LENGTH OF PRG   00147

```
                                    1           IDENT     PLTSTART
                                    2
                                       ****************************************************************
                                    4   *                                                            *
                                    5   *       THIS ROUTINE ALLOCATES A BLOCK OF CORE (CALLED PLOTBLOC)  *
                                    6   *       WHEN INITIAL FINDS A PLOT SYMBOL IN THE SYMBOL BLOCK  *
                                    7   *       TO BE USED AS THE DEVICE CONTROL MACRO FOR THE PLOTTER  *
                                    8   *       DRIVER                                              *
                                    9   *                                                            *
                                   10   *       IT ALSO PLUGS THE ENTRY IN INSTL FOR PROPER INTERRUPT  *
                                   11   *       DECODING AND STORES THE PLOTTER CONNECT CODE INTO   *
                                   12   *       THE PLOTTER DRIVER                                 *
                                   13   *                                                            *
                                       ****************************************************************
                                   15
                                   16           INCLUDE   ↑SYSMAC
            16+001  SYSMAC  COSY/    03          V4.1       08/17/74   0453
                                   17
            00001                  18   X1       EQU       1
            00002                  19   X2       EQU       2
            00003                  20   X3       EQU       3
            00000                  21   CBI      EQU       0
            00000                  22   IMPURE   EQU       0
                                   23
                                   24           EXT       BUILDBLK
                                   25           EXT       HARDWARE
                                   26           EXT       HDLENGTH              LENGTH OF HARDWARE TABLE
                                   27           EXT       INSTL
                                   28           EXT       LINKIT
                                   29           EXT       PLINT
                                   30           EXT       PLOTCON
                                   31
            00051 P                32           ENTRY     PLOT.STR
            00001 P                33           ENTRY     PLOT.SUP
                                   34
                                   35
                                   36           HTDEF
                                  203   .   ****************************************************************
                                  204   . *                                                            *
            00001                 205   HTFILE   EQU       01B                   FILE                    *
            00002                 206   HTLP     EQU       02B                   LINE PRINTER            *
            00003                 207   HTPUN    EQU       03B                   CARD PUNCH              *
            00004                 208   HTCR     EQU       04B                   CARD READER             *
            00005                 209   HTMT     EQU       05B                   MAGNETIC TAPE           *
            00006                 210   HTTTY    EQU       06B                   TELETYPE                *
            00007                 211   HTPLOT   EQU       07B                   X/Y PLOTTER             *
            00010                 212   HTNULL   EQU       10B                   ONLINE INCINERATOR      *
            00011                 213   HTTV     EQU       11B                   CRT DISPLAY             *
            00012                 214   HTRAF    EQU       12B                   RANDOM ACCESS FILE      *
            00013                 215   HTTASK   EQU       13B                   FUTURE INPUT FOR REMOTE BATCH  *
            00014                 216   HTMSF    EQU       14B                   USER DISKPACK           *
            00015                 217   HTPTP    EQU       15B                   PAPER TAPE PUNCH        *
            00016                 218   HTMAX    EQU       16B                   (NUMBR OF HARDWARE TYPES) + 1  *
            00017                 219   HTMASK   EQU       17B                   MASK FOR THE HARDWARE TYPE  *
                                  220   . *                                                            *
                                  221   .   ****************************************************************
```

```
                           38              URBDEF
                            5         . *
                            6         . ***********************************************************
                            7         . *                                                        *
                            8         . *       URBLOCK BLOCK DEFINITIONS                         *
                            9         . *                                                        *
                           10         . *                                                        *
      00000                11    FB        EQU      0              POINTER TO NEXT FILE BLOCK     *
      00001                12    BLF       EQU      FB+1           COUNT OF BLOCKS IN THIS FILE   *
      00002                13    BFBGN     EQU      BLF+1          QUARTER PAGE NUMBER OF CURRENT *
                           14         . *                                                        512 WORD BLOCK                 *
      00003                15    BFCPP     EQU      BFBGN+1        POINTER TO NEXT WORD TO BE     *
                           16         . *                                                        LOADED FROM THIS BLOCK.  THIS  *
                           17         . *                                                        POINTER IS RELATIVE TO THE     *
                           18         . *                                                        BEGINNING OF THE CURRENT BLOCK *
      00004                19    CALBAK    EQU      BFCPP+1        GO TO THIS ADDRESS WHEN BUFFER *
                           20         . *                                                        IS DONE AFTER AN INTERRUPT     *
                           21         . *                                                        BIT23 SEZZ CALBAK              *
      00005                22    IMAD      EQU      CALBAK+1       LOCATION WHERE RECORD IS TO BE *
                           23         . *                                                        PLACED OR MOVED FROM.          *
      00006                24    LNIM      EQU      IMAD+1         MAXIMUM ALLOWABLE RECORD SIZE  *
      00007                25    KILLFLAG  EQU      LNIM+1         STI   *,0                      *
      00010                26    ENAD      EQU      KILLFLAG+1     ENI   BLOCK,X1                 *
      00011                27    NJM       EQU      ENAD+1         UJP   IMPURE                   *
      00012                28    ENIT      EQU      NJM+1          TEMP FOR INDEX 3               *
                           29         . *                                                        IF BIT23 DEVICE MUST BE STARTED *
                           30         . *                                                        BY OPERATOR                    *
                           31         . *                                                        IF BIT22 DO NOT PROCESS FORMS ON*
                           32         . *                                                        THIS DEVICE                    *
                           33         . *                                                        IF BIT21 THEN STOP MACRO       *
                           34         . *                                                        IF BIT20 THEN BUFFER IS UNSAFE *
                           35         . *                                                        BIT 19 IS A QUEUEING FLAG      *
      00013                36    DEVBLK    EQU      ENIT+1         PTR TO 4 WORD BLOCK            *
      00014                37    COUNT     EQU      DEVBLK+1       COUNT OF WORDS IN RECORD       *
      00015                38    POSI      EQU      COUNT+1        RELATIVE LOCATION IN BUFFER    *
      00016                39    PFWORD    EQU      POSI+1         CONTENTS OF PF1                *
      00016                40    FORMSWRD  EQU      PFWORD                                        *
                           41         . *                                                        BIT19 SEZ WAITING FOR          *
                           42         . *                                                        OPERATOR TO READY DEVICE       *
                           43         . *                                                        BIT20 SEZ WANTS FORMS          *
                           44         . *                                                        BIT21 SEZ HAS FORMS            *
                           45         . *                                                        BIT22 SEZ TAKE FORMS OUT       *
                           46         . *                                                        BIT23 SEZ SAME AS BIT22 BUT    *
                           47         . *                                                        DRIVER IS WAITING TO OUTPUT NEXT*
                           48         . *                                                        FILE                           *
      00017                49    IDENT     EQU      PFWORD+1       BCD IDENT OF THE DEVICE        *
      00020                50    URBEXITA  EQU      IDENT+1        ENI   BLOCK,X1                 *
      00021                51    URBEXIT   EQU      URBEXITA+1     UJP   IMPURE                   *
      00022                52    QINGLOC   EQU      URBEXIT+1      ADDRESS TO GO TO WHEN FILES    *
                           53         . *                                                        ARE UNEQUIPPED                 *
      00023                54    QPNT      EQU      QINGLOC+1      POINTER TO NXPTR AND LXPTR     *
      00024                55    QEMPTY    EQU      QPNT+1         ADDRESS TO TELL DRIVER THAT IT *
                           56         . *                                                        HAS TO MORE FILES TO OUTPUT    *
      00025                57    STRTLOC   EQU      QEMPTY+1       ADDRESS TO TELL DRIVER TO START *
                           58         . *                                                        FILE                           *
                           59         . *                                                                                       *
                           60         . ***********************************************************
      00026                39    BUFFER    EQU      STRTLOC+1
                           40
                           41
      00042                42    RECSIZE   EQU      34             MAX LENGTH OF A PLOTTER RECORD
```

```
00000  14100000        44   PLOTX1   ENI      IMPURE,X1
00001  01000000        45   PLOT.SUP UJP      IMPURE
00002  44077777 X      46            SWA      PLOTCON              SAVE THE CONNECT CODE IN THE DRIV
00003  12000014        47            SHA      12
00004  53700000        48            TAI      X3
00005  17300007        49            ANI      7B,X3                COMPUTE POSITION IN INSTL
00006  12000006        50            SHA      6                    FOR INTERRUPT DECODING
00007  17600070        51            ANA      70B
00010  53740000        52            IAI      X3
00011  47100000 P      53            STI      PLOTX1,X1
00012  14177777 X      54            ENI      HDLENGTH,X1          ENTER LENGTH OF TABLE
00013  14600007        55            ENA      HTPLOT
00014  14700017        56            ENQ      HTMASK
00015  13000017        57            SHAQ     15                   SHIFT INTO POSITION
00016  06277777 X      58            MEQ      HARDWARE,2           LOOK FOR THIS DEVICE
00017  01000000 P      59            UJP      PLOTX1
00020  14600000        60            ENA      0                    ALLOW USERS TO EQUIP THE
00021  44100016 X      61            SWA      HARDWARE,X1          DEVICE
00022  54100000 P      62            LDI      PLOTX1,X1            RESTORE X1
00023  14677777 X      63            ENA      PLINT
00024  44377777 X      64            SWA      INSTL,X3
00025  14200071        65            ENI      PLTPROTL-1,X2
00026  20200055 P      66            LDA      PLTPROTO,X2           MOVE THE MACRO
00027  40100000        67            STA      0,X1
00030  15177776        68            INI      -1,X1
00031  02600026 P      69            IJD      *-3,X2
00032  15100001        70            INI      1,X1
00033  53100000        71            TIA      X1
00034  44100010        72            SWA      ENAD,X1              SET UP THE   ENI PROTO,CBI
00035  44100020        73            SWA      URBEXITA,X1
00036  15600007        74            INA      KILLFLAG             SETUP THE KILL STATUS
00037  44100007        75            SWA      KILLFLAG,X1
00040  15600017        76            INA      BUFFER-KILLFLAG      SET UP THE POINTER TO THE
00041  44100005        77            SWA      IMAD,X1              BUFFER
00042  15400042        78            INA,S    QWORDS-BUFFER        SET UP THE QUEUEING
00043  44100023        79            SWA      QPNT,X1
00044  44100071        80            SWA      QWORDS+1,X1
00045  00777777 X      81            RTJ      BUILDBLK
00046  25000053 P      82            LDAQ     BCDPLOT              PLUG THE CHAIN FOR THE DRIVER
00047  00777777 X      83            RTJ      LINKIT
00050  02500001 P      84            IJD      PLOT.SUP,X1          EXIT
                       85
                       86
00051  01000000        87   PLOT.STR UJP      IMPURE
00052  01000051 P      88            UJP      PLOT.STR
                       89
00053  47434663        90   BCDPLOT  BCD      2,PLOTBLOC
```

```
            00055 P      92           PLTPROTO EQU       *
            00055 P      93                    ORGR      PLTPROTO+FB
   00055 00000000        94                    VFD       A24/IMPURE
            00056 P      95                    ORGR      PLTPROTO+BLF
   00056 00000000        96                    VFD       A24/IMPURE
            00057 P      97                    ORGR      PLTPROTO+BFBGN
   00057 00000000        98                    VFD       A24/IMPURE
            00060 P      99                    ORGR      PLTPRCTO+BFCPP
   00060 00000000       100                    VFD       A24/IMPURE
            00061 P     101                    ORGR      PLTPROTO+CALBAK
                        102                    EXT       PLCTCB
   00061 00077777       103                    VFD       A9/IMPURE,A15/PLOTCB   RETURN HERE IF QUEUED
            00062 P     104                    ORGR      PLTPROTO+IMAD
   00062 00000300       105                    VFD       09/000,A15/IMPURE
            00063 P     106                    ORGR      PLTPROTO+LNIM
   00063 00000042       107                    VFD       09/000,A15/RECSIZE
            00064 P     108                    ORGR      PLTPROTO+KILLFLAG
   00064 47000064 P     109                    STI       *,0
   00065 14100055 P     110                    ENI       PLTPROTO,X1+CBI        ENTER BLOCK ADDRESS
            00066 P     111                    ORGR      PLTPROTO+NJM
   00066 01000000       112                    UJP       IMPURE
            00067 P     113                    ORGR      PLTPROTO+ENIT
   00067 40000000       114                    VFD       09/400,A15/IMPURE
            00071 P     115                    ORGR      PLTPROTO+COUNT
   00071 00000000       116                    VFD       A24/IMPURE
            00072 P     117                    ORGR      PLTPROTO+POSI
   00072 00000000       118                    VFD       A24/IMPURE
            00073 P     119                    ORGR      PLTPROTO+PFWORD
   00073 00000000       120                    VFD       A6/IMPURE,O3/0,A15/IMPURE
            00074 P     121                    ORGR      PLTPROTO+IDENT
   00074 47434663       122                    BCD       1,PLOT
            00075 P     123                    ORGR      PLTPROTO+URBEXITA
   00075 14100055 P     124                    ENI       PLTPROTO,X1+CBI
            00076 P     125                    ORGR      PLTPROTO+URBEXIT
   00076 01000000       126                    UJP       IMPURE
            00077 P     127                    ORGR      PLTPROTO+QINGLOC
                        128                    EXT       URBLOKQ
   00077 01077777 X     129                    UJP       URBLOKQ
            00100 P     130                    ORGR      PLTPROTO+QPNT
   00100 00000000       131                    OO        IMPURE
            00101 P     132                    ORGR      PLTPROTO+QEMPTY
   00101 01200000       133                    UJP       0,X2
            00102 P     134                    ORGR      PLTPROTO+STRTLOC
                        135                    EXT       URBLOKI
   00102 01077777 X     136                    UJP       URBLOKI
            00103 P     137                    ORGR      PLTPROTO+BUFFER
   00103                138                    BSS       RECSIZE
            00070       139           QWORDS   EQU       *-PLTPROTO
   00145 00000000       140                    VFD       A24/IMPURE,A24/IMPURE
            00072       141           PLTPROTL EQU       *-PLTPROTO
                        142                    END
```

NO LINES WITH ERRORS

```
  BCDPLOT         00053P      90      32 00046P
  BFBGN           00002       13      15 00000P       97 00057P
  BFCPP           00003       15      19 00000P       99 00060P
  BLF             00001       12      13 00000P       95 00056P
  BUFFER          00026       39     137 00103P       76 00040P        78 00042P
  BUILDBLK     X              24      81 00045P
  CALBAK          00004       19      22 00000P      101 00061P
  CBI             00000       21     110 00065P      124 00075P
  COUNT           00014       37      38 00000P      115 00070P
  DEVBLK          00013       36      37 00000P
  ENAD            00010       26      27 00000P       72 00034P
  ENIT            00012       28      36 00000P      113 00067P
  FB              00000       11      12 00000P       93 00055P
* FORMSWRD        00016       40
  HARDWARE     X              25      58 00016P       61 00021P
  HDLENGTH     X              26      54 00012P
* HTCR            00004      208
* HTFILE          00001      205
* HTLP            00002      206
  HTMASK          00017      219      56 00014P
* HTMAX           00016      218
* HTMSF           00014      216
* HTMT            00005      209
* HTNULL          00010      212
  HTPLOT          00007      211      55 00013P
* HTPTP           00015      217
* HTPUN           00003      207
* HTRAF           00012      214
* HTTASK          00013      215
* HTTTY           00006      210
* HTTV            00011      213
  IDENT           00017       49      50 00000P      121 00074P       77 00041P
  IMAD            00005       22      24 00000P      104 00062P
  IMPURE          00000       22      44 00000P       45 00001P       87 00051P       94 00055P       96 00056P       98 00057P
                                     100 00060P      103 00061P      105 00062P      112 00066P      114 00067P      116 00071P
                                     118 00072P      120 00073P      120 00073P      126 00076P      131 00100P      140 00145P
                                     140 00146P
  INSTL        X              27      64 00024P
  KILLFLAG        00007       25      26 00000P      108 00064P       74 00036P       75 00037P       76 00040P
  LINKIT       X              28      83 00047P
  LNIM            00006       24      25 00000P      106 00063P
  NJM             00011       27      28 00000P      111 00066P
  PFWORD          00016       39      40 00000P       49 00000P      119 00073P
  PLINT        X              29      63 00023P
  PLOT.STR E      00051P      87      32 00000P       88 00052P
  PLOT.SUP E      00001P      45      33 00000P       84 00050P
  PLOTCB       X             102     103 00061P
  PLOTCON      X              30      46 00002P
  PLOTX1          00000P      44      53 00011P       59 00017P       62 00022P
  PLTPROTL        00072      141      65 00025P
  PLTPROTO        00055P      92      93 00055P       95 00056P       97 00057P       99 00060P      101 00061P      104 00062P
                                     106 00063P      108 00064P      111 00066P      113 00067P      115 00070P      117 00072P
                                     119 00073P      121 00074P      123 00075P      125 00076P      127 00077P      130 00100P
                                     132 00101P      134 00102P      137 00103P      139 00145P      141 00147P       66 00026P
                                     110 00065P      124 00075P
  POSI            00015       38      39 00000P      117 00072P
  QEMPTY          00024       55      57 00000P      132 00101P
  QINGLOC         00022       52      54 00000P      127 00077P
  QPNT            00023       54      55 00000P      130 00100P       79 00043P
  QWORDS          00070      139      78 00042P       80 00044P
  RECSIZE         00042       42     138 00103P      107 00063P
  STRTLOC         00025       57      39 00000P      134 00102P
  URBEXIT         00021       51      52 00000P      125 00076P
  URBEXITA        00020       50      51 00000P      123 00075P       73 00035P
  URBLOKI      X             135     136 00102P
  URBLOKQ      X             128     129 00077P
  X1              00001       18      44 00000P       53 00011P       54 00012P       61 00021P       62 00022P       67 00027P
                                      68 00030P       70 00032P       71 00033P       72 00034P       73 00035P       75 00037P
                                      77 00041P       79 00043P       80 00044P       84 00050P      110 00065P      124 00075P
  X2              00002       19      65 00025P       66 00026P       69 00031P      133 00101P
  X3              00003       20      48 00004P       49 00005P       52 00010P       64 00024P
```