LENGTH OF PRG   00226

```
                                  1                   IDENT     CRSTART
                                  2
                                     ******************************************************************
                                  4       *                                                          *
                                  5       *      THIS ROUTINE WILL ALLOCATE A DEVICE CONTROL MACRO FOR *
                                  6       *      ALL ≠CR≠ SYMBOLS IN THE SYMBOL BLOCK.  THE FIRST SUCH  *
                                  7       *      MACRO IS CALLED ≠CRFCBLK≠, ALL OTHER MACROS ARE NOT    *
                                  8       *      NAMED.  CARDS THAT ARE READ THRU THE ≠CRFCBLK≠ CARD    *
                                  9       *      READER ARE ABLE TO HAVE THE CONTROL CARD BIT SUPPRESSED*
                                 10       *      IF SJ4 IS ON WHILE THE CARDS ARE BEING READ.          *
                                 11       *                                                          *
                                 12       *      THIS ROUTINE ALSO PLUGS THE REQUIRED ENTRIES IN INSTL *
                                 13       *      SO THAT CARD READER INTERRUPTS MAY BE PROCESSED NORMALLY*
                                 14       *                                                          *
                                     ******************************************************************
                                 16
                                 17                   INCLUDE   ↑SYSMAC
                                 17+001 SYSMAC COSY/   03          V4.1        08/17/74   0453
                                 18
00001                            19       X1        EQU       1
00002                            20       X2        EQU       2
00003                            21       X3        EQU       3
00000                            22       CBI       EQU       0
                                 23
00000                            24       IMPURE    EQU       0
                                 25
00055 P                          26                 ENTRY     CR.STR
00000 P                          27                 ENTRY     CR.SUP
                                 28
                                 29                 EXT       BUILDCRQ
                                 30                 EXT       INSTL
                                 31                 EXT       LINKIT
                                 32                 EXT       MACHERR
                                 33
                                 34
                                 35                 CRMACDEF
                                102       .*                                                          *
                                103       .*********************************************************** *
                                104       .*                                                          *
                                105       .*              UWBLOCK BLOCK DEFINITIONS                    *
                                106       .*                                                          *
                                107       .*                                                          *
00000                           108       CONBLOCK EQU       0            POINTER TO 8 WORD CONTROL BLOCK *
00001                           109       BFPTR    EQU       CONBLOCK+1   POINTER TO CURRENT CORE BUFFER  *
                                110       .*                             -0 IF NO BUFFER PRESENT        *
00002                           111       BLKPOS   EQU       BFPTR+1      CURRENT BLOCK POSITION          *
00003                           112       IMADR    EQU       BLKPOS+1     ADDRESS OF WORD COUNT AND IMAGE *
00004                           113       CALLBAD  EQU       IMADR+1      CALL BACK ADDRESS               *
                                114       .*                             RTJ MACHERR                     *
00006                           115       RDIST    EQU       CALLBAD+2    ENI BLOCK,CBI                   *
                                116       .*                             UJP IMPURE                      *
00010                           117       WCNT     EQU       RDIST+2      TEMPORARY WORD COUNT            *
00011                           118       CBLOCK   EQU       WCNT+1       ADDRESS OF CURRENT BLOCK        *
00012                           119       TIMAD    EQU       CBLOCK+1     TEMPORARY FOR CURRENT POSITION  *
00013                           120       PSALOC   EQU       TIMAD+1      ADDRESS OF ASSOCIATED PSA       *
00013                           121       DISKBUSY EQU       PSALOC       BUFFER UNSAFE FLAG              *
                                122       .*                             ENI BLOCK,CBI                   *
00015                           123       EXITADD  EQU       PSALOC+2     UJP IMPURE   RETURN ADDRESS     *
00016                           124       PFSAVE   EQU       EXITADD+1    TEMP TO SAVE THE CONTENTS OF PF1*
00017                           125       UWBWC    EQU       PFSAVE+1     TEMP TO SAVE WC AND CALL BACK   *
00020                           126       UWBRET   EQU       UWBWC+1      ADDRESS IF CALL TO UWBLOCKB     *
00021                           127       UWBX3    EQU       UWBWC+2      TEMP TO SAVE RETURN ADDRESS IF  *
                                128       .*                             CALL TO UWBLOCKB                *
                                129       .*                             BIT23 IF LAST RECORD WAS ILOGOFF*
00022                           130       BATCHPNT EQU       UWBX3+1      POINTER TO THE PROPER BATCH Q   *
00023                           131       DESTLP   EQU       BATCHPNT+1   DESTINATION LINE PRINTER CODE   *
00024                           132       UWMAX    EQU       DESTLP+1     NUMBER OF WORDS IN BLOCK        *
                                133       .*                                                          *
                                134       .*                                                          *
                                135       .*                             THE FOLLOWING ARE USED ONLY FOR *
                                136       .*                             DEVICES THAT COME FROM THE PDP8 *
00024                           137       EXPDATA  EQU       UWMAX        BIT23 SEZZ EXPECTING DATA       *
                                138       .*                             BITS 14--0 HAVE 64 WORD BLOCK   *
                                139       .*                             ADDRESS                         *
00025                           140       COMWORD  EQU       EXPDATA+1    12 BIT BYTES WITH THE CONTROL   *
                                141       .*                             BLOCK INFORMATION               *
00026                           142       DEVTYPE  EQU       COMWORD+1    BITS 14--0 HAVE UWBLOCK ROUTINE *
                                143       .*                             POINTER                         *
```

```
00027          144    UWMAXA    EQU       DEVTYPE+1          NUMBER OF WORDS IN LONGER BLOCKS*
               145    .*                                                                      *
               146    .************************************************************************
00024          241    CRENTRY   EQU       UWMAX             ENI  BLOCK,X1                      *
               242    .*                                    UJP  CRINT                         *
00026          243    CONCODE   EQU       CRENTRY+2         ENI  IMPURE,X1 ENTER CONNECT CODE*
               244    .*                                    UJP  CONNECT                       *
               245    .*                                    RTJ  CHANRET  PROCESS CHANNEL INT*
               246    .*                                    UJP  0,X2    WE WILL BE CALLED     *
               247    .*                                                 BACK                  *
               248    .*                                    ENI  BLOCK,X1                      *
               249    .*                                    UJP  CRCONNEC                      *
00034          250    CHANRET   EQU       CONCODE+6         00   IMPURE   CHANNEL INTERRUPT    *
               251    .*                                    NOT BIT23 SEZ OK TO READ           *
               252    .*                                    BIT22 SEZ FILLOUT NEEDED           *
               253    .*                                    ENI  BLOCK,X1                      *
               254    .*                                    UJP  CRCHANIN ENTER THE DRIVER     *
00037          255    DIDENT    EQU       CHANRET+3         BCD 1,ABC  DEVICE NAME             *
00040          256    WRDCOUNT  EQU       DIDENT+1          WORD COUNT OF CURRENT BUFFER       *
00041          257    BUFFADD   EQU       WRDCOUNT+1        BUFFER FOR THE I/O                 *
00050          258    BUFFLEN   EQU       40                SIZE OF BUFFER                     *
00111          259    UWMAXCR   EQU       BUFFADD+BUFFLEN   LENGTH OF CR BLOCKS                *
```

```
00000  01000000       37   CR.SUP    UJP    IMPURE
00001  44000143 P     38             SWA    CRPROTO+CONCODE        SAVE CONNECT CODE IN THE MACRO
00002  40000112 P     39             STA    TEMP                   SAVE THE CONNECT CODE
00003  14600100       40             ENA    1*2↑6                  INCREMENT THE READER NUMBER
00004  34000154 P     41             RAD    CRPROTO+DIDENT
00005  14200110       42             ENI    UWMAXCR-1,X2           MOVE THE MACRO INTO FREE STORAGE
00006  20200115 P     43             LDA    CRPROTO,X2
00007  40100000       44             STA    0,X1
00010  15177776       45             INI    -1,X1
00011  02600006 P     46             IJD    *-3,X2
00012  15100001       47             INI    1,X1
00013  53100000       48             TIA    X1                     BLOCK ADDRESS TO A
00014  44100006       49             SWA    RDIST,X1+CBI           PLUG THE ENI BLOCK,CBI
00015  44100014       50             SWA    EXITADD-1,X1+CBI       INSTRUCTIONS
00016  44100035       51             SWA    CHANRET+1,X1+CBI
00017  44100024       52             SWA    CRENTRY,X1+CBI
00020  44100032       53             SWA    CONCODE+4,X1+CBI
00021  15600034       54             INA    CHANRET
00022  44100030       55             SWA    CONCODE+2,X1+CBI       SET UP CHANNEL INT PROCESSING
00023  21000112 P     56             LDQ    TEMP                   LOAD THE CONNECT CODE WORD
00024  12477760       57             SHQ    -15
00025  17700007       58             ANQ    7B
00026  00777777 X     59             RTJ    BUILDCRQ
00027  20000112 P     60             LDA    TEMP                   LOAD THE CONNECT CODE
00030  12000014       61             SHA    12
00031  53700000       62             TAI    X3
00032  17300007       63             ANI    7B,X3                  COMPUTE POSITION IN INSTL
00033  12000006       64             SHA    6                      FOR INTERRUPT DECODEING
00034  17600070       65             ANA    70B
00035  53740000       66             IAI    X3
00036  53100000       67             TIA    X1                     MACRO ADDRESS TO A
00037  15600024       68             INA    CRENTRY
00040  44377777 X     69             SWA    INSTL,X3
00041  14200000       70   LAST      ENI    IMPURE,X2              ENTER NUMBER OF CARD READERS
00042  10200024       71             ISI    CRTABL,X2              THERE IS NOW ONE MORE
00043  01000045 P     72             UJP    *+2
00044  00000044 P     73             HLT    *                      TOO MANY CARD READERS
00045  47200041 P     74             STI    LAST,X2
00046  53300000       75             TIA    X3                     INTERRUPT CODE TO A
00047  40200065 P     76             STA    CRTAB-1,X2             SAVE FOR LATER
00050  04200001       77             ISE    1,X2                   SKIP IF FIRST TIME
00051  02500000 P     78             IJD    CR.SUP,X1
00052  25000113 P     79             LDAQ   BCDCRFC                ≠CRFCBLK≠
00053  00777777 X     80             RTJ    LINKIT
00054  02500000 P     81             IJD    CR.SUP,X1
                      82
00055  01000000       83   CR.STR    UJP    IMPURE
00056  54100041 P     84             LDI    LAST,X1                LOAD NUMBER OF CARD READERS
00057  47000041 P     85             STI    LAST,0
00060  01000064 P     86             UJP    STR04
       00061 P        87   STR02     EQU    *
00061  20100066 P     88             LDA    CRTAB,X1               LOAD A INTERRUPT CODE
00062  44000005       89             SWA    00005B                 FAKE AN INTERRUPT TO START THE
00063  00700004       90             RTJ    00004B                 READER
00064  02500061 P     91   STR04     IJD    STR02,X1
00065  01000055 P     92             UJP    CR.STR
                      93
00066                 94   CRTAB     BSS    20                     TABLE OF CARD READER INTERRUPT CO
       00024          95   CRTABL    EQU    *-CRTAB                LENGTH OF CRTAB
                      96
00112  00000000       97   TEMP      VFD    A24/IMPURE
                      98
00113  23512623       99   BCDCRFC   BCD    2,CRFCBLK
```

```
          00115 P        101      CRPROTO  EQU      *
          00115 P        102               ORGR     CRPROTO+CONBLOCK
00115  00000000          103               VFD      A24/IMPURE
          00116 P        104               ORGR     CRPROTO+BFPTR
00116  77777777          105               VFD      A24/-IMPURE
          00117 P        106               ORGR     CRPROTO+BLKPOS
00117  00000000          107               VFD      A24/IMPURE
          00120 P        108               ORGR     CRPROTO+IMADR
00120  00000000          109               VFD      A24/IMPURE
          00121 P        110               ORGR     CRPROTO+CALLBAD
00121  00000000          111               VFD      A24/IMPURE
          00122 P        112               ORGR     CRPROTO+RDIST-1
00122  00777777 X        113               RTJ      NACHERR
00123  14100115 P        114               ENI      CRPROTO,X1+CBI
00124  01000000          115               UJP      IMPURE
          00125 P        116               ORGR     CRPROTO+WCNT
00125  00000000          117               VFD      A24/IMPURE
          00126 P        118               ORGR     CRPROTO+CBLOCK
00126  00000000          119               VFD      A9/IMPURE,A15/IMPURE
          00127 P        120               ORGR     CRPROTO+TIMAD
00127  00000000          121               VFD      A24/IMPURE
          00130 P        122               ORGR     CRPROTO+PSALOC
00130  00000000          123               VFD      A9/IMPURE,A15/IMPURE
          00131 P        124               ORGR     CRPROTO+EXITADD-1
00131  14100115 P        125               ENI      CRPROTO,X1+CBI
00132  01000000          126               UJP      IMPURE
          00133 P        127               ORGR     CRPROTO+PFSAVE
00133  00000000          128               VFD      A24/IMPURE
          00134 P        129               ORGR     CRPROTO+UWBWC
00134  00000000          130               VFD      A24/IMPURE,A24/IMPURE
          00136 P        131               ORGR     CRPROTO+UWBX3
00136  00000000          132               VFD      A6/IMPURE,O3/0,A15/IMPURE
          00137 P        133               ORGR     CRPROTO+BATCHPNT
00137  00400000          134               VFD      O6/00,A3/4+IMPURE,A15/IMPURE
          00140 P      134+001             ORGR     CRPROTO+DESTLP
00140  40000000       134+002             VFD      A1/1,A8/0,A15/0
          00141 P        135               ORGR     CRPROTO+CRENTRY
00141  14100115 P        136               ENI      CRPROTO,X1+CBI
                         137               EXT      CRINT
00142  01077777 X        138               UJP      CRINT
          00143 P        139               ORGR     CRPROTO+CONCODE
00143  14100000          140               ENI      IMPURE,X1+CBI
                         141               EXT      CONNECT
00144  01077777 X        142               UJP      CONNECT
00145  00700034          143               RTJ      CHANRET
00146  01200000          144               UJP      0,X2
00147  14100115 P        145               ENI      CRPROTO,X1+CBI
                         146               EXT      CRCONNEC
00150  01077777 X        147               UJP      CRCONNEC
          00151 P        148               ORGR     CRPROTO+CHANRET
00151  00000000          149               VFD      A9/IMPURE,A15/IMPURE
00152  14100115 P        150               ENI      CRPROTO,X1+CBI
                         151               EXT      CRCHANIN
00153  01077777 X        152               UJP      CRCHANIN
          00154 P        153               ORGR     CRPROTO+DIDENT
00154  23510060          154               VFD      H12/CR,A6/IMPURE,H6/
          00226 P        155               ORGR     CRPROTO+UWMAXCR
                         156
                         157               END
```

NO LINES WITH ERRORS

```
BATCHPNT       00022      130    131 00000P    133 00137P
BCOCRFC        00113P      99     79 00052P    104 00116P
BFPTR          00001     109    111 00000P    106 00117P
BLKPOS         00002     111    112 00000P
BUFFADD        00041     257    259 00000P
BUFFLEN        00050     258    259 00000P
BUILDCRQ    X             29     59 00026P
CALLBAD        00004     113    115 00000P    110 00121P
CBI            00000      22     49 00014P     50 00015P     51 00016P     52 00017P     53 00020P     55 00022P
                               114 00123P    125 00131P    136 00141P    140 00143P    145 00147P    150 00152P
CBLOCK         00011     118    119 00000P    118 00126P
CHANRET        00034     250    255 00000P    148 00151P     51 00016P     54 00021P    143 00145P
COMWORD        00025     140    142 00000P
CONBLOCK       00000     108    109 00000P    102 00115P
CONCODE        00026     243    250 00000P    139 00143P     38 00001P     53 00020P     55 00022P
CONNECT     X            141    142 00144P
CR.STR      E  00055P     83     26 00000P     92 00065P
CR.SUP      E  00000P     37     27 00000P     78 00051P     81 00054P
CRCHANIN    X            151    152 00153P
CRCONNEC    X            146    147 00150P
CRENTRY        00024     241    243 00000P    135 00141P     52 00017P     68 00037P
CRINT       X            137    138 00142P
CRPROTO        00115P    101    102 00115P    104 00116P    106 00117P    108 00120P    110 00121P    112 00122P
                               116 00125P    118 00126P    120 00127P    122 00130P    124 00131P    127 00133P
                               129 00134P    131 00136P    133 00137P   134+1 00140P    135 00141P    139 00143P
                               148 00151P    153 00154P    155 00155P     38 00001P     41 00004P     43 00006P
                               114 00123P    125 00131P    136 00141P    145 00147P    150 00152P
CRTAB          00066P     94     95 00112P     76 00047P     88 00061P
CRTABL         00024      95     71 00042P
DESTLP         00023     131    132 00000P   134+1 00140P
DEVTYPE        00026     142    144 00000P
DIDENT         00037     255    256 00000P    153 00154P     41 00004P
*  DISKBUSY    00013     121
EXITADD        00015     123    124 00000P    124 00131P     50 00015P
EXPDATA        00024     137    140 00000P
IMADR          00003     112    113 00000P    108 00120P
IMPURE         00000      24     37 00000P     70 00041P     83 00055P     97 00112P    103 00115P    105 00116P
                               107 00117P    109 00120P    111 00121P    115 00124P    117 00125P    119 00126P
                               119 00126P    121 00127P    123 00130P    123 00130P    126 00132P    128 00133P
                               130 00134P    130 00135P    132 00136P    132 00136P    134 00137P    134 00137P
                               140 00143P    149 00151P    149 00151P    154 00154P
INSTL       X             30     69 00040P
LAST           00041P     70     74 00045P     84 00056P     85 00057P
LINKIT      X             31     80 00053P
MACHERR     X             32    113 00122P
PFSAVE         00016     124    125 00000P    127 00133P
PSALOC         00013     120    121 00000P    123 00000P    122 00130P
RDIST          00006     115    117 00000P    112 00122P     49 00014P
STR02          00061P     87     91 00064P
STR04          00064P     91     86 00060P
TEMP           00112P     97     39 00002P     56 00023P     60 00027P
TIMAD          00012     119    120 00000P    120 00127P
*  UWBRET      00020     126
UWBWC          00017     125    126 00000P    127 00000P    129 00134P
UWBX3          00021     127    130 00000P    131 00136P
UWMAX          00024     132    137 00000P    241 00000P
*  UWMAXA      00027     144
UWMAXCR        00111     259    155 00155P     42 00005P
WCNT           00010     117    118 00000P    116 00125P
WRDCOUNT       00040     256    257 00000P
X1             00001      19     44 00007P     45 00010P     47 00012P     48 00013P     49 00014P     50 00015P
                                51 00016P     52 00017P     53 00020P     55 00022P     67 00036P     78 00051P
                                81 00054P     84 00056P     88 00061P     91 00064P    114 00123P    125 00131P
                               136 00141P    140 00143P    145 00147P    150 00152P
X2             00002      20     42 00005P     43 00006P     46 00011P     70 00041P     71 00042P     74 00045P
                                76 00047P     77 00050P    144 00146P
X3             00003      21     62 00031P     63 00032P     66 00035P     69 00040P     75 00046P
```