

!A

LLOAD ICON.L,A\$4000

\*\*\* End of Pass 1

LLOAD ICON1.L,A\$4000

LLOAD ICON2.L,A\$4000

LLOAD ICON3.L,A\$4000

LLOAD PLOT1.L,A\$4000

LLOAD PLOT2.L,A\$4000

LLOAD INPUT.L,A\$4000

LLOAD PRINT.L,A\$4000

LLOAD DATA.L,A\$4000

LLOAD ICON.L,A\$4000

\*\*\* End of Pass 2

```
0800      1          ttl "ICON Maker Source Code, ICON.L"
0800      2          src "ICON.L"
0800      3      ;
0800      4      ;
0800      5      ; ICON.L
0800      6      ;
0800      7      ;
0800      8      ; ICON Maker Source Code
0800      9      ;
0800     10      ; 2024 February 14
0800     11      ;
0800     12      ;
0800     13      ; DOS 4.5, Build 06
0800     14      ;
0800     15      ; 2024 February 14
0800     16      ;
0800     17      ;
0800     18      ; Start of Source Code: 0x4000
0800     19      ; Start of Symbol List: 0x7800
0800     20      ;
0800     21      ;
0800     22      ; Copyright (c) 2024 February 14 by
0800     23      ; Walland Philip Vrbancic Jr
0800     24      ;
0800     25      ; 6223 East Peabody Street
0800     26      ; Long Beach, California 90808
0800     27      ; United States of America
0800     28      ;
0800     29      ; All Rights Reserved
0800     30      ;
0800     31      ; This software is the confidential and
0800     32      ; proprietary intellectual property of
0800     33      ; Walland Philip Vrbancic Jr
0800     34      ;
0800     35      ;
0000     36  LOC0      epz $00
0800     37      ;
0018     38  DX        epz $18          ; dx extracted by DELTA
0019     39  DY        epz $19          ; dy extracted by DELTA
001A     40  XDX       epz $1A          ; X delta offset (XSTRT-XEND)
001C     41  YDY       epz $1C          ; Y delta offset (YSTRT-YEND)
001D     42  XMOD      epz $1D          ; used in HLINE math
001F     43  YMOD      epz $1F          ; used in HLINE math
0800     44      ;
0020     45  WNDLFT     epz $20
0021     46  WNDWDTH    epz $21
0022     47  WNDTOP     epz $22
0023     48  WNDBTM     epz $23
0024     49  CH         epz $24
0025     50  CV         epz $25
0026     51  GBAS       epz $26
0800     52      ;
0030     53  COLOR      epz $30
0032     54  INVFLG     epz $32
0033     55  PROMPT     epz $33
0800     56      ;
0076     57  ASRUN      epz $76
0800     58      ;
00CE     59  MID        epz $CE          ; used in draw shape math
0800     60      ;
```

```

00D0      61  XSTRT      epz  $D0      ; start X HLINE coordinate
00D2      62  YSTRT      epz  $D2      ; start Y HLINE coordinate
00D3      63  XEND       epz  $D3      ; end X HLINE coordinate
00D5      64  YEND       epz  $D5      ; end Y HLINE coordinate
00D8      65  ASONERR     epz  $D8      ; Applesoft ONERR flag
00DA      66  XOFFSTRT    epz  $DA      ; start X shape LINE offset
00DC      67  YOFFSTRT    epz  $DC      ; start Y shape LINE offset
00DD      68  XOFFEND     epz  $DD      ; end X shape LINE offset
00DF      69  YOFFEND     epz  $DF      ; end Y shape LINE offset
0800      70  ;
00E0      71  XCOOR       epz  $E0      ; ICON window X-coordinate
00E2      72  YCOOR       epz  $E2      ; ICON window Y-coordinate
00E4      73  HRCOLOR     epz  $E4      ; used in COLOR math
00E5      74  ICONNDX     epz  $E5      ; ICON shape structure index
00E6      75  HPAG        epz  $E6      ; used in HIRES page math
00E8      76  BUFRPTR     epz  $E8      ; pointer to ICON shape data
00EC      77  ICONPTR     epz  $EC      ; pointer for user icon buffer
00EE      78  GENPTR      epz  $EE      ; general purpose pointer
0800      79  ;
00FA      80  DATAPTR     epz  $FA      ; PRINT routine pointer
00FB      81  PRNTVAL     epz  $FB      ; equated to DATAPTR+1
00FC      82  PRNTPTR     epz  $FC      ; PRINT routine pointer
0800      83  ;
0800      84              enz
0800      85  ;
0000      86  ZERO        equ  $00
00FF      87  NEGONE      equ  $FF
0800      88  ;
0070      89  XCOORD0     equ  7*16      ; initial X-coordinate
0038      90  YCOORD0     equ  8*7      ; initial Y-coordinate
2000      91  SCRNSIZE     equ  $2000    ; size of screen in bytes
0800      92  ;
0080      93  MAXCOUNT   equ  $80
0800      94  ;
0004      95  ERRORNDX    equ  $04
0036      96  LDLENNDX    equ  $36
0800      97  ;
0000      98  BLACK1      equ  $00
0001      99  GREEN       equ  $01
0002     100  PURPLE       equ  $02
0003     101  WHITE1      equ  $03
0004     102  BLACK2      equ  $04
0005     103  ORANGE      equ  $05
0006     104  BLUE        equ  $06
0007     105  WHITE2      equ  $07
0008     106  GRNBLK      equ  $08
0009     107  PURBLK      equ  $09
000A     108  ORGBLK      equ  $0A
000B     109  BLUBLK      equ  $0B
000C     110  GRNWHT      equ  $0C
000D     111  PURWHT      equ  $0D
000E     112  ORGWHT      equ  $0E
000F     113  BLUWHT      equ  $0F
0010     114  WHTGRBLK    equ  $10
0011     115  WHTPUBLK    equ  $11
0012     116  WHTORBLK    equ  $12
0013     117  WHTBLBLK    equ  $13
0014     118  WHGRBKGR    equ  $14
0015     119  WHPUBKPU    equ  $15
0016     120  WHORBKOR    equ  $16
0017     121  WHBLBKBL    equ  $17

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```
0800      122      ;
0001      123      READCMD      equ      $01
0002      124      WRITCMD      equ      $02
0800      125      ;
0000      126      TEXTMODE      equ      $00
0001      127      GRPHMODE      equ      $01
0002      128      TX80MODE      equ      $02
0003      129      LV80MODE      equ      $03
0800      130      ;
0000      131      NORMDISP      equ      $00
0001      132      INVRDISP      equ      $01
0800      133      ;
0000      134      INITSCRN      equ      $00
0001      135      HOMESCRN      equ      $01
0800      136      ;
0000      137      EOLCLR        equ      $00
0001      138      EOPCLR        equ      $01
0800      139      ;
0000      140      DIRECT        equ      $00
0001      141      INDIRECT      equ      $01
0800      142      ;
0000      143      NOPAD         equ      $00
0020      144      HIGHLOW       equ      $20
0040      145      ZEROPAD       equ      $40
0080      146      SPCPAD        equ      $80
0800      147      ;
0004      148      NEXTLINE      equ      $04
0007      149      CHARCELL      equ      $07
0007      150      MAXDXDY       equ      $07
000F      151      CMDMASK       equ      $0F
000F      152      NIBLMASK      equ      $0F
0014      153      VSNLEN        equ      $14
0018      154      NAMELEN       equ      $18
001F      155      CVMASK        equ      $1F
0028      156      MAXWDTH       equ      $28
0032      157      MAXTRKS       equ      $32
0050      158      MAXCH         equ      $50
0060      159      MINCV         equ      $60
007F      160      ASCIMASK      equ      $7F
007F      161      INVRMASK      equ      $7F
0080      162      MSBMASK       equ      $80
0080      163      ASCIFLAG      equ      $80
00F7      164      DLTACOMP      equ      $F7
0800      165      ;
0050      166      RTNCMD        equ      $50
0051      167      MODECMD       equ      $51
0052      168      DISPCMD       equ      $52
0053      169      SCRNCMD       equ      $53
0054      170      CLRCMD        equ      $54
0055      171      CNTRCMD       equ      $55
0056      172      BUFRCMD       equ      $56
0057      173      NIBLCMD       equ      $57
0058      174      BYT1CMD       equ      $58
0059      175      BYT2CMD       equ      $59
005A      176      BYTNCMD       equ      $5A
005B      177      ADRCMD        equ      $5B
005C      178      DEC1CMD       equ      $5C
005D      179      DEC2CMD       equ      $5D
005E      180      DEC3CMD       equ      $5E
005F      181      DECNCMD       equ      $5F
0800      182      ;
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```

0060      183  FLASH      equ  $60
0084      184  CTRLD     equ  $84
0087      185  BELLCHAR  equ  $87
0088      186  LARROW    equ  $88
008A      187  DARROW    equ  $8A
008B      188  UARROW    equ  $8B
008D      189  RETURN    equ  $8D
0091      190  CTRLQ     equ  $91
0095      191  RARROW    equ  $95
009B      192  ESCAPE    equ  $9B
00A0      193  SPACE     equ  " "
00AE      194  PERIOD    equ  "."
00AF      195  SLASH     equ  "/"
00BA      196  COLON     equ  ":"
00DF      197  LWRMASK   equ  $DF
00E0      198  LWRCASE   equ  $E0
00FF      199  DELETE    equ  $FF
0800      200  ;
00F0      201  COLORCMD  equ  $F0      ; set COLOR index command
00F1      202  HORZCMD   equ  $F1      ; start HORZ shape command
00F2      203  VERTCMD   equ  $F2      ; start VERT shape command
00F3      204  DIAGCMD   equ  $F3      ; start DIAG shape command
00F4      205  CURVECMD  equ  $F4      ; start CURVE shape command
00F5      206  BOXCMD    equ  $F5      ; start BOX shape command
00F6      207  PARLLCMD  equ  $F6      ; start PARALLEL shape command
00F7      208  DOTCMD    equ  $F7      ; start DOT shape command
00F8      209  CHAINCMD  equ  $F8      ; start CHAIN shape command
00F9      210  GRPAGCMD  equ  $F9      ; set Graphics Page command
00FA      211  GROFFCMD  equ  $FA      ; set ICON Window COOR command
00FB      212  GRSIZCMD  equ  $FB      ; set ICON Window size command
00FC      213  GRWIDCMD  equ  $FC      ; set ICON Frame width command
00FD      214  FRCLRCMD  equ  $FD      ; clear ICON Frame command
00FE      215  FRSETCMD  equ  $FE      ; draw ICON Frame command
00FF      216  GREXTCMD  equ  $FF      ; exit ICON draw command
0800      217  ;
0100      218  STACK     equ  $100
0100      219  PAGESIZE  equ  $100
0800      220  ;
03D0      221  DOSWARM   equ  $3D0
03D3      222  DOSCOLD   equ  $3D3
03D9      223  CALLRWTS  equ  $3D9
03E1      224  RDCLKVSN  equ  $3E1
03E3      225  GETIOB    equ  $3E3
03E8      226  PRTERADR  equ  $3E8
03EA      227  HOOKDOS   equ  $3EA
0800      228  ;
2000      229  PAGE20    equ  $2000
4000      230  PAGE40    equ  $4000
0800      231  ;
BFF4      232  MNGVALS   equ  $BFF4
BFFA      233  INITVAL   equ  $BFFA
0800      234  ;
C000      235  KEY       equ  $C000
C010      236  CLRKEY    equ  $C010
0800      237  ;
C030      238  SPEAKER   equ  $C030
0800      239  ;
C050      240  TEXTOFF   equ  $C050
C051      241  TEXTON    equ  $C051
C052      242  MIXCLR    equ  $C052
C053      243  MIXEDON   equ  $C053

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```
C054      244  PAGE1ON  equ  $C054
C055      245  PAGE2ON  equ  $C055
C057      246  HIRESON  equ  $C057
0800      247  ;
C082      248  ROM2WP   equ  $C082
0800      249  ;
F941      250  PRNTAX   equ  $F941
F94A      251  PRBL2    equ  $F94A
FB2F      252  INIT     equ  $FB2F
FB5B      253  TABV     equ  $FB5B
FC22      254  VTAB     equ  $FC22
FC42      255  CLREOP   equ  $FC42
FC58      256  HOME     equ  $FC58
FC9C      257  CLREOL   equ  $FC9C
FCA8      258  WAIT     equ  $FCA8
FD8E      259  CROUT    equ  $FD8E
FDDA      260  PRBYTE   equ  $FDDA
FDE3      261  PRHEX    equ  $FDE3
FDED      262  COUT     equ  $FDED
FE95      263  OUTPORT  equ  $FE95
FF3A      264  BELL     equ  $FF3A
FF69      265  MONITOR  equ  $FF69
0800      266  ;
0800      267  ;
0800      268          icl  "ICON1.L"
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LLOAD  ICON1.L,A$4000
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```

0800          1          ttl "ICON Maker Source Code, ICON1.L"
0800          2          ;
0800          3          ;
0800          4          ; ICON1.L
0800          5          ;
0800          6          ;
0000          7  DISPLAY equ TEXTMODE
C054          8  TEXTPAGE equ PAGE10N
2000          9  SCRNPAGE equ PAGE20
0800         10          ;
0800         11          ;
4000         12          org $4000
4000         13          obj $900
4000         14          usr
4000         15          ;
4000         16          ;
4000 20 EA 03      17          jsr HOOKDOS
4003         18          ;
4003 20 8D 5A      19          jsr PRINT
4006         20          .if DISPLAY=TEXTMODE
4006 51 00         21          byt MODECMD,TEXTMODE
4008         22          .fi
4008         23          .if DISPLAY=GRPHMODE
4008         24          byt RETURN
4008         25          byt MODECMD,GRPHMODE
4008         26          .fi
4008         27          .if DISPLAY=TX80MODE
4008         28          byt MODECMD,TX80MODE
4008         29          .fi
4008 52 00         30          byt DISPCMD,NORMDISP
400A 53 00         31          byt SCRNCMD,INITSCRN
400C 53 01         32          byt SCRNCMD,HOMESCRN
400E 50           33          byt RTNCMD
400F           34          ;
400F 20 2C 46      35          jsr INITPGM
4012           36          ;
4012 20 88 47      37  DOMAIN jsr MAINMENU
4015 90 02         38          bcc >1
4017           39          ;
4017 A9 09         40          lda #9
4019           41          ;
4019 AA           42          ^1 tax
401A           43          ;
401A BD 37 40      44          lda MAINTBLL-1,X
401D 8D 36 40      45          sta MAINMOD+1
4020           46          ;
4020 BD 40 40      47          lda MAINTBLH-1,X
4023 8D 37 40      48          sta MAINMOD+2
4026           49          ;
4026 20 8D 5A      50          jsr PRINT
4029 09 74         51          hex 0974
402B 54 01         52          byt CLRCMD,EOPCLR
402D 8D           53          byt RETURN
402E CD C5 CE      54          asc "MENU"
4031 D5           55          ;
4032 8D           55          byt RETURN
4033 8D           56          byt RETURN
4034 50           57          byt RTNCMD
4035           58          ;
4035 4C 00 00      59  MAINMOD jmp *-*
```

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4038      60 ;
4038      61 ;
4038      62 MAINTBLL:
4038 4A      63      byt DODRAW
4039 A9      64      byt DOEDIT
403A 35      65      byt DONEW
403B 48      66      byt DOLOAD
403C 8C      67      byt DOSAVE
403D 28      68      byt DOLIST
403E 42      69      byt DOPRINT
403F 73      70      byt DORFRESH
4040 87      71      byt DOQUIT
4041      72 ;
4041      73 MAINTBLH:
4041 40      74      hby DODRAW
4042 40      75      hby DOEDIT
4043 41      76      hby DONEW
4044 41      77      hby DOLOAD
4045 41      78      hby DOSAVE
4046 42      79      hby DOLIST
4047 42      80      hby DOPRINT
4048 42      81      hby DORFRESH
4049 42      82      hby DOQUIT
404A      83 ;
404A      84 ;
404A 20 E0 47 85 DODRAW      jsr DRAWMENU
404D 90 02      86      bcc >1
404F      87 ;
404F A9 09      88      lda #9
4051      89 ;
4051 AA      90 ^1      tax
4052      91 ;
4052 BD 96 40 92      lda DRAWTBLL-1,X
4055 8D 95 40 93      sta DRAWMOD+1
4058      94 ;
4058 BD 9F 40 95      lda DRAWTBLH-1,X
405B 8D 96 40 96      sta DRAWMOD+2
405E      97 ;
405E 20 8D 5A 98      jsr PRINT
4061 09 74      99      hex 0974
4063 54 01     100     byt CLRCMD,EOPCLR
4065 8D      101     byt RETURN
4066 CD C5 CE 102     asc "MENU"
4069 D5
406A 8D      103     byt RETURN
406B 8D      104     byt RETURN
406C 50      105     byt RTNCMD
406D      106 ;
406D AD 2D 5D 107     lda ICONWIDE
4070 4A      108     lsr
4071 8D 31 5D 109     sta XDRAW
4074      110 ;
4074 AD 2E 5D 111     lda ICONHIGH
4077 4A      112     lsr
4078 8D 32 5D 113     sta YDRAW
407B      114 ;
407B AE 28 5D 115     ldx CURCOLOR
407E      116 ;
407E BD D0 5D 117     lda COLRTBLL,X
4081 8D 3D 5D 118     sta COLORADR
4084      119 ;

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4084 BD D8 5D      120          lda COLRTBLH,X
4087 8D 3E 5D      121          sta COLORADR+1
408A              122      ;
408A A2 00          123          ldx #ZERO
408C A9 FF          124          lda #GREXTCMD
408E              125      ;
408E 9D 00 5F      126      ^1      sta TEMPBUFR,X
4091              127      ;
4091 E8              128          inx
4092 D0 FA          129          bne <1
4094              130      ;
4094 4C 00 00      131      DRAWMOD  jmp *-*
4097              132      ;
4097              133      ;
4097              134      DRAWTBLL:
4097 AE              135          byt DOCOLOR
4098 ED              136          byt DOHORZ
4099 3C              137          byt DOVERT
409A 83              138          byt DODIAG
409B DE              139          byt DOCURVE
409C 45              140          byt DOBOX
409D 99              141          byt DOPARLL
409E A0              142          byt DODOT
409F 29              143          byt DODREXIT
40A0              144      ;
40A0              145      DRAWTBLH:
40A0 42              146          hby DOCOLOR
40A1 42              147          hby DOHORZ
40A2 43              148          hby DOVERT
40A3 43              149          hby DODIAG
40A4 43              150          hby DOCURVE
40A5 44              151          hby DOBOX
40A6 44              152          hby DOPARLL
40A7 45              153          hby DODOT
40A8 46              154          hby DODREXIT
40A9              155      ;
40A9              156      ;
40A9              157      ; Use the Arrow Keys to move the entire ICON within the
40A9              158      ; current ICON frame.
40A9              159      ;
40A9 20 8D 5A      160      DOEDIT  jsr PRINT
40AC C5 C4 C9      161          asc "EDIT"
40AF D4
40B0 09 74          162          hex 0974
40B2 D5 F3 E5      163          asc "Use Arrow Keys to move ICON."
40B5 A0 C1 F2
40B8 F2 EF F7
40BB A0 CB E5
40BE F9 F3 A0
40C1 F4 EF A0
40C4 ED EF F6
40C7 E5 A0 C9
40CA C3 CF CE
40CD AE
40CE 09 76          164          hex 0976
40D0 C5 EE F4      165          asc "Enter ESC or Q to Quit."
40D3 E5 F2 A0
40D6 C5 D3 C3
40D9 A0 EF F2
40DC A0 D1 A0
40DF F4 EF A0

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40E2 D1 F5 E9
40E5 F4 AE
40E7 50          166          byt RTNCMD
40E8          167          ;
40E8 20 CF 48    168 DOEDIT2 jsr COPYICON
40EB          169          ;
40EB A9 00       170          lda #ZERO
40ED 8D 24 5D    171          sta TESTFLAG
40F0          172          ;
40F0 20 21 4D    173          jsr TEMPPROC
40F3 B0 3A       174          bcs >5
40F5          175          ;
40F5 C9 D1       176          cmp #"Q"
40F7 F0 33       177          beq >4
40F9          178          ;
40F9 AD 24 5D    179          lda TESTFLAG
40FC 30 EA       180          bmi DOEDIT2
40FE          181          ;
40FE A0 EE       182          ldy #TESTDOT
4100 A9 52       183          lda /TESTDOT
4102          184          ;
4102 8C 7A 52    185          sty PUTDOT+1
4105 8D 7B 52    186          sta PUTDOT+2
4108          187          ;
4108 20 E0 4E    188          jsr SHOWTEMP
410B          189          ;
410B A0 7C       190          ldy #PUTDOT2
410D A9 52       191          lda /PUTDOT2
410F          192          ;
410F 8C 7A 52    193          sty PUTDOT+1
4112 8D 7B 52    194          sta PUTDOT+2
4115          195          ;
4115 AD 24 5D    196          lda TESTFLAG
4118 30 CE       197          bmi DOEDIT2
411A          198          ;
411A 20 70 52    199          jsr XPLOT
411D 20 D9 4E    200          jsr SHOWICON
4120 20 E1 48    201          jsr COPYTEMP
4123 20 73 52    202          jsr HPLOT
4126 20 D9 4E    203          jsr SHOWICON
4129          204          ;
4129 4C E8 40    205          jmp DOEDIT2
412C          206          ;
412C 20 6C 49    207          ^4 jsr SELECT
412F          208          ;
412F 20 04 5A    209          ^5 jsr PRESKEY
4132          210          ;
4132 4C 12 40    211          jmp DOMAIN
4135          212          ;
4135          213          ;
4135          214          ; Clear ICON window and frame, redraw ICON frame, and
4135          215          ; initialize ICON and TEMP buffers. With a 48x48 ICON
4135          216          ; frame, clear lines 53 to 106 and bytes 16 to 23.
4135          217          ;
4135 20 8D 5A    218 DONEW jsr PRINT
4138 CE C5 D7    219          asc "NEW"
413B 50          220          byt RTNCMD
413C          221          ;
413C 20 B0 48    222          jsr CLRFRAME
413F 20 40 47    223          jsr INITBUFR
4142 20 04 5A    224          jsr PRESKEY

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4145      225 ;
4145 4C 12 40 226      jmp DOMAIN
4148      227 ;
4148      228 ;
4148      229 ; Get ICON filename to load into memory.
4148      230 ;
4148 20 8D 5A 231 DOLOAD      jsr PRINT
414B CC CF C1 232      asc "LOAD"
414E C4
414F 50      233      byt RTNCMD
4150      234 ;
4150 20 98 59 235      jsr GETFNAME
4153 B0 31    236      bcs >2
4155      237 ;
4155 F0 2F    238      beq >2
4157      239 ;
4157 20 8D 5A 240      jsr PRINT
415A 00 60    241      hex 0060
415C 8D 84    242      byt RETURN,CTRLD
415E C2 CC CF 243      asc "BLOAD "
4161 C1 C4 A0
4164 56 00    244      byt BUFRCMD,DIRECT
4166 63 5D    245      adr NAMEBUFR
4168 AC C1 A4 246      asc ",A$"
416B 5B 00    247      byt ADRCMD,DIRECT
416D 00 61    248      adr ICONBUFR
416F 8D      249      byt RETURN
4170 50      250      byt RTNCMD
4171      251 ;
4171 A0 36    252      ldy #LDLENNDX
4173 20 23 4B 253      jsr MNGVAL
4176      254 ;
4176 E0 00    255      cpx #ZERO          ; remove GREXTCMD
4178 D0 02    256      bne >1
417A      257 ;
417A E9 01    258      sbc #1
417C      259 ;
417C CA      260 ^1      dex
417D      261 ;
417D 8E 3B 5D 262      stx NDXICON
4180 8D 3C 5D 263      sta NDXICON+1
4183      264 ;
4183 20 D9 4E 265      jsr SHOWICON
4186      266 ;
4186 20 04 5A 267 ^2      jsr PRESKEY
4189      268 ;
4189 4C 12 40 269      jmp DOMAIN
418C      270 ;
418C      271 ;
418C      272 ; Save ICON data that is in memory to a filename.
418C      273 ;
418C 20 8D 5A 274 DOSAVE      jsr PRINT
418F D3 C1 D6 275      asc "SAVE"
4192 C5
4193 50      276      byt RTNCMD
4194      277 ;
4194 20 8D 5A 278      jsr PRINT
4197 09 74    279      hex 0974
4199 D3 E1 F6 280      asc "Save ICON data in a"
419C E5 A0 C9
419F C3 CF CE

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41A2 A0 E4 E1
41A5 F4 E1 A0
41A8 E9 EE A0
41AB E1
41AC 50          281      byt RTNCMD
41AD          282      ;
41AD 20 8D 5A    283      ^1      jsr PRINT
41B0 09 76      284      hex 0976
41B2 52          285      byt DISPCMD
41B3 01          286      SAVMOD1 byt INVRDISP
41B4 C2 C9 CE    287      asc "BINARY FILE"
41B7 C1 D2 D9
41BA A0 C6 C9
41BD CC C5
41BF 52 00      288      byt DISPCMD,NORMDISP
41C1 A0 A0 A0    289      asc " "
41C4 52          290      byt DISPCMD
41C5 00          291      SAVMOD2 byt NORMDISP
41C6 D4 C5 D8    292      asc "TEXT FILE"
41C9 D4 A0 C6
41CC C9 CC C5
41CF 52 00      293      byt DISPCMD,NORMDISP
41D1 50          294      byt RTNCMD
41D2          295      ;
41D2 20 1C 5A    296      ^2      jsr GETKEY
41D5 B0 4B      297      bcs >6
41D7          298      ;
41D7 F0 22      299      beq >4
41D9          300      ;
41D9 C9 88      301      cmp #LARROW
41DB F0 0C      302      beq >3
41DD          303      ;
41DD C9 8A      304      cmp #DARROW
41DF F0 08      305      beq >3
41E1          306      ;
41E1 C9 8B      307      cmp #UARROW
41E3 F0 04      308      beq >3
41E5          309      ;
41E5 C9 95      310      cmp #RARROW
41E7 D0 E9      311      bne <2
41E9          312      ;
41E9 AD B3 41    313      ^3      lda SAVMOD1
41EC 49 01      314      eor #INVRDISP
41EE 8D B3 41    315      sta SAVMOD1
41F1          316      ;
41F1 AD C5 41    317      lda SAVMOD2
41F4 49 01      318      eor #INVRDISP
41F6 8D C5 41    319      sta SAVMOD2
41F9          320      ;
41F9 10 B2      321      bpl <1          ; always taken
41FB          322      ;
41FB 20 8D 5A    323      ^4      jsr PRINT
41FE 09 74      324      hex 0974
4200 54 00      325      byt CLRCMD,EOLCLR
4202 09 76      326      hex 0976
4204 54 00      327      byt CLRCMD,EOLCLR
4206 50          328      byt RTNCMD
4207          329      ;
4207 20 98 59    330      jsr GETFNAME
420A B0 16      331      bcs >6
420C          332      ;

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420C F0 14      333      beq >6                ; bytes in NAMEBUFR
420E           334      ;
420E AE 3B 5D   335      ldX NDXICON
4211 AC 3C 5D   336      ldY NDXICON+1
4214           337      ;
4214 E8         338      inX
4215 D0 01      339      bne >5
4217           340      ;
4217 C8         341      inY
4218           342      ;
4218 86 EE      343      ^5      stX GENPTR
421A 84 EF      344      sty GENPTR+1
421C           345      ;
421C AD B3 41   346      lda SAVMOD1
421F 20 98 4A   347      jsr SAVEFILE
4222           348      ;
4222 20 04 5A   349      ^6      jsr PRESKEY
4225           350      ;
4225 4C 12 40   351      jmp DOMAIN
4228           352      ;
4228           353      ;
4228           354      ; List the ICON data to the screen in HEX format.  An ICON
4228           355      ; command begins each new line.
4228           356      ;
4228 20 58 FC   357      DOLIST      jsr HOME
422B           358      ;
422B A9 00      359      lda #ZERO
422D 8D 29 5D   360      sta PRTFLAG
4230           361      ;
4230 AD 51 C0   362      lda TEXTON
4233           363      ;
4233 20 1B 49   364      jsr LISTBUFR
4236 20 8E FD   365      jsr CROUT
4239 20 04 5A   366      jsr PRESKEY
423C           367      ;
423C AD 50 C0   368      lda TEXTOFF
423F           369      ;
423F 4C 12 40   370      jmp DOMAIN
4242           371      ;
4242           372      ;
4242           373      ; List the ICON data to the printer in HEX format.  An ICON
4242           374      ; command begins each new line.
4242           375      ;
4242 20 8D 5A   376      DOPRINT      jsr PRINT
4245 D0 D2 C9   377      asc "PRINT"
4248 CE D4      378
424A 50         378      byt RTNCMD
424B           379      ;
424B A9 FF      380      lda #NEGONE
424D 8D 29 5D   381      sta PRTFLAG
4250           382      ;
4250 20 8D 5A   383      jsr PRINT
4253 00 60      384      hex 0060
4255 8D 84      385      byt RETURN,CTRLD
4257 D0 D2 A3   386      asc "PR#1"
425A B1         387
425B 8D         387      byt RETURN
425C 50         388      byt RTNCMD
425D           389      ;
425D 20 1B 49   390      jsr LISTBUFR
4260           391      ;

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4260 20 8D 5A 392      jsr PRINT
4263 00 60 393      hex 0060
4265 8D 84 394      byt RETURN,CTRLD
4267 D0 D2 A3 395      asc "PR#0"
426A B0
426B 8D 396      byt RETURN
426C 50 397      byt RTNCMD
426D 398      ;
426D 20 04 5A 399      jsr PRESKEY
4270 400      ;
4270 4C 12 40 401      jmp DOMAIN
4273 402      ;
4273 403      ;
4273 404      ; Clear the ICON window and frame, redraw the ICON frame,
4273 405      ; and redraw the ICON data in ICONBUFR.
4273 406      ;
4273 20 8D 5A 407 DORFRESH jsr PRINT
4276 D2 C5 C6 408      asc "REFRESH"
4279 D2 C5 D3
427C C8
427D 50 409      byt RTNCMD
427E 410      ;
427E 20 5C 49 411      jsr REFRESH
4281 20 04 5A 412      jsr PRESKEY
4284 413      ;
4284 4C 12 40 414      jmp DOMAIN
4287 415      ;
4287 416      ;
4287 417      ; Restore the address at ERRORADR, initialize the screen,
4287 418      ; HOME the screen, and cold-start DOS.
4287 419      ;
4287 AC FA BF 420 DOQUIT  ldy INITVAL
428A AD FB BF 421      lda INITVAL+1
428D 422      ;
428D 84 EE 423      sty GENPTR
428F 85 EF 424      sta GENPTR+1
4291 425      ;
4291 A0 04 426      ldy #ERRORNDX
4293 427      ;
4293 AD 43 5D 428      lda SAVROMER
4296 F0 08 429      beq >1
4298 430      ;
4298 91 EE 431      sta (GENPTR),Y
429A 432      ;
429A C8 433      iny
429B 434      ;
429B AD 44 5D 435      lda SAVROMER+1
429E 91 EE 436      sta (GENPTR),Y
42A0 437      ;
42A0 20 8D 5A 438 ^1      jsr PRINT
42A3 439      .if DISPLAY=GRPHMODE
42A3 440      byt MODECMD,TEXTMODE
42A3 441      .fi
42A3 442      .if DISPLAY=TX80MODE
42A3 443      byt MODECMD,LV80MODE
42A3 444      .fi
42A3 52 00 445      byt DISPCMD,NORMDISP
42A5 53 00 446      byt SCRNCMD,INITSCRN
42A7 8D 447      byt RETURN
42A8 53 01 448      byt SCRNCMD,HOMESCRN
42AA 50 449      byt RTNCMD

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42AB          450 ;
42AB 4C D3 03 451      jmp DOSCOLD
42AE          452 ;
42AE          453 ;
42AE          454 ; Display the available choice in colors, select a color,
42AE          455 ; set the current color CURCOLOR, and enter the ICON color
42AE          456 ; command with the selected color into the ICON data.
42AE          457 ;
42AE 20 3C 48 458 DOCOLOR jsr COLRMENU
42B1 B0 37    459      bcs >4
42B3          460 ;
42B3 E9 00    461      sbc #0
42B5          462 ;
42B5 C9 08    463      cmp #8
42B7 F0 31    464      beq >4
42B9          465 ;
42B9 48       466      pha
42BA          467 ;
42BA AC 3B 5D 468      ldy NDXICON
42BD C0 02    469      cpy #ICONBUFR+2
42BF D0 08    470      bne >1
42C1          471 ;
42C1 AD 3C 5D 472      lda NDXICON+1
42C4 D0 03    473      bne >1
42C6          474 ;
42C6 88       475      dey
42C7 D0 0C    476      bne >2 ; always taken
42C9          477 ;
42C9 A9 F0    478 ^1    lda #COLORCMD
42CB 91 EC    479      sta (ICONPTR),Y
42CD          480 ;
42CD C8       481      iny
42CE D0 05    482      bne >2
42D0          483 ;
42D0 EE 3C 5D 484      inc NDXICON+1
42D3 E6 ED    485      inc ICONPTR+1
42D5          486 ;
42D5 68       487 ^2    pla
42D6 8D 28 5D 488      sta CURCOLOR
42D9 91 EC    489      sta (ICONPTR),Y
42DB          490 ;
42DB C8       491      iny
42DC D0 05    492      bne >3
42DE          493 ;
42DE EE 3C 5D 494      inc NDXICON+1
42E1 E6 ED    495      inc ICONPTR+1
42E3          496 ;
42E3 A9 FF    497 ^3    lda #GREXTCMD
42E5 91 EC    498      sta (ICONPTR),Y
42E7          499 ;
42E7 8C 3B 5D 500      sty NDXICON
42EA          501 ;
42EA 4C 4A 40 502 ^4    jmp DODRAW
42ED          503 ;
42ED          504 ;
42ED 20 8D 5A 505 DOHORZ jsr PRINT
42F0 C8 CF D2 506      asc "HORIZ"
42F3 C9 DA
42F5 50       507      byt RTNCMD
42F6          508 ;
42F6 A9 F1    509      lda #HORZCMD

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42F8      510 ;
42F8 20 5E 4E 511      jsr DOSTART
42FB B0 36 512      bcs >3
42FD      513 ;
42FD A2 00 514 DOHORZ2 ldx #ZERO          ; horizontal
42FF 20 F8 4D 515      jsr SHOWMOVE
4302      516 ;
4302 AE 30 5D 517      ldx NDXTEMP
4305      518 ;
4305 AD 31 5D 519      lda XDRAW
4308 9D 00 5F 520      sta TEMPBUFR,X
430B      521 ;
430B 20 E0 4E 522      jsr SHOWTEMP
430E      523 ;
430E 20 E7 4E 524      jsr GETMOVE
4311 B0 20 525      bcs >3
4313      526 ;
4313 C9 D1 527      cmp #"Q"
4315 F0 19 528      beq >2
4317      529 ;
4317 C9 C4 530      cmp #"D"
4319 F0 05 531      beq >1
431B      532 ;
431B 20 F5 4F 533 ^0      jsr ERASTEMP
431E 90 DD 534      bcc DOHORZ2          ; always taken
4320      535 ;
4320 20 1C 4A 536 ^1      jsr CHKDRAW
4323 F0 F6 537      beq <0
4325      538 ;
4325 EE 30 5D 539      inc NDXTEMP
4328      540 ;
4328 20 0E 49 541      jsr COPYDRAW
432B      542 ;
432B 20 7F 5A 543      jsr MYBELL
432E F0 1F 544      beq DOVERT2          ; always taken
4330      545 ;
4330 20 F3 48 546 ^2      jsr COPYSHAP
4333      547 ;
4333 20 5C 49 548 ^3      jsr REFRESH
4336 20 04 5A 549      jsr PRESKEY
4339      550 ;
4339 4C 4A 40 551      jmp DODRAW
433C      552 ;
433C      553 ;
433C 20 8D 5A 554 DOVERT jsr PRINT
433F D6 C5 D2 555      asc "VERTICAL"
4342 D4 C9 C3
4345 C1 CC
4347 50      556      byt RTNCMD
4348      557 ;
4348 A9 F2      558      lda #VERTCMD
434A      559 ;
434A 20 5E 4E 560      jsr DOSTART
434D B0 E4 561      bcs <3
434F      562 ;
434F A2 01 563 DOVERT2 ldx #1          ; vertical
4351 20 F8 4D 564      jsr SHOWMOVE
4354      565 ;
4354 AE 30 5D 566      ldx NDXTEMP
4357      567 ;
4357 AD 32 5D 568      lda YDRAW

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435A 9D 00 5F      569      sta TEMPBUFR,X
435D                570      ;
435D 20 E0 4E      571      jsr SHOWTEMP
4360                572      ;
4360 20 E7 4E      573      jsr GETMOVE
4363 B0 CE          574      bcs <3
4365                575      ;
4365 C9 D1          576      cmp #"Q"
4367 F0 C7          577      beq <2
4369                578      ;
4369 C9 C4          579      cmp #"D"
436B F0 05          580      beq >1
436D                581      ;
436D 20 F5 4F      582      ^0      jsr ERASTEMP
4370 90 DD          583      bcc DOVERT2          ; always taken
4372                584      ;
4372 20 1C 4A      585      ^1      jsr CHKDRAW
4375 F0 F6          586      beq <0
4377                587      ;
4377 EE 30 5D      588      inc NDXTEMP
437A                589      ;
437A 20 0E 49      590      jsr COPYDRAW
437D 20 7F 5A      591      jsr MYBELL
4380                592      ;
4380 4C FD 42      593      jmp DOHORZ2
4383                594      ;
4383                595      ;
4383 20 8D 5A      596      DODIAG      jsr PRINT
4386 C4 C9 C1      597      asc "DIAGONAL"
4389 C7 CF CE
438C C1 CC
438E 50            598      byt RTNCMD
438F                599      ;
438F A9 F3          600      lda #DIAGCMD
4391                601      ;
4391 20 5E 4E      602      jsr DOSTART
4394 B0 3F          603      bcs >4
4396                604      ;
4396 A2 02          605      ^1      ldx #2          ; arrow keys
4398 20 F8 4D      606      jsr SHOWMOVE
439B                607      ;
439B AE 30 5D      608      ldx NDXTEMP
439E                609      ;
439E AD 31 5D      610      lda XDRAW
43A1 9D 00 5F      611      sta TEMPBUFR,X
43A4                612      ;
43A4 AD 32 5D      613      lda YDRAW
43A7 9D 01 5F      614      sta TEMPBUFR+1,X
43AA                615      ;
43AA 20 E0 4E      616      jsr SHOWTEMP
43AD                617      ;
43AD 20 E7 4E      618      jsr GETMOVE
43B0 B0 23          619      bcs >4
43B2                620      ;
43B2 C9 D1          621      cmp #"Q"
43B4 F0 1C          622      beq >3
43B6                623      ;
43B6 C9 C4          624      cmp #"D"
43B8 F0 05          625      beq >2
43BA                626      ;
43BA 20 F5 4F      627      ^0      jsr ERASTEMP

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43BD 90 D7      628      bcc <1      ; always taken
43BF           629      ;
43BF 20 1C 4A   630      ^2      jsr CHKDRAW
43C2 F0 F6      631      beq <0
43C4           632      ;
43C4 EE 30 5D   633      inc NDXTEMP
43C7 EE 30 5D   634      inc NDXTEMP
43CA           635      ;
43CA 20 0E 49   636      jsr COPYDRAW
43CD           637      ;
43CD 20 7F 5A   638      jsr MYBELL
43D0 F0 C4      639      beq <1      ; always taken
43D2           640      ;
43D2 20 F3 48   641      ^3      jsr COPYSHAP
43D5           642      ;
43D5 20 5C 49   643      ^4      jsr REFRESH
43D8 20 04 5A   644      jsr PRESKEY
43DB           645      ;
43DB 4C 4A 40   646      jmp DODRAW
43DE           647      ;
43DE           648      ;
43DE 20 8D 5A   649      DOCURVE jsr PRINT
43E1 C3 D5 D2   650      asc "CURVE"
43E4 D6 C5
43E6 50         651      byt RTNCMD
43E7           652      ;
43E7 A9 F4      653      lda #CURVECMD
43E9           654      ;
43E9 20 5E 4E   655      jsr DOSTART
43EC B0 4E      656      bcs >5
43EE           657      ;
43EE AD 31 5D   658      ^1      lda XDRAW
43F1 8D 35 5D   659      sta XCURVE
43F4           660      ;
43F4 AD 32 5D   661      lda YDRAW
43F7 8D 36 5D   662      sta YCURVE
43FA           663      ;
43FA A9 00      664      lda #ZERO
43FC 8D 38 5D   665      sta DELTAVAL
43FF           666      ;
43FF A2 02      667      ^2      ldx #2
4401 20 F8 4D   668      jsr SHOWMOVE
4404           669      ;
4404 AE 30 5D   670      ldx NDXTEMP
4407           671      ;
4407 AD 38 5D   672      lda DELTAVAL
440A 9D 00 5F   673      sta TEMPBUFR,X
440D           674      ;
440D 20 E0 4E   675      jsr SHOWTEMP
4410           676      ;
4410 20 38 4F   677      jsr GETCURVE
4413 B0 27      678      bcs >5
4415           679      ;
4415 C9 D1      680      cmp #"Q"
4417 F0 19      681      beq >4
4419           682      ;
4419 C9 C4      683      cmp #"D"
441B F0 05      684      beq >3
441D           685      ;
441D 20 F5 4F   686      ^0      jsr ERASTEMP
4420 90 DD      687      bcc <2      ; always taken

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4422      688 ;
4422 20 1C 4A 689 ^3      jsr CHKDRAW
4425 F0 F6 690      beq <0
4427      691 ;
4427 EE 30 5D 692      inc NDXTEMP
442A      693 ;
442A 20 0E 49 694      jsr COPYDRAW
442D      695 ;
442D 20 7F 5A 696      jsr MYBELL
4430 F0 BC 697      beq <1      ; always taken
4432      698 ;
4432 AE 30 5D 699 ^4      ldx NDXTEMP
4435 E0 03 700      cpx #3
4437 F0 03 701      beq >5
4439      702 ;
4439 20 F3 48 703      jsr COPYSHAP
443C      704 ;
443C 20 5C 49 705 ^5      jsr REFRESH
443F 20 04 5A 706      jsr PRESKEY
4442      707 ;
4442 4C 4A 40 708      jmp DODRAW
4445      709 ;
4445      710 ;
4445 20 8D 5A 711 DOBOX      jsr PRINT
4448 C2 CF D8 712      asc "BOX"
444B 50 713      byt RTNCMD
444C      714 ;
444C A9 F5 715      lda #BOXCMD
444E      716 ;
444E 20 5E 4E 717      jsr DOSTART
4451 B0 3D 718      bcs >3
4453      719 ;
4453 A2 02 720 ^1      ldx #2      ; arrow keys
4455 20 F8 4D 721      jsr SHOWMOVE
4458      722 ;
4458 AE 30 5D 723      ldx NDXTEMP
445B      724 ;
445B AD 31 5D 725      lda XDRAW
445E 9D 00 5F 726      sta TEMPBUFR,X
4461      727 ;
4461 AD 32 5D 728      lda YDRAW
4464 9D 01 5F 729      sta TEMPBUFR+1,X
4467      730 ;
4467 20 E0 4E 731      jsr SHOWTEMP
446A      732 ;
446A 20 E7 4E 733      jsr GETMOVE
446D B0 21 734      bcs >3
446F      735 ;
446F C9 D1 736      cmp #"Q"
4471 F0 1D 737      beq >3
4473      738 ;
4473 C9 C4 739      cmp #"D"
4475 F0 05 740      beq >2
4477      741 ;
4477 20 F5 4F 742 ^0      jsr ERASTEMP
447A 90 D7 743      bcc <1      ; always taken
447C      744 ;
447C 20 1C 4A 745 ^2      jsr CHKDRAW
447F F0 F6 746      beq <0
4481      747 ;
4481 EE 30 5D 748      inc NDXTEMP

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4484 EE 30 5D      749      inc NDXTEMP
4487              750      ;
4487 20 0E 49      751      jsr COPYDRAW
448A              752      ;
448A 20 7F 5A      753      jsr MYBELL
448D 20 F3 48      754      jsr COPYSHAP
4490              755      ;
4490 20 5C 49      756      ^3      jsr REFRESH
4493 20 04 5A      757      jsr PRESKEY
4496              758      ;
4496 4C 4A 40      759      jmp DODRAW
4499              760      ;
4499              761      ;
4499 20 8D 5A      762      DOPARLL      jsr PRINT
449C D0 C1 D2      763      asc "PARALLEL"
449F C1 CC CC
44A2 C5 CC
44A4 50              764      byt RTNCMD
44A5              765      ;
44A5 A9 F3          766      lda #DIAGCMD          ; temporary command use
44A7              767      ;
44A7 20 5E 4E      768      jsr DOSTART
44AA B0 7D          769      bcs >4
44AC              770      ;
44AC AD 31 5D      771      lda XDRAW
44AF 8D 35 5D      772      sta XCURVE
44B2              773      ;
44B2 AD 32 5D      774      lda YDRAW
44B5 8D 36 5D      775      sta YCURVE
44B8              776      ;
44B8 A2 02          777      ^1      ldx #2          ; arrow keys
44BA 20 F8 4D      778      jsr SHOWMOVE
44BD              779      ;
44BD AE 30 5D      780      ldx NDXTEMP
44C0              781      ;
44C0 AD 31 5D      782      lda XDRAW
44C3 9D 00 5F      783      sta TEMPBUFR,X
44C6              784      ;
44C6 AD 32 5D      785      lda YDRAW
44C9 9D 01 5F      786      sta TEMPBUFR+1,X
44CC              787      ;
44CC 20 E0 4E      788      jsr SHOWTEMP
44CF              789      ;
44CF 20 E7 4E      790      jsr GETMOVE
44D2 B0 55          791      bcs >4
44D4              792      ;
44D4 C9 D1          793      cmp #"Q"
44D6 F0 55          794      beq >5
44D8              795      ;
44D8 C9 C4          796      cmp #"D"
44DA F0 05          797      beq >2
44DC              798      ;
44DC 20 F5 4F      799      ^0      jsr ERASTEMP
44DF 90 D7          800      bcc <1          ; always taken
44E1              801      ;
44E1 20 1C 4A      802      ^2      jsr CHKDRAW
44E4 F0 F6          803      beq <0
44E6              804      ;
44E6 EE 30 5D      805      inc NDXTEMP
44E9 EE 30 5D      806      inc NDXTEMP
44EC              807      ;

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44EC 20 0E 49      808      jsr COPYDRAW
44EF              809      ;
44EF 20 7F 5A      810      jsr MYBELL
44F2              811      ;
44F2 AD 35 5D      812      lda XCURVE
44F5 8D 31 5D      813      sta XDRAW
44F8              814      ;
44F8 AD 36 5D      815      lda YCURVE
44FB 8D 32 5D      816      sta YDRAW
44FE              817      ;
44FE A2 00          818      ldx #ZERO
4500 8E 38 5D      819      stx DELTAVAL
4503              820      ;
4503 E8             821      inx
4504 8E 4D 5D      822      stx LINECNT
4507              823      ;
4507 A9 F6          824      lda #PARLLCMD      ; real command use
4509 8D 00 5F      825      sta TEMPBUFR
450C              826      ;
450C A2 02          827      ^3      ldx #2
450E 20 F8 4D      828      jsr SHOWMOVE
4511              829      ;
4511 AE 30 5D      830      ldx NDXTEMP
4514              831      ;
4514 AD 38 5D      832      lda DELTAVAL
4517 8D 39 5D      833      sta DELTASAV
451A 9D 00 5F      834      sta TEMPBUFR,X
451D              835      ;
451D AD 4D 5D      836      lda LINECNT
4520 9D 01 5F      837      sta TEMPBUFR+1,X
4523              838      ;
4523 20 E0 4E      839      jsr SHOWTEMP
4526              840      ;
4526 20 38 4F      841      jsr GETCURVE
4529 B0 6C          842      ^4      bcs >9
452B              843      ;
452B C9 D1          844      cmp #"Q"
452D F0 68          845      ^5      beq >9
452F              846      ;
452F C9 C4          847      cmp #"D"
4531 F0 10          848      beq >6
4533              849      ;
4533 20 2B 4A      850      ^1      jsr CHKDELTA
4536 90 06          851      bcc >0
4538              852      ;
4538 AD 39 5D      853      lda DELTASAV
453B 8D 38 5D      854      sta DELTAVAL
453E              855      ;
453E 20 F5 4F      856      ^0      jsr ERASTEMP
4541 90 C9          857      bcc <3      ; always taken
4543              858      ;
4543 AD 38 5D      859      ^6      lda DELTAVAL
4546 F0 EB          860      beq <1
4548              861      ;
4548 EE 30 5D      862      inc NDXTEMP
454B              863      ;
454B 20 0E 49      864      jsr COPYDRAW
454E 20 7F 5A      865      jsr MYBELL
4551              866      ;
4551 20 8D 5A      867      jsr PRINT
4554 09 76          868      hex 0976

```

```

4556 C4 BD C4      869      asc "D=Done "
4559 EF EE E5
455C 50            870      byt RTNCMD
455D            871      ;
455D A2 02        872      ^7      ldx #2          ; arrow keys
455F 20 2B 4E    873      jsr SHOWCNT1
4562            874      ;
4562 AE 30 5D    875      ldx NDXTEMP
4565            876      ;
4565 AD 4D 5D    877      lda LINECNT
4568 8D 4E 5D    878      sta LINESAV
456B 9D 00 5F    879      sta TEMPBUFR,X
456E            880      ;
456E 20 E0 4E    881      jsr SHOWTEMP
4571            882      ;
4571 20 C2 4F    883      jsr GETCOUNT
4574 B0 21        884      bcs >9
4576            885      ;
4576 C9 D1        886      cmp #"Q"
4578 F0 14        887      beq >8
457A            888      ;
457A C9 C4        889      cmp #"D"
457C F0 10        890      beq >8
457E            891      ;
457E 20 2B 4A    892      jsr CHKDELTA
4581 90 06        893      bcc >0
4583            894      ;
4583 AD 4E 5D    895      lda LINESAV
4586 8D 4D 5D    896      sta LINECNT
4589            897      ;
4589 20 F5 4F    898      ^0      jsr ERASTEMP
458C 90 CF        899      bcc <7
458E            900      ;
458E EE 30 5D    901      ^8      inc NDXTEMP
4591            902      ;
4591 20 7F 5A    903      jsr MYBELL
4594 20 F3 48    904      jsr COPYSHAP
4597            905      ;
4597 20 5C 49    906      ^9      jsr REFRESH
459A 20 04 5A    907      jsr PRESKEY
459D            908      ;
459D 4C 4A 40    909      jmp DODRAW
45A0            910      ;
45A0            911      ;
45A0 20 8D 5A    912      DODOT      jsr PRINT
45A3 C4 CF D4    913      asc "DOTS"
45A6 D3
45A7 09 74        914      hex 0974
45A9 C3 CF CC    915      asc "COLOR="
45AC CF D2 BD
45AF 56 01        916      byt BUFRCMD,INDIRECT
45B1 3D 5D        917      adr COLORADR
45B3 09 76        918      hex 0976
45B5 C4 BD C4    919      asc "D=Draw "
45B8 F2 E1 F7
45BB A0
45BC 09 77        920      hex 0977
45BE D1 BD D1    921      asc "Q=Quit"
45C1 F5 E9 F4
45C4 50          922      byt RTNCMD
45C5            923      ;

```

```

45C5 20 73 52      924      jsr HPLOT
45C8              925      ;
45C8 A9 F7         926      lda #DOTCMD
45CA 8D 00 5F      927      sta TEMPBUFR
45CD              928      ;
45CD A9 01         929      lda #1
45CF 8D 30 5D      930      sta NDXTEMP
45D2              931      ;
45D2 A9 7F         932      lda #$7F
45D4 8D 33 5D      933      sta XDRAW0
45D7 8D 34 5D      934      sta YDRAW0
45DA              935      ;
45DA A2 02         936      ^1    ldx #2
45DC 20 F8 4D      937      jsr SHOWMOVE
45DF              938      ;
45DF AE 30 5D      939      ldx NDXTEMP
45E2              940      ;
45E2 AD 31 5D      941      lda XDRAW
45E5 9D 00 5F      942      sta TEMPBUFR,X
45E8              943      ;
45E8 AD 32 5D      944      lda YDRAW
45EB 9D 01 5F      945      sta TEMPBUFR+1,X
45EE              946      ;
45EE 20 E0 4E      947      jsr SHOWTEMP
45F1              948      ;
45F1 20 E7 4E      949      jsr GETMOVE
45F4 B0 2A         950      bcs >4
45F6              951      ;
45F6 C9 D1         952      cmp #"Q"
45F8 F0 1C         953      beq >3
45FA              954      ;
45FA C9 C4         955      cmp #"D"
45FC F0 05         956      beq >2
45FE              957      ;
45FE 20 F5 4F      958      ^0    jsr ERASTEMP
4601 90 D7         959      bcc <1          ; always taken
4603              960      ;
4603 20 1C 4A      961      ^2    jsr CHKDRAW
4606 F0 F6         962      beq <0
4608              963      ;
4608 EE 30 5D      964      inc NDXTEMP
460B EE 30 5D      965      inc NDXTEMP
460E              966      ;
460E 20 0E 49      967      jsr COPYDRAW
4611              968      ;
4611 20 7F 5A      969      jsr MYBELL
4614 F0 C4         970      beq <1          ; always taken
4616              971      ;
4616 AE 30 5D      972      ^3    ldx NDXTEMP
4619 E0 01         973      cpx #1
461B F0 03         974      beq >4
461D              975      ;
461D 20 F3 48      976      jsr COPYSHAP
4620              977      ;
4620 20 5C 49      978      ^4    jsr REFRESH
4623 20 04 5A      979      jsr PRESKEY
4626              980      ;
4626 4C 4A 40      981      jmp DODRAW
4629              982      ;
4629              983      ;
4629 4C 12 40      984      DODREXIT jmp DOMAIN

```

```
462C          985  ;  
462C          986  ;
```

```
BSAVE SEG01,A$0900,B,L$062C
```

```
462C          987          usr SEG01  
462C          988  ;  
462C          989  ;  
462C          990          icl "ICON2.L"
```

```
LLOAD ICON2.L,A$4000
```



```
462C          1          ttl "ICON Maker Source Code, ICON2.L"
462C          2          ;
462C          3          ;
462C          4          ; ICON2.L
462C          5          ;
462C          6          ;
462C          7          obj $900
462C          8          usr
462C          9          ;
462C         10          ;
462C A0 7C      11 INITPGM ldy #VSNBUFR
462E A9 5D      12         lda /VSNBUFR
4630          13          ;
4630 20 1C 4B   14         jsr READVSN
4633          15          ;
4633 20 8D 5A   16         jsr PRINT
4636 53 01      17         byt SCRNCMD,HOMESCRN
4638 55 00      18         byt CNTRCMD,DIRECT
463A C1 F0 F0   19         asc "Apple ][ ICON Maker"
463D EC E5 A0
4640 DD DB A0
4643 C9 C3 CF
4646 CE A0 CD
4649 E1 EB E5
464C F2
464D 8D 8D      20         byt RETURN,RETURN
464F 55 01      21         byt CNTRCMD,INDIRECT
4651 7C 5D      22         adr VSNBUFR
4653 50          23         byt RTNCMD
4654          24          ;
4654 20 8D 5A   25         jsr PRINT
4657 00 66      26         hex 0066
4659 D3 E5 EC   27         asc "Select WIDTH of ICON Window:"
465C E5 E3 F4
465F A0 D7 C9
4662 C4 D4 C8
4665 A0 EF E6
4668 A0 C9 C3
466B CF CE A0
466E D7 E9 EE
4671 E4 EF F7
4674 BA
4675 00 68      28         hex 0068
4677 50          29         byt RTNCMD
4678          30          ;
4678 20 2A 4B   31         jsr INITWID
467B 8D 83 47   32         sta WIDEMOD
467E          33          ;
467E 20 8D 5A   34         jsr PRINT
4681 00 6B      35         hex 006B
4683 D3 E5 EC   36         asc "Select HEIGHT of ICON Window:"
4686 E5 E3 F4
4689 A0 C8 C5
468C C9 C7 C8
468F D4 A0 EF
4692 E6 A0 C9
4695 C3 CF CE
4698 A0 D7 E9
469B EE E4 EF
469E F7 BA
```

```

46A0 00 6D      37      hex 006D
46A2 50        38      byt RTNCMD
46A3          39      ;
46A3 20 2A 4B   40      jsr INITWID
46A6 8D 84 47   41      sta HIGHMOD
46A9          42      ;
46A9 20 8D 5A   43      jsr PRINT
46AC 00 70      44      hex 0070
46AE D3 E5 EC   45      asc "Select THICKNESS of ICON Window Frame:"
46B1 E5 E3 F4
46B4 A0 D4 C8
46B7 C9 C3 CB
46BA CE C5 D3
46BD D3 A0 EF
46C0 E6 A0 C9
46C3 C3 CF CE
46C6 A0 D7 E9
46C9 EE E4 EF
46CC F7 A0 C6
46CF F2 E1 ED
46D2 E5 BA
46D4 72        46      hex 72
46D5 50        47      byt RTNCMD
46D6          48      ;
46D6 20 BE 4B   49      jsr INITFRM
46D9 8D 86 47   50      sta FRWIDMOD
46DC          51      ;
46DC 20 44 4C   52      jsr XSHIFT
46DF 8D 2A 5D   53      sta NXSHIFT
46E2          54      ;
46E2 18        55      clc
46E3          56      ;
46E3 69 70      57      adc #XCOOR0
46E5 8D 7F 47   58      sta XCOORMOD
46E8          59      ;
46E8 A9 38      60      lda #YCOOR0
46EA 8D 81 47   61      sta YCOORMOD
46ED          62      ;
46ED A2 7A      63      ldx #INITCMDS
46EF A9 47      64      lda /INITCMDS
46F1          65      ;
46F1 20 FE 4F   66      jsr ICONPROC
46F4          67      ;
46F4 A0 00      68      ldy #SCRNPAGE
46F6 84 EE      69      sty GENPTR
46F8          70      ;
46F8 A9 20      71      lda /SCRNPAGE
46FA 85 EF      72      sta GENPTR+1
46FC          73      ;
46FC A2 20      74      ldx /SCRNSIZE
46FE 98        75      tya
46FF          76      ;
46FF 91 EE      77      ^1 sta (GENPTR),Y
4701          78      ;
4701 C8        79      iny
4702 D0 FB      80      bne <1
4704          81      ;
4704 E6 EF      82      inc GENPTR+1
4706          83      ;
4706 CA        84      dex
4707 D0 F6      85      bne <1

```

```

4709          86 ;
4709 AC FA BF 87      ldy INITVAL
470C AD FB BF 88      lda INITVAL+1
470F          89 ;
470F 84 EE 90      sty GENPTR
4711 85 EF 91      sta GENPTR+1
4713          92 ;
4713 A0 04 93      ldy #ERRORNDX
4715          94 ;
4715 B1 EE 95      lda (GENPTR),Y
4717 8D 43 5D 96      sta SAVROMER
471A          97 ;
471A A9 F9 98      lda #DISKERR
471C 91 EE 99      sta (GENPTR),Y
471E          100 ;
471E C8 101      iny
471F          102 ;
471F B1 EE 103      lda (GENPTR),Y
4721 8D 44 5D 104      sta SAVROMER+1
4724          105 ;
4724 A9 4A 106      lda /DISKERR
4726 91 EE 107      sta (GENPTR),Y
4728          108 ;
4728 A2 FF 109      ldx #NEGONE
472A 86 D8 110      stx ASONERR
472C          111 ;
472C E8 112      inx
472D 86 33 113      stx PROMPT
472F 86 76 114      stx ASRUN
4731          115 ;
4731 AD 57 C0 116      lda HIRESO
4734 AD 54 C0 117      lda TEXTPAGE
4737 AD 53 C0 118      lda MIXEDON
473A AD 50 C0 119      lda TEXTOFF
473D          120 ;
473D 20 58 FC 121      jsr HOME
4740          122 ;
4740          123 ;
4740 20 73 52 124      INITBUFR jsr HPLT
4743          125 ;
4743 A2 96 126      ldx #FRAME
4745 A9 5E 127      lda /FRAME
4747          128 ;
4747 20 FE 4F 129      jsr ICONPROC
474A          130 ;
474A A2 00 131      ldx #ZERO
474C A9 FF 132      lda #GREXTCMD
474E          133 ;
474E 9D 00 61 134      ^1 sta ICONBUFR,X
4751 9D 00 62 135      sta ICONBUFR+PAGESIZE,X
4754          136 ;
4754 E8 137      inx
4755 D0 F7 138      bne <1
4757          139 ;
4757 A9 F0 140      lda #COLORCMD
4759 8D 00 61 141      sta ICONBUFR
475C          142 ;
475C A9 03 143      lda #WHITE1
475E 8D 28 5D 144      sta CURCOLOR
4761 8D 01 61 145      sta ICONBUFR+1
4764          146 ;

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```

4764 A9 FF      147      lda #GREXTCMD
4766 8D 02 61    148      sta ICONBUFR+2
4769              149      ;
4769 A2 02      150      ldx #ICONBUFR+2
476B A0 00      151      ldY #ICONBUFR
476D A9 61      152      lda /ICONBUFR
476F              153      ;
476F 8E 3B 5D    154      stx NDXICON
4772 8C 3C 5D    155      sty NDXICON+1
4775              156      ;
4775 84 EC      157      sty ICONPTR
4777 85 ED      158      sta ICONPTR+1
4779              159      ;
4779 60          160      rts
477A              161      ;
477A              162      ;
477A              163      ; Initialization commands that define the placement and the
477A              164      ; size of the ICON window.
477A              165      ;
477A F0          166      INITCMDs byt COLORCMD
477B 03          167      byt WHITE1
477C              168      ;
477C F9          169      byt GRPAGCMD
477D 20          170      hby SCRNPAGE          ; select graphics page
477E              171      ;
477E FA          172      byt GROFFCMD
477F FF          173      XCOORMOD byt NEGONE
4780 00          174      byt ZERO
4781 FF          175      YCOORMOD byt NEGONE
4782              176      ;
4782 FB          177      byt GRSIZCMD
4783 FF          178      WIDEMOD byt NEGONE
4784 FF          179      HIGHMOD byt NEGONE
4785              180      ;
4785 FC          181      byt GRWIDCMD
4786 FF          182      FRWIDMOD byt NEGONE
4787              183      ;
4787 FF          184      byt GREXTCMD
4788              185      ;
4788              186      ;
4788              187      ; Print MAIN MENU and wait for menu option number. If
4788              188      ; ESCAPE is entered, return to caller.
4788              189      ;
4788 20 8D 5A     190      MAINMENU jsr PRINT
478B 00 74       191      hex 0074
478D 54 01       192      byt CLRCMD,EOPCLR
478F CD C1 C9    193      asc "MAIN"
4792 CE          194
4793 09          194      hex 09
4794 B1 AD C4     195      asc "1-Draw"
4797 F2 E1 F7     196
479A 13          196      hex 13
479B B4 AD CC     197      asc "4-Load"
479E EF E1 E4     198
47A1 1D          198      hex 1D
47A2 B7 AD D0     199      asc "7-Print"
47A5 F2 E9 EE     200
47A8 F4          200
47A9 8D          200      byt RETURN
47AA CD C5 CE     201      asc "MENU"
47AD D5          201

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```

47AE 09          202          hex 09
47AF B2 AD C5    203          asc "2-Edit"
47B2 E4 E9 F4
47B5 13          204          hex 13
47B6 B5 AD D3    205          asc "5-Save"
47B9 E1 F6 E5
47BC 1D          206          hex 1D
47BD B8 AD D2    207          asc "8-Refresh"
47C0 E5 E6 F2
47C3 E5 F3 E8
47C6 8D          208          byt RETURN
47C7 09          209          hex 09
47C8 B3 AD CE    210          asc "3-New"
47CB E5 F7
47CD 13          211          hex 13
47CE B6 AD CC    212          asc "6-List"
47D1 E9 F3 F4
47D4 1D          213          hex 1D
47D5 B9 AD D1    214          asc "9-Quit"
47D8 F5 E9 F4
47DB 8D          215          byt RETURN
47DC 50          216          byt RTNCMD
47DD            217          ;
47DD 4C 90 48    218          jmp MENUSELC
47E0            219          ;
47E0            220          ;
47E0            221          ; Print DRAW MENU and wait for menu option number.  If
47E0            222          ; ESCAPE is entered, return to caller.
47E0            223          ;
47E0 20 8D 5A    224          DRAWMENU jsr PRINT
47E3 00 74       225          hex 0074
47E5 54 01       226          byt CLRCMD,EOPCLR
47E7 C4 D2 C1    227          asc "DRAW"
47EA D7
47EB 09          228          hex 09
47EC B1 AD C3    229          asc "1-Color"
47EF EF EC EF
47F2 F2
47F3 13          230          hex 13
47F4 B4 AD C4    231          asc "4-Diag"
47F7 E9 E1 E7
47FA 1D          232          hex 1D
47FB B7 AD D0    233          asc "7-Parallel"
47FE E1 F2 E1
4801 EC EC E5
4804 EC
4805 8D          234          byt RETURN
4806 CD C5 CE    235          asc "MENU"
4809 D5
480A 09          236          hex 09
480B B2 AD C8    237          asc "2-Horiz"
480E EF F2 E9
4811 FA
4812 13          238          hex 13
4813 B5 AD C3    239          asc "5-Curve"
4816 F5 F2 F6
4819 E5
481A 1D          240          hex 1D
481B B8 AD C4    241          asc "8-Dots"
481E EF F4 F3
4821 8D          242          byt RETURN

```

```

4822 09          243          hex 09
4823 B3 AD D6    244          asc "3-Vert"
4826 E5 F2 F4
4829 13          245          hex 13
482A B6 AD C2    246          asc "6-Box"
482D EF F8
482F 1D          247          hex 1D
4830 B9 AD CC    248          asc "9-Leave"
4833 E5 E1 F6
4836 E5
4837 8D          249          byt RETURN
4838 50          250          byt RTNCMD
4839          251          ;
4839 4C 90 48    252          jmp MENUSELC
483C          253          ;
483C          254          ;
483C          255          ; Print COLOR MENU and wait for menu option number.  If
483C          256          ; ESCAPE is entered, return to caller.
483C          257          ;
483C 20 8D 5A    258  COLRMENU jsr PRINT
483F 00 74      259          hex 0074
4841 54 01      260          byt CLRCMD,EOPCLR
4843 C3 CF CC    261          asc "COLOR"
4846 CF D2
4848 09          262          hex 09
4849 B1 AD       263          asc "1-"
484B 56 00      264          byt BUFRCMD,DIRECT
484D 9B 5D      265          adr COLOR0
484F 13         266          hex 13
4850 B4 AD       267          asc "4-"
4852 56 00      268          byt BUFRCMD,DIRECT
4854 AF 5D      269          adr COLOR3
4856 1D         270          hex 1D
4857 B7 AD       271          asc "7-"
4859 56 00      272          byt BUFRCMD,DIRECT
485B C4 5D      273          adr COLOR6
485D 8D         274          byt RETURN
485E CD C5 CE    275          asc "MENU"
4861 D5
4862 09          276          hex 09
4863 B2 AD       277          asc "2-"
4865 56 00      278          byt BUFRCMD,DIRECT
4867 A2 5D      279          adr COLOR1
4869 13         280          hex 13
486A B5 AD       281          asc "5-"
486C 56 00      282          byt BUFRCMD,DIRECT
486E B6 5D      283          adr COLOR4
4870 1D         284          hex 1D
4871 B8 AD       285          asc "8-"
4873 56 00      286          byt BUFRCMD,DIRECT
4875 C9 5D      287          adr COLOR7
4877 8D         288          byt RETURN
4878 09          289          hex 09
4879 B3 AD       290          asc "3-"
487B 56 00      291          byt BUFRCMD,DIRECT
487D A8 5D      292          adr COLOR2
487F 13         293          hex 13
4880 B6 AD       294          asc "6-"
4882 56 00      295          byt BUFRCMD,DIRECT
4884 BD 5D      296          adr COLOR5
4886 1D         297          hex 1D

```

```

4887 B9 AD CC      298          asc "9-Leave"
488A E5 E1 F6
488D E5
488E 8D          299          byt RETURN
488F 50          300          byt RTNCMD
4890          301          ;
4890          302          ;
4890 20 8D 5A     303  MENUSELC jsr PRINT
4893 00 77       304          hex 0077
4895 54 00       305          byt CLRCMD,EOLCLR
4897 C3 CD C4    306          asc "CMD>"
489A BE
489B 50          307          byt RTNCMD
489C          308          ;
489C 20 C9 58     309          jsr GETDEC1
489F B0 0E       310          bcs >1
48A1          311          ;
48A1 AD 5F 5D     312          lda DECVALS
48A4 C9 01       313          cmp #1
48A6 90 E8       314          bcc MENUSELC
48A8          315          ;
48A8 C9 0A       316          cmp #9+1
48AA B0 E4       317          bcs MENUSELC
48AC          318          ;
48AC 8D 27 5D     319          sta OPTION
48AF          320          ;
48AF 60          321          ^1      rts
48B0          322          ;
48B0          323          ;
48B0 A2 35       324  CLRFRAME ldx #53
48B2          325          ;
48B2 BD 0A 54     326          ^1      lda YBASEL,X
48B5 85 26       327          sta GBAS
48B7          328          ;
48B7 BD CA 54     329          lda YBASEH,X
48BA 05 E6       330          ora HPAG
48BC 85 27       331          sta GBAS+1
48BE          332          ;
48BE A9 00       333          lda #ZERO
48C0          334          ;
48C0 A0 10       335          ldy #16
48C2          336          ;
48C2 91 26       337          ^2      sta (GBAS),Y
48C4          338          ;
48C4 C8          339          iny
48C5          340          ;
48C5 C0 18       341          cpy #23+1
48C7 D0 F9       342          bne <2
48C9          343          ;
48C9 E8          344          inx
48CA          345          ;
48CA E0 6B       346          cpx #106+1
48CC D0 E4       347          bne <1
48CE          348          ;
48CE 60          349          rts
48CF          350          ;
48CF          351          ;
48CF          352          ; Copy ICONBUFR to TEMPBUFR.
48CF          353          ;
48CF A0 00       354  COPYICON ldy #ZERO
48D1          355          ;

```

```

48D1 B9 00 61    356 ^1      lda ICONBUFR,Y
48D4 99 00 5F    357      sta TEMPBUFR,Y
48D7              358 ;
48D7 B9 00 62    359      lda ICONBUFR+PAGESIZE,Y
48DA 99 00 60    360      sta TEMPBUFR+PAGESIZE,Y
48DD              361 ;
48DD C8          362      iny
48DE D0 F1      363      bne <1
48E0              364 ;
48E0 60          365      rts
48E1              366 ;
48E1              367 ;
48E1              368 ; Copy TEMPBUFR to ICONBUFR.
48E1              369 ;
48E1 A0 00      370 COPYTEMP ldy #ZERO
48E3              371 ;
48E3 B9 00 5F    372 ^1      lda TEMPBUFR,Y
48E6 99 00 61    373      sta ICONBUFR,Y
48E9              374 ;
48E9 B9 00 60    375      lda TEMPBUFR+PAGESIZE,Y
48EC 99 00 62    376      sta ICONBUFR+PAGESIZE,Y
48EF              377 ;
48EF C8          378      iny
48F0 D0 F1      379      bne <1
48F2              380 ;
48F2 60          381      rts
48F3              382 ;
48F3              383 ;
48F3              384 ; Copy Shape to ICONBUFR.  Terminate shape using the
48F3              385 ; GREXTCMD variable.
48F3              386 ;
48F3 A2 00      387 COPYSHAP ldx #ZERO
48F5 AC 3B 5D    388      ldy NDXICON
48F8              389 ;
48F8 BD 00 5F    390 ^1      lda TEMPBUFR,X
48FB 99 00 61    391      sta ICONBUFR,Y
48FE              392 ;
48FE E8          393      inx
48FF C8          394      iny
4900              395 ;
4900 EC 30 5D    396      cpx NDXTEMP
4903 D0 F3      397      bne <1
4905              398 ;
4905 A9 FF      399      lda #GREXTCMD
4907 99 00 61    400      sta ICONBUFR,Y
490A              401 ;
490A 8C 3B 5D    402      sty NDXICON
490D              403 ;
490D 60          404      rts
490E              405 ;
490E              406 ;
490E              407 ; Copy XDRAW to XDRAW0 and YDRAW to YDRAW0.
490E              408 ;
490E AD 31 5D    409 COPYDRAW lda XDRAW
4911 8D 33 5D    410      sta XDRAW0
4914              411 ;
4914 AD 32 5D    412      lda YDRAW
4917 8D 34 5D    413      sta YDRAW0
491A              414 ;
491A 60          415      rts
491B              416 ;

```



```

491B          417 ;
491B A0 00    418 LISTBUFR ldy #ICONBUFR
491D A9 61    419          lda /ICONBUFR
491F          420 ;
491F 84 EE    421          sty GENPTR
4921 85 EF    422          sta GENPTR+1
4923          423 ;
4923 20 4E 49 424          jsr NEXTBUFR
4926          425 ;
4926 20 8D 5A 426 ^1          jsr PRINT
4929 8D        427          byt RETURN
492A A0 C8 C5 428          asc " HEX "
492D D8 A0
492F 58        429          byt BYT1CMD
4930 2C 5D     430          adr CONTENT
4932 50        431          byt RTNCMD
4933          432 ;
4933 AD 2C 5D  433          lda CONTENT
4936 C9 FF     434          cmp #GREXTCMD
4938 F0 10     435          beq >3
493A          436 ;
493A 20 4E 49 437 ^2          jsr NEXTBUFR
493D          438 ;
493D C9 F0     439          cmp #COLORCMD
493F B0 E5     440          bcs <1
4941          441 ;
4941 20 8D 5A  442          jsr PRINT
4944 58        443          byt BYT1CMD
4945 2C 5D     444          adr CONTENT
4947 50        445          byt RTNCMD
4948          446 ;
4948 90 F0     447          bcc <2                ; always taken
494A          448 ;
494A 20 8E FD  449 ^3          jsr CROUT
494D          450 ;
494D 60        451          rts
494E          452 ;
494E          453 ;
494E A0 00     454 NEXTBUFR ldy #ZERO
4950          455 ;
4950 B1 EE     456          lda (GENPTR),Y
4952 8D 2C 5D  457          sta CONTENT
4955          458 ;
4955 E6 EE     459          inc GENPTR
4957 D0 02     460          bne >1
4959          461 ;
4959 E6 EF     462          inc GENPTR+1
495B          463 ;
495B 60        464 ^1          rts
495C          465 ;
495C          466 ;
495C 20 B0 48  467 REFRESH  jsr CLRFRAME
495F 20 73 52  468          jsr HPLOT
4962          469 ;
4962 A2 96     470          ldx #FRAME
4964 A9 5E     471          lda /FRAME
4966          472 ;
4966 20 FE 4F  473          jsr ICONPROC
4969          474 ;
4969 4C D9 4E  475          jmp SHOWICON
496C          476 ;

```

```

496C      477 ;
496C 20 8D 5A 478 SELECT      jsr PRINT
496F 09 76    479             hex 0976
4971 54 00    480             byt CLRCMD,EOLCLR
4973 CE BD CE 481             asc "N=Next  E=Erase"
4976 E5 F8 F4
4979 A0 A0 C5
497C BD C5 F2
497F E1 F3 E5
4982 09 77    482             hex 0977
4984 54 00    483             byt CLRCMD,EOLCLR
4986 C4 BD C4 484             asc "D=Done"
4989 EF EE E5
498C 50        485             byt RTNCMD
498D          486 ;
498D A9 00    487             lda #ZERO
498F 8D 3B 5D 488             sta NDXICON
4992          489 ;
4992          490 SELECT1:
4992 A0 00    491 ^1             ldy #ICONBUFR
4994 A9 61    492             lda /ICONBUFR
4996          493 ;
4996 84 E8    494             sty BUFRPTR
4998 85 E9    495             sta BUFRPTR+1
499A          496 ;
499A AC 3B 5D 497             ldy NDXICON
499D 8C 30 5D 498             sty NDXTEMP
49A0 84 E5    499             sty ICONNDX
49A2          500 ;
49A2 20 98 50 501             jsr RD1ICON
49A5 90 72    502             bcc >9
49A7          503 ;
49A7 48        504             pha
49A8          505 ;
49A8 20 76 4A 506             jsr SHOWSHAP
49AB          507 ;
49AB 68        508             pla
49AC C9 F8    509             cmp #CHAINCMD
49AE F0 68    510             beq >8
49B0          511 ;
49B0 C9 FF    512             cmp #GREXTCMD
49B2 F0 64    513             beq >8
49B4          514 ;
49B4 EE 30 5D 515 ^2             inc NDXTEMP
49B7          516 ;
49B7 20 98 50 517             jsr RD1ICON
49BA 90 F8    518             bcc <2
49BC          519 ;
49BC AE 3B 5D 520             ldx NDXICON
49BF A0 00    521             ldy #ZERO
49C1          522 ;
49C1 BD 00 61 523 ^3             lda ICONBUFR,X
49C4 99 00 5F 524             sta TEMPBUFR,Y
49C7          525 ;
49C7 E8        526             inx
49C8 C8        527             iny
49C9          528 ;
49C9 EC 30 5D 529             cpx NDXTEMP
49CC D0 F3    530             bne <3
49CE          531 ;
49CE A9 FF    532             lda #GREXTCMD

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```

49D0 99 00 5F      533      sta TEMPBUFR,Y
49D3              534      ;
49D3 20 E0 4E      535      ^4      jsr SHOWTEMP
49D6              536      ;
49D6 20 3A 5A      537      jsr CHECKKEY
49D9 B0 3D          538      bcs >8
49DB              539      ;
49DB C9 C5          540      cmp #"E"
49DD F0 13          541      beq >5
49DF              542      ;
49DF C9 CE          543      cmp #"N"
49E1 F0 2C          544      beq >7
49E3              545      ;
49E3 C9 C4          546      cmp #"D"
49E5 F0 31          547      beq >8
49E7              548      ;
49E7 20 EE 4A      549      jsr DELAY
49EA 20 F5 4F      550      jsr ERASTEMP
49ED              551      ;
49ED 20 EE 4A      552      jsr DELAY
49F0 F0 E1          553      beq <4      ; always taken
49F2              554      ;
49F2 20 F5 4F      555      ^5      jsr ERASTEMP
49F5 20 7F 5A      556      jsr MYBELL
49F8              557      ;
49F8 AE 30 5D      558      ldx NDXTEMP
49FB AC 3B 5D      559      ldy NDXICON
49FE              560      ;
49FE BD 00 61      561      ^6      lda ICONBUFR,X
4A01 99 00 61      562      sta ICONBUFR,Y
4A04              563      ;
4A04 E8            564      inx
4A05 C8            565      iny
4A06              566      ;
4A06 C9 FF          567      cmp #GREXTCMD
4A08 D0 F4          568      bne <6
4A0A              569      ;
4A0A 20 D9 4E      570      jsr SHOWICON
4A0D 90 83          571      bcc <1      ; always taken
4A0F              572      ;
4A0F AD 30 5D      573      ^7      lda NDXTEMP
4A12 8D 3B 5D      574      sta NDXICON
4A15              575      ;
4A15 4C 92 49      576      jmp SELECT1
4A18              577      ;
4A18 60            578      ^8      rts
4A19              579      ;
4A19 4C 2C 50      580      ^9      jmp ICONERR
4A1C              581      ;
4A1C              582      ;
4A1C              583      ; Check if XDRAW and YDRAW have changed.
4A1C              584      ;
4A1C AD 31 5D      585      CHKDRAW  lda XDRAW
4A1F CD 33 5D      586      cmp XDRAW0
4A22 D0 06          587      bne >1
4A24              588      ;
4A24 AD 32 5D      589      lda YDRAW
4A27 CD 34 5D      590      cmp YDRAW0
4A2A              591      ;
4A2A 60            592      ^1      rts
4A2B              593      ;

```

```

4A2B          594 ;
4A2B AD 38 5D 595 CHKDELTA lda DELTAVAL
4A2E 20 A1 50 596 jsr DELTA
4A31          597 ;
4A31 85 18    598 sta DX
4A33 84 19    599 sty DY
4A35          600 ;
4A35 AD 01 5F 601 lda TEMPBUFR+1 ; start X
4A38          602 ;
4A38 20 54 4A 603 jsr ADDINDX
4A3B B0 16    604 bcs >1
4A3D          605 ;
4A3D AD 02 5F 606 lda TEMPBUFR+2 ; start Y
4A40          607 ;
4A40 20 65 4A 608 jsr ADDINDY
4A43 B0 0E    609 bcs >1
4A45          610 ;
4A45 AD 03 5F 611 lda TEMPBUFR+3 ; end X
4A48          612 ;
4A48 20 54 4A 613 jsr ADDINDX
4A4B B0 06    614 bcs >1
4A4D          615 ;
4A4D AD 04 5F 616 lda TEMPBUFR+4 ; end Y
4A50          617 ;
4A50 20 65 4A 618 jsr ADDINDY
4A53          619 ;
4A53 60       620 ^1 rts
4A54          621 ;
4A54          622 ;
4A54 AE 4D 5D 623 ADDINDX ldx LINECNT
4A57          624 ;
4A57 18       625 ^1 clc
4A58          626 ;
4A58 65 18    627 adc DX
4A5A          628 ;
4A5A CA       629 dex
4A5B D0 FA    630 bne <1
4A5D          631 ;
4A5D 38       632 sec
4A5E          633 ;
4A5E AA       634 tax
4A5F 30 03    635 bmi >2
4A61          636 ;
4A61 EC 2D 5D 637 cpx ICONWIDE
4A64          638 ;
4A64 60       639 ^2 rts
4A65          640 ;
4A65          641 ;
4A65 AC 4D 5D 642 ADDINDY ldy LINECNT
4A68          643 ;
4A68 18       644 ^1 clc
4A69          645 ;
4A69 65 19    646 adc DY
4A6B          647 ;
4A6B 88       648 dey
4A6C D0 FA    649 bne <1
4A6E          650 ;
4A6E 38       651 sec
4A6F          652 ;
4A6F A8       653 tay
4A70 30 03    654 bmi >2

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```

4A72      655 ;
4A72 CC 2E 5D 656      cpy ICONHIGH
4A75      657 ;
4A75 60      658 ^2      rts
4A76      659 ;
4A76      660 ;
4A76 29 0F    661 SHOWSHAP and #15
4A78 AA      662      tax
4A79      663 ;
4A79 BD 76 5E 664      lda SHAPTBLH,X
4A7C 8D 41 5D 665      sta SHAPEADR
4A7F      666 ;
4A7F BD 86 5E 667      lda SHAPTBLH,X
4A82 8D 42 5D 668      sta SHAPEADR+1
4A85      669 ;
4A85 20 8D 5A 670      jsr PRINT
4A88 09 74      671      hex 0974
4A8A 54 00      672      byt CLRCMD,EOLCLR
4A8C D3 C8 C1 673      asc "SHAPE="
4A8F D0 C5 BD
4A92 56 01      674      byt BUFRCMD,INDIRECT
4A94 41 5D      675      adr SHAPEADR
4A96 50      676      byt RTNCMD
4A97      677 ;
4A97 60      678      rts
4A98      679 ;
4A98      680 ;
4A98 F0 22      681 SAVEFILE beq >1
4A9A      682 ;
4A9A 20 8D 5A 683      jsr PRINT
4A9D 00 60      684      hex 0060
4A9F 8D 84      685      byt RETURN,CTRLD
4AA1 C2 D3 C1 686      asc "BSAVE "
4AA4 D6 C5 A0
4AA7 56 00      687      byt BUFRCMD,DIRECT
4AA9 63 5D      688      adr NAMEBUFR
4AAB AC C1 A4 689      asc ",A$"
4AAE 5B 00      690      byt ADRCMD,DIRECT
4AB0 00 61      691      adr ICONBUFR
4AB2 AC CC A4 692      asc ",L$"
4AB5 5B 01      693      byt ADRCMD,INDIRECT
4AB7 EE 00      694      adr GENPTR
4AB9 8D      695      byt RETURN
4ABA 50      696      byt RTNCMD
4ABB      697 ;
4ABB 60      698      rts
4ABC      699 ;
4ABC 20 8D 5A 700      ^1      jsr PRINT
4ABF 00 60      701      hex 0060
4AC1 8D 84      702      byt RETURN,CTRLD
4AC3 CF D0 C5 703      asc "OPEN "
4AC6 CE A0
4AC8 56 00      704      byt BUFRCMD,DIRECT
4ACA 63 5D      705      adr NAMEBUFR
4ACC 8D 84      706      byt RETURN,CTRLD
4ACE D7 D2 C9 707      asc "WRITE "
4AD1 D4 C5 A0
4AD4 56 00      708      byt BUFRCMD,DIRECT
4AD6 63 5D      709      adr NAMEBUFR
4AD8 8D      710      byt RETURN
4AD9 50      711      byt RTNCMD

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4ADA          712 ;
4ADA 20 1B 49 713      jsr LISTBUFR
4ADD          714 ;
4ADD 20 8D 5A 715      jsr PRINT
4AE0 84       716      byt CTRLD
4AE1 C3 CC CF 717      asc "CLOSE "
4AE4 D3 C5 A0
4AE7 56 00     718      byt BUFRCMD,DIRECT
4AE9 63 5D     719      adr NAMEBUFR
4AEB 8D        720      byt RETURN
4AEC 50        721      byt RTNCMD
4AED          722 ;
4AED 60        723      rts
4AEE          724 ;
4AEE          725 ;
4AEE          726 ; Delay 16 * 9.823 ms = 157.168 ms
4AEE          727 ;
4AEE A2 10     728 DELAY      ldx #16
4AF0          729 ;
4AF0 A9 3C     730 ^1      lda #60
4AF2 20 A8 FC 731      jsr WAIT
4AF5          732 ;
4AF5 CA        733      dex
4AF6 D0 F8     734      bne <1
4AF8          735 ;
4AF8 60        736      rts
4AF9          737 ;
4AF9          738 ;
4AF9 8E 1F 5D 739 DISKERR  stx SAVX
4AFC          740 ;
4AFC 20 8D 5A 741      jsr PRINT
4AFF 87        742      byt BELLCHAR
4B00 09 76     743      hex 0976
4B02 C4 E9 F3 744      asc "Disk Error:  "
4B05 EB A0 C5
4B08 F2 F2 EF
4B0B F2 BA A0
4B0E A0
4B0F 50        745      byt RTNCMD
4B10          746 ;
4B10 AE 1F 5D 747      ldx SAVX
4B13 20 20 4B 748      jsr PRTERORR
4B16          749 ;
4B16 20 04 5A 750      jsr PRESKEY
4B19          751 ;
4B19 4C 12 40 752      jmp DOMAIN
4B1C          753 ;
4B1C          754 ;
4B1C 38        755 READVSN  sec
4B1D          756 ;
4B1D 6C E1 03 757      jmp (RDCLKVSN)
4B20          758 ;
4B20          759 ;
4B20 6C E8 03 760 PRTERORR jmp (PRTERADR)
4B23          761 ;
4B23          762 ;
4B23 2C 27 4B 763 MNGVAL  bit SETVFLAG      ; set 16-bit access
4B26 18        764      clc      ; read access
4B27 6C F4 BF 765 SETVFLAG jmp (MNGVALS)
4B2A          766 ;
4B2A          767 ;

```

BSAVE SEG02,A\$0900,B,L\$04FE

4B2A	768		usr SEG02
4B2A	769	;	
4B2A	770	;	
4B2A	771		icl "ICON3.L"

LLOAD ICON3.L,A\$4000

```

4B2A      1          ttl "ICON Maker Source Code, ICON3.L"
4B2A      2      ;
4B2A      3      ;
4B2A      4      ; ICON3.L
4B2A      5      ;
4B2A      6      ;
4B2A      7          obj $900
4B2A      8          usr
4B2A      9      ;
4B2A     10      ;
4B2A A9 00     11  INITWID  lda #ZERO
4B2C 8D 27 5D  12          sta OPTION
4B2F     13      ;
4B2F 20 94 4B  14          jsr SETWID
4B32     15      ;
4B32 20 8D 5A  16  SELCWID  jsr PRINT
4B35 06        17          hex 06
4B36 52        18          byt DISPCMD
4B37 00        19  WIDMOD0  byt NORMDISP
4B38 B3 B2     20          asc "32"
4B3A 52 00     21          byt DISPCMD,NORMDISP
4B3C 0C        22          hex 0C
4B3D 52        23          byt DISPCMD
4B3E 00        24  WIDMOD1  byt NORMDISP
4B3F B3 B6     25          asc "36"
4B41 52 00     26          byt DISPCMD,NORMDISP
4B43 12        27          hex 12
4B44 52        28          byt DISPCMD
4B45 00        29  WIDMOD2  byt NORMDISP
4B46 B4 B0     30          asc "40"
4B48 52 00     31          byt DISPCMD,NORMDISP
4B4A 18        32          hex 18
4B4B 52        33          byt DISPCMD
4B4C 00        34  WIDMOD3  byt NORMDISP
4B4D B4 B4     35          asc "44"
4B4F 52 00     36          byt DISPCMD,NORMDISP
4B51 1E        37          hex 1E
4B52 52        38          byt DISPCMD
4B53 00        39  WIDMOD4  byt NORMDISP
4B54 B4 B8     40          asc "48"
4B56 52 00     41          byt DISPCMD,NORMDISP
4B58 50        42          byt RTNCMD
4B59     43      ;
4B59 AE 27 5D  44          ldx OPTION
4B5C     45      ;
4B5C 20 1C 5A  46  ^1      jsr GETKEY
4B5F     47      ;
4B5F C9 9B     48          cmp #ESCAPE
4B61 F0 2E     49          beq >5
4B63     50      ;
4B63 C9 88     51          cmp #LARROW
4B65 D0 07     52          bne >2
4B67     53      ;
4B67 CA        54          dex
4B68 10 1C     55          bpl >4
4B6A     56      ;
4B6A A2 04     57          ldx #4
4B6C 10 18     58          bpl >4
4B6E     59      ;
4B6E C9 95     60  ^2      cmp #RARROW

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4B70 D0 09      61      bne >3
4B72           62      ;
4B72 E8         63      inx
4B73           64      ;
4B73 E0 05      65      cpx #5
4B75 90 0F      66      bcc >4
4B77           67      ;
4B77 A2 00      68      ldx #ZERO
4B79 10 0B      69      bpl >4
4B7B           70      ;
4B7B C9 8D      71      ^3      cmp #RETURN
4B7D D0 DD      72      bne <1
4B7F           73      ;
4B7F 20 A8 4B   74      jsr CLRWID
4B82           75      ;
4B82 BD B9 4B   76      lda NWIDTBL,X
4B85           77      ;
4B85 60         78      rts
4B86           79      ;
4B86 8E 27 5D   80      ^4      stx OPTION
4B89           81      ;
4B89 20 A8 4B   82      jsr CLRWID
4B8C 20 94 4B   83      jsr SETWID
4B8F           84      ;
4B8F 90 A1      85      bcc SELCWID      ; always taken
4B91           86      ;
4B91 4C 87 42   87      ^5      jmp DOQUIT
4B94           88      ;
4B94           89      ;
4B94 AD 27 5D   90      SETWID      lda OPTION
4B97 0A         91      asl
4B98 AA         92      tax
4B99           93      ;
4B99 BD AF 4B   94      lda WIDTBL,X
4B9C 8D AB 4B   95      sta WIDMOD+1
4B9F           96      ;
4B9F BD B0 4B   97      lda WIDTBL+1,X
4BA2 8D AC 4B   98      sta WIDMOD+2
4BA5           99      ;
4BA5 A9 01     100      lda #INVRDISP
4BA7           101      ;
4BA7 2C 00 00  102      bit *-*
4BAA           103      dfs !-2
4BA8           104      ;
4BA8 A9 00     105      CLRWID      lda #NORMDISP
4BAA           106      ;
4BAA 8D 37 4B  107      WIDMOD      sta WIDMOD0
4BAD           108      ;
4BAD 18        109      clc
4BAE           110      ;
4BAE 60        111      rts
4BAF           112      ;
4BAF           113      ;
4BAF 37 4B     114      WIDTBL      adr WIDMOD0
4BB1 3E 4B     115      adr WIDMOD1
4BB3 45 4B     116      adr WIDMOD2
4BB5 4C 4B     117      adr WIDMOD3
4BB7 53 4B     118      adr WIDMOD4
4BB9           119      ;
4BB9 20 24 28  120      NWIDTBL      hex 2024282C30
4BBC 2C 30

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```

4BBE          121 ;
4BBE          122 ;
4BBE A9 00    123 INITFRM  lda #ZERO
4BC0 8D 27 5D 124          sta OPTION
4BC3          125 ;
4BC3 20 1D 4C 126          jsr SETFRM
4BC6          127 ;
4BC6 20 8D 5A 128 SELCFRM  jsr PRINT
4BC9 06       129          hex 06
4BCA 52       130          byt DISPCMD
4BCB 00       131 FRMMOD0  byt NORMDISP
4BCC B0       132          asc "0"
4BCD 52 00    133          byt DISPCMD,NORMDISP
4BCF 0C       134          hex 0C
4BD0 52       135          byt DISPCMD
4BD1 00       136 FRMMOD1  byt NORMDISP
4BD2 B1       137          asc "1"
4BD3 52 00    138          byt DISPCMD,NORMDISP
4BD5 12       139          hex 12
4BD6 52       140          byt DISPCMD
4BD7 00       141 FRMMOD2  byt NORMDISP
4BD8 B2       142          asc "2"
4BD9 52 00    143          byt DISPCMD,NORMDISP
4BDB 18       144          hex 18
4BDC 52       145          byt DISPCMD
4BDD 00       146 FRMMOD3  byt NORMDISP
4BDE B3       147          asc "3"
4BDF 52 00    148          byt DISPCMD,NORMDISP
4BE1 50       149          byt RTNCMD
4BE2          150 ;
4BE2 AE 27 5D 151          ldx OPTION
4BE5          152 ;
4BE5 20 1C 5A 153 ^1      jsr GETKEY
4BE8          154 ;
4BE8 C9 9B    155          cmp #ESCAPE
4BEA F0 2E    156          beq >5
4BEC          157 ;
4BEC C9 88    158          cmp #LARROW
4BEE D0 07    159          bne >2
4BF0          160 ;
4BF0 CA       161          dex
4BF1 10 1C    162          bpl >4
4BF3          163 ;
4BF3 A2 03    164          ldx #3
4BF5 10 18    165          bpl >4
4BF7          166 ;
4BF7 C9 95    167 ^2      cmp #RARROW
4BF9 D0 09    168          bne >3
4BFB          169 ;
4BFB E8       170          inx
4BFC          171 ;
4BFC E0 04    172          cpx #4
4BFE 90 0F    173          bcc >4
4C00          174 ;
4C00 A2 00    175          ldx #ZERO
4C02 10 0B    176          bpl >4
4C04          177 ;
4C04 C9 8D    178 ^3      cmp #RETURN
4C06 D0 DD    179          bne <1
4C08          180 ;
4C08 20 31 4C 181          jsr CLRFRM

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```

4C0B      182 ;
4C0B BD 40 4C 183      lda NFRMTBL,X
4C0E      184 ;
4C0E 60      185      rts
4C0F      186 ;
4C0F 8E 27 5D 187 ^4      stx OPTION
4C12      188 ;
4C12 20 31 4C 189      jsr CLRFRM
4C15 20 1D 4C 190      jsr SETFRM
4C18      191 ;
4C18 90 AC      192      bcc SELCFRM          ; always taken
4C1A      193 ;
4C1A 4C 87 42 194 ^5      jmp DOQUIT
4C1D      195 ;
4C1D      196 ;
4C1D AD 27 5D 197 SETFRM      lda OPTION
4C20 0A      198      asl
4C21 AA      199      tax
4C22      200 ;
4C22 BD 38 4C 201      lda FRMTBL,X
4C25 8D 34 4C 202      sta FRMMOD+1
4C28      203 ;
4C28 BD 39 4C 204      lda FRMTBL+1,X
4C2B 8D 35 4C 205      sta FRMMOD+2
4C2E      206 ;
4C2E A9 01      207      lda #INVRDISP
4C30      208 ;
4C30 2C 00 00 209      bit *-*
4C33      210      dfs !-2
4C31      211 ;
4C31 A9 00      212 CLRFRM      lda #NORMDISP
4C33      213 ;
4C33 8D CB 4B 214 FRMMOD      sta FRMMOD0
4C36      215 ;
4C36 18      216      clc
4C37      217 ;
4C37 60      218      rts
4C38      219 ;
4C38      220 ;
4C38 CB 4B      221 FRMTBL      adr FRMMOD0
4C3A D1 4B      222      adr FRMMOD1
4C3C D7 4B      223      adr FRMMOD2
4C3E DD 4B      224      adr FRMMOD3
4C40      225 ;
4C40 00 01 02 226 NFRMTBL      hex 00010203
4C43 03
4C44      227 ;
4C44      228 ;
4C44 A9 00      229 XSHIFT      lda #ZERO
4C46 8D 27 5D 230      sta OPTION
4C49      231 ;
4C49 20 EA 4C 232      jsr SETXSFT
4C4C      233 ;
4C4C 20 8D 5A 234 SELCXST      jsr PRINT
4C4F 00 75      235      hex 0075
4C51 D8 A0 F3 236      asc "X shift:  "
4C54 E8 E9 E6
4C57 F4 BA A0
4C5A A0
4C5B 52      237      byt DISPCMD
4C5C 00      238 XSFTMOD0 byt NORMDISP

```

```
4C5D B0          239          asc  "0"
4C5E 52 00       240          byt  DISPCMD,NORMDISP
4C60 A0          241          asc  " "
4C61 52          242          byt  DISPCMD
4C62 00          243  XSFTMOD1 byt  NORMDISP
4C63 B1          244          asc  "1"
4C64 52 00       245          byt  DISPCMD,NORMDISP
4C66 A0          246          asc  " "
4C67 52          247          byt  DISPCMD
4C68 00          248  XSFTMOD2 byt  NORMDISP
4C69 B2          249          asc  "2"
4C6A 52 00       250          byt  DISPCMD,NORMDISP
4C6C A0          251          asc  " "
4C6D 52          252          byt  DISPCMD
4C6E 00          253  XSFTMOD3 byt  NORMDISP
4C6F B3          254          asc  "3"
4C70 52 00       255          byt  DISPCMD,NORMDISP
4C72 A0          256          asc  " "
4C73 52          257          byt  DISPCMD
4C74 00          258  XSFTMOD4 byt  NORMDISP
4C75 B4          259          asc  "4"
4C76 52 00       260          byt  DISPCMD,NORMDISP
4C78 A0          261          asc  " "
4C79 52          262          byt  DISPCMD
4C7A 00          263  XSFTMOD5 byt  NORMDISP
4C7B B5          264          asc  "5"
4C7C 52 00       265          byt  DISPCMD,NORMDISP
4C7E A0          266          asc  " "
4C7F 52          267          byt  DISPCMD
4C80 00          268  XSFTMOD6 byt  NORMDISP
4C81 B6          269          asc  "6"
4C82 52 00       270          byt  DISPCMD,NORMDISP
4C84 A0 A0       271          asc  " "
4C86 52          272          byt  DISPCMD
4C87 00          273  XSFTMOD7 byt  NORMDISP
4C88 B7          274          asc  "7"
4C89 52 00       275          byt  DISPCMD,NORMDISP
4C8B A0          276          asc  " "
4C8C 52          277          byt  DISPCMD
4C8D 00          278  XSFTMOD8 byt  NORMDISP
4C8E B8          279          asc  "8"
4C8F 52 00       280          byt  DISPCMD,NORMDISP
4C91 A0          281          asc  " "
4C92 52          282          byt  DISPCMD
4C93 00          283  XSFTMOD9 byt  NORMDISP
4C94 B9          284          asc  "9"
4C95 52 00       285          byt  DISPCMD,NORMDISP
4C97 A0          286          asc  " "
4C98            287  ;
4C98 52          288          byt  DISPCMD
4C99 00          289  XSFTMODA byt  NORMDISP
4C9A C1          290          asc  "A"
4C9B 52 00       291          byt  DISPCMD,NORMDISP
4C9D A0          292          asc  " "
4C9E 52          293          byt  DISPCMD
4C9F 00          294  XSFTMODB byt  NORMDISP
4CA0 C2          295          asc  "B"
4CA1 52 00       296          byt  DISPCMD,NORMDISP
4CA3 A0          297          asc  " "
4CA4 52          298          byt  DISPCMD
4CA5 00          299  XSFTMODC byt  NORMDISP
```

```

4CA6 C3          300          asc "C"
4CA7 52 00       301          byt DISPCMD,NORMDISP
4CA9 A0          302          asc " "
4CAA 52          303          byt DISPCMD
4CAB 00          304  XSFTMODD byt NORMDISP
4CAC C4          305          asc "D"
4CAD 52 00       306          byt DISPCMD,NORMDISP
4CAF 50          307          byt RTNCMD
4CB0             308          ;
4CB0 AE 27 5D    309          ldx OPTION
4CB3             310          ;
4CB3 20 1C 5A    311          ^1 jsr GETKEY
4CB6             312          ;
4CB6 C9 9B       313          cmp #ESCAPE
4CB8 F0 2D       314          beq >5
4CBA             315          ;
4CBA C9 88       316          cmp #LARROW
4CBC D0 07       317          bne >2
4CBE             318          ;
4CBE CA          319          dex
4CBF 10 1A       320          bpl >4
4CC1             321          ;
4CC1 A2 0D       322          ldx #13
4CC3 10 16       323          bpl >4
4CC5             324          ;
4CC5 C9 95       325          ^2 cmp #RARROW
4CC7 D0 09       326          bne >3
4CC9             327          ;
4CC9 E8          328          inx
4CCA             329          ;
4CCA E0 0E       330          cpx #14
4CCC 90 0D       331          bcc >4
4CCE             332          ;
4CCE A2 00       333          ldx #ZERO
4CD0 10 09       334          bpl >4
4CD2             335          ;
4CD2 C9 8D       336          ^3 cmp #RETURN
4CD4 D0 DD       337          bne <1
4CD6             338          ;
4CD6 20 FE 4C    339          jsr CLRXSFT
4CD9             340          ;
4CD9             341          ; lda NXSFTTBL,X
4CD9 8A          342          txa
4CDA             343          ;
4CDA 60          344          rts
4CDB             345          ;
4CDB 8E 27 5D    346          ^4 stx OPTION
4CDE             347          ;
4CDE 20 FE 4C    348          jsr CLRXSFT
4CE1 20 EA 4C    349          jsr SETXSFT
4CE4             350          ;
4CE4 4C 4C 4C    351          jmp SELCXST
4CE7             352          ;
4CE7 4C 87 42    353          ^5 jmp DOQUIT
4CEA             354          ;
4CEA             355          ;
4CEA AD 27 5D    356  SETXSFT lda OPTION
4CED 0A          357          asl
4CEE AA          358          tax
4CEF             359          ;
4CEF BD 05 4D    360          lda XSFTTBL,X

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```

4CF2 8D 01 4D    361          sta XSFTMOD+1
4CF5            362          ;
4CF5 BD 06 4D    363          lda XSFTTBL+1,X
4CF8 8D 02 4D    364          sta XSFTMOD+2
4CFB            365          ;
4CFB A9 01      366          lda #INVRDISP
4CFD            367          ;
4CFD 2C 00 00    368          bit *-*
4D00            369          dfs !-2
4CFE            370          ;
4CFE A9 00      371 CLRXSFT  lda #NORMDISP
4D00            372          ;
4D00 8D 5C 4C    373 XSFTMOD  sta XSFTMOD0
4D03            374          ;
4D03 18          375          clc
4D04            376          ;
4D04 60          377          rts
4D05            378          ;
4D05            379          ;
4D05 5C 4C      380 XSFTTBL  adr XSFTMOD0
4D07 62 4C      381          adr XSFTMOD1
4D09 68 4C      382          adr XSFTMOD2
4D0B 6E 4C      383          adr XSFTMOD3
4D0D 74 4C      384          adr XSFTMOD4
4D0F 7A 4C      385          adr XSFTMOD5
4D11 80 4C      386          adr XSFTMOD6
4D13 87 4C      387          adr XSFTMOD7
4D15 8D 4C      388          adr XSFTMOD8
4D17 93 4C      389          adr XSFTMOD9
4D19 99 4C      390          adr XSFTMODA
4D1B 9F 4C      391          adr XSFTMODB
4D1D A5 4C      392          adr XSFTMODC
4D1F AB 4C      393          adr XSFTMODD
4D21            394          ;
4D21            395          ;NXSFTTBL hex 0001020304
4D21            396          ;
4D21            397          ;
4D21            398          ; Get keypress.  If an Arrow Key was entered, process
4D21            399          ; TEMPBUFR for any absolute X or Y coordinate using DX and
4D21            400          ; DY.  If ESC or Q is entered, return with C-flag set.
4D21            401          ;
4D21 20 1C 5A    402 TEMPPROC jsr GETKEY
4D24            403          ;
4D24 A2 00      404          ldx #ZERO
4D26 A0 00      405          ldy #ZERO
4D28            406          ;
4D28 C9 9B      407          cmp #ESCAPE
4D2A F0 15      408          beq >1
4D2C            409          ;
4D2C C9 95      410          cmp #RARROW
4D2E F0 12      411          beq >2
4D30            412          ;
4D30 C9 8A      413          cmp #DARROW
4D32 F0 11      414          beq >3
4D34            415          ;
4D34 C9 88      416          cmp #LARROW
4D36 F0 10      417          beq >4
4D38            418          ;
4D38 C9 8B      419          cmp #UARROW
4D3A F0 0F      420          beq >5
4D3C            421          ;

```

```

4D3C C9 D1      422      cmp #"Q"
4D3E D0 E1      423      bne TEMPPROC
4D40            424      ;
4D40 18          425      clc
4D41            426      ;
4D41 60          427      ^1      rts
4D42            428      ;
4D42 E8          429      ^2      inx
4D43 D0 07       430      bne >6
4D45            431      ;
4D45 C8          432      ^3      iny
4D46 D0 04       433      bne >6
4D48            434      ;
4D48 CA          435      ^4      dex
4D49 D0 01       436      bne >6
4D4B            437      ;
4D4B 88          438      ^5      dey
4D4C            439      ;
4D4C 86 18       440      ^6      stx DX
4D4E 84 19       441      sty DY
4D50            442      ;
4D50            443      ;
4D50            444      ; Entry point to process any ICON shape structure. The
4D50            445      ; shape structure must be terminated with the GREXTCMD.
4D50            446      ;
4D50 A0 00       447      ldy #TEMPBUFR
4D52 A9 5F       448      lda /TEMPBUFR
4D54            449      ;
4D54 84 E8       450      sty BUFRPTR
4D56 85 E9       451      sta BUFRPTR+1
4D58            452      ;
4D58 A0 00       453      ldy #ZERO
4D5A 84 E5       454      sty ICONNDX
4D5C            455      ;
4D5C 20 98 50    456      TEMPROC1 jsr RD1ICON
4D5F 90 15       457      bcc >1
4D61            458      ;
4D61 29 0F       459      TEMPROC2 and #CMDMASK
4D63 AA          460      tax
4D64            461      ;
4D64 BD 7B 4D    462      lda EDITTBLL,X
4D67 8D 74 4D    463      sta TEMPMOD+1
4D6A            464      ;
4D6A BD 8B 4D    465      lda EDITTBLH,X
4D6D 8D 75 4D    466      sta TEMPMOD+2
4D70            467      ;
4D70 20 98 50    468      jsr RD1ICON
4D73            469      ;
4D73 4C 00 00    470      TEMPMOD jmp *-*
4D76            471      ;
4D76 20 2C 50    472      ^1      jsr ICONERR
4D79            473      ;
4D79 38          474      sec
4D7A            475      ;
4D7A 60          476      rts
4D7B            477      ;
4D7B            478      ;
4D7B            479      EDITTBLL:
4D7B 5C          480      byt TEMPROC1
4D7C B8          481      byt EDHORZ
4D7D C3          482      byt EDVERT

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4D7E CE          483          byt EDDIAG
4D7F D6          484          byt EDCURVE
4D80 CE          485          byt EDBOX
4D81 E1          486          byt EDPARLL
4D82 CE          487          byt EDDOT
4D83 F6          488          byt EDGRCHN
4D84 5C          489          byt TEMPROC1
4D85 ED          490          byt EDGROFF
4D86 F0          491          byt EDGRSIZ
4D87 5C          492          byt TEMPROC1
4D88 61          493          byt TEMPROC2
4D89 61          494          byt TEMPROC2
4D8A F6          495          byt EDGREXIT
4D8B            496          ;
4D8B            497          EDITTBLH:
4D8B 4D          498          hby TEMPROC1
4D8C 4D          499          hby EDHORZ
4D8D 4D          500          hby EDVERT
4D8E 4D          501          hby EDDIAG
4D8F 4D          502          hby EDCURVE
4D90 4D          503          hby EDBOX
4D91 4D          504          hby EDPARLL
4D92 4D          505          hby EDDOT
4D93 4D          506          hby EDGRCHN
4D94 4D          507          hby TEMPROC1
4D95 4D          508          hby EDGROFF
4D96 4D          509          hby EDGRSIZ
4D97 4D          510          hby TEMPROC1
4D98 4D          511          hby TEMPROC2
4D99 4D          512          hby TEMPROC2
4D9A 4D          513          hby EDGREXIT
4D9B            514          ;
4D9B            515          ;
4D9B 18          516          ADDTODX   clc
4D9C            517          ;
4D9C 65 18       518          adc DX
4D9E 10 03       519          bpl >1
4DA0            520          ;
4DA0 8D 24 5D    521          sta TESTFLAG
4DA3            522          ;
4DA3 91 E8       523          ^1      sta (BUFRPTR),Y
4DA5            524          ;
4DA5 4C 98 50    525          jmp RD1ICON
4DA8            526          ;
4DA8            527          ;
4DA8 20 9B 4D    528          ADDTODXY  jsr ADDTODX
4DAB            529          ;
4DAB 18          530          ADDTODY   clc
4DAC            531          ;
4DAC 65 19       532          adc DY
4DAE 10 03       533          bpl >1
4DB0            534          ;
4DB0 8D 24 5D    535          sta TESTFLAG
4DB3            536          ;
4DB3 91 E8       537          ^1      sta (BUFRPTR),Y
4DB5            538          ;
4DB5 4C 98 50    539          jmp RD1ICON
4DB8            540          ;
4DB8            541          ;
4DB8 20 A8 4D    542          EDHORZ   jsr ADDTODXY
4DBB            543          ;

```



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4DBB 20 9B 4D 544 EDHORZ2 jsr ADDTODX
4DBE 90 06 545 bcc EDVERT2
4DC0 546 ;
4DC0 4C 61 4D 547 jmp TEMPROC2
4DC3 548 ;
4DC3 549 ;
4DC3 20 A8 4D 550 EDVERT jsr ADDTODXY
4DC6 551 ;
4DC6 20 AB 4D 552 EDVERT2 jsr ADDTODY
4DC9 90 F0 553 bcc EDHORZ2
4DCB 554 ;
4DCB 4C 61 4D 555 jmp TEMPROC2
4DCE 556 ;
4DCE 557 ;
4DCE 558 EDDOT:
4DCE 559 EDBOX:
4DCE 20 A8 4D 560 EDDIAG jsr ADDTODXY
4DD1 90 FB 561 bcc EDDIAG
4DD3 562 ;
4DD3 4C 61 4D 563 jmp TEMPROC2
4DD6 564 ;
4DD6 565 ;
4DD6 20 A8 4D 566 EDCURVE jsr ADDTODXY
4DD9 567 ;
4DD9 20 98 50 568 ^1 jsr RD1ICON
4DDC 90 FB 569 bcc <1
4DDE 570 ;
4DDE 4C 61 4D 571 jmp TEMPROC2
4DE1 572 ;
4DE1 573 ;
4DE1 20 A8 4D 574 EDPARLL jsr ADDTODXY
4DE4 20 A8 4D 575 jsr ADDTODXY
4DE7 576 ;
4DE7 20 98 50 577 jsr RD1ICON
4DEA 578 ;
4DEA 4C 5C 4D 579 jmp TEMPROC1
4DED 580 ;
4DED 581 ;
4DED 20 98 50 582 EDGROFF jsr RD1ICON
4DF0 20 98 50 583 EDGRSIZ jsr RD1ICON
4DF3 584 ;
4DF3 4C 5C 4D 585 jmp TEMPROC1
4DF6 586 ;
4DF6 587 ;
4DF6 588 EDGRCHN:
4DF6 18 589 EDGREXIT clc
4DF7 590 ;
4DF7 60 591 rts
4DF8 592 ;
4DF8 593 ;
4DF8 8E 3A 5D 594 SHOWMOVE stx MOVEMENT
4DFB 595 ;
4DFB BD 01 5E 596 lda MOVETBLL,X
4DFE 8D 3F 5D 597 sta MOVEADR
4E01 598 ;
4E01 BD 04 5E 599 lda MOVETBLH,X
4E04 8D 40 5D 600 sta MOVEADR+1
4E07 601 ;
4E07 20 8D 5A 602 jsr PRINT
4E0A 1D 74 603 hex 1D74
4E0C D8 BD 604 asc "X="

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4E0E 5D          605          byt DEC2CMD
4E0F 31 5D      606          adr XDRAW
4E11 A0 A0 D9   607          asc "  Y="
4E14 BD
4E15 5D          608          byt DEC2CMD
4E16 32 5D      609          adr YDRAW
4E18 1D 76      610          hex 1D76
4E1A CD EF F6   611          asc "Movement="
4E1D E5 ED E5
4E20 EE F4 BD
4E23 1D 77      612          hex 1D77
4E25 56 01      613          byt BUFRCMD,INDIRECT
4E27 3F 5D      614          adr MOVEADR
4E29 50          615          byt RTNCMD
4E2A           616          ;
4E2A 60          617          rts
4E2B           618          ;
4E2B           619          ;
4E2B 8E 3A 5D   620  SHOWCNT1 stx MOVEMENT
4E2E           621          ;
4E2E BD 01 5E   622          lda MOVETBLL,X
4E31 8D 3F 5D   623          sta MOVEADR
4E34           624          ;
4E34 BD 04 5E   625          lda MOVETBLH,X
4E37 8D 40 5D   626          sta MOVEADR+1
4E3A           627          ;
4E3A 20 8D 5A   628          jsr PRINT
4E3D 1D 74      629          hex 1D74
4E3F 54 00      630          byt CLRCMD,EOLCLR
4E41 C3 EF F5   631          asc "Count="
4E44 EE F4 BD
4E47 5D          632          byt DEC2CMD
4E48 4D 5D      633          adr LINECNT
4E4A 1D 76      634          hex 1D76
4E4C CE EF AE   635          asc "No. Lines="
4E4F A0 CC E9
4E52 EE E5 F3
4E55 BD
4E56 1D 77      636          hex 1D77
4E58 56 01      637          byt BUFRCMD,INDIRECT
4E5A 3F 5D      638          adr MOVEADR
4E5C 50          639          byt RTNCMD
4E5D           640          ;
4E5D 60          641          rts
4E5E           642          ;
4E5E           643          ;
4E5E           644          ; Get the start X and Y coordinates. Exit with C-flag set
4E5E           645          ; if ESCAPE or Q is entered, otherwise exit with C-flag
4E5E           646          ; clear.
4E5E           647          ;
4E5E 8D 00 5F   648  DOSTART  sta TEMPBUFR          ; save command in TEMPBUFR
4E61           649          ;
4E61 20 8D 5A   650          jsr PRINT
4E64 09 74      651          hex 0974
4E66 C3 CF CC   652          asc "COLOR="
4E69 CF D2 BD
4E6C 56 01      653          byt BUFRCMD,INDIRECT
4E6E 3D 5D      654          adr COLORADR
4E70 09 76      655          hex 0976
4E72 D3 BD D3   656          asc "S=Start"
4E75 F4 E1 F2

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```

4E78 F4
4E79 09 77      657      hex 0977
4E7B D1 BD D1   658      asc "Q=Quit"
4E7E F5 E9 F4
4E81 50          659      byt RTNCMD
4E82            660      ;
4E82 20 6D 52    661      jsr EPLLOT
4E85            662      ;
4E85 A2 02      663      ^1      ldx #2                ; arrow keys
4E87 20 F8 4D    664      jsr SHOWMOVE
4E8A            665      ;
4E8A AE 31 5D    666      ldx XDRAW
4E8D AD 32 5D    667      lda YDRAW
4E90            668      ;
4E90 20 7E 50    669      jsr SETSTRT
4E93 20 79 52    670      jsr PUTDOT
4E96            671      ;
4E96 20 E7 4E    672      jsr GETMOVE
4E99 B0 35      673      bcs >3
4E9B            674      ;
4E9B C9 D1      675      cmp #"Q"
4E9D F0 31      676      beq >3
4E9F            677      ;
4E9F C9 D3      678      cmp #"S"
4EA1 F0 06      679      beq >2
4EA3            680      ;
4EA3 20 79 52    681      jsr PUTDOT
4EA6            682      ;
4EA6 4C 85 4E    683      jmp <1
4EA9            684      ;
4EA9 20 7F 5A    685      ^2      jsr MYBELL
4EAC            686      ;
4EAC 20 8D 5A    687      jsr PRINT
4EAF 09 76      688      hex 0976
4EB1 C4 BD C4    689      asc "D=Draw "
4EB4 F2 E1 F7
4EB7 A0
4EB8 50          690      byt RTNCMD
4EB9            691      ;
4EB9 AD 31 5D    692      lda XDRAW
4EBC 8D 33 5D    693      sta XDRAW0
4EBF 8D 01 5F    694      sta TEMPBUFR+1
4EC2            695      ;
4EC2 AD 32 5D    696      lda YDRAW
4EC5 8D 34 5D    697      sta YDRAW0
4EC8 8D 02 5F    698      sta TEMPBUFR+2
4ECB            699      ;
4ECB A9 03      700      lda #3
4ECD 8D 30 5D    701      sta NDXTEMP
4ED0            702      ;
4ED0 08          703      ^3      php
4ED1            704      ;
4ED1 20 79 52    705      jsr PUTDOT
4ED4 20 73 52    706      jsr HPLOT
4ED7            707      ;
4ED7 28          708      plp
4ED8            709      ;
4ED8 60          710      rts
4ED9            711      ;
4ED9            712      ;
4ED9            713      ; Display shape currently in ICONBUFR.

```

```

4ED9          714 ;
4ED9 A2 00    715 SHOWICON ldx #ICONBUFR
4EDB A9 61    716         lda /ICONBUFR
4EDD          717 ;
4EDD 4C FE 4F 718         jmp ICONPROC
4EE0          719 ;
4EE0          720 ;
4EE0          721 ; Display shape currently in TEMPBUFR.
4EE0          722 ;
4EE0 A2 00    723 SHOWTEMP ldx #TEMPBUFR
4EE2 A9 5F    724         lda /TEMPBUFR
4EE4          725 ;
4EE4 4C FE 4F 726         jmp ICONPROC
4EE7          727 ;
4EE7          728 ;
4EE7 20 1C 5A 729 GETMOVE jsr GETKEY
4EEA B0 4B    730         bcs >6
4EEC          731 ;
4EEC AE 31 5D 732         ldx XDRAW
4EEF AC 32 5D 733         ldy YDRAW
4EF2          734 ;
4EF2 C9 95    735         cmp #RARROW
4EF4 D0 0E    736         bne >1
4EF6          737 ;
4EF6 AD 3A 5D 738         lda MOVEMENT
4EF9 4A       739         lsr
4EFA B0 EB    740         bcs GETMOVE
4EFC          741 ;
4EFC E8       742         inx
4EFD EC 2D 5D 743         cpx ICONWIDE
4F00 F0 E5    744         beq GETMOVE
4F02          745 ;
4F02 D0 2C    746         bne >4 ; always taken
4F04          747 ;
4F04 C9 88    748 ^1      cmp #LARROW
4F06 D0 0B    749         bne >2
4F08          750 ;
4F08 AD 3A 5D 751         lda MOVEMENT
4F0B 4A       752         lsr
4F0C B0 D9    753         bcs GETMOVE
4F0E          754 ;
4F0E CA       755         dex
4F0F 30 D6    756         bmi GETMOVE
4F11          757 ;
4F11 10 1D    758         bpl >4 ; always taken
4F13          759 ;
4F13 C9 8A    760 ^2      cmp #DARROW
4F15 D0 0D    761         bne >3
4F17          762 ;
4F17 AD 3A 5D 763         lda MOVEMENT
4F1A F0 CB    764         beq GETMOVE
4F1C          765 ;
4F1C C8       766         iny
4F1D CC 2E 5D 767         cpy ICONHIGH
4F20 F0 C5    768         beq GETMOVE
4F22          769 ;
4F22 D0 0C    770         bne >4 ; always taken
4F24          771 ;
4F24 C9 8B    772 ^3      cmp #UARROW
4F26 D0 0E    773         bne >5
4F28          774 ;

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```

4F28 AD 3A 5D      775          lda MOVEMENT
4F2B F0 BA        776          beq GETMOVE
4F2D              777          ;
4F2D 88           778          dey
4F2E 30 B7        779          bmi GETMOVE
4F30              780          ;
4F30 8E 31 5D     781          ^4      stx XDRAW
4F33 8C 32 5D     782          sty YDRAW
4F36              783          ;
4F36 18           784          ^5      clc
4F37              785          ;
4F37 60           786          ^6      rts
4F38              787          ;
4F38              788          ;
4F38 AE 31 5D     789  GETCURVE  ldx XDRAW
4F3B AC 32 5D     790          ldy YDRAW
4F3E              791          ;
4F3E 20 1C 5A     792          jsr GETKEY
4F41 B0 36        793          bcs >6
4F43              794          ;
4F43 C9 95        795          cmp #RARROW
4F45 D0 08        796          bne >1
4F47              797          ;
4F47 E8           798          inx
4F48              799          ;
4F48 EC 2D 5D     800          cpx ICONWIDE
4F4B F0 EB        801          beq GETCURVE
4F4D              802          ;
4F4D D0 1C        803          bne >4          ; always taken
4F4F              804          ;
4F4F C9 88        805          ^1      cmp #LARROW
4F51 D0 05        806          bne >2
4F53              807          ;
4F53 CA           808          dex
4F54 30 E2        809          bmi GETCURVE
4F56              810          ;
4F56 10 13        811          bpl >4          ; always taken
4F58              812          ;
4F58 C9 8A        813          ^2      cmp #DARROW
4F5A D0 08        814          bne >3
4F5C              815          ;
4F5C C8           816          iny
4F5D              817          ;
4F5D CC 2E 5D     818          cpy ICONHIGH
4F60 F0 D6        819          beq GETCURVE
4F62              820          ;
4F62 D0 07        821          bne >4          ; always taken
4F64              822          ;
4F64 C9 8B        823          ^3      cmp #UARROW
4F66 D0 10        824          bne >5
4F68              825          ;
4F68 88           826          dey
4F69 30 CD        827          bmi GETCURVE
4F6B              828          ;
4F6B 20 7A 4F     829          ^4      jsr DODELTA
4F6E B0 C8        830          bcs GETCURVE
4F70              831          ;
4F70 8E 31 5D     832          stx XDRAW
4F73 8C 32 5D     833          sty YDRAW
4F76              834          ;
4F76 A9 00        835          lda #ZERO

```

```

4F78      836 ;
4F78 18    837 ^5      clc
4F79      838 ;
4F79 60    839 ^6      rts
4F7A      840 ;
4F7A      841 ;
4F7A EC 35 5D 842 DODELTA  cpx XCURVE
4F7D B0 10    843      bcs >1
4F7F      844 ;
4F7F 8E 86 4F 845      stx DODLMOD1+1
4F82      846 ;
4F82 AD 35 5D 847      lda XCURVE
4F85 E9 00    848 DODLMOD1  sbc #*-*          ; XDRAW
4F87      849 ;
4F87 C9 07    850      cmp #MAXDXDY
4F89 B0 36    851      bcs >5
4F8B      852 ;
4F8B 09 08    853      ora #$08
4F8D D0 08    854      bne >2          ; always taken
4F8F      855 ;
4F8F 8A      856 ^1      txa
4F90 ED 35 5D 857      sbc XCURVE
4F93      858 ;
4F93 C9 08    859      cmp #MAXDXDY+1
4F95 B0 2A    860      bcs >5
4F97      861 ;
4F97 0A      862 ^2      asl
4F98 0A      863      asl
4F99 0A      864      asl
4F9A 0A      865      asl
4F9B      866 ;
4F9B 8D 37 5D 867      sta DELTATMP
4F9E      868 ;
4F9E CC 36 5D 869      cpy YCURVE
4FA1 B0 10    870      bcs >3
4FA3      871 ;
4FA3 8C AA 4F 872      sty DODLMOD2+1
4FA6      873 ;
4FA6 AD 36 5D 874      lda YCURVE
4FA9 E9 00    875 DODLMOD2  sbc #*-*          ; YDRAW
4FAB      876 ;
4FAB C9 07    877      cmp #MAXDXDY
4FAD B0 12    878      bcs >5
4FAF      879 ;
4FAF 09 08    880      ora #$08
4FB1 D0 08    881      bne >4          ; always taken
4FB3      882 ;
4FB3 98      883 ^3      tya
4FB4 ED 36 5D 884      sbc YCURVE
4FB7      885 ;
4FB7 C9 08    886      cmp #MAXDXDY+1
4FB9 B0 06    887      bcs >5
4FBB      888 ;
4FBB 0D 37 5D 889      ^4      ora DELTATMP
4FBE 8D 38 5D 890      sta DELTAVAL
4FC1      891 ;
4FC1 60      892 ^5      rts
4FC2      893 ;
4FC2      894 ;
4FC2 20 1C 5A 895 GETCOUNT jsr GETKEY
4FC5 B0 2D    896      bcs >6

```

```

4FC7      897 ;
4FC7 AE 4D 5D 898      ldx LINECNT
4FCA      899 ;
4FCA C9 95 900      cmp #RARROW
4FCC D0 07 901      bne >1
4FCE      902 ;
4FCE E8 903      inx
4FCF      904 ;
4FCF E0 80 905      cpx #MAXCOUNT
4FD1 F0 EF 906      beq GETCOUNT
4FD3      907 ;
4FD3 D0 1B 908      bne >4 ; always taken
4FD5      909 ;
4FD5 C9 88 910      ^1 cmp #LARROW
4FD7 D0 05 911      bne >2
4FD9      912 ;
4FD9 CA 913      dex
4FDA F0 E6 914      beq GETCOUNT
4FDC      915 ;
4FDC D0 12 916      bne >4 ; always taken
4FDE      917 ;
4FDE C9 8A 918      ^2 cmp #DARROW
4FE0 D0 07 919      bne >3
4FE2      920 ;
4FE2 E8 921      inx
4FE3      922 ;
4FE3 E0 80 923      cpx #MAXCOUNT
4FE5 F0 DB 924      beq GETCOUNT
4FE7      925 ;
4FE7 D0 07 926      bne >4 ; always taken
4FE9      927 ;
4FE9 C9 8B 928      ^3 cmp #UARROW
4FEB D0 06 929      bne >5
4FED      930 ;
4FED CA 931      dex
4FEE F0 D2 932      beq GETCOUNT
4FF0      933 ;
4FF0 8E 4D 5D 934      ^4 stx LINECNT
4FF3      935 ;
4FF3 18 936      ^5 clc
4FF4      937 ;
4FF4 60 938      ^6 rts
4FF5      939 ;
4FF5      940 ;
4FF5      941 ; EOR shapes in TEMPBUFR from screen. SHOWTEMP exits with
4FF5      942 ; C-flag clear.
4FF5      943 ;
4FF5 20 70 52 944      ERASTEMP jsr XPLOT
4FF8 20 E0 4E 945      jsr SHOWTEMP
4FFB      946 ;
4FFB 4C 73 52 947      jmp HPLOT
4FFE      948 ;
4FFE      949 ;

```

BSAVE SEG03,A\$0900,B,L\$04D4

```

4FFE      950      usr SEG03
4FFE      951 ;
4FFE      952 ;
4FFE      953      icl "PLOT1.L"

```

LLOAD PLOT1.L,A\$4000

```

4FFE      1          ttl "ICON Maker Source Code, PLOT1.L"
4FFE      2      ;
4FFE      3      ;
4FFE      4      ; PLOT1.L
4FFE      5      ;
4FFE      6      ;
4FFE      7          obj $900
4FFE      8          usr
4FFE      9      ;
4FFE     10      ;
4FFE     11      ; Entry point to process any ICON shape structure. The
4FFE     12      ; shape structure must be terminated with the GREXTCMD.
4FFE     13      ; The Y-reg and A-reg contain the address of the shape
4FFE     14      ; structure to be drawn.
4FFE     15      ;
4FFE 86 E8     16  ICONPROC stx BUFRPTR
5000 85 E9     17          sta BUFRPTR+1
5002     18      ;
5002 A0 00     19          ldy #ZERO
5004 84 E5     20          sty ICONNDX
5006     21      ;
5006 20 98 50  22  CONPROC1 jsr RD1ICON
5009 90 1B     23          bcc >1
500B     24      ;
500B 29 0F     25  CONPROC2 and #CMDMASK
500D AA        26          tax
500E     27      ;
500E BD 5A 50  28          lda PROCTBLL,X
5011 8D 1E 50  29          sta ICONMOD+1
5014     30      ;
5014 BD 6A 50  31          lda PROCTBLH,X
5017 8D 1F 50  32          sta ICONMOD+2
501A     33      ;
501A 20 94 50  34          jsr RD2ICON
501D     35      ;
501D 4C 00 00  36  ICONMOD  jmp *-*
5020     37      ;
5020 84 E5     38  CONPROC3 sty ICONNDX
5022     39      ;
5022 C9 F0     40  CONPROC4 cmp #COLORCMD
5024 B0 E5     41          bcs CONPROC2
5026     42      ;
5026 20 2C 50  43  ^1      jsr ICONERR
5029     44      ;
5029 4C 87 42  45          jmp DOQUIT
502C     46      ;
502C     47      ;
502C 8D 2B 5D  48  ICONERR  sta ICONCMD
502F     49      ;
502F 20 8D 5A  50          jsr PRINT
5032 87        51          byt BELLCHAR
5033 00 77     52          hex 0077
5035 C5 F8 F0  53          asc "Expected Shape command, got 0x"
5038 E5 E3 F4
503B E5 E4 A0
503E D3 E8 E1
5041 F0 E5 A0
5044 E3 EF ED
5047 ED E1 EE
504A E4 AC A0

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504D E7 EF F4
5050 A0 B0 F8
5053 58          54          byt BYT1CMD
5054 2B 5D          55          adr ICONCMD
5056 50          56          byt RTNCMD
5057          57 ;
5057 4C 1C 5A      58          jmp GETKEY
505A          59 ;
505A          60 ;
505A          61 PROCTBLL:
505A B8          62          byt PLCOLOR
505B D8          63          byt PLHORZ
505C F2          64          byt PLVERT
505D 0C          65          byt PLDIAG
505E 27          66          byt PLCURVE
505F 4A          67          byt PLBOX
5060 7D          68          byt PLPARLL
5061 BE          69          byt PLDOT
5062 CF          70          byt PLCHAIN
5063 D1          71          byt PLGRPAG
5064 D6          72          byt PLGROFF
5065 E2          73          byt PLGRSIZ
5066 EB          74          byt PLGRWID
5067 F1          75          byt PLFRCLR
5068 F3          76          byt PLFRSET
5069 6B          77          byt PLGREXIT
506A          78 ;
506A          79 PROCTBLH:
506A 50          80          hby PLCOLOR
506B 50          81          hby PLHORZ
506C 50          82          hby PLVERT
506D 51          83          hby PLDIAG
506E 51          84          hby PLCURVE
506F 51          85          hby PLBOX
5070 51          86          hby PLPARLL
5071 51          87          hby PLDOT
5072 51          88          hby PLCHAIN
5073 51          89          hby PLGRPAG
5074 51          90          hby PLGROFF
5075 51          91          hby PLGRSIZ
5076 51          92          hby PLGRWID
5077 51          93          hby PLFRCLR
5078 51          94          hby PLFRSET
5079 52          95          hby PLGREXIT
507A          96 ;
507A          97 ;
507A          98 ; Copy previous end-point to new start-point.
507A          99 ;
507A A6 DD      100 RSETSTRT ldx XOFFEND
507C A5 DF      101          lda YOFFEND
507E          102 ;
507E          103 ;
507E 18          104 SETSTRT clc
507F          105 ;
507F 85 DC      106          sta YOFFSTRT
5081 A8          107          tay
5082          108 ;
5082 65 E2      109          adc YCOOR
5084 85 D2      110          sta YSTRT
5086          111 ;
5086 8A          112          txa

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5087 85 DA      113      sta XOFFSTRT
5089           114      ;
5089 65 E0      115      adc XCOOR
508B 85 D0      116      sta XSTRT
508D           117      ;
508D A5 E1      118      lda XCOOR+1
508F 69 00      119      adc #ZERO
5091 85 D1      120      sta XSTRT+1
5093           121      ;
5093 60         122      rts
5094           123      ;
5094           124      ;
5094           125      ; Read two variables from the shape structure into the
5094           126      ; X-reg first, then into the A-reg.  Fall into RD1ICON.
5094           127      ;
5094 20 98 50    128  RD2ICON  jsr RD1ICON
5097 AA         129      tax
5098           130      ;
5098           131      ;
5098           132      ; Read one variable from the shape structure into A-reg.
5098           133      ;
5098 A4 E5      134  RD1ICON  ldy ICONNDX
509A           135      ;
509A E6 E5      136      inc ICONNDX
509C           137      ;
509C B1 E8      138      lda (BUFRPTR),Y
509E C9 F0      139      cmp #COLORCMD
50A0           140      ;
50A0 60         141      rts
50A1           142      ;
50A1           143      ;
50A1           144      ; Extract dx/dy from byte and form 2's compliment if
50A1           145      ; necessary.  Upper nibble is dx and lower nibble is dy.
50A1           146      ; Return dx in A-reg and dy in Y-reg.
50A1           147      ;
50A1           148      ; 0 = zero delta, 1-7 = positive delta, 8-E = negative
50A1           149      ; delta.  For example, 8 corresponds to -1, 9 to -2.  The
50A1           150      ; value of F is reserved for ICON commands.
50A1           151      ;
50A1 48         152  DELTA    pha
50A2           153      ;
50A2 29 0F      154      and #CMDMASK
50A4 C9 08      155      cmp #$08
50A6 90 02      156      bcc >1
50A8           157      ;
50A8 49 F7      158      eor #DLTACOMP
50AA           159      ;
50AA A8         160      ^1    tay
50AB           161      ;
50AB 68         162      pla
50AC           163      ;
50AC 4A         164      lsr
50AD 4A         165      lsr
50AE 4A         166      lsr
50AF 4A         167      lsr
50B0           168      ;
50B0 C9 08      169      cmp #$08
50B2 90 03      170      bcc >2
50B4           171      ;
50B4 49 F7      172      eor #DLTACOMP
50B6           173      ;

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```

50B6 18          174          clc
50B7          175          ;
50B7 60          176          ^2          rts
50B8          177          ;
50B8          178          ;
50B8          179          ; Example:  F003
50B8          180          ;
50B8          181          ; Save A-reg for next command.  Use color byte in X-reg to
50B8          182          ; initialize the array COLORBYT from the selected COLORTBL.
50B8          183          ;
50B8 48          184          PLCOLOR pha
50B9          185          ;
50B9 8A          186          txa
50BA 85 E4       187          sta HRCOLOR
50BC          188          ;
50BC 20 C3 50    189          jsr SETCOLOR
50BF          190          ;
50BF 68          191          pla
50C0          192          ;
50C0 4C 22 50    193          jmp CONPROC4
50C3          194          ;
50C3          195          ;
50C3 0A          196          SETCOLOR asl
50C4 0A          197          asl
50C5 69 03       198          adc #3
50C7          199          ;
50C7 AA          200          tax
50C8          201          ;
50C8 A0 03       202          ldy #3
50CA          203          ;
50CA BD EA 53    204          ^1          lda COLORTBL,X
50CD 99 B0 58    205          sta COLORBYT,Y
50D0 99 B4 58    206          sta COLORBYT+4,Y
50D3          207          ;
50D3 CA          208          dex
50D4          209          ;
50D4 88          210          dey
50D5 10 F3       211          bpl <1
50D7          212          ;
50D7 60          213          rts
50D8          214          ;
50D8          215          ;
50D8          216          ; Example:  FlxxyyxXyYxXyY...
50D8          217          ;
50D8          218          ; Set start coordinate at XOFFSTRT=xx and YOFFSTRT=yy.
50D8          219          ; Then toggle XOFFEND=xx, draw line, YOFFEND=yY, draw line,
50D8          220          ; until another command is reached.
50D8          221          ;
50D8 20 7E 50    222          PLHORZ      jsr SETSTRT
50DB 84 DF       223          sty YOFFEND
50DD          224          ;
50DD 20 98 50    225          jsr RD1ICON
50E0          226          ;
50E0 85 DD       227          PLHORZ2    sta XOFFEND
50E2 20 0E 53    228          jsr DRAWLINE
50E5          229          ;
50E5 20 7A 50    230          jsr RSETSTRT
50E8 86 DD       231          stx XOFFEND
50EA          232          ;
50EA 20 98 50    233          jsr RD1ICON
50ED 90 0B       234          bcc PLVERT2

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```

50EF      235 ;
50EF 4C 0B 50 236      jmp CONPROC2
50F2      237 ;
50F2      238 ;
50F2      239 ; Example: F2xxyyyYxXyYxX...
50F2      240 ;
50F2      241 ; Set start coordinate at XOFFSTRT=xx and YOFFSTRT=yy.
50F2      242 ; Then toggle YOFFEND=yY, draw line, XOFFEND=xX, draw line,
50F2      243 ; until another command is reached.
50F2      244 ;
50F2 20 7E 50 245 PLVERT    jsr SETSTRT
50F5 86 DD      246      stx XOFFEND
50F7      247 ;
50F7 20 98 50 248      jsr RD1ICON
50FA      249 ;
50FA 85 DF      250 PLVERT2   sta YOFFEND
50FC 20 10 53 251      jsr DRAWLIN2
50FF      252 ;
50FF 20 7A 50 253      jsr RSETSTRT
5102 84 DF      254      sty YOFFEND
5104      255 ;
5104 20 98 50 256      jsr RD1ICON
5107 90 D7      257      bcc PLHORZ2
5109      258 ;
5109 4C 0B 50 259      jmp CONPROC2
510C      260 ;
510C      261 ;
510C      262 ; Example: F3xxyyxXyYxXyY...
510C      263 ;
510C      264 ; Set start coordinate at XOFFSTRT=xx and YOFFSTRT=yy.
510C      265 ; Then get XOFFEND=xX and YOFFEND=yY, draw line, and repeat
510C      266 ; until another command is reached.
510C      267 ;
510C 20 7E 50 268 PLDIAG    jsr SETSTRT
510F 20 94 50 269      jsr RD2ICON
5112      270 ;
5112 86 DD      271 PLDIAG2   stx XOFFEND
5114 85 DF      272      sta YOFFEND
5116      273 ;
5116 20 10 53 274      jsr DRAWLIN2
5119 20 7A 50 275      jsr RSETSTRT
511C      276 ;
511C 20 94 50 277      jsr RD2ICON
511F      278 ;
511F E0 F0      279      cpx #COLORCMD
5121 90 EF      280      bcc PLDIAG2
5123      281 ;
5123 8A      282      txa
5124      283 ;
5124 4C 20 50 284      jmp CONPROC3
5127      285 ;
5127      286 ;
5127      287 ; Example: F4xxyyXYXYXY...
5127      288 ;
5127      289 ; Set start coordinate at XOFFSTRT=xx and YOFFSTRT=yy.
5127      290 ; Then extract dx/dy so XOFFEND+=dx and YOFFEND+=dy, draw
5127      291 ; line and repeat until zero is reached.
5127      292 ;
5127 20 7E 50 293 PLCURVE   jsr SETSTRT
512A 20 98 50 294      jsr RD1ICON
512D      295 ;

```

```

512D 20 A1 50      296  PLCURVE2 jsr DELTA
5130              297  ;
5130 65 DA        298              adc XOFFSTRT
5132 85 DD        299              sta XOFFEND
5134              300  ;
5134 18           301              clc
5135              302  ;
5135 98           303              tya
5136 65 DC        304              adc YOFFSTRT
5138 85 DF        305              sta YOFFEND
513A              306  ;
513A 20 10 53     307              jsr DRAWLIN2
513D 20 7A 50     308              jsr RSETSTRT
5140              309  ;
5140 20 98 50     310              jsr RD1ICON
5143              311  ;
5143 C9 F0        312              cmp #COLORCMD
5145 90 E6        313              bcc PLCURVE2
5147              314  ;
5147 4C 0B 50     315              jmp CONPROC2
514A              316  ;
514A              317  ;
514A              318  ; Example:  F5xyyxXyY
514A              319  ;
514A              320  ; Set start coordinate at XOFFSTRT=xx and YOFFSTRT=yy.
514A              321  ; Then set XOFFEND=xX and YOFFEND=yY.  Process box image.
514A              322  ;
514A 48           323  PLBOX      pha                ; YOFFSTRT
514B              324  ;
514B 20 7E 50     325              jsr SETSTRT
514E 84 DF        326              sty YOFFEND
5150              327  ;
5150 8A           328              txa                ; XOFFSTRT
5151 48           329              pha
5152              330  ;
5152 20 94 50     331              jsr RD2ICON
5155              332  ;
5155 86 DD        333              stx XOFFEND
5157 48           334              pha                ; YOFFEND
5158              335  ;
5158 20 0E 53     336              jsr DRAWLINE
515B              337  ;
515B 20 7A 50     338              jsr RSETSTRT
515E 86 DD        339              stx XOFFEND
5160              340  ;
5160 68           341              pla
5161 85 DF        342              sta YOFFEND
5163              343  ;
5163 20 10 53     344              jsr DRAWLIN2
5166              345  ;
5166 20 7A 50     346              jsr RSETSTRT
5169 84 DF        347              sty YOFFEND
516B              348  ;
516B 68           349              pla
516C 85 DD        350              sta XOFFEND
516E              351  ;
516E 20 0E 53     352              jsr DRAWLINE
5171              353  ;
5171 20 7A 50     354              jsr RSETSTRT
5174 86 DD        355              stx XOFFEND
5176              356  ;

```

```

5176 68          357          pla
5177 20 10 53    358          jsr DRAWLIN2
517A          359          ;
517A 4C 06 50    360          jmp CONPROC1
517D          361          ;
517D          362          ;
517D          363          ; Example: F6xxyyxXyYXYnn
517D          364          ;
517D          365          ; Set start coordinate at XOFFSTRT=xx and YOFFSTRT=yy and
517D          366          ; end coordinate at XOFFEND=xX and YOFFEND=yY. Next
517D          367          ; parallel line at DELTA=XY for nn number of lines.
517D          368          ;
517D 20 7E 50    369  PLPARLL  jsr SETSTRT
5180 20 94 50    370          jsr RD2ICON
5183          371          ;
5183 86 DD        372          stx XOFFEND
5185 85 DF        373          sta YOFFEND
5187          374          ;
5187 20 10 53    375          jsr DRAWLIN2
518A          376          ;
518A 20 94 50    377          jsr RD2ICON
518D 8D 4F 5D    378          sta COUNTER
5190          379          ;
5190 8A          380          txa
5191 20 A1 50    381          jsr DELTA
5194          382          ;
5194 85 18        383          sta DX
5196 84 19        384          sty DY
5198          385          ;
5198 18          386          ^1  clc
5199          387          ;
5199 A5 DA        388          lda XOFFSTRT
519B 65 18        389          adc DX
519D AA          390          tax
519E          391          ;
519E 18          392          clc
519F          393          ;
519F A5 DC        394          lda YOFFSTRT
51A1 65 19        395          adc DY
51A3          396          ;
51A3 20 7E 50    397          jsr SETSTRT
51A6          398          ;
51A6          399          ;  clc
51A6          400          ;
51A6 A5 DD        401          lda XOFFEND
51A8 65 18        402          adc DX
51AA 85 DD        403          sta XOFFEND
51AC          404          ;
51AC 18          405          clc
51AD          406          ;
51AD A5 DF        407          lda YOFFEND
51AF 65 19        408          adc DY
51B1 85 DF        409          sta YOFFEND
51B3          410          ;
51B3 20 10 53    411          jsr DRAWLIN2
51B6          412          ;
51B6 CE 4F 5D    413          dec COUNTER
51B9 D0 DD        414          bne <1
51BB          415          ;
51BB 4C 06 50    416          jmp CONPROC1
51BE          417          ;

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51BE      418 ;
51BE      419 ; Example: F7xxyyXXYYxxyy...
51BE      420 ;
51BE      421 ; Set coordinate at XOFFSTRT=xx and YOFFSTRT=yy and PUTDOT.
51BE      422 ; Repeat until another command is reached from saved A-reg.
51BE      423 ;
51BE 20 7E 50 424 PLDOT      jsr SETSTRT
51C1 20 79 52 425          jsr PUTDOT
51C4      426 ;
51C4 20 94 50 427          jsr RD2ICON
51C7      428 ;
51C7 E0 F0   429          cpx #COLORCMD
51C9 90 F3   430          bcc PLDOT
51CB      431 ;
51CB 8A      432          txa
51CC      433 ;
51CC 4C 20 50 434          jmp CONPROC3
51CF      435 ;
51CF      436 ;
51CF      437 ; Example: F8
51CF      438 ;
51CF      439 ; Exit with C-flag set.
51CF      440 ;
51CF 38      441 PLCHAIN  sec
51D0      442 ;
51D0 60      443          rts
51D1      444 ;
51D1      445 ;
51D1      446 ; Example: F940
51D1      447 ;
51D1      448 ; Save A-reg for next command. Save X-reg at HPAG.
51D1      449 ;
51D1 86 E6   450 PLGRPAG  stx HPAG
51D3      451 ;
51D3 4C 22 50 452          jmp CONPROC4
51D6      453 ;
51D6      454 ;
51D6      455 ; Example: FA640028
51D6      456 ;
51D6      457 ; Save X-reg and A-reg at XCOOR and get value for YCOOR.
51D6      458 ;
51D6 86 E0   459 PLGROFF  stx XCOOR
51D8 85 E1   460          sta XCOOR+1
51DA      461 ;
51DA 20 98 50 462          jsr RD1ICON
51DD      463 ;
51DD 85 E2   464          sta YCOOR
51DF      465 ;
51DF 4C 06 50 466          jmp CONPROC1
51E2      467 ;
51E2      468 ;
51E2      469 ; Example: FB2828
51E2      470 ;
51E2      471 ; Save X-reg at ICONWIDE and A-reg at ICONHIGH.
51E2      472 ;
51E2 8E 2D 5D 473 PLGRSIZ  stx ICONWIDE
51E5 8D 2E 5D 474          sta ICONHIGH
51E8      475 ;
51E8 4C 06 50 476          jmp CONPROC1
51EB      477 ;
51EB      478 ;

```

```

51EB          479 ; Example: FC02
51EB          480 ;
51EB          481 ; Save A-reg for next command. Save X-reg at FRMWID.
51EB          482 ;
51EB 8E 2F 5D 483 PLGRWID stx FRMWIDE
51EE          484 ;
51EE 4C 22 50 485             jmp CONPROC4
51F1          486 ;
51F1          487 ;
51F1          488 ; Example: FD
51F1          489 ;
51F1          490 ; Save X-reg for next command. Fall into PLFRSET.
51F1          491 ;
51F1 18       492 PLFRCLR clc
51F2          493 ;
51F2 B0 00     494             bcs PLFRSET+1
51F4          495             dfs !-1
51F3          496 ;
51F3          497 ;
51F3          498 ; Example: FE
51F3          499 ;
51F3          500 ; Save X-reg for next command. Reset ICONNDX.
51F3          501 ;
51F3 38       502 PLFRSET sec
51F4          503 ;
51F4 84 E5     504             sty ICONNDX
51F6          505 ;
51F6 8A       506             txa
51F7 48       507             pha
51F8          508 ;
51F8 A9 00     509             lda #BLACK1
51FA          510 ;
51FA 90 02     511             bcc >1
51FC          512 ;
51FC A5 E4     513             lda HRCOLOR
51FE          514 ;
51FE 20 C3 50 515 ^1         jsr SETCOLOR
5201          516 ;
5201 AD 2F 5D 517             lda FRMWIDE
5204 8D 4F 5D 518             sta COUNTER
5207 F0 59     519             beq >3
5209          520 ;
5209 38       521 ^2         sec
520A          522 ;
520A A5 E2     523             lda YCOOR
520C ED 4F 5D 524             sbc COUNTER
520F          525 ;
520F 85 DC     526             sta YOFFSTRT
5211 85 D2     527             sta YSTRT
5213 A8       528             tay
5214          529 ;
5214 A5 E0     530             lda XCOOR
5216 ED 4F 5D 531             sbc COUNTER
5219 AA       532             tax
521A          533 ;
521A A5 E1     534             lda XCOOR+1
521C E9 00     535             sbc #ZERO
521E          536 ;
521E 86 DA     537             stx XOFFSTRT
5220 85 DB     538             sta XOFFSTRT+1
5222          539 ;

```



```

5222 86 D0      540      stx XSTRT
5224 85 D1      541      sta XSTRT+1
5226           542      ;
5226 CE 4F 5D   543      dec COUNTER
5229           544      ;
5229 18         545      clc
522A           546      ;
522A AD 4F 5D   547      lda COUNTER
522D 6D 2D 5D   548      adc ICONWIDE
5230 65 E0      549      adc XCOOR
5232 AA         550      tax
5233           551      ;
5233 A5 E1      552      lda XCOOR+1
5235 69 00      553      adc #ZERO
5237           554      ;
5237 20 1E 53   555      jsr HLINE
523A           556      ;
523A 18         557      clc
523B           558      ;
523B AD 4F 5D   559      lda COUNTER
523E 6D 2E 5D   560      adc ICONHIGH
5241 65 E2      561      adc YCOOR
5243 A8         562      tay
5244           563      ;
5244 A6 D3      564      ldx XEND
5246 A5 D4      565      lda XEND+1
5248           566      ;
5248 20 22 53   567      jsr HLINE2
524B           568      ;
524B A6 DA      569      ldx XOFFSTRT
524D A5 DB      570      lda XOFFSTRT+1
524F           571      ;
524F A4 D5      572      ldy YEND
5251           573      ;
5251 20 1E 53   574      jsr HLINE
5254           575      ;
5254 A6 D3      576      ldx XEND
5256 A5 D4      577      lda XEND+1
5258           578      ;
5258 A4 DC      579      ldy YOFFSTRT
525A           580      ;
525A 20 22 53   581      jsr HLINE2
525D           582      ;
525D AD 4F 5D   583      lda COUNTER
5260 D0 A7      584      bne <2
5262           585      ;
5262 A5 E4      586      ^3 lda HRCOLOR
5264 20 C3 50   587      jsr SETCOLOR
5267           588      ;
5267 68         589      pla
5268           590      ;
5268 4C 22 50   591      jmp CONPROC4
526B           592      ;
526B           593      ;
526B           594      ; Example: FF
526B           595      ;
526B           596      ; Exit with C-flag clear.
526B           597      ;
526B 18         598      PLGREXIT clc
526C           599      ;
526C 60         600      rts

```

```
526D          601  ;  
526D          602  ;
```

```
BSAVE SEG04,A$0900,B,L$026F
```

```
526D          603          usr SEG04  
526D          604  ;  
526D          605  ;  
526D          606          icl "PLOT2.L"
```

```
LLOAD PLOT2.L,A$4000
```

```
526D          1          ttl "ICON Maker Source Code, PLOT2.L"
526D          2          ;
526D          3          ;
526D          4          ; PLOT2.L
526D          5          ;
526D          6          ;
526D          7          obj $900
526D          8          usr
526D          9          ;
526D         10          ;
526D         11          ; HPLOT is used to put a dot on the screen with color
526D         12          ; masking.
526D         13          ;
526D         14          ; XPLOT is used to remove a dot from the screen with color
526D         15          ; masking.
526D         16          ;
526D         17          ; EPLOT is used to EOR a dot on the screen with color
526D         18          ; masking.
526D         19          ;
526D A9 40      20 EPLOT    lda #$40
526F          21          ;
526F 2C 00 00   22          bit *-*
5272          23          dfs !-2
5270          24          ;
5270 A9 80      25 XPLOT    lda #$80
5272          26          ;
5272 2C 00 00   27          bit *-*
5275          28          dfs !-2
5273          29          ;
5273 A9 00      30 HPLOT    lda #ZERO
5275          31          ;
5275 8D 26 5D   32          sta PLOTFLAG
5278          33          ;
5278 60         34          rts
5279          35          ;
5279          36          ;
5279 4C 7C 52   37 PUTDOT    jmp PUTDOT2
527C          38          ;
527C A4 D2      39 PUTDOT2   ldy YSTRT
527E          40          ;
527E B9 0A 54   41          lda YBASEL,Y
5281 85 26      42          sta GBAS
5283          43          ;
5283 B9 CA 54   44          lda YBASEH,Y
5286 05 E6      45          ora HPAG
5288 85 27      46          sta GBAS+1
528A          47          ;
528A 98         48          tya
528B 6A         49          ror
528C          50          ;
528C A4 D0      51          ldy XSTRT
528E          52          ;
528E A5 D1      53          lda XSTRT+1
5290 F0 0E      54          beq >1
5292          55          ;
5292 B9 8A 56   56          lda XBASEH,Y
5295 8D 22 5D   57          sta TEMP
5298          58          ;
5298 BE A6 56   59          ldx MASKNDX+4,Y
529B          60          ;
```

```

529B B9 A6 57      61      lda COLORNDX+4,Y
529E 10 0C        62      bpl >2
52A0              63      ;
52A0 B9 8A 55      64      ^1      lda XBASEL,Y
52A3 8D 22 5D      65      sta TEMP
52A6              66      ;
52A6 BE A2 56      67      ldx MASKNDX,Y
52A9              68      ;
52A9 B9 A2 57      69      lda COLORNDX,Y
52AC              70      ;
52AC A8            71      ^2      tay
52AD              72      ;
52AD 90 02         73      bcc >3
52AF              74      ;
52AF C8            75      iny
52B0 C8            76      iny
52B1              77      ;
52B1 B9 B0 58      78      ^3      lda COLORBYT,Y
52B4 3D A2 58      79      and MASKON,X
52B7 85 30         80      sta COLOR
52B9              81      ;
52B9 AC 22 5D      82      ldy TEMP
52BC              83      ;
52BC 2C 26 5D      84      bit PLOTFLAG
52BF 30 0C         85      bmi >4
52C1 70 12         86      bvs >5
52C3              87      ;
52C3 B1 26         88      lda (GBAS),Y
52C5 3D A9 58      89      and MASKOFF,X
52C8              90      ;
52C8 05 30         91      ora COLOR
52CA 91 26         92      sta (GBAS),Y
52CC              93      ;
52CC 60            94      rts
52CD              95      ;
52CD B1 26         96      ^4      lda (GBAS),Y
52CF 3D A9 58      97      and MASKOFF,X
52D2 91 26         98      sta (GBAS),Y
52D4              99      ;
52D4 60            100     rts
52D5              101     ;
52D5 B1 26         102     ^5      lda (GBAS),Y
52D7 45 30         103     eor COLOR
52D9 91 26         104     sta (GBAS),Y
52DB              105     ;
52DB 60            106     rts
52DC              107     ;
52DC 31 26         108     ^5      and (GBAS),Y
52DE F0 07         109     beq >6
52E0              110     ;
52E0 B1 26         111     lda (GBAS),Y
52E2 45 30         112     eor COLOR
52E4 91 26         113     sta (GBAS),Y
52E6              114     ;
52E6 60            115     rts
52E7              116     ;
52E7 B1 26         117     ^6      lda (GBAS),Y
52E9 05 30         118     ora COLOR
52EB 91 26         119     sta (GBAS),Y
52ED              120     ;
52ED 60            121     rts

```

```

52EE          122 ;
52EE          123 ;
52EE          124 ; Test dot coordinates if they are less than X/YCOOR or
52EE          125 ; greater than or equal to X/YCOOR+ICONWIDE/HIGH.
52EE          126 ;
52EE A5 D0     127 TESTDOT   lda XSTRT
52F0 C5 E0     128           cmp XCOOR
52F2 90 14     129           bcc >1
52F4          130 ;
52F4 E5 E0     131           sbc XCOOR
52F6 CD 2D 5D  132           cmp ICONWIDE
52F9 B0 0D     133           bcs >1
52FB          134 ;
52FB A5 D2     135           lda YSTRT
52FD C5 E2     136           cmp YCOOR
52FF 90 07     137           bcc >1
5301          138 ;
5301 E5 E2     139           sbc YCOOR
5303 CD 2E 5D  140           cmp ICONHIGH
5306 90 05     141           bcc >2
5308          142 ;
5308 A9 FF     143 ^1      lda #NEGONE
530A 8D 24 5D  144           sta TESTFLAG
530D          145 ;
530D 60        146 ^2      rts
530E          147 ;
530E          148 ;
530E          149 ; DRAWLINE calculates XEND and YEND and falls into HLINE.
530E          150 ;
530E          151 ; *** Probably should make XOFFEND two bytes. When XOFFEND
530E          152 ; is 0xFF then A-reg becomes 0x01 which is WRONG. The
530E          153 ; add instruction is removed as a temporary fix.
530E          154 ;
530E A5 DF     155 DRAWLINE  lda YOFFEND
5310          156 ;
5310 18        157 DRAWLIN2  clc
5311          158 ;
5311 65 E2     159           adc YCOOR
5313 A8        160           tay
5314          161 ;
5314 18        162           clc
5315          163 ;
5315 A5 DD     164           lda XOFFEND
5317 65 E0     165           adc XCOOR
5319 AA        166           tax
531A          167 ;
531A A5 E1     168           lda XCOOR+1
531C 69 00     169           adc #ZERO
531E          170 ;
531E          171 ;
531E          172 ; HLINE is used to draw a line from the STRT coordinates to
531E          173 ; the END coordinates with color masking.
531E          174 ;
531E 86 D3     175 HLINE     stx XEND
5320 85 D4     176           sta XEND+1
5322          177 ;
5322 84 D5     178 HLINE2    sty YEND
5324          179 ;
5324 E4 D0     180           cpx XSTRT
5326          181 ;
5326 E5 D1     182           sbc XSTRT+1

```

```

5328 B0 13      183      bcs >1
532A           184      ;
532A 38         185      sec
532B           186      ;
532B A5 D0      187      lda XSTRT
532D E5 D3      188      sbc XEND
532F 85 1A      189      sta XDX
5331           190      ;
5331 A5 D1      191      lda XSTRT+1
5333 E5 D4      192      sbc XEND+1
5335 85 1B      193      sta XDX+1
5337           194      ;
5337 A2 FF      195      ldx #NEGONE
5339 86 1E      196      stx XMOD+1
533B D0 0C      197      bne >2      ; always taken
533D           198      ;
533D 85 1B      199      ^1      sta XDX+1
533F           200      ;
533F 8A         201      txa
5340           202      ;
5340 E5 D0      203      sbc XSTRT
5342 85 1A      204      sta XDX
5344           205      ;
5344 A2 00      206      ldx #ZERO
5346 86 1E      207      stx XMOD+1
5348           208      ;
5348 E8         209      inx
5349           210      ;
5349 86 1D      211      ^2      stx XMOD
534B           212      ;
534B E6 1A      213      inc XDX
534D D0 02      214      bne >3
534F           215      ;
534F E6 1B      216      inc XDX+1
5351           217      ;
5351 C4 D2      218      ^3      cpy YSTRT
5353 B0 0B      219      bcs >4
5355           220      ;
5355 38         221      sec
5356           222      ;
5356 A5 D2      223      lda YSTRT
5358 E5 D5      224      sbc YEND
535A 85 1C      225      sta YDY
535C           226      ;
535C A0 FF      227      ld y #NEGONE
535E D0 07      228      bne >5      ; always taken
5360           229      ;
5360 98         230      ^4      tya
5361           231      ;
5361 E5 D2      232      sbc YSTRT
5363 85 1C      233      sta YDY
5365           234      ;
5365 A0 01      235      ld y #1
5367           236      ;
5367 84 1F      237      ^5      sty YMOD
5369           238      ;
5369 E6 1C      239      inc YDY
536B           240      ;
536B A6 1A      241      ld x XDX
536D E4 1C      242      cpx YDY
536F           243      ;

```

```

536F A5 1B      244      lda XDX+1
5371 E9 00      245      sbc #ZERO
5373           246      ;
5373 90 42      247      bcc YLOOP
5375           248      ;
5375           249      ;
5375 85 CF      250 XLOOP   sta MID+1
5377           251      ;
5377 8A          252      txa
5378           253      ;
5378 E5 1C      254      sbc YDY
537A 85 CE      255      sta MID
537C           256      ;
537C 20 79 52   257 XLOOP2  jsr PUTDOT
537F           258      ;
537F A5 D0      259      lda XSTRT
5381 C5 D3      260      cmp XEND
5383 D0 06      261      bne >1
5385           262      ;
5385 A6 D1      263      ldx XSTRT+1
5387 E4 D4      264      cpx XEND+1
5389 F0 5E      265      beq HLINEEXIT
538B           266      ;
538B 18          267      ^1    clc
538C           268      ;
538C           269      ;      lda XSTRT
538C 65 1D      270      adc XMOD
538E 85 D0      271      sta XSTRT
5390           272      ;
5390 A5 D1      273      lda XSTRT+1
5392 65 1E      274      adc XMOD+1
5394 85 D1      275      sta XSTRT+1
5396           276      ;
5396 38          277      sec
5397           278      ;
5397 A5 CE      279      lda MID
5399 E5 1C      280      sbc YDY
539B 85 CE      281      sta MID
539D           282      ;
539D B0 DD      283      bcs XLOOP2
539F           284      ;
539F C6 CF      285      dec MID+1
53A1 10 D9      286      bpl XLOOP2
53A3           287      ;
53A3           288      ;      lda MID
53A3 65 1A      289      adc XDX
53A5 85 CE      290      sta MID
53A7           291      ;
53A7 A5 CF      292      lda MID+1
53A9 65 1B      293      adc XDX+1
53AB 85 CF      294      sta MID+1
53AD           295      ;
53AD 18          296      clc
53AE           297      ;
53AE A5 D2      298      lda YSTRT
53B0 65 1F      299      adc YMOD
53B2 85 D2      300      sta YSTRT
53B4           301      ;
53B4 4C 7C 53   302      jmp XLOOP2
53B7           303      ;
53B7           304      ;

```

```
53B7 38          305 YLOOP      sec
53B8             306 ;
53B8 A5 1C       307             lda YDY
53BA E5 1A       308             sbc XDX
53BC 85 CE       309             sta MID
53BE             310 ;
53BE 20 79 52    311 YLOOP2    jsr PUTDOT
53C1             312 ;
53C1 A5 D2       313             lda YSTRT
53C3 C5 D5       314             cmp YEND
53C5 F0 22       315             beq HLINEEXIT
53C7             316 ;
53C7 18          317             clc
53C8             318 ;
53C8             319 ;             lda YSTRT
53C8 65 1F       320             adc YMOD
53CA 85 D2       321             sta YSTRT
53CC             322 ;
53CC 38          323             sec
53CD             324 ;
53CD A5 CE       325             lda MID
53CF E5 1A       326             sbc XDX
53D1 85 CE       327             sta MID
53D3             328 ;
53D3 B0 E9       329             bcs YLOOP2
53D5             330 ;
53D5             331 ;             lda MID
53D5 65 1C       332             adc YDY
53D7 85 CE       333             sta MID
53D9             334 ;
53D9 18          335             clc
53DA             336 ;
53DA A5 D0       337             lda XSTRT
53DC 65 1D       338             adc XMOD
53DE 85 D0       339             sta XSTRT
53E0             340 ;
53E0 A5 D1       341             lda XSTRT+1
53E2 65 1E       342             adc XMOD+1
53E4 85 D1       343             sta XSTRT+1
53E6             344 ;
53E6 4C BE 53    345             jmp YLOOP2
53E9             346 ;
53E9             347 ;
53E9 60          348 HLINEEXIT rts
53EA             349 ;
53EA             350 ;
53EA             351 ; Color Tables
53EA             352 ;
53EA             353 ; COLORTBL provides the required bits to be set to display
53EA             354 ; a selected HCOLOR.
53EA             355 ;
53EA             356 COLORTBL:
53EA             357 ;
53EA             358 ; #00 - BLACK1
53EA             359 ;
53EA 00 00 00    360             hex 00000000
53ED 00          361 ;
53EE             362 ; #01 - GREEN
53EE             363 ;
53EE 2A 55 2A    364             hex 2A552A55
```



```
53F1 55
53F2          365 ;
53F2          366 ; #02 - PURPLE
53F2          367 ;
53F2 55 2A 55 368          hex 552A552A
53F5 2A
53F6          369 ;
53F6          370 ; #03 - WHITE1
53F6          371 ;
53F6 7F 7F 7F 372          hex 7F7F7F7F
53F9 7F
53FA          373 ;
53FA          374 ; #04 - BLACK2
53FA          375 ;
53FA 80 80 80 376          hex 80808080
53FD 80
53FE          377 ;
53FE          378 ; #05 - ORANGE
53FE          379 ;
53FE AA D5 AA 380          hex AAD5AAD5
5401 D5
5402          381 ;
5402          382 ; #06 - BLUE
5402          383 ;
5402 D5 AA D5 384          hex D5AAD5AA
5405 AA
5406          385 ;
5406          386 ; #07 - WHITE2
5406          387 ;
5406 FF FF FF 388          hex FFFFFFFF
5409 FF
540A          389 ;
540A          390 ; #08 - GREEN/BLACK
540A          391 ;
540A          392 ;          hex 22440811
540A          393 ;
540A          394 ; #09 - PURPLE/BLACK
540A          395 ;
540A          396 ;          hex 11224408
540A          397 ;
540A          398 ; #10 - ORANGE/BLACK
540A          399 ;
540A          400 ;          hex A2C48891
540A          401 ;
540A          402 ; #11 - BLUE/BLACK
540A          403 ;
540A          404 ;          hex 91A2C488
540A          405 ;
540A          406 ; #12 - GREEN/WHITE
540A          407 ;
540A          408 ;          hex 3A5D2E576B75
540A          409 ;
540A          410 ; #13 - PURPLE/WHITE
540A          411 ;
540A          412 ;          hex 5D2E576B753A
540A          413 ;
540A          414 ; #14 - ORANGE/WHITE
540A          415 ;
540A          416 ;          hex BADDAAED7EBF5
540A          417 ;
540A          418 ; #15 - BLUE/WHITE
```

```
540A      419 ;
540A      420 ;          hex DDAED7EBF5BA
540A      421 ;
540A      422 ; #16 - WHITE/GREEN/BLACK
540A      423 ;
540A      424 ;          hex 3A74685123470E1D
540A      425 ;
540A      426 ; #17 - WHITE/PURPLE/BLACK
540A      427 ;
540A      428 ;          hex 74685123470E1D3A
540A      429 ;
540A      430 ; #18 - WHITE/ORANGE/BLACK
540A      431 ;
540A      432 ;          hex BAF4E8D1A3C78E9D
540A      433 ;
540A      434 ; #19 - WHITE/BLUE/BLACK
540A      435 ;
540A      436 ;          hex F4E8D1A3C78E9DBA
540A      437 ;
540A      438 ; #20 - WHITE/GREEN/BLACK/GREEN
540A      439 ;
540A      440 ;          hex 3A510B5D68452E742217
540A      441 ;
540A      442 ; #21 - WHITE/PURPLE/BLACK/PURPLE
540A      443 ;
540A      444 ;          hex 510B5D68452E7422173A
540A      445 ;
540A      446 ; #22 - WHITE/ORANGE/BLACK/ORANGE
540A      447 ;
540A      448 ;          hex BAD18BDDE8C5AEF4A297
540A      449 ;
540A      450 ; #23 - WHITE/BLUE/BLACK/BLUE
540A      451 ;
540A      452 ;          hex D18BDDE8C5AEF4A297BA
540A      453 ;
540A      454 ;
540A      455 ; SCREEN TABLES
540A      456 ;
540A      457 ; YBASEL and YBASEH are indexed by YPTR to determine the
540A      458 ; base screen address for GBAS.
540A      459 ;
540A      460 YBASEL:
540A 00 00 00 461          hex 0000000000000000
540D 00 00 00
5410 00 00
5412 80 80 80 462          hex 8080808080808080
5415 80 80 80
5418 80 80
541A 00 00 00 463          hex 0000000000000000
541D 00 00 00
5420 00 00
5422 80 80 80 464          hex 8080808080808080
5425 80 80 80
5428 80 80
542A 00 00 00 465          hex 0000000000000000
542D 00 00 00
5430 00 00
5432 80 80 80 466          hex 8080808080808080
5435 80 80 80
5438 80 80
543A 00 00 00 467          hex 0000000000000000
```

```

543D 00 00 00
5440 00 00
5442 80 80 80      468      hex 8080808080808080
5445 80 80 80
5448 80 80
544A      469      ;
544A 28 28 28      470      hex 2828282828282828
544D 28 28 28
5450 28 28
5452 A8 A8 A8      471      hex A8A8A8A8A8A8A8A8
5455 A8 A8 A8
5458 A8 A8
545A 28 28 28      472      hex 2828282828282828
545D 28 28 28
5460 28 28
5462 A8 A8 A8      473      hex A8A8A8A8A8A8A8A8
5465 A8 A8 A8
5468 A8 A8
546A 28 28 28      474      hex 2828282828282828
546D 28 28 28
5470 28 28
5472 A8 A8 A8      475      hex A8A8A8A8A8A8A8A8
5475 A8 A8 A8
5478 A8 A8
547A 28 28 28      476      hex 2828282828282828
547D 28 28 28
5480 28 28
5482 A8 A8 A8      477      hex A8A8A8A8A8A8A8A8
5485 A8 A8 A8
5488 A8 A8
548A      478      ;
548A 50 50 50      479      hex 5050505050505050
548D 50 50 50
5490 50 50
5492 D0 D0 D0      480      hex D0D0D0D0D0D0D0D0
5495 D0 D0 D0
5498 D0 D0
549A 50 50 50      481      hex 5050505050505050
549D 50 50 50
54A0 50 50
54A2 D0 D0 D0      482      hex D0D0D0D0D0D0D0D0
54A5 D0 D0 D0
54A8 D0 D0
54AA 50 50 50      483      hex 5050505050505050
54AD 50 50 50
54B0 50 50
54B2 D0 D0 D0      484      hex D0D0D0D0D0D0D0D0
54B5 D0 D0 D0
54B8 D0 D0
54BA 50 50 50      485      hex 5050505050505050
54BD 50 50 50
54C0 50 50
54C2 D0 D0 D0      486      hex D0D0D0D0D0D0D0D0
54C5 D0 D0 D0
54C8 D0 D0
54CA      487      ;
54CA      488      YBASEH:
54CA 00 04 08      489      hex 0004080C1014181C
54CD 0C 10 14
54D0 18 1C
54D2 00 04 08      490      hex 0004080C1014181C

```

```

54D5 0C 10 14
54D8 18 1C
54DA 01 05 09    491          hex 0105090D1115191D
54DD 0D 11 15
54E0 19 1D
54E2 01 05 09    492          hex 0105090D1115191D
54E5 0D 11 15
54E8 19 1D
54EA 02 06 0A    493          hex 02060A0E12161A1E
54ED 0E 12 16
54F0 1A 1E
54F2 02 06 0A    494          hex 02060A0E12161A1E
54F5 0E 12 16
54F8 1A 1E
54FA 03 07 0B    495          hex 03070B0F13171B1F
54FD 0F 13 17
5500 1B 1F
5502 03 07 0B    496          hex 03070B0F13171B1F
5505 0F 13 17
5508 1B 1F
550A                                497 ;
550A 00 04 08    498          hex 0004080C1014181C
550D 0C 10 14
5510 18 1C
5512 00 04 08    499          hex 0004080C1014181C
5515 0C 10 14
5518 18 1C
551A 01 05 09    500          hex 0105090D1115191D
551D 0D 11 15
5520 19 1D
5522 01 05 09    501          hex 0105090D1115191D
5525 0D 11 15
5528 19 1D
552A 02 06 0A    502          hex 02060A0E12161A1E
552D 0E 12 16
5530 1A 1E
5532 02 06 0A    503          hex 02060A0E12161A1E
5535 0E 12 16
5538 1A 1E
553A 03 07 0B    504          hex 03070B0F13171B1F
553D 0F 13 17
5540 1B 1F
5542 03 07 0B    505          hex 03070B0F13171B1F
5545 0F 13 17
5548 1B 1F
554A                                506 ;
554A 00 04 08    507          hex 0004080C1014181C
554D 0C 10 14
5550 18 1C
5552 00 04 08    508          hex 0004080C1014181C
5555 0C 10 14
5558 18 1C
555A 01 05 09    509          hex 0105090D1115191D
555D 0D 11 15
5560 19 1D
5562 01 05 09    510          hex 0105090D1115191D
5565 0D 11 15
5568 19 1D
556A 02 06 0A    511          hex 02060A0E12161A1E
556D 0E 12 16
5570 1A 1E

```

```

5572 02 06 0A    512          hex 02060A0E12161A1E
5575 0E 12 16
5578 1A 1E
557A 03 07 0B    513          hex 03070B0F13171B1F
557D 0F 13 17
5580 1B 1F
5582 03 07 0B    514          hex 03070B0F13171B1F
5585 0F 13 17
5588 1B 1F
558A              515      ;
558A              516      ;
558A              517      ; XBASEL and XBASEH are indexed by XPTR to determine the
558A              518      ; byte index from base screen location GBAS.
558A              519      ;
558A              520      XBASEL:
558A 00 00 00    521          hex 0000000000000000
558D 00 00 00
5590 00
5591 01 01 01    522          hex 0101010101010101
5594 01 01 01
5597 01
5598 02 02 02    523          hex 0202020202020202
559B 02 02 02
559E 02
559F 03 03 03    524          hex 0303030303030303
55A2 03 03 03
55A5 03
55A6              525      ;
55A6 04 04 04    526          hex 0404040404040404
55A9 04 04 04
55AC 04
55AD 05 05 05    527          hex 0505050505050505
55B0 05 05 05
55B3 05
55B4 06 06 06    528          hex 0606060606060606
55B7 06 06 06
55BA 06
55BB 07 07 07    529          hex 0707070707070707
55BE 07 07 07
55C1 07
55C2              530      ;
55C2 08 08 08    531          hex 0808080808080808
55C5 08 08 08
55C8 08
55C9 09 09 09    532          hex 0909090909090909
55CC 09 09 09
55CF 09
55D0 0A 0A 0A    533          hex 0A0A0A0A0A0A0A0A
55D3 0A 0A 0A
55D6 0A
55D7 0B 0B 0B    534          hex 0B0B0B0B0B0B0B0B
55DA 0B 0B 0B
55DD 0B
55DE              535      ;
55DE 0C 0C 0C    536          hex 0C0C0C0C0C0C0C0C
55E1 0C 0C 0C
55E4 0C
55E5 0D 0D 0D    537          hex 0D0D0D0D0D0D0D0D
55E8 0D 0D 0D
55EB 0D
55EC 0E 0E 0E    538          hex 0E0E0E0E0E0E0E0E

```

```

55EF 0E 0E 0E
55F2 0E
55F3 0F 0F 0F    539          hex 0F0F0F0F0F0F0F
55F6 0F 0F 0F
55F9 0F
55FA          540    ;
55FA 10 10 10    541          hex 10101010101010
55FD 10 10 10
5600 10
5601 11 11 11    542          hex 11111111111111
5604 11 11 11
5607 11
5608 12 12 12    543          hex 12121212121212
560B 12 12 12
560E 12
560F 13 13 13    544          hex 13131313131313
5612 13 13 13
5615 13
5616          545    ;
5616 14 14 14    546          hex 14141414141414
5619 14 14 14
561C 14
561D 15 15 15    547          hex 15151515151515
5620 15 15 15
5623 15
5624 16 16 16    548          hex 16161616161616
5627 16 16 16
562A 16
562B 17 17 17    549          hex 17171717171717
562E 17 17 17
5631 17
5632          550    ;
5632 18 18 18    551          hex 18181818181818
5635 18 18 18
5638 18
5639 19 19 19    552          hex 19191919191919
563C 19 19 19
563F 19
5640 1A 1A 1A    553          hex 1A1A1A1A1A1A1A
5643 1A 1A 1A
5646 1A
5647 1B 1B 1B    554          hex 1B1B1B1B1B1B1B
564A 1B 1B 1B
564D 1B
564E          555    ;
564E 1C 1C 1C    556          hex 1C1C1C1C1C1C1C
5651 1C 1C 1C
5654 1C
5655 1D 1D 1D    557          hex 1D1D1D1D1D1D1D
5658 1D 1D 1D
565B 1D
565C 1E 1E 1E    558          hex 1E1E1E1E1E1E1E
565F 1E 1E 1E
5662 1E
5663 1F 1F 1F    559          hex 1F1F1F1F1F1F1F
5666 1F 1F 1F
5669 1F
566A          560    ;
566A 20 20 20    561          hex 20202020202020
566D 20 20 20
5670 20

```

```

5671 21 21 21 562 hex 21212121212121
5674 21 21 21
5677 21
5678 22 22 22 563 hex 22222222222222
567B 22 22 22
567E 22
567F 23 23 23 564 hex 23232323232323
5682 23 23 23
5685 23
5686 565 ;
5686 24 24 24 566 hex 24242424
5689 24
568A 567 ;
568A 568 XBASEH:
568A 24 24 24 569 hex 242424
568D 25 25 25 570 hex 25252525252525
5690 25 25 25
5693 25
5694 26 26 26 571 hex 26262626262626
5697 26 26 26
569A 26
569B 27 27 27 572 hex 27272727272727
569E 27 27 27
56A1 27
56A2 573 ;
56A2 574 ;
56A2 575 ; MASKNDX is indexed by XPTR to determine which mask byte

56A2 576 ; is used from MASKON and MASKOFF.
56A2 577 ;
56A2 578 MASKNDX:
56A2 00 01 02 579 hex 00010203040506
56A5 03 04 05
56A8 06
56A9 00 01 02 580 hex 00010203040506
56AC 03 04 05
56AF 06
56B0 00 01 02 581 hex 00010203040506
56B3 03 04 05
56B6 06
56B7 00 01 02 582 hex 00010203040506
56BA 03 04 05
56BD 06
56BE 583 ;
56BE 00 01 02 584 hex 00010203040506
56C1 03 04 05
56C4 06
56C5 00 01 02 585 hex 00010203040506
56C8 03 04 05
56CB 06
56CC 00 01 02 586 hex 00010203040506
56CF 03 04 05
56D2 06
56D3 00 01 02 587 hex 00010203040506
56D6 03 04 05
56D9 06
56DA 588 ;
56DA 00 01 02 589 hex 00010203040506
56DD 03 04 05
56E0 06
56E1 00 01 02 590 hex 00010203040506
56E4 03 04 05

```

```

56E7 06
56E8 00 01 02 591 hex 00010203040506
56EB 03 04 05
56EE 06
56EF 00 01 02 592 hex 00010203040506
56F2 03 04 05
56F5 06
56F6 593 ;
56F6 00 01 02 594 hex 00010203040506
56F9 03 04 05
56FC 06
56FD 00 01 02 595 hex 00010203040506
5700 03 04 05
5703 06
5704 00 01 02 596 hex 00010203040506
5707 03 04 05
570A 06
570B 00 01 02 597 hex 00010203040506
570E 03 04 05
5711 06
5712 598 ;
5712 00 01 02 599 hex 00010203040506
5715 03 04 05
5718 06
5719 00 01 02 600 hex 00010203040506
571C 03 04 05
571F 06
5720 00 01 02 601 hex 00010203040506
5723 03 04 05
5726 06
5727 00 01 02 602 hex 00010203040506
572A 03 04 05
572D 06
572E 603 ;
572E 00 01 02 604 hex 00010203040506
5731 03 04 05
5734 06
5735 00 01 02 605 hex 00010203040506
5738 03 04 05
573B 06
573C 00 01 02 606 hex 00010203040506
573F 03 04 05
5742 06
5743 00 01 02 607 hex 00010203040506
5746 03 04 05
5749 06
574A 608 ;
574A 00 01 02 609 hex 00010203040506
574D 03 04 05
5750 06
5751 00 01 02 610 hex 00010203040506
5754 03 04 05
5757 06
5758 00 01 02 611 hex 00010203040506
575B 03 04 05
575E 06
575F 00 01 02 612 hex 00010203040506
5762 03 04 05
5765 06
5766 613 ;
5766 00 01 02 614 hex 00010203040506

```



```

5769 03 04 05
576C 06
576D 00 01 02    615          hex 00010203040506
5770 03 04 05
5773 06
5774 00 01 02    616          hex 00010203040506
5777 03 04 05
577A 06
577B 00 01 02    617          hex 00010203040506
577E 03 04 05
5781 06
5782          618 ;
5782 00 01 02    619          hex 00010203040506
5785 03 04 05
5788 06
5789 00 01 02    620          hex 00010203040506
578C 03 04 05
578F 06
5790 00 01 02    621          hex 00010203040506
5793 03 04 05
5796 06
5797 00 01 02    622          hex 00010203040506
579A 03 04 05
579D 06
579E          623 ;
579E 00 01 02    624          hex 00010203
57A1 03
57A2          625 ;
57A2          626 ;
57A2          627 ; COLORNDX is indexed by XPTR to determine which color byte
57A2          628 ; is used from COLORBYT.
57A2          629 ;
57A2          630 COLORNDX:
57A2 00 00 00    631          hex 0000000000000000
57A5 00 00 00
57A8 00
57A9 01 01 01    632          hex 0101010101010101
57AC 01 01 01
57AF 01
57B0 02 02 02    633          hex 0202020202020202
57B3 02 02 02
57B6 02
57B7 03 03 03    634          hex 0303030303030303
57BA 03 03 03
57BD 03
57BE          635 ;
57BE 00 00 00    636          hex 0000000000000000
57C1 00 00 00
57C4 00
57C5 01 01 01    637          hex 0101010101010101
57C8 01 01 01
57CB 01
57CC 02 02 02    638          hex 0202020202020202
57CF 02 02 02
57D2 02
57D3 03 03 03    639          hex 0303030303030303
57D6 03 03 03
57D9 03
57DA          640 ;
57DA 00 00 00    641          hex 0000000000000000
57DD 00 00 00

```

```

57E0 00
57E1 01 01 01    642          hex 0101010101010101
57E4 01 01 01
57E7 01
57E8 02 02 02    643          hex 0202020202020202
57EB 02 02 02
57EE 02
57EF 03 03 03    644          hex 0303030303030303
57F2 03 03 03
57F5 03
57F6          645 ;
57F6 00 00 00    646          hex 0000000000000000
57F9 00 00 00
57FC 00
57FD 01 01 01    647          hex 0101010101010101
5800 01 01 01
5803 01
5804 02 02 02    648          hex 0202020202020202
5807 02 02 02
580A 02
580B 03 03 03    649          hex 0303030303030303
580E 03 03 03
5811 03
5812          650 ;
5812 00 00 00    651          hex 0000000000000000
5815 00 00 00
5818 00
5819 01 01 01    652          hex 0101010101010101
581C 01 01 01
581F 01
5820 02 02 02    653          hex 0202020202020202
5823 02 02 02
5826 02
5827 03 03 03    654          hex 0303030303030303
582A 03 03 03
582D 03
582E          655 ;
582E 00 00 00    656          hex 0000000000000000
5831 00 00 00
5834 00
5835 01 01 01    657          hex 0101010101010101
5838 01 01 01
583B 01
583C 02 02 02    658          hex 0202020202020202
583F 02 02 02
5842 02
5843 03 03 03    659          hex 0303030303030303
5846 03 03 03
5849 03
584A          660 ;
584A 00 00 00    661          hex 0000000000000000
584D 00 00 00
5850 00
5851 01 01 01    662          hex 0101010101010101
5854 01 01 01
5857 01
5858 02 02 02    663          hex 0202020202020202
585B 02 02 02
585E 02
585F 03 03 03    664          hex 0303030303030303
5862 03 03 03

```

```

5865 03
5866          665 ;
5866 00 00 00 666          hex 0000000000000000
5869 00 00 00
586C 00
586D 01 01 01 667          hex 0101010101010101
5870 01 01 01
5873 01
5874 02 02 02 668          hex 0202020202020202
5877 02 02 02
587A 02
587B 03 03 03 669          hex 0303030303030303
587E 03 03 03
5881 03
5882          670 ;
5882 00 00 00 671          hex 0000000000000000
5885 00 00 00
5888 00
5889 01 01 01 672          hex 0101010101010101
588C 01 01 01
588F 01
5890 02 02 02 673          hex 0202020202020202
5893 02 02 02
5896 02
5897 03 03 03 674          hex 0303030303030303
589A 03 03 03
589D 03
589E          675 ;
589E 00 00 00 676          hex 00000000
58A1 00
58A2          677 ;
58A2          678 ;
58A2          679 ; MASKON sets the appropriate bit from COLORBYT.
58A2          680 ;
58A2 81 82 84 681 MASKON   hex 8182848890A0C0
58A5 88 90 A0
58A8 C0
58A9          682 ;
58A9          683 ;
58A9          684 ; MASKOFF clears the current screen bit.
58A9          685 ;
58A9 7E 7D 7B 686 MASKOFF  hex 7E7D7B776F5F3F
58AC 77 6F 5F
58AF 3F
58B0          687 ;
58B0          688 ;
58B0          689 ; Data that is only used in the PLOT1.L and PLOT2.L
58B0          690 ; routines.
58B0          691 ;
58B0          692 COLORBYT dfs 8,ZERO
58B8          693 ;
58B8          694 ;

BSAVE SEG05,A$0900,B,L$064B

58B8          695          usr SEG05
58B8          696 ;
58B8          697 ;
58B8          698          icl "INPUT.L"

LLOAD INPUT.L,A$4000

```

```
58B8      1          ttl "ICON Maker Source Code, INPUT.L"
58B8      2      ;
58B8      3      ;
58B8      4      ; INPUT.L
58B8      5      ;
58B8      6      ;
58B8      7          obj $900
58B8      8          usr
58B8      9      ;
58B8     10      ;
58B8 A9 02     11  GETHEX2  lda #2
58BA     12      ;
58BA 2C 00 00  13          bit *-*
58BD     14          dfs !-2
58BB     15      ;
58BB A9 03     16  GETHEX3  lda #3
58BD     17      ;
58BD 2C 00 00  18          bit *-*
58C0     19          dfs !-2
58BE     20      ;
58BE A9 04     21  GETHEX4  lda #4
58C0     22      ;
58C0 2C 00 00  23          bit *-*
58C3     24          dfs !-2
58C1     25      ;
58C1 A9 06     26  GETHEX6  lda #6
58C3     27      ;
58C3 2C 00 00  28          bit *-*
58C6     29          dfs !-2
58C4     30      ;
58C4 A9 08     31  GETHEX8  lda #8
58C6     32      ;
58C6 38        33          sec
58C7 B0 0C     34          bcs >1
58C9     35      ;
58C9     36      ;
58C9 A9 01     37  GETDEC1  lda #1
58CB     38      ;
58CB 2C 00 00  39          bit *-*
58CE     40          dfs !-2
58CC     41      ;
58CC A9 02     42  GETDEC2  lda #2
58CE     43      ;
58CE 2C 00 00  44          bit *-*
58D1     45          dfs !-2
58CF     46      ;
58CF A9 03     47  GETDEC3  lda #3
58D1     48      ;
58D1 2C 00 00  49          bit *-*
58D4     50          dfs !-2
58D2     51      ;
58D2 A9 05     52  GETDEC5  lda #5
58D4     53      ;
58D4 18        54          clc
58D5     55      ;
58D5 08        56      ^1    php
58D6     57      ;
58D6 8D 50 5D  58          sta NNUMS
58D9     59      ;
58D9 A9 00     60          lda #ZERO
```

```

58DB          61 ;
58DB A0 0E      62      ldy #CHARBUFR-NENTRY+1
58DD          63 ;
58DD 99 52 5D   64 ^2      sta NENTRY,Y
58E0          65 ;
58E0 88         66      dey
58E1 10 FA      67      bpl <2
58E3          68 ;
58E3 20 58 5A   69 NUMLOOP jsr READKEY
58E6 90 03      70      bcc >3
58E8          71 ;
58E8 28         72      plp
58E9          73 ;
58E9 38         74      sec
58EA          75 ;
58EA 60         76      rts
58EB          77 ;
58EB D0 0A      78 ^3      bne >4
58ED          79 ;
58ED AC 52 5D   80      ldy NENTRY
58F0 D0 4B      81      bne NUMPROC
58F2          82 ;
58F2 28         83      plp
58F3          84 ;
58F3 A9 00      85      lda #ZERO
58F5          86 ;
58F5 18         87      clc
58F6          88 ;
58F6 60         89      rts
58F7          90 ;
58F7 C9 88      91 ^4      cmp #LARROW
58F9 F0 06      92      beq >5
58FB          93 ;
58FB C9 FF      94      cmp #DELETE
58FD D0 0F      95      bne >6
58FF          96 ;
58FF A9 88      97      lda #LARROW
5901          98 ;
5901 AC 52 5D   99 ^5      ldy NENTRY
5904 F0 DD     100      beq NUMLOOP
5906          101 ;
5906 20 73 5A   102      jsr PRNTCHAR
5909          103 ;
5909 CE 52 5D   104      dec NENTRY
590C 10 D5      105      bpl NUMLOOP          ; always taken
590E          106 ;
590E C9 E0      107 ^6      cmp #LWRCASE
5910 90 02      108      bcc >7
5912          109 ;
5912 29 DF      110      and #LWRMASK
5914          111 ;
5914 AC 52 5D   112 ^7      ldy NENTRY
5917 CC 50 5D   113      cpy NNUMS
591A B0 C7      114      bcs NUMLOOP
591C          115 ;
591C AA         116      tax
591D          117 ;
591D E9 AF      118      sbc #"0"-1
591F 30 C2      119      bmi NUMLOOP
5921          120 ;
5921 C9 0A      121      cmp #10

```

```

5923 90 0C      122      bcc >8
5925           123      ;
5925 28         124      plp
5926 08         125      php
5927           126      ;
5927 90 BA      127      bcc NUMLOOP
5929           128      ;
5929 E9 11      129      sbc #17
592B           130      ;
592B C9 06     131      cmp #6
592D B0 B4     132      bcs NUMLOOP
592F           133      ;
592F 69 0A     134      adc #10
5931           135      ;
5931 99 53 5D   136      ^8      sta NUMVALS,Y
5934           137      ;
5934 8A         138      txa
5935           139      ;
5935 20 73 5A   140      jsr PRNTCHAR
5938           141      ;
5938 EE 52 5D   142      inc NENTRY
593B D0 A6     143      bne NUMLOOP      ; always taken
593D           144      ;
593D 28         145      NUMPROC  plp
593E 90 2F     146      bcc DECPROC
5940           147      ;
5940 CC 50 5D   148      HEXPROC  cpy NNUMS
5943 B0 13     149      bcs >2
5945           150      ;
5945 A2 06     151      ldx #6
5947           152      ;
5947 BD 53 5D   153      ^1      lda NUMVALS,X
594A 9D 54 5D   154      sta NUMVALS+1,X
594D           155      ;
594D CA         156      dex
594E 10 F7     157      bpl <1
5950           158      ;
5950 A9 00     159      lda #ZERO
5952 8D 53 5D   160      sta NUMVALS
5955           161      ;
5955 C8         162      iny
5956 D0 E8     163      bne HEXPROC
5958           164      ;
5958 A2 06     165      ^2      ldx #6
595A A0 03     166      ld y #3
595C           167      ;
595C BD 53 5D   168      ^3      lda NUMVALS,X
595F           169      ;
595F 0A         170      asl
5960 0A         171      asl
5961 0A         172      asl
5962 0A         173      asl
5963           174      ;
5963 1D 54 5D   175      ora NUMVALS+1,X
5966 99 5B 5D   176      sta HEXVALS,Y
5969           177      ;
5969 CA         178      dex
596A CA         179      dex
596B           180      ;
596B 88         181      dey
596C 10 EE     182      bpl <3

```

```

596E      183 ;
596E 60    184      rts
596F      185 ;
596F AE 52 5D 186 DECPROC ldx NENTRY
5972 CA      187      dex
5973      188 ;
5973 A0 00    189      ldy #ZERO
5975      190 ;
5975 BD 53 5D 191 ^1      lda NUMVALS,X
5978 F0 19    192      beq >3
597A      193 ;
597A AD 5F 5D 194 ^2      lda DECVALS
597D 79 91 5D 195      adc DECTBLH,Y
5980 8D 5F 5D 196      sta DECVALS
5983      197 ;
5983 AD 60 5D 198      lda DECVALS+1
5986 79 96 5D 199      adc DECTBLH,Y
5989 8D 60 5D 200      sta DECVALS+1
598C      201 ;
598C B0 09    202      bcs >4
598E      203 ;
598E DE 53 5D 204      dec NUMVALS,X
5991 D0 E7    205      bne <2
5993      206 ;
5993 C8      207 ^3      iny
5994      208 ;
5994 CA      209      dex
5995 10 DE    210      bpl <1
5997      211 ;
5997 60      212 ^4      rts
5998      213 ;
5998      214 ;
5998 20 8D 5A 215 GETFNAME jsr PRINT
599B 09 74    216      hex 0974
599D C5 EE F4 217      asc "Enter ICON filename"
59A0 E5 F2 A0
59A3 C9 C3 CF
59A6 CE A0 E6
59A9 E9 EC E5
59AC EE E1 ED
59AF E5
59B0 09 75    218      hex 0975
59B2 BE A0    219      asc "> "
59B4 50      220      byt RTNCMD
59B5      221 ;
59B5 A0 17    222      ldy #NAMELEN-1
59B7      223 ;
59B7 A9 A0    224      lda #SPACE
59B9      225 ;
59B9 99 63 5D 226 ^1      sta NAMEBUFR,Y
59BC      227 ;
59BC 88      228      dey
59BD 10 FA    229      bpl <1
59BF      230 ;
59BF C8      231      iny
59C0      232 ;
59C0 8C 4C 5D 233      sty COUNT
59C3      234 ;
59C3 20 58 5A 235 ^2      jsr READKEY
59C6 B0 3B    236      bcs >6
59C8      237 ;

```

```

59C8 F0 36      238      beq >5
59CA           239      ;
59CA C9 88      240      cmp #LARROW
59CC F0 04      241      beq >3
59CE           242      ;
59CE C9 FF      243      cmp #DELETE
59D0 D0 18      244      bne >4
59D2           245      ;
59D2 AC 4C 5D   246      ^3      ldy COUNT
59D5 F0 EC      247      beq <2
59D7           248      ;
59D7 C6 24      249      dec CH
59D9 CE 4C 5D   250      dec COUNT
59DC           251      ;
59DC 88         252      dey
59DD           253      ;
59DD A9 A0      254      lda #SPACE
59DF 99 63 5D   255      sta NAMEBUFR,Y
59E2           256      ;
59E2 20 8D 5A   257      jsr PRINT
59E5 54 00      258      byt CLRCMD,EOLCLR
59E7 50         259      byt RTNCMD
59E8           260      ;
59E8 90 D9      261      bcc <2          ; always taken
59EA           262      ;
59EA C9 A0      263      ^4      cmp #SPACE
59EC 90 D5      264      bcc <2
59EE           265      ;
59EE AC 4C 5D   266      ldy COUNT
59F1           267      ;
59F1 C0 18      268      cpy #NAMELEN
59F3 B0 CE      269      bcs <2
59F5           270      ;
59F5 99 63 5D   271      sta NAMEBUFR,Y
59F8           272      ;
59F8 20 ED FD   273      jsr COUT
59FB           274      ;
59FB EE 4C 5D   275      inc COUNT
59FE D0 C3      276      bne <2          ; always taken
5A00           277      ;
5A00 AD 4C 5D   278      ^5      lda COUNT
5A03           279      ;
5A03 60         280      ^6      rts
5A04           281      ;
5A04           282      ;
5A04           283      ; Print "Press Any Key" and fall into GETKEY.
5A04           284      ;
5A04 20 8D 5A   285      PRESKEY jsr PRINT
5A07 00 76      286      hex 0076
5A09 54 01      287      byt CLRCMD,EOPCLR
5A0B 8D         288      byt RETURN
5A0C 55 00      289      byt CNTRCMD,DIRECT
5A0E D0 F2 E5   290      asc "Press Any Key"
5A11 F3 F3 A0
5A14 C1 EE F9
5A17 A0 CB E5
5A1A F9
5A1B 50         291      byt RTNCMD
5A1C           292      ;
5A1C           293      ;
5A1C           294      ; Wait for keypress. Change lower case to upper case.

```



```

5A1C      295 ;
5A1C 2C 10 C0 296 GETKEY    bit CLRKEY
5A1F      297 ;
5A1F AD 00 C0 298 ^1      lda KEY
5A22      299 ;
5A22 EA      300      nop
5A23      301 ;
5A23 10 FA    302      bpl <1
5A25      303 ;
5A25 2C 10 C0 304      bit CLRKEY
5A28      305 ;
5A28 C9 E1    306      cmp #"a"
5A2A 90 06    307      bcc >2
5A2C      308 ;
5A2C C9 FB    309      cmp #"z"+1
5A2E B0 02    310      bcs >2
5A30      311 ;
5A30 29 DF    312      and #LWRMASK
5A32      313 ;
5A32 C9 9B    314 ^2      cmp #ESCAPE
5A34 F0 03    315      beq >3
5A36      316 ;
5A36 C9 8D    317      cmp #RETURN
5A38      318 ;
5A38 18      319      clc
5A39      320 ;
5A39 60      321 ^3      rts
5A3A      322 ;
5A3A      323 ;
5A3A      324 ; Do not wait for keypress.  Change lower case to upper
5A3A      325 ; case.
5A3A      326 ;
5A3A AD 00 C0 327 CHECKKEY  lda KEY
5A3D 30 04    328      bmi >1
5A3F      329 ;
5A3F A9 00    330      lda #ZERO
5A41 F0 13    331      beq >3                ; always taken
5A43      332 ;
5A43 2C 10 C0 333 ^1      bit CLRKEY
5A46      334 ;
5A46 C9 E1    335      cmp #"a"
5A48 90 06    336      bcc >2
5A4A      337 ;
5A4A C9 FB    338      cmp #"z"+1
5A4C B0 02    339      bcs >2
5A4E      340 ;
5A4E 29 DF    341      and #LWRMASK
5A50      342 ;
5A50 C9 9B    343 ^2      cmp #ESCAPE
5A52 F0 03    344      beq >4
5A54      345 ;
5A54 C9 8D    346      cmp #RETURN
5A56      347 ;
5A56 18      348 ^3      clc
5A57      349 ;
5A57 60      350 ^4      rts
5A58      351 ;
5A58      352 ;
5A58 20 8D 5A 353 READKEY   jsr PRINT
5A5B 52 01    354      byt DISPCMD,INVRDISP
5A5D A0      355      asc " "

```

```
5A5E 88          356          byt LARROW
5A5F 50          357          byt RTNCMD
5A60            358          ;
5A60 20 1C 5A    359          jsr GETKEY
5A63            360          ;
5A63 20 8D 5A    361          jsr PRINT
5A66 52 00       362          byt DISPCMD,NORMDISP
5A68 A0          363          asc " "
5A69 88          364          byt LARROW
5A6A 50          365          byt RTNCMD
5A6B            366          ;
5A6B C9 9B       367          cmp #ESCAPE
5A6D F0 03       368          beq >1
5A6F            369          ;
5A6F C9 8D       370          cmp #RETURN
5A71            371          ;
5A71 18          372          clc
5A72            373          ;
5A72 60          374          ^1      rts
5A73            375          ;
5A73            376          ;
5A73 8D 61 5D    377          PRNTCHAR sta CHARBUFR
5A76            378          ;
5A76 20 8D 5A    379          jsr PRINT
5A79 56 00       380          byt BUFRCMD,DIRECT
5A7B 61 5D       381          adr CHARBUFR
5A7D 50          382          byt RTNCMD
5A7E            383          ;
5A7E 60          384          rts
5A7F            385          ;
5A7F            386          ;
5A7F A0 00       387          MYBELL ldy #ZERO
5A81            388          ;
5A81 A9 08       389          ^1      lda #8
5A83 20 A8 FC    390          jsr WAIT
5A86            391          ;
5A86 AD 30 C0    392          lda SPEAKER
5A89            393          ;
5A89 88          394          dey
5A8A D0 F5       395          bne <1
5A8C            396          ;
5A8C 60          397          rts
5A8D            398          ;
5A8D            399          ;
```

BSAVE SEG06,A\$0900,B,L\$01D5

```
5A8D            400          usr SEG06
5A8D            401          ;
5A8D            402          ;
5A8D            403          icl "PRINT.L"
```

LLOAD PRINT.L,A\$4000

```

5A8D          1          ttl "ICON Maker Source Code, PRINT.L"
5A8D          2          ;
5A8D          3          ;
5A8D          4          ; PRINT.L
5A8D          5          ;
5A8D          6          ;
5A8D          7          obj $900
5A8D          8          usr
5A8D          9          ;
5A8D         10          ;
5A8D 8D 77 5B 11 PRINT    sta PRNTSAVA+1
5A90 8E 75 5B 12          stx PRNTSAVX+1
5A93 8C 73 5B 13          sty PRNTSAVY+1
5A96         14          ;
5A96 68       15          pla
5A97 85 FC    16          sta PRNTPTR
5A99         17          ;
5A99 68       18          pla
5A9A 85 FD    19          sta PRNTPTR+1
5A9C         20          ;
5A9C E6 FC    21 PRNTLOOP inc PRNTPTR
5A9E D0 02    22          bne >1
5AA0         23          ;
5AA0 E6 FD    24          inc PRNTPTR+1
5AA2         25          ;
5AA2 A0 00    26 ^1      ldy #ZERO
5AA4         27          ;
5AA4 B1 FC    28          lda (PRNTPTR),Y
5AA6 10 10    29          bpl >3
5AA8         30          ;
5AA8 C9 A0    31          cmp #SPACE
5AAA 90 06    32          bcc >2
5AAC         33          ;
5AAC 20 11 5B 34          jsr PRNTOUT
5AAF         35          ;
5AAF 4C 9C 5A 36          jmp PRNTLOOP
5AB2         37          ;
5AB2 20 15 5B 38 ^2      jsr PRNTOUT2
5AB5         39          ;
5AB5 4C 9C 5A 40          jmp PRNTLOOP
5AB8         41          ;
5AB8 C9 50    42 ^3      cmp #MAXCH
5ABA B0 04    43          bcs >4
5ABC         44          ;
5ABC 85 24    45          sta CH
5ABE         46          ;
5ABE 90 DC    47          bcc PRNTLOOP
5AC0         48          ;
5AC0 C9 60    49 ^4      cmp #MINCV
5AC2 90 0A    50          bcc >5
5AC4         51          ;
5AC4 29 1F    52          and #CVMASK
5AC6 85 25    53          sta CV
5AC8         54          ;
5AC8 20 22 FC 55 PRNTMOD1 jsr VTAB
5ACB         56          ;
5ACB 4C 9C 5A 57          jmp PRNTLOOP
5ACE         58          ;
5ACE 29 0F    59 ^5      and #CMDMASK
5AD0 AA       60          tax

```

```

5AD1      61 ;
5AD1 BD 37 5B 62      lda PRNTBL,X
5AD4 8D E4 5A 63      sta PRNTMOD2+1
5AD7      64 ;
5AD7 BD 47 5B 65      lda PRNTBLL,X
5ADA 8D 0C 5B 66      sta PRNTMOD3+1
5ADD      67 ;
5ADD BD 57 5B 68      lda PRNTBLH,X
5AE0 8D 0D 5B 69      sta PRNTMOD3+2
5AE3      70 ;
5AE3 90 23 71 PRNTMOD2 bcc PRNTBR6
5AE5      72 ;
5AE5 C8 73 PRNTBR1 iny
5AE6      74 ;
5AE6 B1 FC 75      lda (PRNTPTR),Y
5AE8 8D 36 5B 76      sta FRMTVAL
5AEB D0 08 77      bne PRNTBR3
5AED      78 ;
5AED F0 10 79      beq PRNTBR5 ; always taken
5AEF      80 ;
5AEF C8 81 PRNTBR2 iny
5AF0      82 ;
5AF0 B1 FC 83      lda (PRNTPTR),Y
5AF2 8D 36 5B 84      sta FRMTVAL
5AF5      85 ;
5AF5 C8 86 PRNTBR3 iny
5AF6      87 ;
5AF6 B1 FC 88      lda (PRNTPTR),Y
5AF8 85 FA 89      sta DATAPTR
5AFA      90 ;
5AFA C8 91 PRNTBR4 iny
5AFB      92 ;
5AFB B1 FC 93      lda (PRNTPTR),Y
5AFD 85 FB 94      sta DATAPTR+1 ; equated to PRNTVAL
5AFF      95 ;
5AFF 98 96 PRNTBR5 tya
5B00      97 ;
5B00 65 FC 98      adc PRNTPTR
5B02 85 FC 99      sta PRNTPTR
5B04 90 02 100     bcc PRNTBR6
5B06      101 ;
5B06 E6 FD 102     inc PRNTPTR+1
5B08      103 ;
5B08 18 104 PRNTBR6 clc
5B09      105 ;
5B09 A0 00 106     ldy #ZERO
5B0B      107 ;
5B0B 20 00 00 108 PRNTMOD3 jsr *-*
5B0E      109 ;
5B0E 4C 9C 5A 110     jmp PRNTLOOP
5B11      111 ;
5B11      112 ;
5B11      113 PRNTOUT:
5B11 09 00 114 OUTMOD1 ora #ZERO
5B13 49 00 115 OUTMOD2 eor #ZERO
5B15      116 ;
5B15 4C ED FD 117 PRNTOUT2 jmp COUT
5B18      118 ;
5B18      119 ;
5B18      120 ; Notes on DISPCMD as index
5B18      121 ;

```

```

5B18      122 ; 0 - Normal display
5B18      123 ; 1 - Inverse display
5B18      124 ;
5B18 00 40 125 OUTTBL1 hex 0040 ; TEXT
5B1A 00 00 126 hex 0000 ; GRPH
5B1C 00 00 127 hex 0000 ; TX80
5B1E      128 ;
5B1E 00 C0 129 OUTTBL2 hex 00C0
5B20 00 80 130 hex 0080
5B22 00 00 131 hex 0000
5B24      132 ;
5B24 FF 3F 133 OUT80COL hex FF3F
5B26      134 ;
5B26      135 ;
5B26 22 FC 136 VTABADRS adr VTAB
5B28 79 5B 137 adr PRINTRTN
5B2A 22 FC 138 adr VTAB
5B2C      139 ;
5B2C      140 ;
5B2C ED FD 141 OUTADRS adr COUT
5B2E 1F 5D 142 adr PRNTGRPH
5B30 ED FD 143 adr COUT
5B32      144 ;
5B32 00 145 PRNTSAV hex 00
5B33 00 00 146 PRNTNUM hex 0000
5B35      147 ;
5B35      148 ;
5B35      149 ; Notes on MODEVAL and FRMTVAL
5B35      150 ;
5B35      151 ; 0 - 40 column TEXT mode
5B35      152 ; 1 - GRAPHICS mode
5B35      153 ; 2 - 80 column TEXT mode
5B35      154 ; 3 - exit 80 TEXT, enter 40 TEXT
5B35      155 ;
5B35      156 ; 0x00 - no left padding
5B35      157 ; 0x20 - data in high/low order, otherwise low/high order
5B35      158 ; 0x40 - zero left padding
5B35      159 ; 0x80 - space left padding
5B35      160 ;
5B35 00 161 MODEVAL hex 00
5B36 00 162 FRMTVAL hex 00
5B37      163 ;
5B37      164 ;
5B37      165 ; Branch table of command routines.
5B37      166 ;
5B37      167 PRNTBL:
5B37 23 168 byt PRNTBR6-PRNTBR1 ; 50
5B38 15 169 byt PRNTBR4-PRNTBR1 ; 51
5B39 15 170 byt PRNTBR4-PRNTBR1 ; 52
5B3A 15 171 byt PRNTBR4-PRNTBR1 ; 53
5B3B 15 172 byt PRNTBR4-PRNTBR1 ; 54
5B3C 00 173 byt PRNTBR1-PRNTBR1 ; 55
5B3D 0A 174 byt PRNTBR2-PRNTBR1 ; 56
5B3E 10 175 byt PRNTBR3-PRNTBR1 ; 57
5B3F 10 176 byt PRNTBR3-PRNTBR1 ; 58
5B40 10 177 byt PRNTBR3-PRNTBR1 ; 59
5B41 0A 178 byt PRNTBR2-PRNTBR1 ; 5A
5B42 0A 179 byt PRNTBR2-PRNTBR1 ; 5B
5B43 10 180 byt PRNTBR3-PRNTBR1 ; 5C
5B44 10 181 byt PRNTBR3-PRNTBR1 ; 5D
5B45 10 182 byt PRNTBR3-PRNTBR1 ; 5E

```

```

5B46 0A          183          byt PRNTBR2-PRNTBR1 ; 5F
5B47          184          ;
5B47          185          ;
5B47          186          ; Address tables of command routines.
5B47          187          ;
5B47          188  PRNTBLL:
5B47 67          189          byt PRNTRTN          ; 50
5B48 7A          190          byt PRNTMODE         ; 51
5B49 C5          191          byt PRNTDISP         ; 52
5B4A E4          192          byt PRNTSCRN         ; 53
5B4B F4          193          byt PRNTCLR          ; 54
5B4C FE          194          byt PRNTCNTR         ; 55
5B4D 20          195          byt PRNTBUFR         ; 56
5B4E 3C          196          byt PRNTNIBL         ; 57
5B4F 45          197          byt PRNT1BYT         ; 58
5B50 48          198          byt PRNT2BYT         ; 59
5B51 41          199          byt PRNTNBYT         ; 5A
5B52 54          200          byt PRNTADR          ; 5B
5B53 6C          201          byt PRNT1DEC         ; 5C
5B54 72          202          byt PRNT2DEC         ; 5D
5B55 7F          203          byt PRNT3DEC         ; 5E
5B56 89          204          byt PRNTNDEC         ; 5F
5B57          205          ;
5B57          206  PRNTBLH:
5B57 5B          207          hby PRNTRTN          ; 50
5B58 5B          208          hby PRNTMODE         ; 51
5B59 5B          209          hby PRNTDISP         ; 52
5B5A 5B          210          hby PRNTSCRN         ; 53
5B5B 5B          211          hby PRNTCLR          ; 54
5B5C 5B          212          hby PRNTCNTR         ; 55
5B5D 5C          213          hby PRNTBUFR         ; 56
5B5E 5C          214          hby PRNTNIBL         ; 57
5B5F 5C          215          hby PRNT1BYT         ; 58
5B60 5C          216          hby PRNT2BYT         ; 59
5B61 5C          217          hby PRNTNBYT         ; 5A
5B62 5C          218          hby PRNTADR          ; 5B
5B63 5C          219          hby PRNT1DEC         ; 5C
5B64 5C          220          hby PRNT2DEC         ; 5D
5B65 5C          221          hby PRNT3DEC         ; 5E
5B66 5C          222          hby PRNTNDEC         ; 5F
5B67          223          ;
5B67          224          ;
5B67          225          ; RTNCMD (0x50)
5B67          226          ;
5B67 BA          227  PRNTRTN  tsx
5B68          228          ;
5B68 A5 FC       229          lda PRNTPTR
5B6A 9D 01 01    230          sta STACK+1,X
5B6D          231          ;
5B6D A5 FD       232          lda PRNTPTR+1
5B6F 9D 02 01    233          sta STACK+2,X
5B72          234          ;
5B72 A0 00       235  PRNTSAVY ldy #ZERO
5B74 A2 00       236  PRNTSAVX ldx #ZERO
5B76 A9 00       237  PRNTSAVA lda #ZERO
5B78          238          ;
5B78 18          239          clc
5B79          240          ;
5B79 60          241  PRINTRTN rts
5B7A          242          ;
5B7A          243          ;

```

```

5B7A      244 ; MODECMD (0x51)
5B7A      245 ;
5B7A      246 ; 0 - 40 column TEXT mode
5B7A      247 ; 1 - GRAPHICS mode
5B7A      248 ; 2 - 80 column TEXT mode
5B7A      249 ; 3 - exit 80 TEXT, enter 40 TEXT
5B7A      250 ;
5B7A A5 FB 251 PRNTMODE lda DATAPTR+1
5B7C 29 03 252         and #3
5B7E      253 ;
5B7E C9 02 254         cmp #TX80MODE
5B80 D0 09 255         bne >1
5B82      256 ;
5B82 A9 B3 257         lda #"3"
5B84 20 95 FE 258         jsr OUTPORT
5B87      259 ;
5B87 A9 02 260         lda #TX80MODE
5B89 D0 1A 261         bne >2
5B8B      262 ;
5B8B C9 03 263 ^1      cmp #LV80MODE
5B8D D0 16 264         bne >2
5B8F      265 ;
5B8F AD 24 5B 266         lda OUT80COL
5B92 85 32 267         sta INVFLG
5B94      268 ;
5B94 A9 9B 269         lda #ESCAPE
5B96 20 ED FD 270         jsr COUT
5B99      271 ;
5B99 A9 91 272         lda #CTRLQ
5B9B 20 ED FD 273         jsr COUT
5B9E      274 ;
5B9E A9 B0 275         lda #"0"
5BA0 20 95 FE 276         jsr OUTPORT
5BA3      277 ;
5BA3 A9 00 278         lda #TEXTMODE
5BA5      279 ;
5BA5 8D 35 5B 280 ^2      sta MODEVAL
5BA8      281 ;
5BA8 0A 282         asl
5BA9 A8 283         tay
5BAA      284 ;
5BAA B9 26 5B 285         lda VTABADRS,Y
5BAD 8D C9 5A 286         sta PRNTMOD1+1
5BB0      287 ;
5BB0 B9 27 5B 288         lda VTABADRS+1,Y
5BB3 8D CA 5A 289         sta PRNTMOD1+2
5BB6      290 ;
5BB6 B9 2C 5B 291         lda OUTADRS,Y
5BB9 8D 16 5B 292         sta PRNTOUT2+1
5BBC      293 ;
5BBC B9 2D 5B 294         lda OUTADRS+1,Y
5BBF 8D 17 5B 295         sta PRNTOUT2+2
5BC2      296 ;
5BC2 4C EA 03 297         jmp HOOKDOS
5BC5      298 ;
5BC5      299 ;
5BC5      300 ; DISPCMD (0x52)
5BC5      301 ;
5BC5      302 ; 0 - Normal display
5BC5      303 ; 1 - Inverse display
5BC5      304 ;

```

```

5BC5 A4 FB      305 PRNTDISP ldy PRNTVAL      ; display mode
5BC7            306 ;
5BC7 AD 35 5B   307             lda MODEVAL
5BCA C9 02      308             cmp #TX80MODE
5BCC D0 05      309             bne >1
5BCE            310 ;
5BCE BE 24 5B   311             ldx OUT80COL,Y
5BD1 86 32      312             stx INVFLG
5BD3            313 ;
5BD3 0A         314 ^1          asl              ; clears C-flag
5BD4 65 FB      315             adc PRNTVAL
5BD6            316 ;
5BD6 A8         317             tay
5BD7            318 ;
5BD7 B9 18 5B   319             lda OUTTBL1,Y
5BDA 8D 12 5B   320             sta OUTMOD1+1
5BDD            321 ;
5BDD B9 1E 5B   322             lda OUTTBL2,Y
5BE0 8D 14 5B   323             sta OUTMOD2+1
5BE3            324 ;
5BE3 60         325             rts
5BE4            326 ;
5BE4            327 ;
5BE4            328 ; SCRNCMD (0x53)
5BE4            329 ;
5BE4            330 ; 0 - INIT
5BE4            331 ; 1 - HOME
5BE4            332 ;
5BE4 2C 54 C0   333 PRNTSCRN bit PAGE1ON
5BE7            334 ;
5BE7            335             .if DISPLAY=GRPHMODE
5BE7            336 ;
5BE7            337             lda MODEVAL
5BE7            338             cmp #GRPHMODE
5BE7            339             bne >2
5BE7            340 ;
5BE7            341             lda PRNTVAL
5BE7            342             bne >1
5BE7            343 ;
5BE7            344             jmp SCRNNINIT
5BE7            345 ;
5BE7            346 ^1          jmp SCRNHOME
5BE7            347 ;
5BE7            348             .fi
5BE7            349 ;
5BE7 A5 FB      350 ^2          lda PRNTVAL
5BE9 D0 06      351             bne >3
5BEB            352 ;
5BEB 2C 51 C0   353             bit TEXTON
5BEE            354 ;
5BEE 4C 2F FB   355             jmp INIT
5BF1            356 ;
5BF1 4C 58 FC   357 ^3          jmp HOME
5BF4            358 ;
5BF4            359 ;
5BF4            360 ; CLRCMD (0x54)
5BF4            361 ;
5BF4            362 ; 0 - EOL
5BF4            363 ; 1 - EOP
5BF4            364 ;
5BF4            365 PRNTCLR:

```



```

5BF4          366          .if DISPLAY=GRPHMODE
5BF4          367          ;
5BF4          368          lda MODEVAL
5BF4          369          cmp #GRPHMODE
5BF4          370          bne >2
5BF4          371          ;
5BF4          372          lda PRNTVAL
5BF4          373          bne >1
5BF4          374          ;
5BF4          375          jmp SCRNEOL
5BF4          376          ;
5BF4          377          ^1      jmp SCRNEOP
5BF4          378          ;
5BF4          379          .fi
5BF4          380          ;
5BF4 A5 FB      381          ^2      lda PRNTVAL
5BF6 D0 03      382          bne >3
5BF8          383          ;
5BF8 4C 9C FC    384          jmp CLREOL
5BFB          385          ;
5BFB 4C 42 FC    386          ^3      jmp CLREOP
5BFE          387          ;
5BFE          388          ;
5BFE          389          ; CNTRCMD (0x55)
5BFE          390          ;
5BFE          391          ; 0 - center and print immediate ASCII data
5BFE          392          ; 1 - center and print buffer ASCII data
5BFE          393          ;
5BFE A9 9F      394      PRNTCNTR lda #SPACE-1
5C00          395          ;
5C00 AE 36 5B    396          ldx FRMTVAL
5C03 D0 07      397          bne >2
5C05          398          ;
5C05 C8          399          ^1      iny
5C06          400          ;
5C06 D1 FC      401          cmp (PRNTPTR),Y
5C08 90 FB      402          bcc <1
5C0A          403          ;
5C0A B0 05      404          bcs >3          ; always taken
5C0C          405          ;
5C0C C8          406          ^2      iny
5C0D          407          ;
5C0D D1 FA      408          cmp (DATAPTR),Y
5C0F 90 FB      409          bcc <2
5C11          410          ;
5C11 88          411          ^3      dey
5C12 98          412          tya
5C13          413          ;
5C13 49 FF      414          eor #NEGONE
5C15 65 21      415          adc WNDWIDTH
5C17          416          ;
5C17 4A          417          lsr
5C18          418          ;
5C18 65 20      419          adc WNDLFT
5C1A 85 24      420          sta CH
5C1C          421          ;
5C1C 8A          422          txa
5C1D D0 10      423          bne PRTBUFR2
5C1F          424          ;
5C1F 60          425          rts
5C20          426          ;

```

```

5C20          427 ;
5C20          428 ; BUFRCMD (0x56)
5C20          429 ;
5C20          430 ; 0 - direct address
5C20          431 ; 1 - indirect address
5C20          432 ;
5C20 AD 36 5B 433 PRNTBUFR lda FRMTVAL
5C23 F0 0C    434          beq >1
5C25          435 ;
5C25 B1 FA    436          lda (DATAPTR),Y
5C27 AA       437          tax
5C28          438 ;
5C28 C8       439          iny
5C29          440 ;
5C29 B1 FA    441          lda (DATAPTR),Y
5C2B          442 ;
5C2B 86 FA    443          stx DATAPTR
5C2D 85 FB    444          sta DATAPTR+1
5C2F          445 ;
5C2F A0 00    446 PRTBUFR2 ldy #ZERO
5C31          447 ;
5C31 B1 FA    448 ^1      lda (DATAPTR),Y
5C33 F0 06    449          beq >2
5C35          450 ;
5C35 20 11 5B 451          jsr PRNTOUT
5C38          452 ;
5C38 C8       453          iny
5C39 D0 F6    454          bne <1
5C3B          455 ;
5C3B 60       456 ^2      rts
5C3C          457 ;
5C3C          458 ;
5C3C          459 ; NIBLCMD (0x57)
5C3C          460 ;
5C3C B1 FA    461 PRNTNIBL lda (DATAPTR),Y
5C3E          462 ;
5C3E 4C D9 5C 463          jmp PRNTHEx
5C41          464 ;
5C41          465 ;
5C41          466 ; BYT1CMD (0x58)
5C41          467 ; BYT2CMD (0x59)
5C41          468 ; BYTNCMD (0x5A)
5C41          469 ;
5C41 AE 36 5B 470 PRNTNBYT ldx FRMTVAL
5C44          471 ;
5C44 2C 00 00 472          bit *-*
5C47          473          dfs !-2
5C45          474 ;
5C45 A2 01    475 PRNT1BYT ldx #1
5C47          476 ;
5C47 2C 00 00 477          bit *-*
5C4A          478          dfs !-2
5C48          479 ;
5C48 A2 02    480 PRNT2BYT ldx #2
5C4A          481 ;
5C4A B1 FA    482 PRNTBYT  lda (DATAPTR),Y
5C4C          483 ;
5C4C 20 D0 5C 484          jsr PRNTBYTE
5C4F          485 ;
5C4F C8       486          iny
5C50          487 ;

```

```

5C50 CA          488          dex
5C51 D0 F7      489          bne PRNTBYT
5C53           490          ;
5C53 60         491          rts
5C54           492          ;
5C54           493          ;
5C54           494          ; ADRCMD (0x5B)
5C54           495          ;
5C54           496          ; 0 - direct address
5C54           497          ; 1 - indirect address
5C54           498          ;
5C54 AD 36 5B   499 PRNTADR   lda FRMTVAL
5C57 D0 06      500          bne >1
5C59           501          ;
5C59 A6 FA      502          ldx DATAPTR
5C5B A5 FB      503          lda DATAPTR+1
5C5D           504          ;
5C5D 90 06      505          bcc >2                ; always taken
5C5F           506          ;
5C5F B1 FA      507 ^1      lda (DATAPTR),Y
5C61 AA         508          tax
5C62           509          ;
5C62 C8         510          iny
5C63           511          ;
5C63 B1 FA      512          lda (DATAPTR),Y
5C65           513          ;
5C65 20 D0 5C   514 ^2      jsr PRNTBYTE
5C68           515          ;
5C68 8A         516          txa
5C69           517          ;
5C69 4C D0 5C   518          jmp PRNTBYTE
5C6C           519          ;
5C6C           520          ;
5C6C           521          ; DEC1CMD (0x5C)
5C6C           522          ;
5C6C 20 E6 5C   523 PRNT1DEC  jsr HEXTODEC
5C6F           524          ;
5C6F 4C D9 5C   525          jmp PRNTHEx
5C72           526          ;
5C72           527          ;
5C72           528          ; DEC2CMD (0x5D)
5C72           529          ;
5C72 20 E6 5C   530 PRNT2DEC  jsr HEXTODEC
5C75           531          ;
5C75           532          ;
5C75 8A         533 PRNTDEC   txa
5C76 20 D9 5C   534          jsr PRNTHEx
5C79           535          ;
5C79 AD 32 5B   536          lda PRNTSAV
5C7C           537          ;
5C7C 4C D9 5C   538          jmp PRNTHEx
5C7F           539          ;
5C7F           540          ;
5C7F           541          ; DEC3CMD (0x5E)
5C7F           542          ;
5C7F 20 E6 5C   543 PRNT3DEC  jsr HEXTODEC
5C82           544          ;
5C82 98         545          tya
5C83 20 D9 5C   546          jsr PRNTHEx
5C86           547          ;
5C86 4C 75 5C   548          jmp PRNTDEC

```

```

5C89          549 ;
5C89          550 ;
5C89          551 ; DECNCMD (0x5F)
5C89          552 ;
5C89          553 ; 0x00 - no left padding
5C89          554 ; 0x20 - data in high/low order, otherwise low/high order
5C89          555 ; 0x40 - zero left padding
5C89          556 ; 0x80 - space left padding
5C89          557 ;
5C89          558 ; data in high/low order
5C89          559 ;
5C89 B1 FA    560 PRNTNDEC lda (DATAPTR),Y
5C8B AA       561 tax
5C8C          562 ;
5C8C C8       563 iny
5C8D          564 ;
5C8D B1 FA    565 lda (DATAPTR),Y
5C8F A8       566 tay
5C90          567 ;
5C90 AD 36 5B 568 lda FRMTVAL
5C93 29 20    569 and #HIGHLOW
5C95 D0 09    570 bne >1
5C97          571 ;
5C97 8E 33 5B 572 stx PRNTNUM
5C9A 8C 34 5B 573 sty PRNTNUM+1
5C9D          574 ;
5C9D 4C A6 5C 575 jmp >2
5CA0          576 ;
5CA0 8C 33 5B 577 ^1 sty PRNTNUM
5CA3 8E 34 5B 578 stx PRNTNUM+1
5CA6          579 ;
5CA6 A2 03    580 ^2 ldx #3
5CA8          581 ;
5CA8 2C 36 5B 582 bit FRMTVAL
5CAB 70 18    583 bvs >6
5CAD          584 ;
5CAD 20 00 5D 585 ^3 jsr GETDIGIT
5CB0 D0 16    586 bne >7
5CB2          587 ;
5CB2 2C 36 5B 588 bit FRMTVAL
5CB5 10 05    589 bpl >4
5CB7          590 ;
5CB7 A9 A0    591 lda #SPACE
5CB9 20 11 5B 592 jsr PRNTOUT
5CBC          593 ;
5CBC CA       594 ^4 dex
5CBD 10 EE    595 bpl <3
5CBF          596 ;
5CBF AD 33 5B 597 ^5 lda PRNTNUM
5CC2          598 ;
5CC2 4C D9 5C 599 jmp PRNTHEx
5CC5          600 ;
5CC5 20 00 5D 601 ^6 jsr GETDIGIT
5CC8          602 ;
5CC8 20 D9 5C 603 ^7 jsr PRNTHEx
5CCB          604 ;
5CCB CA       605 dex
5CCC 10 F7    606 bpl <6
5CCE          607 ;
5CCE 30 EF    608 bmi <5
5CD0          609 ;

```

; always taken

```

5CD0          610 ;
5CD0 48        611 PRNTBYTE pha
5CD1          612 ;
5CD1 4A        613          lsr
5CD2 4A        614          lsr
5CD3 4A        615          lsr
5CD4 4A        616          lsr
5CD5          617 ;
5CD5 20 DB 5C  618          jsr PRNTHX2
5CD8          619 ;
5CD8 68        620          pla
5CD9          621 ;
5CD9          622 ;
5CD9 29 0F      623 PRNTHX and #NIBLMASK
5CDB          624 ;
5CDB 09 B0      625 PRNTHX2 ora #"0"
5CDD          626 ;
5CDD C9 BA      627          cmp #"9"+1
5CDF 90 02      628          bcc >1
5CE1          629 ;
5CE1 69 06      630          adc #6
5CE3          631 ;
5CE3 4C 11 5B   632 ^1      jmp PRNTOUT
5CE6          633 ;
5CE6          634 ;
5CE6 B1 FA      635 HEXTODEC lda (DATAPTR),Y
5CE8          636 ;
5CE8 A2 00      637          ldx #ZERO
5CEA          638 ;
5CEA C9 64      639 ^1      cmp #100
5CEC 90 05      640          bcc >2
5CEE          641 ;
5CEE E9 64      642          sbc #100
5CF0          643 ;
5CF0 C8         644          iny
5CF1 D0 F7      645          bne <1
5CF3          646 ;
5CF3 C9 0A      647 ^2      cmp #10
5CF5 90 05      648          bcc >3
5CF7          649 ;
5CF7 E9 0A      650          sbc #10
5CF9          651 ;
5CF9 E8         652          inx
5CFA D0 F7      653          bne <2
5CFC          654 ;
5CFC 8D 32 5B   655 ^3      sta PRNTSAV
5CFF          656 ;
5CFF 60         657          rts
5D00          658 ;
5D00          659 ;
5D00 A0 00      660 GETDIGIT ldy #ZERO
5D02          661 ;
5D02 38         662 ^1      sec
5D03          663 ;
5D03 AD 33 5B   664          lda PRNTNUM
5D06 FD 92 5D   665          sbc DECTBLH+1,X
5D09 48         666          pha
5D0A          667 ;
5D0A AD 34 5B   668          lda PRNTNUM+1
5D0D FD 97 5D   669          sbc DECTBLH+1,X
5D10 90 0A      670          bcc >2

```

```
5D12      671 ;
5D12 8D 34 5B 672      sta PRNTNUM+1
5D15      673 ;
5D15 68      674      pla
5D16 8D 33 5B 675      sta PRNTNUM
5D19      676 ;
5D19 C8      677      iny
5D1A D0 E6    678      bne <1
5D1C      679 ;
5D1C 68      680 ^2      pla
5D1D      681 ;
5D1D 98      682      tya
5D1E      683 ;
5D1E 60      684      rts
5D1F      685 ;
5D1F      686 ;
5D1F      687 PRNTGRPH:
5D1F      688 ;
5D1F      689      .if DISPLAY=GRPHMODE
5D1F      690 ;
5D1F      691      cmp #SPACE
5D1F      692      bcs >3
5D1F      693 ;
5D1F      694      cmp #ASCIFLAG
5D1F      695      bcc >3
5D1F      696 ;
5D1F      697      cmp #BELLCHAR
5D1F      698      bne >1
5D1F      699 ;
5D1F      700      jmp BELL
5D1F      701 ;
5D1F      702 ^1      cmp #RETURN
5D1F      703      beq >2
5D1F      704 ;
5D1F      705      cmp #LARROW
5D1F      706      bne >1
5D1F      707 ;
5D1F      708      dec CH
5D1F      709 ;
5D1F      710 ^1      cmp #DARROW
5D1F      711      bne >1
5D1F      712 ;
5D1F      713      inc CV
5D1F      714 ;
5D1F      715 ^1      cmp #UARROW
5D1F      716      bne >1
5D1F      717 ;
5D1F      718      dec CV
5D1F      719 ;
5D1F      720 ^1      cmp #RARROW
5D1F      721      bne >1
5D1F      722 ;
5D1F      723      inc CH
5D1F      724 ;
5D1F      725 ^1      rts
5D1F      726 ;
5D1F      727 ^2      lda WNDLFT
5D1F      728      sta CH
5D1F      729 ;
5D1F      730      inc CV
5D1F      731 ;
```

```
5D1F      732      lda CV
5D1F      733      cmp WNDBTM
5D1F      734      bcc >8
5D1F      735      ;
5D1F      736      jmp SCROLL
5D1F      737      ;
5D1F      738      ^3      stx SCRNSAVX+1
5D1F      739      sty SCRNSAVY+1
5D1F      740      ;
5D1F      741      ldx /CHARTBL
5D1F      742      ;
5D1F      743      ldy #ZERO
5D1F      744      ;
5D1F      745      asl
5D1F      746      bcs >4
5D1F      747      ;
5D1F      748      ldy #INVRMASK
5D1F      749      ;
5D1F      750      sec
5D1F      751      ;
5D1F      752      ^4      sty SCRNMOD2+1
5D1F      753      ;
5D1F      754      sbc #$40
5D1F      755      ;
5D1F      756      asl
5D1F      757      bcc >5
5D1F      758      ;
5D1F      759      ldx /CHARTBL+$200
5D1F      760      ;
5D1F      761      ^5      asl
5D1F      762      bcc >6
5D1F      763      ;
5D1F      764      inx
5D1F      765      ;
5D1F      766      clc
5D1F      767      ;
5D1F      768      ^6      adc #CHARTBL
5D1F      769      sta SCRNMOD1+1
5D1F      770      bcc >7
5D1F      771      ;
5D1F      772      inx
5D1F      773      ;
5D1F      774      ^7      stx SCRNMOD1+2
5D1F      775      ;
5D1F      776      clc
5D1F      777      ;
5D1F      778      ldx CV
5D1F      779      ;
5D1F      780      lda YBASELO,X
5D1F      781      sta SCRNMOD3+1
5D1F      782      ;
5D1F      783      lda YBASEHI,X
5D1F      784      sta SCRNMOD3+2
5D1F      785      ;
5D1F      786      ldy CH
5D1F      787      ldx #CHARCELL
5D1F      788      ;
5D1F      789      SCRNMOD1 lda *-,X
5D1F      790      ;
5D1F      791      SCRNMOD2 eor #ZERO
5D1F      792      ;
```

```
5D1F      793  SCRNMOD3 sta *-*,Y
5D1F      794  ;
5D1F      795          lda SCRNMOD3+2
5D1F      796          adc #NEXTLINE
5D1F      797          sta SCRNMOD3+2
5D1F      798  ;
5D1F      799          dex
5D1F      800          bpl SCRNMOD1
5D1F      801  ;
5D1F      802          iny
5D1F      803  ;
5D1F      804  SCRNMOD4 cpy #MAXWDTH
5D1F      805          bcs <2
5D1F      806  ;
5D1F      807          sty CH
5D1F      808  ;
5D1F      809  SCRNSAVY ldy #ZERO
5D1F      810  SCRNSAVX ldx #ZERO
5D1F      811  ;
5D1F      812  ^8      rts
5D1F      813  ;
5D1F      814  ;
5D1F      815  SCRNINIT bit HIRES
5D1F      816          bit MIXCLR
5D1F      817          bit TEXTOFF
5D1F      818  ;
5D1F      819          clc
5D1F      820  ;
5D1F      821          lda #MAXWDTH
5D1F      822          adc WNDLFT
5D1F      823          sta SCRNMOD4+1
5D1F      824          sta EOLMOD1+1
5D1F      825          sta SCRLMOD3+1
5D1F      826  ;
5D1F      827          rts
5D1F      828  ;
5D1F      829  ;
5D1F      830  SCROLL   lda WNDLFT
5D1F      831          sta CH
5D1F      832  ;
5D1F      833          ldx WNDBTM
5D1F      834          dex
5D1F      835          stx SCRLMOD4+1
5D1F      836  ;
5D1F      837          ldx WNDTOP
5D1F      838          stx CV
5D1F      839  ;
5D1F      840  ^1      lda YBASELO,X
5D1F      841          sta SCRLMOD2+1
5D1F      842  ;
5D1F      843          lda YBASEHI,X
5D1F      844          sta SCRLMOD2+2
5D1F      845  ;
5D1F      846          inx
5D1F      847          stx CV
5D1F      848  ;
5D1F      849          lda YBASELO,X
5D1F      850          sta SCRLMOD1+1
5D1F      851  ;
5D1F      852          lda YBASEHI,X
5D1F      853          sta SCRLMOD1+2
```



```
5D1F      854 ;
5D1F      855         ldx #CHARCELL
5D1F      856 ;
5D1F      857 ^2         ldy CH
5D1F      858 ;
5D1F      859 SCRLMOD1 lda *-,Y
5D1F      860 SCRLMOD2 sta *-,Y
5D1F      861 ;
5D1F      862         iny
5D1F      863 ;
5D1F      864 SCRLMOD3 cpy #MAXWDTH
5D1F      865         bcc SCRLMOD1
5D1F      866 ;
5D1F      867         lda SCRLMOD1+2
5D1F      868         adc #NEXTLINE-1
5D1F      869         sta SCRLMOD1+2
5D1F      870 ;
5D1F      871         lda SCRLMOD2+2
5D1F      872         adc #NEXTLINE
5D1F      873         sta SCRLMOD2+2
5D1F      874 ;
5D1F      875         dex
5D1F      876         bpl <2
5D1F      877 ;
5D1F      878         ldx CV
5D1F      879 SCRLMOD4 cpx #LOC0
5D1F      880         bne <1
5D1F      881 ;
5D1F      882 ;
5D1F      883 SCRNEOL ldx CV
5D1F      884 ;
5D1F      885         lda YBASELO,X
5D1F      886         sta EOLMOD2+1
5D1F      887 ;
5D1F      888         lda YBASEHI,X
5D1F      889         sta EOLMOD2+2
5D1F      890 ;
5D1F      891         ldx #CHARCELL
5D1F      892 ;
5D1F      893 ^1         ldy CH
5D1F      894 ;
5D1F      895         lda #ZERO
5D1F      896 ;
5D1F      897 EOLMOD1 cpy #MAXWDTH
5D1F      898         bcs >2
5D1F      899 ;
5D1F      900 EOLMOD2 sta *-,Y
5D1F      901 ;
5D1F      902         iny
5D1F      903         bne EOLMOD1
5D1F      904 ;
5D1F      905 ^2         lda EOLMOD2+2
5D1F      906         adc #NEXTLINE-1
5D1F      907         sta EOLMOD2+2
5D1F      908 ;
5D1F      909         dex
5D1F      910         bpl <1
5D1F      911 ;
5D1F      912         rts
5D1F      913 ;
5D1F      914 ;
```

```
5D1F      915  SCRNHOME lda WNDLFT
5D1F      916          sta CH
5D1F      917  ;
5D1F      918          lda WNDTOP
5D1F      919          sta CV
5D1F      920  ;
5D1F      921  ;
5D1F      922  SCRNEOP jsr SCRNEOL
5D1F      923  ;
5D1F      924          lda CH
5D1F      925          pha
5D1F      926  ;
5D1F      927          lda CV
5D1F      928          pha
5D1F      929  ;
5D1F      930          lda WNDLFT
5D1F      931          sta CH
5D1F      932  ;
5D1F      933  ^1      inc CV
5D1F      934  ;
5D1F      935          lda CV
5D1F      936          cmp WNDBTM
5D1F      937          bcs >2
5D1F      938  ;
5D1F      939          jsr SCRNEOL
5D1F      940          bmi <1
5D1F      941  ;
5D1F      942  ^2      pla
5D1F      943          sta CV
5D1F      944  ;
5D1F      945          pla
5D1F      946          sta CH
5D1F      947  ;
5D1F      948          rts
5D1F      949  ;
5D1F      950  ;
5D1F      951  YBASELO:
5D1F      952          hex 0080008000800080
5D1F      953          hex 28A828A828A828A8
5D1F      954          hex 50D050D050D050D0
5D1F      955  ;
5D1F      956  YBASEHI:
5D1F      957          hex 2020212122222323
5D1F      958          hex 2020212122222323
5D1F      959          hex 2020212122222323
5D1F      960  ;
5D1F      961  ;
5D1F      962  CHARTBL:
5D1F      963          hex 0000000000000000 ;
5D1F      964          hex 0008000808080808 ; !
5D1F      965          hex 0000000000141414 ; "
5D1F      966          hex 0014143E143E1414 ; #
5D1F      967          hex 00081E281C0A3C08 ; $
5D1F      968          hex 0030320408102606 ; %
5D1F      969          hex 002C122A040A0A04 ; &
5D1F      970          hex 0000000000080808 ; ^
5D1F      971          hex 0010080404040810 ; (
5D1F      972          hex 0004081010100804 ; )
5D1F      973          hex 00082A1C081C2A08 ; *
5D1F      974          hex 000008083E080800 ; +
5D1F      975          hex 0408080000000000 ; ,
```

```
5D1F      976      hex 0000000003E000000 ; -
5D1F      977      hex 00080000000000000 ; .
5D1F      978      hex 0000020408102000 ; /
5D1F      979      ;
5D1F      980      hex 001C22262A32221C ; 0
5D1F      981      hex 001C08080808080C08 ; 1
5D1F      982      hex 003E02041820221C ; 2
5D1F      983      hex 001C22201810203E ; 3
5D1F      984      hex 0010103E12141810 ; 4
5D1F      985      hex 001C2220201E023E ; 5
5D1F      986      hex 001C22221E020438 ; 6
5D1F      987      hex 000404040810203E ; 7
5D1F      988      hex 001C22221C22221C ; 8
5D1F      989      hex 000E10203C22221C ; 9
5D1F      990      hex 0000080008000000 ; :
5D1F      991      hex 0408080008000000 ; ;
5D1F      992      hex 0020100804081020 ; <
5D1F      993      hex 0000003E003E0000 ; =
5D1F      994      hex 0002040810080402 ; >
5D1F      995      hex 000800089820221C ; ?
5D1F      996      ;
5D1F      997      hex 003C021A2A3A221C ; @
5D1F      998      hex 0022223E22221408 ; A
5D1F      999      hex 001E22221E22221E ; B
5D1F     1000      hex 001C22020202221C ; C
5D1F     1001      hex 001E22222222221E ; D
5D1F     1002      hex 003E02021E02023E ; E
5D1F     1003      hex 000202021E02023E ; F
5D1F     1004      hex 003C22320202023C ; G
5D1F     1005      hex 002222223E222222 ; H
5D1F     1006      hex 001C08080808081C ; I
5D1F     1007      hex 001C222020202020 ; J
5D1F     1008      hex 0022120A060A1222 ; K
5D1F     1009      hex 003E020202020202 ; L
5D1F     1010      hex 002222222A2A3622 ; M
5D1F     1011      hex 002222322A262222 ; N
5D1F     1012      hex 001C22222222221C ; O
5D1F     1013      ;
5D1F     1014      hex 000202021E22221E ; P
5D1F     1015      hex 002C122A2222221C ; Q
5D1F     1016      hex 0022120A1E22221E ; R
5D1F     1017      hex 001C22201C02221C ; S
5D1F     1018      hex 000808080808083E ; T
5D1F     1019      hex 001C222222222222 ; U
5D1F     1020      hex 0008142222222222 ; V
5D1F     1021      hex 0022362A2A222222 ; W
5D1F     1022      hex 0022221408142222 ; X
5D1F     1023      hex 0008080808142222 ; Y
5D1F     1024      hex 003E02040810203E ; Z
5D1F     1025      hex 003C04040404043C ; [
5D1F     1026      hex 0000201008040200 ; \
5D1F     1027      hex 001E10101010101E ; ]
5D1F     1028      hex 0000000000221408 ; ^
5D1F     1029      hex 7F00000000000000 ; _
5D1F     1030      ;
5D1F     1031      hex 0000000000100804 ; `
5D1F     1032      hex 003C223C201C0000 ; a
5D1F     1033      hex 001E2222221E0202 ; b
5D1F     1034      hex 003C0202023C0000 ; c
5D1F     1035      hex 003C2222223C2020 ; d
5D1F     1036      hex 003C023E221C0000 ; e
```

```

5D1F      1037      hex 000404041E042418 ; f
5D1F      1038      hex 1C203C22221C0000 ; g
5D1F      1039      hex 00222222221E0202 ; h
5D1F      1040      hex 001C0808080C0008 ; i
5D1F      1041      hex 0C12101010180010 ; j
5D1F      1042      hex 0022120E12220202 ; k
5D1F      1043      hex 001C08080808080C ; l
5D1F      1044      hex 00222A2A2A360000 ; m
5D1F      1045      hex 00222222221E0000 ; n
5D1F      1046      hex 001C2222221C0000 ; o
5D1F      1047      ;
5D1F      1048      hex 02021E22221E0000 ; p
5D1F      1049      hex 20203C22223C0000 ; q
5D1F      1050      hex 00020202063A0000 ; r
5D1F      1051      hex 001E201C023C0000 ; s
5D1F      1052      hex 00182404041E0404 ; t
5D1F      1053      hex 002C322222220000 ; u
5D1F      1054      hex 0008142222220000 ; v
5D1F      1055      hex 00362A2A22220000 ; w
5D1F      1056      hex 0022140814220000 ; x
5D1F      1057      hex 1C203C2222220000 ; y
5D1F      1058      hex 003E0408103E0000 ; z
5D1F      1059      hex 0030080804080830 ; {
5D1F      1060      hex 0808080808080808 ; |
5D1F      1061      hex 0006080810080806 ; }
5D1F      1062      hex 0000000000001A2C ; ~
5D1F      1063      hex 00002A142A142A00 ;
5D1F      1064      ;
5D1F      1065      ;
5D1F      1066      .fi
5D1F      1067      ;
5D1F      1068      ;

```

BSAVE SEG07,A\$0900,B,L\$0292

```

5D1F      1069      usr SEG07
5D1F      1070      ;
5D1F      1071      ;
5D1F      1072      icl "DATA.L"

```

LLOAD DATA.L,A\$4000

```

5D1F      1          ttl "ICON Maker Source Code, DATA.L"
5D1F      2      ;
5D1F      3      ;
5D1F      4      ; DATA.L
5D1F      5      ;
5D1F      6      ;
5D1F      7          obj $900
5D1F      8          usr
5D1F      9      ;
5D1F     10      ;
5D1F     11  SAVX      dfs 1,ZERO
5D20     12  SAVY      dfs 1,ZERO
5D21     13  SAVA      dfs 1,ZERO
5D22     14      ;
5D22     15  TEMP      dfs 1,ZERO
5D23     16  TEMPVAL   dfs 1,ZERO
5D24     17      ;
5D24     18  TESTFLAG  dfs 1,ZERO
5D25     19  CMDFLAG   dfs 1,ZERO
5D26     20  PLOTFLAG  dfs 1,ZERO
5D27     21      ;
5D27     22  OPTION    dfs 1,ZERO
5D28     23  CURCOLOR  dfs 1,ZERO
5D29     24  PRTFLAG   dfs 1,ZERO
5D2A     25      ;
5D2A     26  NXSHIFT   dfs 1,ZERO
5D2B     27      ;
5D2B     28  ICONCMD   dfs 1,ZERO
5D2C     29  CONTENT   dfs 1,ZERO
5D2D     30      ;
5D2D     31  ICONWIDE  dfs 1,ZERO
5D2E     32  ICONHIGH  dfs 1,ZERO
5D2F     33  FRMWIDE   dfs 1,ZERO
5D30     34      ;
5D30     35  NDXTEMP   dfs 1,ZERO
5D31     36  XDRAW      dfs 1,ZERO
5D32     37  YDRAW      dfs 1,ZERO
5D33     38  XDRAW0     dfs 1,ZERO
5D34     39  YDRAW0     dfs 1,ZERO
5D35     40  XCURVE     dfs 1,ZERO
5D36     41  YCURVE     dfs 1,ZERO
5D37     42  DELTATMP   dfs 1,ZERO
5D38     43  DELTAVAL   dfs 1,ZERO
5D39     44  DELTASAV   dfs 1,ZERO
5D3A     45  MOVEMENT   dfs 1,ZERO
5D3B     46      ;
5D3B     47  NDXICON    dfs 2,ZERO
5D3D     48  COLORADR   dfs 2,ZERO
5D3F     49  MOVEADR    dfs 2,ZERO
5D41     50  SHAPEADR   dfs 2,ZERO
5D43     51  SAVROMER   dfs 2,ZERO
5D45     52      ;
5D45     53  SAVNUM     dfs 1,ZERO
5D46     54  SAVDATE    dfs 6,ZERO
5D4C     55      ;
5D4C     56  COUNT      dfs 1,ZERO
5D4D     57  LINECNT    dfs 1,ZERO
5D4E     58  LINESAV    dfs 1,ZERO
5D4F     59  COUNTER    dfs 1,ZERO
5D50     60      ;

```

```

5D50          61  NNUMS      dfs 1,ZERO
5D51          62  SAVECH     dfs 1,ZERO
5D52          63  NENTRY     dfs 1,ZERO
5D53          64  ;
5D53          65  NUMVALS     dfs 8,ZERO
5D5B          66  ;
5D5B          67  HEXVALS     dfs 4,ZERO
5D5F          68  DECVALS     dfs 2,ZERO
5D61          69  ;
5D61 A0 00    70  CHARBUFR   byt SPACE,ZERO
5D63          71  ;
5D63          72  NAMEBUFR   dfs NAMELEN+1,ZERO
5D7C          73  VSNBUFR    dfs VSNLEN+1,ZERO
5D91          74  ;
5D91          75  ;
5D91 01 0A 64 76  DECTBLLL   byt 1,10,100,1000,10000
5D94 E8 10
5D96 00 00 00 77  DECTBLH    hby 1,10,100,1000,10000
5D99 03 27
5D9B          78  ;
5D9B          79  ;
5D9B C2 EC E1 80  COLOR0      asc "Black1"
5D9E E3 EB B1
5DA1 00          81          hex 00
5DA2 C7 F2 E5    82  COLOR1      asc "Green"
5DA5 E5 EE
5DA7 00          83          hex 00
5DA8 D6 E9 EF    84  COLOR2      asc "Violet"
5DAB EC E5 F4
5DAE 00          85          hex 00
5DAF D7 E8 E9    86  COLOR3      asc "White1"
5DB2 F4 E5 B1
5DB5 00          87          hex 00
5DB6 C2 EC E1    88  COLOR4      asc "Black2"
5DB9 E3 EB B2
5DBC 00          89          hex 00
5DBD CF F2 E1    90  COLOR5      asc "Orange"
5DC0 EE E7 E5
5DC3 00          91          hex 00
5DC4 C2 EC F5    92  COLOR6      asc "Blue"
5DC7 E5
5DC8 00          93          hex 00
5DC9 D7 E8 E9    94  COLOR7      asc "White2"
5DCC F4 E5 B2
5DCF 00          95          hex 00
5DD0          96  ;
5DD0          97  COLRTBLL:
5DD0 9B          98          byt COLOR0
5DD1 A2          99          byt COLOR1
5DD2 A8         100         byt COLOR2
5DD3 AF         101         byt COLOR3
5DD4 B6         102         byt COLOR4
5DD5 BD         103         byt COLOR5
5DD6 C4         104         byt COLOR6
5DD7 C9         105         byt COLOR7
5DD8          106  ;
5DD8          107  COLRTBLH:
5DD8 5D         108         hby COLOR0
5DD9 5D         109         hby COLOR1
5DDA 5D         110         hby COLOR2
5DDB 5D         111         hby COLOR3

```

```

5DDC 5D          112          hby COLOR4
5DDD 5D          113          hby COLOR5
5DDE 5D          114          hby COLOR6
5DDF 5D          115          hby COLOR7
5DE0          116          ;
5DE0          117          ;
5DE0 C8 CF D2    118  MOVE0    asc "HORZ Only "
5DE3 DA A0 CF
5DE6 EE EC F9
5DE9 A0
5DEA 00          119          hex 00
5DEB D6 C5 D2    120  MOVE1    asc "VERT Only "
5DEE D4 A0 CF
5DF1 EE EC F9
5DF4 A0
5DF5 00          121          hex 00
5DF6 C1 F2 F2    122  MOVE2    asc "Arrow Keys"
5DF9 EF F7 A0
5DFC CB E5 F9
5DFF F3
5E00 00          123          hex 00
5E01          124          ;
5E01          125  MOVETBLL:
5E01 E0          126          byt MOVE0
5E02 EB          127          byt MOVE1
5E03 F6          128          byt MOVE2
5E04          129          ;
5E04          130  MOVETBLH:
5E04 5D          131          hby MOVE0
5E05 5D          132          hby MOVE1
5E06 5D          133          hby MOVE2
5E07          134          ;
5E07          135          ;
5E07 C3 EF EC    136  SHAPE0    asc "Color"
5E0A EF F2
5E0C 00          137          hex 00
5E0D C8 EF F2    138  SHAPE1    asc "Horizontal"
5E10 E9 FA EF
5E13 EE F4 E1
5E16 EC
5E17 00          139          hex 00
5E18 D6 E5 F2    140  SHAPE2    asc "Vertical"
5E1B F4 E9 E3
5E1E E1 EC
5E20 00          141          hex 00
5E21 C4 E9 E1    142  SHAPE3    asc "Diagonal"
5E24 E7 EF EE
5E27 E1 EC
5E29 00          143          hex 00
5E2A C3 F5 F2    144  SHAPE4    asc "Curve"
5E2D F6 E5
5E2F 00          145          hex 00
5E30 C2 EF F8    146  SHAPE5    asc "Box"
5E33 00          147          hex 00
5E34 D0 E1 F2    148  SHAPE6    asc "Parallel"
5E37 E1 EC EC
5E3A E5 EC
5E3C 00          149          hex 00
5E3D C4 EF F4    150  SHAPE7    asc "Dots"
5E40 F3
5E41 00          151          hex 00

```

```

5E42 C3 E8 E1 152 SHAPE8 asc "Chain"
5E45 E9 EE
5E47 00 153 hex 00
5E48 C7 D2 A0 154 SHAPE9 asc "GR Page"
5E4B D0 E1 E7
5E4E E5
5E4F 00 155 hex 00
5E50 C1 E4 E4 156 SHAPEA asc "Address"
5E53 F2 E5 F3
5E56 F3
5E57 00 157 hex 00
5E58 D3 E9 FA 158 SHAPEB asc "Size"
5E5B E5
5E5C 00 159 hex 00
5E5D D7 E9 E4 160 SHAPEC asc "Width"
5E60 F4 E8
5E62 00 161 hex 00
5E63 C5 F2 E1 162 SHAPED asc "Erase"
5E66 F3 E5
5E68 00 163 hex 00
5E69 C4 E9 F3 164 SHAPEE asc "Display"
5E6C F0 EC E1
5E6F F9
5E70 00 165 hex 00
5E71 C5 F8 E9 166 SHAPEF asc "Exit"
5E74 F4
5E75 00 167 hex 00
5E76 168 ;
5E76 169 SHAPTBL:
5E76 07 170 byt SHAPE0
5E77 0D 171 byt SHAPE1
5E78 18 172 byt SHAPE2
5E79 21 173 byt SHAPE3
5E7A 2A 174 byt SHAPE4
5E7B 30 175 byt SHAPE5
5E7C 34 176 byt SHAPE6
5E7D 3D 177 byt SHAPE7
5E7E 42 178 byt SHAPE8
5E7F 48 179 byt SHAPE9
5E80 50 180 byt SHAPEA
5E81 58 181 byt SHAPEB
5E82 5D 182 byt SHAPEC
5E83 63 183 byt SHAPED
5E84 69 184 byt SHAPEE
5E85 71 185 byt SHAPEF
5E86 186 ;
5E86 187 SHAPTBLH:
5E86 5E 188 hby SHAPE0
5E87 5E 189 hby SHAPE1
5E88 5E 190 hby SHAPE2
5E89 5E 191 hby SHAPE3
5E8A 5E 192 hby SHAPE4
5E8B 5E 193 hby SHAPE5
5E8C 5E 194 hby SHAPE6
5E8D 5E 195 hby SHAPE7
5E8E 5E 196 hby SHAPE8
5E8F 5E 197 hby SHAPE9
5E90 5E 198 hby SHAPEA
5E91 5E 199 hby SHAPEB
5E92 5E 200 hby SHAPEC
5E93 5E 201 hby SHAPED

```



```
5E94 5E          202          hby SHAPEE
5E95 5E          203          hby SHAPEF
5E96             204          ;
5E96             205          ;
5E96             206  FRAME:
5E96 F0 03       207          hex F003
5E98 FE          208          hex FE
5E99 FF          209          hex FF
5E9A             210          ;
5E9A             211          ;
```

BSAVE SEG08,A\$0900,B,L\$017B

```
5E9A             212          usr SEG08
5E9A             213          ;
5E9A             214          ;
5E9A             215          dfs PAGESIZE-*&NEGONE
5F00             216          ;
5F00             217          ;
5F00             218  TEMPBUFR dfs PAGESIZE*2
6100             219          ;
6100             220          ;
6100             221  ICONBUFR:
6100             222          ;
6100             223          ;
6100             224          stt "ICON Maker Symbol Table"
6100             225          ;
6100             226          ;
6100             227          end 111
```

\*\*\* End of Assembly

Symbol List starts at 0x7800, ends at 0x8DFE, used 0x15FE, remaining 0x263A

Symbols unsorted:

LOC0	0000	DX	0018	DY	0019	XDX	001A	YDY	001C
XMOD	001D	YMOD	001F	WNDLFT	0020	WNDWDTH	0021	WNDTOP	0022
WNCBTM	0023	CH	0024	CV	0025	GBAS	0026	COLOR	0030
INVFLG	0032	PROMPT	0033	ASRUN	0076	MID	00CE	XSTRT	00D0
YSTRT	00D2	XEND	00D3	YEND	00D5	ASONERR	00D8	XOFFSTRT	00DA
YOFFSTRT	00DC	XOFFEND	00DD	YOFFEND	00DF	XCOOR	00E0	YCOOR	00E2
HRCOLOR	00E4	ICONNDX	00E5	HPAG	00E6	BUFRPTR	00E8	ICONPTR	00EC
GENPTR	00EE	DATAPTR	00FA	PRNTVAL	00FB	PRNTPTR	00FC	ZERO	0000
NEGONE	00FF	XCOOR0	0070	YCOOR0	0038	SCRNSIZE	2000	MAXCOUNT	0080
ERRORNDX	0004	LDLENNDX	0036	BLACK1	0000	GREEN	0001	PURPLE	0002
WHITE1	0003	BLACK2	0004	ORANGE	0005	BLUE	0006	WHITE2	0007
GRNBLK	0008	PURBLK	0009	ORGBLK	000A	BLUBLK	000B	GRNWHT	000C
PURWHT	000D	ORGWHT	000E	BLUWHT	000F	WHTGRBLK	0010	WHTPUBLK	0011
WHTORBLK	0012	WHTBLBLK	0013	WHGRBKGR	0014	WHPUBKPU	0015	WHORBKOR	0016
WHBLBKBL	0017	READCMD	0001	WRITCMD	0002	TEXTMODE	0000	GRPHMODE	0001
TX80MODE	0002	LV80MODE	0003	NORMDISP	0000	INVRDISP	0001	INITSCRN	0000
HOMESCRN	0001	EOLCLR	0000	EOPCLR	0001	DIRECT	0000	INDIRECT	0001
NOPAD	0000	HIGHLOW	0020	ZEROPAD	0040	SPCPAD	0080	NEXTLINE	0004
CHARCELL	0007	MAXDXDY	0007	CMDMASK	000F	NIBLMASK	000F	VSNLEN	0014
NAMELEN	0018	CVMASK	001F	MAXWDTH	0028	MAXTRKS	0032	MAXCH	0050
MINCV	0060	ASCIMASK	007F	INVRMASK	007F	MSBMASK	0080	ASCIFLAG	0080
DLTACOMP	00F7	RTNCMD	0050	MODECMD	0051	DISPCMD	0052	SCRNCMD	0053
CLRCMD	0054	CNTRCMD	0055	BUFRCMD	0056	NIBLCMD	0057	BYT1CMD	0058
BYT2CMD	0059	BYTNCMD	005A	ADRCMD	005B	DEC1CMD	005C	DEC2CMD	005D
DEC3CMD	005E	DECNCMD	005F	FLASH	0060	CTRLD	0084	BELLCHAR	0087
LARROW	0088	DARROW	008A	UARROW	008B	RETURN	008D	CTRLQ	0091
RARROW	0095	ESCAPE	009B	SPACE	00A0	PERIOD	00AE	SLASH	00AF
COLON	00BA	LWRMASK	00DF	LWRCASE	00E0	DELETE	00FF	COLORCMD	00F0
HORZCMD	00F1	VERTCMD	00F2	DIAGCMD	00F3	CURVECMD	00F4	BOXCMD	00F5
PARLLCMD	00F6	DOTCMD	00F7	CHAINCMD	00F8	GRPAGCMD	00F9	GROFFCMD	00FA
GRSIZCMD	00FB	GRWIDCMD	00FC	FRCLRCMD	00FD	FRSETCMD	00FE	GREXTCMD	00FF
STACK	0100	PAGESIZE	0100	DOSWARM	03D0	DOSCOLD	03D3	CALLRWTS	03D9
RDCLKVSN	03E1	GETIOB	03E3	PRTERADR	03E8	HOOKDOS	03EA	PAGE20	2000
PAGE40	4000	MNGVALS	BFF4	INITVAL	BFFA	KEY	C000	CLRKEY	C010
SPEAKER	C030	TEXTOFF	C050	TEXTON	C051	MIXCLR	C052	MIXEDON	C053
PAGE1ON	C054	PAGE2ON	C055	HIRESON	C057	ROM2WP	C082	PRNTAX	F941
PRBL2	F94A	INIT	FB2F	TABV	FB5B	VTAB	FC22	CLREOP	FC42
HOME	FC58	CLREOL	FC9C	WAIT	FCA8	CROUT	FD8E	PRBYTE	FD8E
PRHEX	FDE3	COUT	FDED	OUTPORT	FE95	BELL	FF3A	MONITOR	FF69
DISPLAY	0000	TEXTPAGE	C054	SCRNPAGE	2000	DOMAIN	4012	MAINMOD	4035
MAINTBLH	4038	MAINTBLH	4041	DODRAW	404A	DRAWMOD	4094	DRAWTBLH	4097
DRAWTBLH	40A0	DOEDIT	40A9	DOEDIT2	40E8	DONEW	4135	DOLOAD	4148
DOSAVE	418C	SAVMOD1	41B3	SAVMOD2	41C5	DOLIST	4228	DOPRINT	4242
DORFRESH	4273	DOQUIT	4287	DOCOLOR	42AE	DOHORZ	42ED	DOHORZ2	42FD
DOVERT	433C	DOVERT2	434F	DODIAG	4383	DOCURVE	43DE	DOBOX	4445
DOPARLL	4499	DODOT	45A0	DODREXIT	4629	INITPGM	462C	INITBUFR	4740
INITCMDS	477A	XCOORMOD	477F	YCOORMOD	4781	WIDEMOD	4783	HIGHMOD	4784
FRWIDMOD	4786	MAINMENU	4788	DRAWMENU	47E0	COLRMENU	483C	MENUSELC	4890
CLRFRAME	48B0	COPYICON	48CF	COPYTEMP	48E1	COPYSHAP	48F3	COPYDRAW	490E
LISTBUFR	491B	NEXTBUFR	494E	REFRESH	495C	SELECT	496C	SELECT1	4992
CHKDRAW	4A1C	CHKDELTA	4A2B	ADDINDX	4A54	ADDINDY	4A65	SHOWSHAP	4A76
SAVEFILE	4A98	DELAY	4AEE	DISKERR	4AF9	READVSN	4B1C	PRTERORR	4B20
MNGVAL	4B23	SETVFLAG	4B27	INITWID	4B2A	SELCWID	4B32	WIDMOD0	4B37
WIDMOD1	4B3E	WIDMOD2	4B45	WIDMOD3	4B4C	WIDMOD4	4B53	SETWID	4B94
CLRWID	4BA8	WIDMOD	4BAA	WIDTBL	4BAF	NWIDTBL	4BB9	INITFRM	4BBE
SELCFRM	4BC6	FRMMOD0	4BCB	FRMMOD1	4BD1	FRMMOD2	4BD7	FRMMOD3	4BDD

SETFRM	4C1D	CLRFRM	4C31	FRMMOD	4C33	FRMTBL	4C38	NFRMTBL	4C40
XSHIFT	4C44	SELCSFT	4C4C	XSFTMOD0	4C5C	XSFTMOD1	4C62	XSFTMOD2	4C68
XSFTMOD3	4C6E	XSFTMOD4	4C74	XSFTMOD5	4C7A	XSFTMOD6	4C80	XSFTMOD7	4C87
XSFTMOD8	4C8D	XSFTMOD9	4C93	XSFTMODA	4C99	XSFTMODB	4C9F	XSFTMODC	4CA5
XSFTMODD	4CAB	SETXSFT	4CEA	CLRXSFT	4CFE	XSFTMOD	4D00	XSFTTBL	4D05
TEMPPROC	4D21	TEMPROC1	4D5C	TEMPROC2	4D61	TEMPMOD	4D73	EDITTBL	4D7B
EDITTBLH	4D8B	ADDTODX	4D9B	ADDTODXY	4DA8	ADDTODY	4DAB	EDHORZ	4DB8
EDHORZ2	4DBB	EDVERT	4DC3	EDVERT2	4DC6	EDDOT	4DCE	EDBOX	4DCE
EDDIAG	4DCE	EDCURVE	4DD6	EDPARLL	4DE1	EDGROFF	4DED	EDGRSIZ	4DF0
EDGRCHN	4DF6	EDGREXIT	4DF6	SHOWMOVE	4DF8	SHOWCNT1	4E2B	DOSTART	4E5E
SHOWICON	4ED9	SHOWTEMP	4EE0	GETMOVE	4EE7	GETCURVE	4F38	DODELTA	4F7A
DODLMOD1	4F85	DODLMOD2	4FA9	GETCOUNT	4FC2	ERASTEMP	4FF5	ICONPROC	4FFE
CONPROC1	5006	CONPROC2	500B	ICONMOD	501D	CONPROC3	5020	CONPROC4	5022
ICONERR	502C	PROCTBLL	505A	PROCTBLH	506A	RSETSTRT	507A	SETSTRT	507E
RD2ICON	5094	RD1ICON	5098	DELTA	50A1	PLCOLOR	50B8	SETCOLOR	50C3
PLHORZ	50D8	PLHORZ2	50E0	PLVERT	50F2	PLVERT2	50FA	PLDIAG	510C
PLDIAG2	5112	PLCURVE	5127	PLCURVE2	512D	PLBOX	514A	PLPARLL	517D
PLDOT	51BE	PLCHAIN	51CF	PLGRPAG	51D1	PLGROFF	51D6	PLGRSIZ	51E2
PLGRWID	51EB	PLFRCLR	51F1	PLFRSET	51F3	PLGREXIT	526B	EPLOT	526D
XPLOT	5270	HPLOT	5273	PUTDOT	5279	PUTDOT2	527C	TESTDOT	52EE
DRAWLINE	530E	DRAWLIN2	5310	HLINE	531E	HLINE2	5322	XLOOP	5375
XLOOP2	537C	YLOOP	53B7	YLOOP2	53BE	HLINEXIT	53E9	COLORTBL	53EA
YBASEL	540A	YBASEH	54CA	XBASEL	558A	XBASEH	568A	MASKNDX	56A2
COLORNDX	57A2	MASKON	58A2	MASKOFF	58A9	COLORBYT	58B0	GETHEX2	58B8
GETHEX3	58BB	GETHEX4	58BE	GETHEX6	58C1	GETHEX8	58C4	GETDEC1	58C9
GETDEC2	58CC	GETDEC3	58CF	GETDEC5	58D2	NUMLOOP	58E3	NUMPROC	593D
HEXPROC	5940	DECPROC	596F	GETFNAME	5998	PRESKEY	5A04	GETKEY	5A1C
CHECKKEY	5A3A	READKEY	5A58	PRNTCHAR	5A73	MYBELL	5A7F	PRINT	5A8D
PRNTLOOP	5A9C	PRNTMOD1	5AC8	PRNTMOD2	5AE3	PRNTBR1	5AE5	PRNTBR2	5AEF
PRNTBR3	5AF5	PRNTBR4	5AFA	PRNTBR5	5AFF	PRNTBR6	5B08	PRNTMOD3	5B0B
PRNTOUT	5B11	OUTMOD1	5B11	OUTMOD2	5B13	PRNTOUT2	5B15	OUTTBL1	5B18
OUTTBL2	5B1E	OUT80COL	5B24	VTABADRS	5B26	OUTADRS	5B2C	PRNTSAV	5B32
PRNTNUM	5B33	MODEVAL	5B35	FRMTVAL	5B36	PRNTBL	5B37	PRNTBLL	5B47
PRNTBLH	5B57	PRNTRTN	5B67	PRNTSAVY	5B72	PRNTSAVX	5B74	PRNTSAVA	5B76
PRNTRTN	5B79	PRNTMODE	5B7A	PRNTDISP	5BC5	PRNTSCRN	5BE4	PRNTCLR	5BF4
PRNTCNTR	5BFE	PRNTBUFR	5C20	PRTBUFR2	5C2F	PRNTNIBL	5C3C	PRNTNBYT	5C41
PRNT1BYT	5C45	PRNT2BYT	5C48	PRNTBYT	5C4A	PRNTADR	5C54	PRNT1DEC	5C6C
PRNT2DEC	5C72	PRNTDEC	5C75	PRNT3DEC	5C7F	PRNTNDEC	5C89	PRNTBYTE	5CD0
PRNTHX	5CD9	PRNTHX2	5CDB	HEXTODEC	5CE6	GETDIGIT	5D00	PRNTGRPH	5D1F
SAVX	5D1F	SAVY	5D20	SAVA	5D21	TEMP	5D22	TEMPVAL	5D23
TESTFLAG	5D24	CMDFLAG	5D25	PLOTFLAG	5D26	OPTION	5D27	CURCOLOR	5D28
PRTFLAG	5D29	NXSHIFT	5D2A	ICONCMD	5D2B	CONTENT	5D2C	ICONWIDE	5D2D
ICONHIGH	5D2E	FRMWIDE	5D2F	NDXTEMP	5D30	XDRAW	5D31	YDRAW	5D32
XDRAW0	5D33	YDRAW0	5D34	XCURVE	5D35	YCURVE	5D36	DELTATMP	5D37
DELTAVAL	5D38	DELTASAV	5D39	MOVEMENT	5D3A	NDXICON	5D3B	COLORADR	5D3D
MOVEADR	5D3F	SHAPEADR	5D41	SAVROMER	5D43	SAVNUM	5D45	SAVDATE	5D46
COUNT	5D4C	LINECNT	5D4D	LINESAV	5D4E	COUNTER	5D4F	NNUMS	5D50
SAVECH	5D51	NENTRY	5D52	NUMVALS	5D53	HEXVALS	5D5B	DECVALS	5D5F
CHARBUFR	5D61	NAMEBUFR	5D63	VSNBUFR	5D7C	DECTBLL	5D91	DECTBLH	5D96
COLOR0	5D9B	COLOR1	5DA2	COLOR2	5DA8	COLOR3	5DAF	COLOR4	5DB6
COLOR5	5DBD	COLOR6	5DC4	COLOR7	5DC9	COLRTBLL	5DD0	COLRTBLH	5DD8
MOVE0	5DE0	MOVE1	5DEB	MOVE2	5DF6	MOVETBLL	5E01	MOVETBLH	5E04
SHAPE0	5E07	SHAPE1	5E0D	SHAPE2	5E18	SHAPE3	5E21	SHAPE4	5E2A
SHAPE5	5E30	SHAPE6	5E34	SHAPE7	5E3D	SHAPE8	5E42	SHAPE9	5E48
SHAPEA	5E50	SHAPEB	5E58	SHAPEC	5E5D	SHAPED	5E63	SHAPEE	5E69
SHAPEF	5E71	SHAPTBL	5E76	SHAPTBLH	5E86	FRAME	5E96	TEMPBUFR	5F00
ICONBUFR	6100								

Symbols alphabetically sorted:

ADDINDX	4A54	ADDINDY	4A65	ADDTODX	4D9B	ADDTODXY	4DA8	ADDTODY	4DAB
ADRCMD	005B	ASCIFLAG	0080	ASCIMASK	007F	ASONERR	00D8	ASRUN	0076
BELL	FF3A	BELLCHAR	0087	BLACK1	0000	BLACK2	0004	BLUBLK	000B
BLUE	0006	BLUWHT	000F	BOXCMD	00F5	BUFRCMD	0056	BUFRPTR	00E8
BYT1CMD	0058	BYT2CMD	0059	BYTNCMD	005A	CALLRWTS	03D9	CH	0024
CHAINCMD	00F8	CHARBUFR	5D61	CHARCELL	0007	CHECKKEY	5A3A	CHKDELTA	4A2B
CHKDRAW	4A1C	CLRCMD	0054	CLREOL	FC9C	CLREOP	FC42	CLRFRAME	48B0
CLRFRM	4C31	CLRKEY	C010	CLRWID	4BA8	CLRXSFT	4CFE	CMDFLAG	5D25
CMDMASK	000F	CNTRCMD	0055	COLON	00BA	COLOR	0030	COLOR0	5D9B
COLOR1	5DA2	COLOR2	5DA8	COLOR3	5DAF	COLOR4	5DB6	COLOR5	5DBD
COLOR6	5DC4	COLOR7	5DC9	COLORADR	5D3D	COLORBYT	58B0	COLORCMD	00F0
COLORNDX	57A2	COLORTBL	53EA	COLRMENU	483C	COLRTBLH	5DD8	COLRTBLL	5DD0
CONPROC1	5006	CONPROC2	500B	CONPROC3	5020	CONPROC4	5022	CONTENT	5D2C
COPYDRAW	490E	COPYICON	48CF	COPYSHAP	48F3	COPYTEMP	48E1	COUNT	5D4C
COUNTER	5D4F	COUT	FD0D	CROUT	FD8E	CTRLD	0084	CTRLQ	0091
CURCOLOR	5D28	CURVECMD	00F4	CV	0025	CVMASK	001F	DARROW	008A
DATAPTR	00FA	DEC1CMD	005C	DEC2CMD	005D	DEC3CMD	005E	DECNCMD	005F
DECPROC	596F	DECTBLH	5D96	DECTBLL	5D91	DECVALS	5D5F	DELAY	4AEE
DELETE	00FF	DELTA	50A1	DELTASAV	5D39	DELTATMP	5D37	DELTAVAL	5D38
DIAGCMD	00F3	DIRECT	0000	DISKERR	4AF9	DISPCMD	0052	DISPLAY	0000
DLTACOMP	00F7	DOBOX	4445	DOCOLOR	42AE	DOCURVE	43DE	DODELTA	4F7A
DODIAG	4383	DODLMOD1	4F85	DODLMOD2	4FA9	DODOT	45A0	DODRAW	404A
DODREXIT	4629	DOEDIT	40A9	DOEDIT2	40E8	DOHORZ	42ED	DOHORZ2	42FD
DOLIST	4228	DOLOAD	4148	DOMAIN	4012	DONEW	4135	DOPARLL	4499
DOPRINT	4242	DOQUIT	4287	DORFRESH	4273	DOSAVE	418C	DOSCOLD	03D3
DOSTART	4E5E	DOSWARM	03D0	DOTCMD	00F7	DOVERT	433C	DOVERT2	434F
DRAWLIN2	5310	DRAWLINE	530E	DRAWMENU	47E0	DRAWMOD	4094	DRAWTBLH	40A0
DRAWTBLL	4097	DX	0018	DY	0019	EDBOX	4DCE	EDCURVE	4DD6
EDDIAG	4DCE	EDDOT	4DCE	EDGRCHN	4DF6	EDGREXIT	4DF6	EDGROFF	4DED
EDGRSIZ	4DF0	EDHORZ	4DB8	EDHORZ2	4DBB	EDITTBLH	4D8B	EDITTBLL	4D7B
EDPARLL	4DE1	EDVERT	4DC3	EDVERT2	4DC6	EOLCLR	0000	EOPCLR	0001
EPLOT	526D	ERASTEMP	4FF5	ERRORNDX	0004	ESCAPE	009B	FLASH	0060
FRAME	5E96	FRCLRCMD	00FD	FRMMOD	4C33	FRMMOD0	4BCB	FRMMOD1	4BD1
FRMMOD2	4BD7	FRMMOD3	4BDD	FRMTBL	4C38	FRMTVAL	5B36	FRMWIDE	5D2F
FRSETCMD	00FE	FRWIDMOD	4786	GBAS	0026	GENPTR	00EE	GETCOUNT	4FC2
GETCURVE	4F38	GETDEC1	58C9	GETDEC2	58CC	GETDEC3	58CF	GETDEC5	58D2
GETDIGIT	5D00	GETFNAME	5998	GETHEX2	58B8	GETHEX3	58BB	GETHEX4	58BE
GETHEX6	58C1	GETHEX8	58C4	GETIOB	03E3	GETKEY	5A1C	GETMOVE	4EE7
GREEN	0001	GREXTCMD	00FF	GRNBLK	0008	GRNWHT	000C	GROFFCMD	00FA
GRPAGCMD	00F9	GRPHMODE	0001	GRSIZCMD	00FB	GRWIDCMD	00FC	HEXPROC	5940
HEXTODEC	5CE6	HEXVALS	5D5B	HIGHLOW	0020	HIGHMOD	4784	HIRESON	C057
HLINE	531E	HLINE2	5322	HLINEXIT	53E9	HOME	FC58	HOMESCRN	0001
HOOKDOS	03EA	HORZCMD	00F1	HPAG	00E6	HPLLOT	5273	HRCOLOR	00E4
ICONBUFR	6100	ICONCMD	5D2B	ICONERR	502C	ICONHIGH	5D2E	ICONMOD	501D
ICONNDX	00E5	ICONPROC	4FFE	ICONPTR	00EC	ICONWIDE	5D2D	INDIRECT	0001
INIT	FB2F	INITBUFR	4740	INITCMDS	477A	INITFRM	4BBE	INITPGM	462C
INITSCRN	0000	INITVAL	BFFA	INITWID	4B2A	INVFLG	0032	INVRDISP	0001
INVRMASK	007F	KEY	C000	LARROW	0088	LDLENNDX	0036	LINECNT	5D4D
LINESAV	5D4E	LISTBUFR	491B	LOC0	0000	LV80MODE	0003	LWRCASE	00E0
LWRMASK	00DF	MAINMENU	4788	MAINMOD	4035	MAINTBLH	4041	MAINTBLL	4038
MASKNDX	56A2	MASKOFF	58A9	MASKON	58A2	MAXCH	0050	MAXCOUNT	0080
MAXDXDY	0007	MAXTRKS	0032	MAXWDTH	0028	MENUSELC	4890	MID	00CE
MINCV	0060	MIXCLR	C052	MIXEDON	C053	MNGVAL	4B23	MNGVALS	BFF4
MODECMD	0051	MODEVAL	5B35	MONITOR	FF69	MOVE0	5DE0	MOVE1	5DEB
MOVE2	5DF6	MOVEADR	5D3F	MOVEMENT	5D3A	MOVETBLH	5E04	MOVETBLL	5E01
MSBMASK	0080	MYBELL	5A7F	NAMEBUFR	5D63	NAMELEN	0018	NDXICON	5D3B
NDXTEMP	5D30	NEGONE	00FF	NENTRY	5D52	NEXTBUFR	494E	NEXTLINE	0004
NFRMTBL	4C40	NIBLCMD	0057	NIBLMASK	000F	NNUMS	5D50	NOPAD	0000
NORMDISP	0000	NUMLOOP	58E3	NUMPROC	593D	NUMVALS	5D53	NWIDTBL	4BB9
NXSHIFT	5D2A	OPTION	5D27	ORANGE	0005	ORGBLK	000A	ORGWHT	000E
OUT80COL	5B24	OUTADRS	5B2C	OUTMOD1	5B11	OUTMOD2	5B13	OUTPORT	FE95

OUTTBL1	5B18	OUTTBL2	5B1E	PAGE1ON	C054	PAGE20	2000	PAGE2ON	C055
PAGE40	4000	PAGESIZE	0100	PARLLCMD	00F6	PERIOD	00AE	PLBOX	514A
PLCHAIN	51CF	PLCOLOR	50B8	PLCURVE	5127	PLCURVE2	512D	PLDIAG	510C
PLDIAG2	5112	PLDOT	51BE	PLFRCLR	51F1	PLFRSET	51F3	PLGREXIT	526B
PLGROFF	51D6	PLGRPAG	51D1	PLGRSIZ	51E2	PLGRWID	51EB	PLHORZ	50D8
PLHORZ2	50E0	PLOTFLAG	5D26	PLPARLL	517D	PLVERT	50F2	PLVERT2	50FA
PRBL2	F94A	PRBYTE	FDDA	PRESKEY	5A04	PRHEX	FDE3	PRINT	5A8D
PRINTRTN	5B79	PRNT1BYT	5C45	PRNT1DEC	5C6C	PRNT2BYT	5C48	PRNT2DEC	5C72
PRNT3DEC	5C7F	PRNTADR	5C54	PRNTAX	F941	PRNTBL	5B37	PRNTBLH	5B57
PRNTBLL	5B47	PRNTBR1	5AE5	PRNTBR2	5AEF	PRNTBR3	5AF5	PRNTBR4	5AFA
PRNTBR5	5AFF	PRNTBR6	5B08	PRNTBUFR	5C20	PRNTBYT	5C4A	PRNTBYTE	5CD0
PRNTCHAR	5A73	PRNTCLR	5BF4	PRNTCNTR	5BFE	PRNTDEC	5C75	PRNTDISP	5BC5
PRNTGRPH	5D1F	PRNTHEx	5CD9	PRNTHEx2	5CDB	PRNTLOOP	5A9C	PRNTMOD1	5AC8
PRNTMOD2	5AE3	PRNTMOD3	5B0B	PRNTMODE	5B7A	PRNTNBYT	5C41	PRNTNDEC	5C89
PRNTNIBL	5C3C	PRNTNUM	5B33	PRNTOUT	5B11	PRNTOUT2	5B15	PRNTPTR	00FC
PRNTRTN	5B67	PRNTSAV	5B32	PRNTSAVA	5B76	PRNTSAVX	5B74	PRNTSAVY	5B72
PRNTSCRN	5BE4	PRNTVAL	00FB	PROCTBLH	506A	PROCTBLL	505A	PROMPT	0033
PRTBUFR2	5C2F	PRTERADR	03E8	PRTErrOR	4B20	PRTFLAG	5D29	PURBLK	0009
PURPLE	0002	PURWHT	000D	PUTDOT	5279	PUTDOT2	527C	RARROW	0095
RD1ICON	5098	RD2ICON	5094	RDCLKVSN	03E1	READCMD	0001	READKEY	5A58
READVSN	4B1C	REFRESH	495C	RETURN	008D	ROM2WP	C082	RSETSTRT	507A
RTNCMD	0050	SAVA	5D21	SAVDATE	5D46	SAVECH	5D51	SAVEFILE	4A98
SAVMOD1	41B3	SAVMOD2	41C5	SAVNUM	5D45	SAVROMER	5D43	SAVX	5D1F
SAVY	5D20	SCRNCMD	0053	SCRNPAGE	2000	SCRNSIZE	2000	SELCFRM	4BC6
SELCWID	4B32	SELCSFT	4C4C	SELECT	496C	SELECT1	4992	SETCOLOR	50C3
SETFRM	4C1D	SETSTRT	507E	SETVFLAG	4B27	SETWID	4B94	SETXSFT	4CEA
SHAPE0	5E07	SHAPE1	5E0D	SHAPE2	5E18	SHAPE3	5E21	SHAPE4	5E2A
SHAPE5	5E30	SHAPE6	5E34	SHAPE7	5E3D	SHAPE8	5E42	SHAPE9	5E48
SHAPEA	5E50	SHAPEADR	5D41	SHAPEB	5E58	SHAPEC	5E5D	SHAPED	5E63
SHAPEE	5E69	SHAPEF	5E71	SHAPTBLH	5E86	SHAPTBLL	5E76	SHOWCNT1	4E2B
SHOWICON	4ED9	SHOWMOVE	4DF8	SHOWSHAP	4A76	SHOWTEMP	4EE0	SLASH	00AF
SPACE	00A0	SPCPAD	0080	SPEAKER	C030	STACK	0100	TABV	FB5B
TEMP	5D22	TEMPBUFR	5F00	TEMPMOD	4D73	TEMPPROC	4D21	TEMPROC1	4D5C
TEMPROC2	4D61	TEMPVAL	5D23	TESTDOT	52EE	TESTFLAG	5D24	TEXTMODE	0000
TEXTOFF	C050	TEXTON	C051	TEXTPAGE	C054	TX80MODE	0002	UARROW	008B
VERTCMD	00F2	VSNBUFR	5D7C	VSNLEN	0014	VTAB	FC22	VTABADRS	5B26
WAIT	FCA8	WHBLBKBL	0017	WHGRBKGR	0014	WHITE1	0003	WHITE2	0007
WHORBKOR	0016	WHPUBKPU	0015	WHTBLBLK	0013	WHTGRBLK	0010	WHTORBLK	0012
WHTPUBLK	0011	WIDEMOD	4783	WIDMOD	4BAA	WIDMOD0	4B37	WIDMOD1	4B3E
WIDMOD2	4B45	WIDMOD3	4B4C	WIDMOD4	4B53	WIDTBL	4BAF	WNDBTM	0023
WNDLFT	0020	WNDTOP	0022	WNDWDTH	0021	WRITCMD	0002	XBASEH	568A
XBASEL	558A	XCOOR	00E0	XCOOR0	0070	XCOORMOD	477F	XCURVE	5D35
XDRAW	5D31	XDRAW0	5D33	XDX	001A	XEND	00D3	XLOOP	5375
XLOOP2	537C	XMOD	001D	XOFFEND	00DD	XOFFSTRT	00DA	XPLOT	5270
XSFTMOD	4D00	XSFTMOD0	4C5C	XSFTMOD1	4C62	XSFTMOD2	4C68	XSFTMOD3	4C6E
XSFTMOD4	4C74	XSFTMOD5	4C7A	XSFTMOD6	4C80	XSFTMOD7	4C87	XSFTMOD8	4C8D
XSFTMOD9	4C93	XSFTMODA	4C99	XSFTMODB	4C9F	XSFTMODC	4CA5	XSFTMODD	4CAB
XSFTTBL	4D05	XSHIFT	4C44	XSTRT	00D0	YBASEH	54CA	YBASEL	540A
YCOOR	00E2	YCOOR0	0038	YCOORMOD	4781	YCURVE	5D36	YDRAW	5D32
YDRAW0	5D34	YDY	001C	YEND	00D5	YLOOP	53B7	YLOOP2	53BE
YMOD	001F	YOFFEND	00DF	YOFFSTRT	00DC	YSTRT	00D2	ZERO	0000
ZEROPAD	0040								

Symbols numerically sorted:

ZERO	0000	TEXTMODE	0000	NORMDISP	0000	NOPAD	0000	LOC0	0000
INITSCRN	0000	EOLCLR	0000	DISPLAY	0000	DIRECT	0000	BLACK1	0000
READCMD	0001	INVRDISP	0001	INDIRECT	0001	HOMESCRN	0001	GRPHMODE	0001
GREEN	0001	EOPCLR	0001	WRITCMD	0002	TX80MODE	0002	PURPLE	0002
WHITE1	0003	LV80MODE	0003	NEXTLINE	0004	ERRORNDX	0004	BLACK2	0004

ORANGE	0005	BLUE	0006	WHITE2	0007	MAXDXDY	0007	CHARCELL	0007
GRNBLK	0008	PURBLK	0009	ORGBLK	000A	BLUBLK	000B	GRNWHT	000C
PURWHT	000D	ORGWHT	000E	NIBLMASK	000F	CMDMASK	000F	BLUWHT	000F
WHTGRBLK	0010	WHTPUBLK	0011	WHTORBLK	0012	WHTBLBLK	0013	WHGRBKGR	0014
VSNLEN	0014	WHPUBKPU	0015	WHORBKOR	0016	WHBLBKBL	0017	NAMELEN	0018
DX	0018	DY	0019	XDX	001A	YDY	001C	XMOD	001D
YMOD	001F	CVMASK	001F	WNDLFT	0020	HIGHLOW	0020	WNDWDTH	0021
WNDTOP	0022	WNBDM	0023	CH	0024	CV	0025	GBAS	0026
MAXWDTH	0028	COLOR	0030	MAXTRKS	0032	INVFLG	0032	PROMPT	0033
LDLENNDX	0036	YCOOR0	0038	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	FLASH	0060	XCOOR0	0070	ASRUN	0076	INVRMASK	007F
ASCIMASK	007F	SPCPAD	0080	MSBMASK	0080	MAXCOUNT	0080	ASCIFLAG	0080
CTRLD	0084	BELLCHAR	0087	LARROW	0088	DARROW	008A	UARROW	008B
RETURN	008D	CTRLQ	0091	RARROW	0095	ESCAPE	009B	SPACE	00A0
PERIOD	00AE	SLASH	00AF	COLON	00BA	MID	00CE	XSTRT	00D0
YSTRT	00D2	XEND	00D3	YEND	00D5	ASONERR	00D8	XOFFSTRT	00DA
YOFFSTRT	00DC	XOFFEND	00DD	YOFFEND	00DF	LWRMASK	00DF	XCOOR	00E0
LWRCASE	00E0	YCOOR	00E2	HRCOLOR	00E4	ICONNDX	00E5	HPAG	00E6
BUFRPTR	00E8	ICONPTR	00EC	GENPTR	00EE	COLORCMD	00F0	HORZCMD	00F1
VERTCMD	00F2	DIAGCMD	00F3	CURVECMD	00F4	BOXCMD	00F5	PARLLCMD	00F6
DOTCMD	00F7	DLTACOMP	00F7	CHAINCMD	00F8	GRPAGCMD	00F9	GROFFCMD	00FA
DATAPTR	00FA	PRNTVAL	00FB	GRSIZCMD	00FB	PRNTPTR	00FC	GRWIDCMD	00FC
FRCLRCMD	00FD	FRSETCMD	00FE	NEGONE	00FF	GREXTCMD	00FF	DELETE	00FF
STACK	0100	PAGESIZE	0100	DOSWARM	03D0	DOSCOLD	03D3	CALLRWTS	03D9
RDCLKVSN	03E1	GETIOB	03E3	PRTERADR	03E8	HOOKDOS	03EA	SCRNSIZE	2000
SCRNPAGE	2000	PAGE20	2000	PAGE40	4000	DOMAIN	4012	MAINMOD	4035
MAINTBL	4038	MAINTBLH	4041	DODRAW	404A	DRAWMOD	4094	DRAWTBL	4097
DRAWTBLH	40A0	DOEDIT	40A9	DOEDIT2	40E8	DONEW	4135	DOLOAD	4148
DOSAVE	418C	SAVMOD1	41B3	SAVMOD2	41C5	DOLIST	4228	DOPRINT	4242
DORFRESH	4273	DOQUIT	4287	DOCOLOR	42AE	DOHORZ	42ED	DOHORZ2	42FD
DOVERT	433C	DOVERT2	434F	DODIAG	4383	DOCURVE	43DE	DOBOX	4445
DOPARLL	4499	DODOT	45A0	DODREXIT	4629	INITPGM	462C	INITBUFR	4740
INITCMDS	477A	XCOORMOD	477F	YCOORMOD	4781	WIDEMOD	4783	HIGHMOD	4784
FRWIDMOD	4786	MAINMENU	4788	DRAWMENU	47E0	COLRMENU	483C	MENUSELC	4890
CLRFRAME	48B0	COPYICON	48CF	COPYTEMP	48E1	COPYSHAP	48F3	COPYDRAW	490E
LISTBUFR	491B	NEXTBUFR	494E	REFRESH	495C	SELECT	496C	SELECT1	4992
CHKDRAW	4A1C	CHKDELTA	4A2B	ADDINDX	4A54	ADDINDY	4A65	SHOWSHAP	4A76
SAVEFILE	4A98	DELAY	4AEE	DISKERR	4AF9	READVSN	4B1C	PRTERORR	4B20
MNGVAL	4B23	SETVFLAG	4B27	INITWID	4B2A	SELCWID	4B32	WIDMOD0	4B37
WIDMOD1	4B3E	WIDMOD2	4B45	WIDMOD3	4B4C	WIDMOD4	4B53	SETWID	4B94
CLRWID	4BA8	WIDMOD	4BAA	WIDTBL	4BAF	NWIDTBL	4BB9	INITFRM	4BBE
SELCFRM	4BC6	FRMMOD0	4BCB	FRMMOD1	4BD1	FRMMOD2	4BD7	FRMMOD3	4BDD
SETFRM	4C1D	CLRFRM	4C31	FRMMOD	4C33	FRMTBL	4C38	NFRMTBL	4C40
XSHIFT	4C44	SELXSFT	4C4C	XSFTMOD0	4C5C	XSFTMOD1	4C62	XSFTMOD2	4C68
XSFTMOD3	4C6E	XSFTMOD4	4C74	XSFTMOD5	4C7A	XSFTMOD6	4C80	XSFTMOD7	4C87
XSFTMOD8	4C8D	XSFTMOD9	4C93	XSFTMODA	4C99	XSFTMODB	4C9F	XSFTMODC	4CA5
XSFTMODD	4CAB	SETXSFT	4CEA	CLRXSFT	4CFE	XSFTMOD	4D00	XSFTTBL	4D05
TEMPPROC	4D21	TEMPROC1	4D5C	TEMPROC2	4D61	TEMPMOD	4D73	EDITTBL	4D7B
EDITTBLH	4D8B	ADDTODX	4D9B	ADDTODXY	4DA8	ADDTODY	4DAB	EDHORZ	4DB8
EDHORZ2	4DBB	EDVERT	4DC3	EDVERT2	4DC6	EDDOT	4DCE	EDDIAG	4DCE
EDBOX	4DCE	EDCURVE	4DD6	EDPARLL	4DE1	EDGROFF	4DED	EDGRSIZ	4DF0
EDGREXIT	4DF6	EDGRCHN	4DF6	SHOWMOVE	4DF8	SHOWCNT1	4E2B	DOSTART	4E5E
SHOWICON	4ED9	SHOWTEMP	4EE0	GETMOVE	4EE7	GETCURVE	4F38	DODELTA	4F7A
DODLMOD1	4F85	DODLMOD2	4FA9	GETCOUNT	4FC2	ERASTEMP	4FF5	ICONPROC	4FFE
CONPROC1	5006	CONPROC2	500B	ICONMOD	501D	CONPROC3	5020	CONPROC4	5022
ICONERR	502C	PROCTBL	505A	PROCTBLH	506A	RSETSTRT	507A	SETSTRT	507E
RD2ICON	5094	RD1ICON	5098	DELTA	50A1	PLCOLOR	50B8	SETCOLOR	50C3
PLHORZ	50D8	PLHORZ2	50E0	PLVERT	50F2	PLVERT2	50FA	PLDIAG	510C

PLDIAG2	5112	PLCURVE	5127	PLCURVE2	512D	PLBOX	514A	PLPARLL	517D
PLDOT	51BE	PLCHAIN	51CF	PLGRPAG	51D1	PLGROFF	51D6	PLGRSIZ	51E2
PLGRWID	51EB	PLFRCLR	51F1	PLFRSET	51F3	PLGREXIT	526B	EPLOT	526D
XPLOT	5270	HPLOT	5273	PUTDOT	5279	PUTDOT2	527C	TESTDOT	52EE
DRAWLINE	530E	DRAWLIN2	5310	HLINE	531E	HLINE2	5322	XLOOP	5375
XLOOP2	537C	YLOOP	53B7	YLOOP2	53BE	HLINEXIT	53E9	COLORTBL	53EA
YBASEL	540A	YBASEH	54CA	XBASEL	558A	XBASEH	568A	MASKNDX	56A2
COLORNDX	57A2	MASKON	58A2	MASKOFF	58A9	COLORBYT	58B0	GETHEX2	58B8
GETHEX3	58BB	GETHEX4	58BE	GETHEX6	58C1	GETHEX8	58C4	GETDEC1	58C9
GETDEC2	58CC	GETDEC3	58CF	GETDEC5	58D2	NUMLOOP	58E3	NUMPROC	593D
HEXPROC	5940	DECPROC	596F	GETFNAME	5998	PRESKEY	5A04	GETKEY	5A1C
CHECKKEY	5A3A	READKEY	5A58	PRNTCHAR	5A73	MYBELL	5A7F	PRINT	5A8D
PRNTLOOP	5A9C	PRNTMOD1	5AC8	PRNTMOD2	5AE3	PRNTBR1	5AE5	PRNTBR2	5AEF
PRNTBR3	5AF5	PRNTBR4	5AFA	PRNTBR5	5AFF	PRNTBR6	5B08	PRNTMOD3	5B0B
PRNTOUT	5B11	OUTMOD1	5B11	OUTMOD2	5B13	PRNTOUT2	5B15	OUTTBL1	5B18
OUTTBL2	5B1E	OUT80COL	5B24	VTABADRS	5B26	OUTADRS	5B2C	PRNTSAV	5B32
PRNTNUM	5B33	MODEVAL	5B35	FRMTVAL	5B36	PRNTBL	5B37	PRNTBLL	5B47
PRNTBLH	5B57	PRNTRTN	5B67	PRNTSAVY	5B72	PRNTSAVX	5B74	PRNTSAVA	5B76
PRNTRTN	5B79	PRNTMODE	5B7A	PRNTDISP	5BC5	PRNTSCRN	5BE4	PRNTCLR	5BF4
PRNTCNTR	5BFE	PRNTBUFR	5C20	PRTBUFR2	5C2F	PRNTNIBL	5C3C	PRNTNBYT	5C41
PRNT1BYT	5C45	PRNT2BYT	5C48	PRNTBYT	5C4A	PRNTADR	5C54	PRNT1DEC	5C6C
PRNT2DEC	5C72	PRNTDEC	5C75	PRNT3DEC	5C7F	PRNTNDEC	5C89	PRNTBYTE	5CD0
PRNTHEx	5CD9	PRNTHEx2	5CDB	HEXTODEC	5CE6	GETDIGIT	5D00	SAVX	5D1F
PRNTGRPH	5D1F	SAVY	5D20	SAVA	5D21	TEMP	5D22	TEMPVAL	5D23
TESTFLAG	5D24	CMDFLAG	5D25	PLOTFLAG	5D26	OPTION	5D27	CURCOLOR	5D28
PRTFLAG	5D29	NXSHIFT	5D2A	ICONCMD	5D2B	CONTENT	5D2C	ICONWIDE	5D2D
ICONHIGH	5D2E	FRMWIDE	5D2F	NDXTEMP	5D30	XDRAW	5D31	YDRAW	5D32
XDRAW0	5D33	YDRAW0	5D34	XCURVE	5D35	YCURVE	5D36	DELTATMP	5D37
DELTAVAL	5D38	DELTASAV	5D39	MOVEMENT	5D3A	NDXICON	5D3B	COLORADR	5D3D
MOVEADR	5D3F	SHAPEADR	5D41	SAVRomer	5D43	SAVNUM	5D45	SAVDATE	5D46
COUNT	5D4C	LINECNT	5D4D	LINESAV	5D4E	COUNTER	5D4F	NNUMS	5D50
SAVECH	5D51	NENTRY	5D52	NUMVALS	5D53	HEXVALS	5D5B	DECVALS	5D5F
CHARBUFR	5D61	NAMEBUFR	5D63	VSNBUFR	5D7C	DECTBLL	5D91	DECTBLH	5D96
COLOR0	5D9B	COLOR1	5DA2	COLOR2	5DA8	COLOR3	5DAF	COLOR4	5DB6
COLOR5	5DBD	COLOR6	5DC4	COLOR7	5DC9	COLRTBLL	5DD0	COLRTBLH	5DD8
MOVE0	5DE0	MOVE1	5DEB	MOVE2	5DF6	MOVETBLL	5E01	MOVETBLH	5E04
SHAPE0	5E07	SHAPE1	5E0D	SHAPE2	5E18	SHAPE3	5E21	SHAPE4	5E2A
SHAPE5	5E30	SHAPE6	5E34	SHAPE7	5E3D	SHAPE8	5E42	SHAPE9	5E48
SHAPEA	5E50	SHAPEB	5E58	SHAPEC	5E5D	SHAPED	5E63	SHAPEE	5E69
SHAPEF	5E71	SHAPTBL	5E76	SHAPTBLH	5E86	FRAME	5E96	TEMPBUFR	5F00
ICONBUFR	6100	MNGVALS	BFF4	INITVAL	BFFA	KEY	C000	CLRKEY	C010
SPEAKER	C030	TEXTOFF	C050	TEXTON	C051	MIXCLR	C052	MIXEDON	C053
TEXTPAGE	C054	PAGE1ON	C054	PAGE2ON	C055	HIRESON	C057	ROM2WP	C082
PRNTAX	F941	PRBL2	F94A	INIT	FB2F	TABV	FB5B	VTAB	FC22
CLREOP	FC42	HOME	FC58	CLREOL	FC9C	WAIT	FCA8	CROUT	FD8E
PRBYTE	FDDA	PRHEX	FDE3	COUT	FDED	OUTPORT	FE95	BELL	FF3A
MONITOR	FF69								