```
 17:47 SEP 08,'75 ID=010E
JOB ;POST,BRU333323132,7   . TERMINAL JOB
LIMIT (CORE,16),(TIME,10)
ASSIGN M:SI,(FILE,GHOST1D,:DOOTSI)
ASSIGN M:CI,(FILE,GHOST1D,:DOOCI)
METASYM SI,CI,L0,CN
    .SS R0,R1,R2,R3,R4,R5,R6,R7,R8,R9,R10,R11,R12,R13,R14,R15
    .SS SR1,SR2,SR3,SR4,D1,D2,D3,D4,$
    .END
```

```
AF
          56/LI
ANLZT
         574/LD            614*TEXTC
BLANK
       496*1/M:PRINT       632*EQU
BLNKLN
       496*1*M:PRINT       511/EXU
BOOTFLG
          64/REF           285/MTW          295/LC           564/STW
BOOTYPE
         210*EQU           217/EQU          545/CH
CINIT050
         682*EQU           688/BLE
CLSDUMP
         442*GEN           528/CAL1
CLSPATCH
         365*GEN           445/CAL1
C8:RCVD8FF
         172/SREF          705/EXU
C8:XPSD8
         175/SREF          683/LW
C8C
         163/SREF          679/LI
C8CINIT
         199/SREF          692/B            694/BCR          697/BCR          719/B
C8CINITNR
         455/BAL           678*EQU
C8D:LPC
         170/SREF          708/LD
C8H:DN
         168/SREF          700/LH
C8H:I8
         178/SREF          684/LH
C8NT
         470/LW            630*TEXT
C8NTDBWN
```

```
        476/BANZ        490=EQU
CONTINU
      483.1/B           515=EQU
CORED
        122/REF         516/LW
DABN
        373/DATA        373/DATA        379=RFS
DABN1
     379.2/BE        379.4=EQU
DCTSIZ
         99/REF         468/CI          479/CI
DCT16
         93/REF         499/LD
DCT3
         87/REF         463/LB
DCT8
         90/REF         321/LW
DCT9
       92.1/REF        473.1/LW
DFVDOWN
        465/BANZ        489=EQU
DFVOPN
        291/CAL1        293/CAL1        301/CAL1        723=GEN
DISPLAY
        492/BGZ         498=EQU
DOWNC
        475/CI        627.3=EQU
DOWNCA
     627.2=EQU       627.3/EQU
DOWNCP
     627.1=EQU       627.3/EQU
DOWND
        464/CI          627=EQU
DSCCVT
        158/REF         536/BAL
DUMPFILE
        108/REF         381/STW         519/STH         578/MTW
```

```
ENDITMS
        512/M:PRINT     644-EQU
ENDPRT
        482/BGEZ        510-EQU
ERFLG
        356/MTB         454-BCS
ERRLOG
        139/REF         562/BAL
ERSKIP
        454/BCS         458-EQU
EXIT
        284/BCS         286/BE          610-LI
FF:ARM
      207.7/SREF     719.12/EXU
FFB:CDX
      207.9/SREF     719.13/LB
FFCP#
      207.5/SREF      589.1/LI        719.9/LI
FFCPINIT
      457.1/BAL       719.1-RES
FFF:SUP
      207.8/SREF     719.21/GEN
FFH:ALV
      207.6/SREF     719.11/LH
FILLT
        608/LD          615-TEXTC
FINIT1
      719.3/BFZ       719.8-RES
FINIT2
     719.11-LH       719.19/BDR
FNAME
        587/LD          618-TEXTC
GHOST1
          5/DFF         282-EQU         726/END
GHOST1D
          4/DFF          33-CSECT
GOGJOB
```

```
          597/BFZ          604=EQU
GETYPE
          546/BE           548=LI
GTNXTCBC
          702/BCS          713=EQU
HA
          217/EQU          217/EQU
HASPIO
          201/SREF         313/LI           322/CI
INT#
        207.2/SREF       719.2/LI
INTCONT
        207.4/SREF       719.4/LW
INTLOC
        207.3/SREF       719.5/LB
ITMPRT
          496/M:PRINT      638=EQU
KRD1
          573/BCS          580=EQU
LCOC
          166/SREF         687/CI           715/CI
LF
           56=LI
LLNDD
           85/REF          289/AND
LOGFIL
        589.2/BFZ          590=EQU
LOGFIL2
          592/BFZ          603/B            607=EQU
LOGRCVG
          570/BNEZ         577=EQU
M:DO
           75/REF          287/LI
M:LL
           77/REF          294/LI           624/GEN
M:LO
           79/REF          292/LI
```

M:PATCH
83/REF 365/GEN
M:PRINT
54=CNAME
M:TM
81/REF 367/GEN 371/GEN 442/GEN 525/LW
MASTER
283/CAL1 622=DATA
MESS
496/M:PRINT 496.1/M:PRINT 505/M:PRINT 512/M:PRINT
MBSTBP
598=LB 609/BDR
MPBITS
51.1=SET
MSGPRT
471/STW 502/STW 504/STH 505/M:PRINT 641=EQU
NEWQ
207.10/REF 719.17/BAL
NSCPU
311/LI 591/LI
NXTCBC
699=EQU 716/BLE
NXTCBNT
473=EQU 480/BLE
NXTDEV
462=EQU 469/BLE
NXTLINE
704=EQU 712/BLE
BPNAB
382/B 538=EQU
BPNDUMP
371=GEN 524/CAL1
PAGE
495/CAL1 624=GEN
PASSO
145/REF 359/LI 361/BCR
PASOCHK

353/BCS 358=EQU
PASORTN
60/DEF 444=EQU
PRINT
57/CAL1 623=DATA
RASIZE
161/SREF 308/AI
RBLIMS
105/REF 318/LW 319/CW
RCVCODE
132/REF 554/LW
RCVRCNT
129/REF 550/LS
RFCOV
354=EQU
RFCOVER2
141/REF 355/BAL 360/BCS 362/BAL
RFCVRTN
357/B 363/B 446=EQU
RSTTM
367=GEN 521/CAL1
RT:REBOOT
156/REF 457/BAL
S:ACORE
116/REF 343/LW 348/STW
S:ADR
207/REF 557/LW
S:PCORE
118/REF 350/AWM
S:STLC
120/REF 310/STW 339/AWM
SB:INIT
187/SREF 598/LB 601/STB
SB:RCVA
185/SREF 595/STW
SB:RCVR
183/SREF 594/STW

SEEK4000
126/REF 537/STW
SETSTL
314/BNEZ 319=CW 328/B
SETSTL1
316/BEZ 320/BL 330=EQU
SETSTL2
333/BEZ 337/BLEZ 341=EQU
SL:BSTRT
191/SREF 594/MTW
SL:CORE
114/REF 345/CW 347/STW
SL:PWP
196/SREF 332/LI 335/AW 336/AW
SL:RSVP
112/REF 342/STW
SL:STLM
110/REF 309/STW 338/AWM
SMAKFLG
135/REF 572/LC
SMUIS
124/REF 520/AI
SNDDX
101/REF 304/LB
STOPBIT
599.1/AI
SUABTFLE
207.1/REF 528.1/STW 528.2/STW
SUPCODE
719.14/OR 719.21=GEN
SYSMAK
149/REF 447/BAL
T:BTSCHED
154/REF 454/BAL
T:GJOBSTRT
152/REF 567/BAL 575/BAL 582/BAL 586/BAL 588/BAL 589.4/BAL
604/BAL 609/BAL

```
T0P:PAGE
        494-EQU         514/EXU
TXCF:FIL
        588/LD          620-TEXTC
TXCRBBAT
        566/LD          614-TEXTC
TXCRVGST
        581/LD          617-TEXTC
TXFR0G
      589.3/LD        621.1-TEXTC
TXM00SE
        605/LD          621-TEXTC
XFC
        138/REF         599/AND
2NXTC0NT
        477-EQU         508/B
2NXTDEV
        466-EQU         507/BEZ
278018
        204/SREF        315/LI          324/CI
#B00TS
        217-EQU         543/LI
```

```
                        ******************
                        *M*       GH0ST1D  GH0ST1 DRIVER
                        ******************
                                  DEF      GH0ST1D            M0DULE NAME
                                  DEF      GH0ST1             GH0ST1D:S ENTRY P0INT
                        *P*
                        *P*       NAME:    GH0ST1D
                        *P*       PURP0SE: INITIATE THE GH0ST1 PR0CESS0R.
                        *P*       DESCRIPTI0N:  GH0ST1D EXITS IMMEDIATELY IF THE SYSTEM
                        *P*                 IS UP & RUNNING. 0THERWISE, GH0ST1D DETERMINES
                        *P*                 H0W IT WAS ENTERED, I.E., BY REC0VERY, B00T
                        *P*                 UNDER THE FILES, C0LD TAPE B00T, 0R FR0M
                        *P*                 RAD/DISC B00T. GH0ST1D THEN ENTERS SYSMAK T0
                        *P*                 INITIALIZE THE PR0CESS0RS. C0C INITIALIZATI0N,
                        *P*                 BATCH SCHEDULER INITIALIZATI0N, & REAL-TIME USER
                        *P*                 INITIALIZATI0N ARE THEN PERF0RMED UNLESS
                        *P*                 REC0VERY HAS AB0RTED, THEN N0 INITIALIZATI0N
                        *P*                 IS D0NE. GH0ST1D THEN DISPLAYS, IF REQUESTED,
                        *P*                 THE PARTITI0NING INF0 IDENTIFYING WHAT
                        *P*                 DEVICES &/0R C0NTR0LLERS ARE PARTITI0NED.
                        *P*                 GH0ST1D ENTERS A SYSTEM START-UP ERR0R L0G
                        *P*                 MESSAGE & THEN STARTS THE SYMBI0NT GH0ST.
                        *P*                 0THER GH0STS STARTED INCLUDE:
                        *P*                           ANLZ (0NLY AFTER REC0VERY)
                        *P*                           RVGH0ST (IF DUMP FILE EXISTS)
                        *P*                           ERR:FIL
                        *P*                           FIX
                        *P*                           M00SE (IF SLAVE 0VER-RIDE IS SET
                        *P*                                 F0R MULTI-PR0CESSING SYSTEM)
                        *P*                 GH0ST1D THEN CHANGES GH0ST1:S ENTRY F0R GH0ST
                        *P*                 START-UP T0 FILL. GH0ST1D THEN EXITS T0 FILL.
                        *P*
02 00000                GH0ST1D  CSECT    1
```

```
34                                      PAGE
35          00000000    R0          EQU     0
36          00000001    R1          EQU     1
37          00000002    R2          EQU     2
38          00000003    R3          EQU     3
39          00000004    R4          EQU     4
40          00000005    R5          EQU     5
41          00000006    R6          EQU     6
42          00000007    R7          EQU     7
43          00000008    R8          EQU     8
44          00000009    R9          EQU     9
45          0000000A    R10         EQU     10
46          0000000B    R11         EQU     11
47          0000000C    R12         EQU     12
48          0000000D    R13         EQU     13
49          0000000E    R14         EQU     14
50          0000000F    R15         EQU     15
51                      *
 1*         00000001    MPBITS      SET     1               MULTIPROCESSING FLAGS
53                                  SYSTEM  UTS
54          00000000    MIPRINT     CNAME
55                                  PROC
56                      LF          LI,14   AF(1,2)
57                                  CAL1,2  PRINT
58                                  PEND
```

```
59                                  PAGE
60                                  DEF     PASORTN         RETURN ENTRY TO GHOST1
61                          *,*                             FROM GENMDG MODULE
```

```
                                PAGE
                *
                                REF     B00TFLG         INPUT OUTPUT WORD
                *,*                                     FLAG CONTAINING THE TYPE OF
                *,*                                     ENTRY INTO GHOST1.
                *,*                                     BYTE.0 CONTAINS THE FLAGS:
                *,*                                             80 = I (TTY I/O)
                *,*                                             40 = P (LP OUTPUT)
                *,*                                             20 = C (CARD PATCHES)
                *,*                                             10 = T (TAPE PATCHES)
                *,*                                             08 = F (TAPE FILES)
                *,*                                             04 = D (XDELTA RETAINED)
                *,*                                             02 = S (!SYS FILES)
                                REF     M:DO            DCB
                *,*                                     OPEN DIAGNOSTIC OUTPUT
                                REF     M:LL            DCB
                *,*                                     OPEN LISTING OUTPUT
                                REF     M:LO            DCB
                *,*                                     OPEN LISTING OUTPUT
                                REF     M:TM            DCB
                *,*                                     FILE DCB
                                REF     M:PATCH         DCB
                *,*                                     PATCH FILE DCB
                                REF     LLNDD           INPUT WORD
                *,*                                     LISTING DEV.ADDR.DURING BOOT
                                REF     DCT3            INPUT BYTE
                *,*                                     CHECK IF DEVICE IS PARTITIONED
                *,*                                     BIT 2
                                REF     DCT8            INPUT WORD
                *,*                                     CHECK HANDLER ADDRESSES FOR
                *,*                                     SPECIAL HANDLERS
                                REF     DCT9            INPUT WORD BITS 3-4
                *,*                                     CHECK IF CONTROLLER IS PARTITIONED
                *,*                                     BIT 3 = 1, ALTERNATE
                *,*                                     BIT 4 = 1, PRIMARY
                                REF     DCT16           INPUT DOUBLE WORD
                *,*                                     DISPLAY !YYNDD! FOR PARTITIONED
```

```
 95                    *,*                          DEVICES
 99                              REF     DCTSIZ             INPUT
100                    *,*                          SIZE OF DCT TABLES
101                             REF     SNDDX              INPUT BYTE
102                    *,*                          BYTE=0 = # ENTRIES IN SYMBIONT TABLES
103                    *,*                          USED TO SET UP PAGE STEALING DURING
104                    *,*                          BOOT
105                             REF     RBLIMS             INPUT DOUBLE WORD
106                    *,*                          REMOTE BATCH STATION SYMBIONT
107                    *,*                          INDEX LIMITS
108                             REF     DUMPFILE           OUTPUT TABLE
109                    *,*                          SET INFO FOR RVGHOST
110                             REF     SL:STLM            OUTPUT WORD
111                    *,*                          MAX.# PAGES TO BE STOLEN
112                             REF     SL:RSVP            OUTPUT WORD
113                    *,*                          # RESERVED PAGES FOR STEALER
114                             REF     SL:CORE            INPUT OUTPUT WORD
115                    *,*                          MAX.SWAPPER SIZE
116                             REF     S:ACORE            INPUT OUTPUT WORD
117                    *,*                          # PAGES AVAILABLE TO SYSTEM
118                             REF     S:PCORE            OUTPUT WORD
119                    *,*                          # PAGES AVAILABLE TO USER
120                             REF     S:STLC             OUTPUT WORD
121                    *,*                          # CURRENTLY STEALABLE PAGES
122                             REF     CORED              INPUT WORD
123                    *,*                               ADDRESS OF PHYSICAL MEMORY+1
124                             REF     SMUIS              INPUT
125                    *,*                          MAX.# USERS IN SYSTEM
126                             REF     SEEK4000           OUTPUT WORD
127                    *,*                          DUMPFILES SEEK ADDRESS LOCATED IN
128                    *,*                          SEEK4000 -1
129                             REF     RCVRCNT            INPUT WORD
130                    *,*                          RECOVERY COUNT USED IN SYSTEM
131                    *,*                          START-UP ERROR LOG ENTRY
132                             REF     RCVCODE            INPUT WORD
133                    *,*                          CONTAINS RECOVERY SCREECH
134                    *,*                          CODE & SUB-CODE
```

```
135                          REF     SMAKFLG         INPUT BITS 0-3
136                  *,*                         FLAG = 8, START RVGHOST INSTEAD OF
137                  *,*                         ANLZ AS DUMPFILE CONTAINS THE DUMP
138                          REF     XFC             CONSTANT X'000000FC'
139                          REF     ERRLOG          ROUTINE
140                  *,*                         ADD SYSTEM STARTUP ENTRY TO ERROR LOG
141                          REF     RECOVER2        ROUTINE
142                  *,*                         GHOST1 HAS BEEN ENTERED AS A
143                  *,*                         RESULT OF A RECOVERY OR
144                  *,*                         OPERATOR RECOVERY
145                          REF     PASSO           ROUTINE
146                  *,*                         ENTER PASSO IF TAPE BOOT OR
147                  *,*                         AFTER RECOVER2 COMPLETES ITS
148                  *,*                         BOOT UNDER THE FILES FUNCTIONS
149                          REF     SYSMAK          ROUTINE
150                  *,*                         ENTERED TO INITIALIZE THE SYSTEM
151                  *,*                         PROCESSORS
152                          REF     T:GJOBSTRT      ROUTINE
153                  *,*                         START UP DESIGNATED GHOST
154                          REF     T:BTSCHED       ROUTINE
155                  *,*                         INITIATE BATCH SCHEDULER
156                          REF     RT:REBOOT       ROUTINE
157                  *,*                         INITIALIZE REAL-TIME USER(S)
158                          REF     DSCCVT          ROUTINE
159                  *,*                         CONVERT SECTOR ADDRESS TO A
160                  *,*                         DISC SEEK ADDRESS
161                          SREF    RASIZE          INPUT
162                  *,*                         # READ AHEAD ENTRIES
163                          SREF    COC             INPUT
164                  *,*                         = 0  NON-COC SYSTEM
165                  *,*                         > 0  COC SYSTEM
166                          SREF    LCOC            INPUT
167                  *,*                         # COCS -1
168                          SREF    COH:DN          INPUT HALF WORD
169                  *,*                         OBTAIN COC ADDRESS
170                          SREF    COD:LPC         INPUT DOUBLE WORD
171                  *,*                         COC'S LOGICAL LINE LIMITS
```

```
172                                     SREF    C0:RCVD0FF          INPUT
173                     *,*                                 INSTRUCTION T0 TURN RECEIVER
174                     *,*                                 L DATASET  0FF
175                                     SREF    C0:XPSD0            INPUT W0RD
176                     *,*                                 0BTAIN 0UTPUT INTERRUPT XPSD
177                     *,*                                 INSTRUCTION
178                                     SREF    C0H:I0              INPUT HALF W0RD
179                     *,*                                 0BTAIN 0UTPUT INTERRUPT ADDRESS
183                                     SREF    SB:RCVR             0UTPUT W0RD
184                     *,*                                 SET MASTER REC0VER FLAG =0
185                                     SREF    SB:RCVA             0UTPUT W0RD
186                     *,*                                 SET SLAVE REC0VER FLAG =0
187                                     SREF    SB:INIT             INPUT 0UTPUT BYTE
188                     *,*                                 SET BIT=7 =0 (START FLAG), &
189                     *,*                                 SET BIT=6 =1 (ST0P FLAG)
190                     *,*                                 0F SLAVES FLAG
191                                     SREF    SL:BSTRT            INPUT W0RD
192                     *,*                                 SLAVE 0VERRIDE FLAG CHECK
193                     *,*                                       = 0  START M00SE GH0ST
194                     *,*                                       > 0  FIX UP SB:INIT FLAG
195                     *,*                                            & D0N'T START M00SE GH0ST
196                                     SREF    SL:PWP              INPUT W0RD
197                     *,*                                 #PHYSICAL W0RK PAGES REQUIRED F0R
198                     *,*                                 TP. PASS2-GENERATED 0N BASIS 0F PWP 0PTI0N
199                                     SREF    C0CINIT             R0UTINE
200                     *,*                                 INITIALIZE C0CS
201                                     SREF    HASPI0              R0UTINE
202                     *,*                                 CHECK PRESENCE 0F HASPI0 HANDLER
203                     *,*                                 IN SYSTEM
204                                     SREF    2780I0              R0UTINE
205                     *,*                                 CHECK PRESENCE 0F 2780I0 HANDLER
206                     *,*                                 IN SYSTEM
207                                     REF     S:ADR               CPU HARDWARE ADDRESS TABLE
  1*                                    REF     SUABTFLE            SINGLE USER AB0RT FDA 0F DUMPFILE.
  2*                                    SREF    INT#                # EXTERNAL INTS T0 INIT
  3*                                    SREF    INTL0C              WHERE THEY G0
  4*                                    SREF    INTC0NT             WHAT T0 PUT THERE
```

```
 5*
 6*
 7*
 8*
 9*
10*
                SREF    FECP#           # FECPs
                SREF    FEH:ALV         INTERRUPT LEVEL BIT
                SREF    FE:ARM          ARM INSTRUCTION
                SREF    FEF:SUP         SYSTEM UPPING FUNCTION CODE FOR FECP
                SREF    FEB:CDX         FECP DCT INDEX
                REF     NEWQ            TELL FECPS SYSTEM IS UP
```

```
208                                          PAGE
209                                          PCC       0
210          02 00000                 B88TYPE  EQU       $
211    02 00000    D5D6      A                 DATA,2    'N8'
212    02 00000 2  2210      A                 DATA,2    X'2210'
213    02 00001    FFFF      A                 DATA,2    X'FFFF'
214    02 00001 2  6C00      A                 DATA,2    X'6C00'
215    02 00002    0000      A                 DATA,2    X'0000'
216    02 00002 2  0001      A                 DATA,2    X'0001'
217          00000005                #B88TS   EQU       HA($)-HA(B88TYPE)-1
218                                    *
219                                    *
```

```
221                     *F*
222                     *F*       NAME:     GHOST1
223                     *F*       PURPOSE:  INITIATE THE GHOST1 PROCESSOR.
224                     *F*       DESCRIPTION:  GHOST1 EXITS IMMEDIATELY IF THE SYSTEM
225                     *F*                 IS UP & RUNNING. OTHERWISE, GHOST1 DETERMINES
226                     *F*                 HOW IT WAS ENTERED, I.E., BY RECOVERY, BOOT
227                     *F*                 UNDER THE FILES, COLD TAPE BOOT, OR FROM
228                     *F*                 RAD/DISC BOOT. IF BOOT IS A TAPE BOOT OR
229                     *F*                 BOOT UNDER FILES, GHOST1 THEN EXITS TO PASSO.
230                     *F*                 OTHERWISE,GHOST1 ENTERS SYSMAK TO
231                     *F*                 INITIALIZE THE PROCESSORS. COC INITIALIZATION,
232                     *F*                 BATCH SCHEDULER INITIALIZATION, & REAL-TIME USER
233                     *F*                 INITIALIZATION ARE THEN PERFORMED UNLESS
234                     *F*                 RECOVERY HAS ABORTED, THEN NO INITIALIZATION
235                     *F*                 IS DONE. GHOST1 THEN DISPLAYS, IF REQUESTED,
236                     *F*                 THE PARTITIONING INFO IDENTIFYING WHAT
237                     *F*                 DEVICES &/OR CONTROLLERS ARE PARTITIONED.
238                     *F*                 GHOST1 ENTERS A SYSTEM START-UP ERROR LOG
239                     *F*                 MESSAGE & THEN STARTS THE SYMBIONT GHOST.
240                     *F*                 OTHER GHOSTS STARTED INCLUDE:
241                     *F*                           ANLZ (ONLY AFTER RECOVERY)
242                     *F*                           RVGHOST (IF DUMP FILE EXISTS)
243                     *F*                           ERR:FIL
244                     *F*                           FIX
245                     *F*                           MOOSE (IF SLAVE OVER-RIDE IS SET
246                     *F*                                 FOR MULTI-PROCESSING SYSTEM)
247                     *F*                 GHOST1 THEN CHANGES GHOST1'S ENTRY FOR GHOST
248                     *F*                 START-UP TO FILL. GHOST1 THEN EXITS TO FILL.
249                     *DO*
250                     *D*       NAME:     GHOST1
251                     *         ENTRY:    DABN
252                     *         PURPOSE:  INITIATE THE GHOST1 PROCESSOR.
253                     *         DESCRIPTION:  GHOST1 EXITS IMMEDIATELY IF THE SYSTEM
254                     *                   IS UP & RUNNING. OTHERWISE, GHOST1 DETERMINES
255                     *                   HOW IT WAS ENTERED, I.E., BY RECOVERY, BOOT
256                     *                   UNDER THE FILES, COLD TAPE BOOT, OR FROM
257                     *                   RAD/DISC BOOT. GHOST1 THEN ENTERS THE
```

```
258                     *                   APPROPRIATE MODULE IN GHOST1'S LOAD MODULE
259                     *                   TO PERFORM THE NECESSARY FUNCTIONS
260                     *                   DEPENDING UPON HOW GHOST1 WAS ENTERED.
261                     *
262                     *           DABN -  ENTERED WHEN I/O ERROR FROM M;TM.
263                     *
264                     *                   THE TYPE OF BOOT INDEX USED THROUGHOUT GHOST1
265                     *                   IS AS FOLLOWS:
266                     *           INDEX   TYPE OF BOOT
267                     *           -----   ----------------------------
268                     *           0       INDETERMINATE
269                     *           1       COLD TAPE BOOT
270                     *           2       BOOT UNDER FILES
271                     *           3       RAD BOOT
272                     *           4       RECOVERY
273                     *           5       OPERATOR RECOVERY
274                     *
275                     *           INTERFACE:  EXIT,HASP10,2780I0,RECOVER2,RECVRTN,
276                     *                   PASSO,OPNAB.
277                     *           REGISTERS:  ALL USED
278                     *           ENVIRONMENT:  MAPPED, MASTER
279                     *FIN*
280                     *
```

```
282          02 00003                GH8ST1   EQU     $
283    02 00003    046000FF                  CAL1,6  MASTER
284    02 00004    698000EB                  BCS,8   EXIT            DIDNT W8RK
285    02 00005    33000000 X                MTW,0   B88TFLG         D8NT RUN IF WE ARE UP
286    02 00006    683000EB                  BE      EXIT
287    02 00007    22100000 N                LI,1    M:D8            M:D8 DCB
288    02 00008    22203FFF A                LI,2    X'3FFF'
289    02 00009    4B200000 X                AND,2   LLNDD           'LL' DEVICE ADDRESS
290    02 0000A    20204000 A                AI,2    X'4000'         DIAG BIT
291    02 0000B    04100148F                 CAL1,1  DEV8PN          8PEN M:D8 DCB
292    02 0000C    22100000 N                LI,1    M:L8            M:L8 DCB
293    02 0000D    04100148F                 CAL1,1  DEV8PN          8PEN M:L8 DCB
294    02 0000E    22100000 N                LI,1    M:LL            8PEN LL
295    02 0000F    70200000 X                LC      B88TFLG         T8 'N8' IF N8 LP 8UTPUT
296    02 00010    69400012                  BCS,4   $+2             SET 8N ANY RAD B88T(REC8V, ETC.)
297    02 00011    222005D6 A                LI,2    'N8'
  1*   02 00012    6B300028A A               INT,3   X'2A'           IF N8T TAPE B88T
  2*   02 00013    643000015                 BDR,3   $+2             USE SYMBI8NT LP
299    02 00014    693000016                 BNEZ    $+2
300    02 00015    222003D7 A                LI,2    'LP'
301    02 00016    04100148F                 CAL1,1  DEV8PN
302                                 *
303                                 *  SET UP PAGE STEALING CELLS S8 THAT WRITE-AHEAD CAN
304                                 *  BE D8NE DURING B88T
305                                 *
306    02 00017    72100000 X                LB,1    SNDDX
307    02 00018    25100007F A               SLS,1   -1
308    02 00019    20100000 N                AI,1    RASIZE          ADD # READ-AHEAD ENTRIES
309    02 0001A    35100000 X                STW,1   SL:STLM
310    02 0001B    35100000 X                STW,1   S:STLC
311    02 0001C    22A000003 N               LI,R10  3*NSCPU         DEFAULT PGS +1 F8R EACH SLAVE CPU DE
312    02 0001D    22B000002 A               LI,11   2
313    02 0001E    22000000 N                LI,0    HASPI8
314    02 0001F    693000023                 BNEZ    SETSTL-1
315    02 00020    22000000 N                LI,0    2780I8
316    02 00021    683000028E                BEZ     SETSTL1
317    02 00022    22B000001 A               LI,11   1
```

```
318  02 00023  32100001 N          LW,1    RBLIMS+1
319  02 00024  31100000 X SETSTL   CW,1    RBLIMS
320  02 00025  6910002E            BL      SETSTL1
321  02 00026  32020000 X          LW,0    DCT8,1
322  02 00027  21000000 N          CI,0    HASPI8
323  02 00028  68300002B           BE      $+3
324  02 00029  21000000 N          CI,0    2780I8
325  02 0002A  69300002C           BNE     $+2
326  02 0002B  30A0000B A          AW,10   11
327  02 0002C  201FFFFF A          AI,1    -1
328  02 0002D  68000024            B       SETSTL
329                        *
330       02 0002E         SETSTL1 EQU     $
331  02 0002E  25A0007F A          SLS,10  -1
332  02 0002F  22100000 N          LI,1    SL:PWP          CK FOR PRESENCE OF TP PHYSICAL WK PG
333  02 00030  68300038            BEZ     SETSTL2         B, IF NONE
334  02 00031  221FFFFA A          LI,1    -6              WILL SUBTRACT 6 PGS FROM SL:PWP
335  02 00032  30A00000 X          AW,10   SL:PWP          ASSUME SL:PWP LESS THAN OR = 6
336  02 00033  30100000 X          AW,1    SL:PWP          BUT, CHECK ON THIS
337  02 00034  68200038            BLEZ    SETSTL2         B, IF SO; ALL PAGES TO SL:RSVP
338  02 00035  66100000 X          AWM,1   SL:STLM         ELSE, ADD SL:PWP -6 PGS TO STLM
339  02 00036  66100000 X          AWM,1   S:STLC          UPDATE INITIAL STLM COUNT ALSO
340  02 00037  38A00001 A          SW,10   1               GET EXCESS OVER 6 PGS BACK FROM RSVP
341       02 00038         SETSTL2 EQU     $
342  02 00038  35A00000 X          STW,10  SL:RSVP
343  02 00039  32100000 X          LW,1    S:ACORE
344  02 0003A  3810000A A          SW,1    10
345  02 0003B  31100000 X          CW,1    SL:CORE
346  02 0003C  6810003E            BGE     $+2
347  02 0003D  35100000 X          STW,1   SL:CORE
348  02 0003E  35100000 X          STW,1   S:ACORE
349  02 0003F  3AA0000A A          LCW,10  10
350  02 00040  66A00000 X          AWM,10  S:PCORE
351                        *
352  02 00041  70200002A A         LC      X'2A'           GET BOOT TYPE
353  02 00042  69F00046            BCS,15  PASOCHK         NOT RECOVERY
354       02 00043         RECOV   EQU     $
```

```
355   02 00043   6AB00000 X            BAL,11   RECOVER2
356   02 00044   73F00070              MTB,-1   ERFLG          ERROR, DONT RESTART USERS
357   02 00045   68000006F            B        RECVRTN
358         02 00046                   EQU      $
359   02 00046   22B00000 N            LI,11    PASSO          EXIT TO PASSO FROM RECOVER2
360   02 00047   69800000 X            BCS,8    RECOVER2       IF BOOT UNDER FILES
361   02 00048   68400000 X            BCR,4    PASSO          TAPE BOOT
362   02 00049   6AB00000 X            BAL,11   RECOVER2       RESTORE ZAPPED DATA IF RAD BOOT
363   02 0004A   68000006F            B        RECVRTN
```

```
365    02 0004B     15000000 N   CLSPATCH GEN,8,24 X'15',M:PATCH
366    02 0004C     80000000 A            DATA      X'80000000',2      CLOSE AND SAVE PATCH FILE
       02 0004D     00000002 A
367    02 0004E     14000000 N   RSTTM    GEN,8,24 X'14',M:TM
368    02 0004F     00007001 A            DATA      X'7001'
369    02 00050     00000001 A            DATA      1
370    02 00051     03       A            DATA,1    3,,,,4,,,,5,,,,6,,,,11,1,,
       02 00051 1   00       A
       02 00051 2   00       A
       02 00051 3   00       A
       02 00052     04       A
       02 00052 1   00       A
       02 00052 2   00       A
       02 00052 3   00       A
       02 00053     05       A
       02 00053 1   00       A
       02 00053 2   00       A
       02 00053 3   00       A
       02 00054     06       A
       02 00054 1   00       A
       02 00054 2   00       A
       02 00054 3   00       A
       02 00055     08       A
       02 00055 1   01       A
       02 00055 2   00       A
       02 00055 3   00       A
371    02 00056     14000000 N   BPNDUMP  GEN,8,24 X'14',M:TM
  1*   02 00057     C5441001 A            DATA      X'C5441001'
373    02 00058     00000063             DATA      DABN,DABN
       02 00059     00000063
374    02 0005A     00000003 A            DATA      3,2,2              RANDOM,BUT,SAVE
       02 0005B     00000002 A
       02 0005C     00000002 A
  1*   02 0005D     80000002 A            PZE       *R2                BP LABLE
375    02 0005E     80000003 A            PZE       *3
376    02 0005F     01       A            DATA,1    1,1,3,3
       02 0005F 1   01       A
```

```
      02 0005F 2  03          A
      02 0005F 3  03          A
377   02 00060    08C4F4D4    A                TEXTC     'DUMPFILE'
      02 00061    D7C6C9D3    A
      02 00062    C5404040    A
```

```
379    02 00063                    DABN     RES
  1*   02 00063   2120C4D7 A               CI,R2    'DP'          DISK PACK
  2*   02 00064   68300068                 BE       DABN1         YES=CANT GET FILE
  3*   02 00065   2220C4D7 A               LI,R2    'DP'          NO=TRY DISK PACK
  4*   02 00066   208FFFFF A               AI,R8    -1            POINT BACK TO CAL
  5*   02 00067   E8000008 A               B        *R8           TRY TO GET DUMPFILE ON PACK
  6*        02 00068                    DABN1    EQU      $
380    02 00068   222FFFFF A               LI,R2    -1
381    02 00069   35200000 X               STW,R2   DUMPFILE      SET DUMPFILE TO CANT GET FILE
382    02 0006A   680000B1                 B        OPNAB
```

```
384                                     *F*
385                                     *F*     NAME:    PASORTN
386                                     *F*     PURPOSE: GHOST1'S GENMDG MODULE RETURN POINT.
387                                     *F*     DESCRIPTION:  CLOSE PATCH FILE & THEN ENTER SYSMAK TO
388                                     *F*             INITIALIZE THE PROCESSORS. COC INITIALIZATION,
389                                     *F*             BATCH SCHEDULER INITIALIZATION, & REAL-TIME USER
390                                     *F*             INITIALIZATION ARE THEN PERFORMED UNLESS
391                                     *F*             RECOVERY HAS ABORTED, THEN NO INITIALIZATION
392                                     *F*             IS DONE. PASORTN THEN DISPLAYS, IF REQUESTED,
393                                     *F*             THE PARTITIONING INFO IDENTIFYING WHAT
394                                     *F*             DEVICES &/OR CONTROLLERS ARE PARTITIONED.
395                                     *F*             PASORTN ENTERS A SYSTEM START-UP ERROR LOG
396                                     *F*             MESSAGE & THEN STARTS THE SYMBIONT GHOST.
397                                     *F*             OTHER GHOSTS STARTED INCLUDE:
398                                     *F*                     ANLZ (ONLY AFTER RECOVERY)
399                                     *F*                     RVGHOST (IF DUMP FILE EXISTS)
400                                     *F*                     ERR:FIL
401                                     *F*                     FIX
402                                     *F*                     MOOSE (IF SLAVE OVER-RIDE IS SET
403                                     *F*                         FOR MULTI-PROCESSING SYSTEM)
404                                     *F*             PASORTN THEN CHANGES GHOST1'S ENTRY FOR GHOST
405                                     *F*             START-UP TO FILL. PASORTN THEN EXITS TO FILL.
406                                     *F*
407                                     *D*
408                                     *D*     NAME:    PASORTN
409                                     *D*     ENTRY:   RECVRTN
410                                     *D*     ENTRY:   OPNAB
411                                     *D*     PURPOSE: GHOST1'S GENMDG MODULE RETURN POINT.
412                                     *D*     DESCRIPTION:  CLOSE PATCH FILE & THEN ENTER SYSMAK TO
413                                     *D*             INITIALIZE THE PROCESSORS. COC INITIALIZATION,
414                                     *D*             BATCH SCHEDULER INITIALIZATION, & REAL-TIME USER
415                                     *D*             INITIALIZATION ARE THEN PERFORMED UNLESS
416                                     *D*             RECOVERY HAS ABORTED, THEN NO INITIALIZATION
417                                     *D*             IS DONE. PASORTN THEN DISPLAYS, IF REQUESTED,
418                                     *D*             THE PARTITIONING INFO IDENTIFYING WHAT
419                                     *D*             DEVICES &/OR CONTROLLERS ARE PARTITIONED.
420                                     *D*             PASORTN ENTERS A SYSTEM START-UP ERROR LOG
```

```
421                                  *D*              MESSAGE & THEN STARTS THE SYMBIONT GHOST.
422                                  *D*              OTHER GHOSTS STARTED INCLUDE:
423                                  *D*                       ANLZ (ONLY AFTER RECOVERY)
424                                  *D*                       RVGHOST (IF DUMP FILE EXISTS)
425                                  *D*                       ERR:FIL
426                                  *D*                       FIX
427                                  *D*                       MOOSE (IF SLAVE OVER-RIDE IS SET
428                                  *D*                          FOR MULTI-PROCESSING SYSTEM)
429                                  *D*              PASORTN THEN CHANGES GHOST1'S ENTRY FOR GHOST
430                                  *D*              START-UP TO FILL. PASORTN THEN EXITS TO FILL.
431                                  *D*
432                                  *D*       RECVRTN - ENTERED DIRECTLY FROM GHOST1 IF PASSO IS
433                                  *D*                 NOT ENTERED.
434                                  *D*       OPNAB -   ENTERED ONLY IF I/O ERROR/ABNORMAL OCCURS
435                                  *D*                 WHEN OPENING THE DUMPFILE.
436                                  *D*
437                                  *D*       INTERFACE:  SYSMAK,COCINITNR,T:BTSCHED,RT:REBOOT,
438                                  *D*                   DSCCVT,MSMSET,ERRLOG,T:GJOBSTRT.
439                                  *D*       REGISTERS:  ALL USED
440                                  *D*       ENVIRONMENT:  MAPPED, MASTER
441                                  *D*
442  02 0006B    15000000 N    CLSDUMP  GEN,8,24 X'15',M:TM
443  02 0006C    80000000 A             DATA      X'80000000',2
     02 0006D    00000002 A
444       02 0006E                    PASORTN  EQU       $
445  02 0006E    041000AB               CAL1,1    CLSPATCH          CLOSE AND SAVE THE PATCH FILE AFTER
446       02 0006F                    RECVRTN  EQU       $
447  02 0006F    6AB00000 X             BAL,11    SYSMAK            INITIALIZE PROCESSORS
448                                  *
449                                  *         THE FOLLOWING INSTRUCTION BECOMES A BRANCH IF
450                                  *         RECOVER2 OR HGPRECONSTRUCT ABORT
451                                  *         USER REINITIALIZATION CODE SHOULD THEREFORE BE
452                                  *         PLACED BETWEEN ERFLG AND ERSKIP
453                                  *
454  02 00070    69000075               ERFLG     BCS,0     ERSKIP
455  02 00071    6AB0011D               BAL,R11   COCINITNR         BAL/INITIALIZE COC
456  02 00072    6AB00000 X             BAL,11    T:BTSCHED
```

```
457   02 00073   6AB00000 X          BAL,R11  RT:REBOOT          REAL-TIME USER INITIALIZATION
 1*   02 00074   6A800013C            BAL,8    FECPINIT          INITIALIZE FECP IF ANY
458         02 00075           FRSKIP  EQU      $
459   02 00075   22A00000 A          LI,R10   0                 =0 DEVICE, >0 CONTROLLER
460   02 00076   22BFFFFF A          LI,R11   -1                1ST TIME FLAG (I.E., DEVICE)
461   02 00077   22100001 A          LI,R1    1                 DCT INDEX (FOR DEVICE)
462         02 00078           NXTDEV  EQU      $
463   02 00078   72320000 X          LB,R3    DCT3,R1           GET FLAGS
464   02 00079   21300020 A          CI,R3    DOWND
465   02 0007A   69400008B          BANZ     DEVDOWN     YES-- DEV.PARTITIONED
466         02 0007B           2NXTDEV EQU      $           NO---
467   02 0007B   20100001 A          AI,R1    1                 2 NEXT DCT
468   02 0007C   21100000 N          CI,R1    DCTSIZ
469   02 0007D   68200078           BLE      NXTDEV      NO--- DONE
470   02 0007E   32A00103           LW,R10   CONT        YES-- SET MESSAGE
471   02 0007F   35A0010E           STW,R10  MSGPRT+1            FOR CONTROLLER
472   02 00080   22100001 A          LI,R1    1                 DCT INDEX (FOR CONTROLLER)
473         02 00081           NXTCONT EQU      $
 1*   02 00081   32320000 X          LW,R3    DCT9,R1
 2*   02 00082   72300003 A          LB,R3    R3                GET FLAGS
475   02 00083   21300018 A          CI,R3    DOWNC
476   02 00084   69400008B          BANZ     CONTDOWN    YES-- CONT.PARTITIONED
477         02 00085           2NXTCONT EQU     $           NO---
478   02 00085   20100001 A          AI,R1    1                 2 NEXT DCT
479   02 00086   21100000 N          CI,R1    DCTSIZ
480   02 00087   68200081           BLE      NXTCONT     NO--- DONE
481   02 00088   21B00000 A          CI,R11   0           YES--
482   02 00089   6810009D           BGEZ     ENDPRT      YES-- ANY PARTITIONED ITEMS
483                                 *                    NO---
 1*   02 0008A   68000A1            B        CONTINU
488                                 *----------------
489         02 0008B           DEVDOWN EQU      $
490         02 0008B           CONTDOWN EQU     $
491   02 0008B   20B00001 A          AI,R11   1                 SET FLAG TO NOT 1ST TIME
492   02 0008C   69200092           BGZ      DISPLAY     NO--- WAS THIS THE 1ST TIME
493                                 *                    YES--
494         02 0008D           TOP:PAGE EQU     $
```

```
495   02 0008D   04100102
496   02 0008E   22E00105
      02 0008F   042000FF
  1*  02 00090   22E00104      BLNKLN   M:PRINT  (MESS,BLANK)        'BLANK LINE'
      02 00091   042000FF
498       02 00092             DISPLAY  EQU      $
499   02 00092   12220000 X             LD,R2    DCT16,R1            GET 'YYNDD'
500   02 00093   25200108 A             SLD,R2   8
501   02 00094   20300040 A             AI,R3    ' '
502   02 00095   35300110               STW,R3   MSGPRT+3            PUT 'NDD' INTO MESSAGE
503   02 00096   22300001 A             LI,R3    1
504   02 00097   5526010F               STH,R2   MSGPRT+2,R3         PUT 'YY' INTO MESSAGE
505   02 00098   22E0010D               M:PRINT  (MESS,MSGPRT)       'DEV/CONT YYNDD PART'
      02 00099   042000FF
506   02 0009A   21A00000 A             CI,R10   0
507   02 0009B   68300078               BEZ      2NXTDEV     YES-- DEV.TYPE
508   02 0009C   68000085               B        2NXTCONT    NO--- CONT.
509                                    *---------------
510       02 0009D             ENDPRT   EQU      $
511   02 0009D   67000090               EXU      BLNKLN              'BLANK LINE'
512   02 0009E   22E00115               M:PRINT  (MESS,ENDITMS)      'END OF PART ITEMS'
      02 0009F   042000FF
514   02 000A0   6700008D               EXU      TOP:PAGE            TOP OF PAGE
515       02 000A1             CONTINU  EQU      $
516   02 000A1   32300000 X             LW,R3    CORED
517   02 000A2   203FFFFF A             AI,R3    -1
518   02 000A3   25300077 A             SLS,R3   -9                  HIGHEST PAGE NUMBER IN MEMORY
519   02 000A4   55300001 N             STH,3    DUMPFILE+1
520   02 000A5   20300001 N             AI,3     SMUIS+1             PLUS ROOM FOR USER JITS
521   02 000A6   04100046               CAL1,1   RSTTM               CLEAN OUT THE M:TM DCB
  1*  02 000A7   2220C4C3 A             LI,R2    'DC'                TRY TO GET DUMPFILE ON RAD
524   02 000A8   04100056               CAL1,1   OPNDUMP             OPEN THE FILE
525   02 000A9   32100001 N             LW,1     M:TM+1              CFUADDRESS
  1*  02 000AA   32820001 A             LW,R8    1,R1                FDA OF DUMPFILE
527   02 000AB   32320005 A             LW,3     5,1                 SIZE
528   02 000AC   0410006B               CAL1,1   CLSDUMP
  1*  02 000AD   35800000 X             STW,R8   SUABTFLE            FDA OF SUA RANDUM FILE
```

```
  2*  02 000AE   353000001 N            STW,R3   SUABTFLE+1          NUMBER OF SECTORS IN FILE
536   02 000AF   6AB000000 X            BAL,R11  DSCCVT               GO-CONVERT TO SEEK
537   02 000B0   3581FFFF N             STW,R8   SEEK4000-1           SEEK OF X'4000'
538        02 000B1                     OPNAB    EQU      $
539                                     *
540                                     *        INSERT SYSTEM START-UP ERROR LOG MESSAGE
541                                     *
542                                     *
543   02 000B1   221000005 A            LI,1     #BOOTS               MAX LOOP
544   02 000B2   5220002A A             LH,2     X'2A'                GET INDICATOR
545   02 000B3   5122000?               CH,2     BOOTYPE,1            FIND MATCHUP
546   02 000B4   683000B6              BE       GOTYPE               GOTCHA
547   02 000B5   641000B3              BDR,1    $-2
548   02 000B6   22A01804 A   GOTYPE   LI,10     X'1804'              CODE/COUNT FOR MSG
549   02 000B7   223000007 A           LI,3     7                    MASK TO GET
550   02 000B8   4A3000000 X           LS,3     RCVRCNT              COUNT
551   02 000B9   553000?A A            STH,3    10                   TO PUT AWAY COUNT
552   02 000BA   751000?A A            STB,1    10                   PUT AWAY TYPE
553   02 000BB   25A00210 A            SCS,10   16                   AND POSITION PROPERLY
554   02 000BC   32D000?? X            LW,13    RCVCODE              GET SCREECH CODE/SUBCODE
555   02 000BD   25D00210 A            SCS,13   16                   POSITION PROPERPY
556   02 000BE   75D000?D A            STB,13   13
557   02 000BF   328000?? X            LW,R8    S:ADR                GET HARDWARE ADDRESS
558                                     *                             0 FOR SIGMA 7
559   02 000C0   229?FFFF A            LI,R9    X'FFFF'
560   02 000C1   478000?D A            STS,R8   R13                  POSITION IN RIGHT HALFWORD
561   02 000C2   226000?A A            LI,6     10                   LOC OF ERR MSG
562   02 000C3   6A5000?? X            BAL,5    ERRLOG               AND INSERT IT INTO LOG
563   02 000C4   221000?? A            LI,1     0                    SET RUNNING FILA
564   02 000C5   351000?? X            STW,1    BOOTFLG
565                                     *
566   02 000C6   120000F2              LD,0     TXCRBBAT
567   02 000C7   6AA000?? X            BAL,10   T:GJOBSTRT            START SYMBIONT GHOST
568                                     *  NOTE:  ANLZ MUST BE FIRST GHOST STARTED AFTER RBBAT
569   02 000C8   730000?A A            MTB,0    X'2A'
570   02 000C9   693000CE              BNEZ     LOGRCVG
571   02 000CA   702000?? X            LC       SMAKFLG              DUMPFILE CONTAIN THE DUMP
```

```
573  02 000CB  698000D0          BCS,8   KRD1          YES=DONT START ANLZ; START RVGHOST
574  02 000CC  12000EE          LD,0    ANLZT
575  02 000CD  6AA00000 X        BAL,10  T:GJOBSTRT    START ANLZ
576                              *
577       02 000CE               LOGRCVG EQU     $
578  02 000CE  33000000 X        MTW,0   DUMPFILE
579  02 000CF  68200D2           BLEZ    $+3           SINGLE USER ABORT !DUMPFILE! FREE
580       02 000D0               KRD1    EQU     $
581  02 000D0  12000F4           LD,0    TXCRVGST
582  02 000D1  6AA00000 X        BAL,10  T:GJOBSTRT    START THE RECOVER GHOST
583                              *  START ERR:FIL
584                              *
585  02 000D2  12000F8           LD,R0   TXCE:FIL
586  02 000D3  6AA00000 X        BAL,R10 T:GJOBSTRT
587  02 000D4  12000F6           LD,R0   FNAME
588  02 000D5  6AA00000 X        BAL,R10 T:GJOBSTRT    START IT
589                              *
  1* 02 000D6  22000000 N        LI,0    FECP#         IF FECPS, START GROF
  2* 02 000D7  683000DA         BEZ     LOGFIL
  3* 02 000D8  12000FC          LD,0    TXFROG
  4* 02 000D9  6AA00000 X        BAL,10  T:GJOBSTRT
590       02 000DA               LOGFIL  EQU     $
591  02 000DA  22100000 N        LI,1    NSCPU         MP SYSTEM
592  02 000DB  683000E9          BEZ     LOGFIL2       NO
593  02 000DC  22000000 A        LI,0    0
594  02 000DD  35000000 X        STW,0   SB:RCVR        ZERO OUT MASTER RCVR FLAG
595  02 000DE  35000000 X        STW,0   SB:RCVA        ZERO OUT SLAVE RCVR FLAG
596  02 000DF  33000000 X        MTW,0   SL:BSTRT       SLAVE OVERRIDE SET
597  02 000E0  683000E7          BEZ     GOGJOB        NO,  START MOOSE
598  02 000E1  72A20000 X        MOSTOP  LB,10   SB:INIT,1    GET FLAGS
599  02 000E2  4BA00000 X        AND,10  XFC           MASK OUT START/STOP
  1* 02 000E3  20A00002 A        AI,10   STOPBIT       SET STOP FLAG
601  02 000E4  75A20000 X        STB,10  SB:INIT,1     RESTORE FLAG
602  02 000E5  641000E1          BDR,1   MOSTOP       DONE ALL
603  02 000E6  680000E9          B       LOGFIL2       YES,SKIP MOOSE
604       02 000E7               GOGJOB  EQU     $
605  02 000E7  12000FA           LD,0    TXMOOSE       NO OVERRIDE,START
```

```
606   02 000E8   6AA00000 X                BAL,10   T:GJ0BSTRT        M00SE
607         02 000E9                LOGFIL2  EQU      $
608   02 000E9   12000F0                   LD,0     FILLT             START UP FIILL
609   02 000EA   6AA00000 X                BAL,10   T:GJ0BSTRT
610   02 000EB   22600000 A    EXIT        LI,6     0
611   02 000EC   04900001 A                CAL1,9   1                 EXIT T0 FILL
```

```
613                                                  BOUND     8
614     02 000EE    04C1D5D3 A   ANLZT     TEXTC     'ANLZ'
        02 000EF    E9404040 A
615     02 000F0    04C6C9D3 A   FILLT     TEXTC     'FILL'
        02 000F1    D3404040 A
616     02 000F2    05D9C2C2 A   TXCRBBAT  TEXTC     'RBBAT'
        02 000F3    C1E34040 A
617     02 000F4    07D9F5C7 A   TXCRVGST  TEXTC     'RVGH8ST'
        02 000F5    C8D6F2E3 A
618     02 000F6    03C6C9E7 A   FNAME     TEXTC     'FIX'
619     02 000F7    40404040 A               TEXT      ' '                    MUST HAVE TRAILING BLANKS
620     02 000F8    07C5D9D9 A   TXCE'FIL   TEXTC     'ERR'FIL'
        02 000F9    7AC6C9D3 A
621     02 000FA    05D4D6D6 A   TXM88SE    TEXTC     'M88SE'
        02 000FB    E2C54040 A
  1*    02 000FC    04C6D9D6 A   TXFR8G     TEXTC     'FR8G'
        02 000FD    C7404040 A
622     02 000FE    08       A   MASTER    DATA,1    8,0,0,0
        02 000FE 1  00       A
        02 000FE 2  00       A
        02 000FE 3  00       A
623     02 000FF    01000000 A   PRINT     DATA      X'10000000',X'80000000',X'8000000E'
        02 00100    80000000 A
        02 00101    8000000E A
624     02 00102    04000000 N   PAGE      GEN,8,24  4,MILL
```

```
626                                 ********
627          00000020               DBWND     EQU     X'20'             DEV.DBWN
  1*         00000008               DBWNCP    EQU     X'08'             PRIM.CBNT.DBWN
  2*         00000010               DBWNCA    EQU     X'10'             ALT.CBNT.DBWN
  3*         00000018               DBWNC     EQU     DBWNCP+DBWNCA     CBNT.DBWN
629                                 ********
630   02 00103    C3D6D5E3 A        CBNT      TEXT    'CBNT'
631                                 ********
632          02 00104               BLANK     EQU     $
633   02 00104    01404040 A                  TEXTC   ' '
637                                 ********
638          02 00105               ITMPRT    EQU     $
639   02 00105    1F405C5C A                  TEXTC   ' ***** ITEMS PARTITIBNED ******'
      02 00106    565C5C40 A
      02 00107    C9E3C5D4 A
      02 00108    E240D7C1 A
      02 00109    D9E3C9E3 A
      02 0010A    C9D6D5C5 A
      02 0010B    C4405C5C A
      02 0010C    565C5C5C A
640                                 ********
641          02 0010D               MSGPRT    EQU     $
642   02 0010D    1E404040 A                  TEXTC   '   DEV   YYNDD     PARTITIBNED'
      02 0010E    C4C5F540 A
      02 0010F    4040F8E8 A
      02 00110    D5C4C440 A
      02 00111    40404040 A
      02 00112    D7C1D9E3 A
      02 00113    C9E3C9D6 A
      02 00114    D5C5C440 A
643                                 ********
644          02 00115               ENDITMS   EQU     $
645   02 00115    1F405C5C A                  TEXTC   ' ** END BF PARTITIBNED ITEMS **'
      02 00116    40C5D5C4 A
      02 00117    40D6C640 A
      02 00118    D7C1D9E3 A
      02 00119    C9E3C9D6 A
```

```
      02 0011A    D5C5C440 A
      02 0011B    C9E3C5D4 A
      02 0011C    E240C5C5 A
  646                          ********
```

```
                                      ********************************************************************************
                                      *D8*
                                      *D*       NAME:    C8CINITNR
                                      *         DESCRIPTION:
                                      *
                                      *   C8C INITIALIZATION
                                      *
                                      *   RETURN IF THIS IS A N8N-C8C SYSTEM.
                                      *
                                      *   SET UP THE C8C INPUT AND 8UTPUT INTERRUPT XPSD INSTRUCTI8NS.
                                      *
                                      *   IF THIS IS A RAD 8R TAPE B88T (AS 8PP8SED T8 A REC8VERY),
                                      *   AND IF SENSE SWITCH 2 IS IN THE UP P8SITI8N,
                                      *   WE EXECUTE A 'TURN RECEIVER L DATASET 8FF - TURN BACK-T8-BACK
                                      *   TEST 8FF' WRITE DIRECT T8 EACH RECEIVER.  THIS IS IN CASE THE CE'S
                                      *   HAVE TURNED THE BACK-T8-BACK TEST FEATURE 8N WITH THEIR DIAGN8STICS.
                                      *   WE THEN DELAY F8R AT LEAST 80 MILLI-SEC8NDS BEF8RE TURNING THE
                                      *   RECEIVERS 8N (IN C8CINIT).  N8TE THAT THIS WILL HANG UP THE
                                      *   PH8NE LINE IF DIAL-UP.
                                      *
                                      *   CALL C8CINIT (IN THE C8C M8DULE IN THE R88T) T8 C8MPLETE
                                      *   INITIALIZATI8N.
                                      *
                                      *         CALL:    R11 = LINK
                                      *
                                      *         INTERFACE:  C8CINIT.
                                      *         REGISTERS:  R0-R1,R3-R5,R7-R8 USED, R11 SAVED
                                      *         ENVIR8NMENT:  MAPPED, MASTER
                                      *FIN*
                                      ********************************************************************************
02 0011D                              C8CINITNR   EQU  $
02 0011D  22000000 N                            LI,R0    C8C              SEE IF N8N-C8C SYSTEM
02 0011E  E8300008 A                            BEZ      *R11             B/N8N-C8C; RETURN
02 0011F  22300000 A                            LI,R3    0                L/0; C8C #
02 00120                              CINIT050  EQU      $
02 00120  32160000 X                            LW,R1    C8;XPSD8,R3      L/8UTPUT INTERRUPT XPSD INSTRUCTI8N
02 00121  52560000 X                            LH,R5    C8H;I8,R3        L/8UTPUT INTERRUPT ADR
```

```
685   02 00122   351A0000 A          STW,R1   0,R5              S/XPSD
686   02 00123   20300001 A          AI,R3    1                 +1 TO COC #
687   02 00124   21300000 N          CI,R3    LCOC              C/COC # W/LAST COC #
688   02 00125   68200120            BLE      CINITOC           BLE; SET UP NEXT COC'S INTERRUPTS
689                                  ********************************************************************
690                                  *  NOP THE FOLLOWING INSTRUCTION TO TURN ON THE BACK-TO-BACK MODE CHECK.
691                                  ********************************************************************
692   02 00126   68000000 X          B        COCINIT           B/COCINIT; NO BACK-TO-BACK MODE TEST
693   02 00127   70200020 A          LC       X'2A'             CHECK TYPE OF SYSTEM STARTUP
694   02 00128   68F00000 X          BCR,15   COCINIT           B/RECOVERY; DON'T TURN DATA SETS OFF
695                                  *                             GO TO COCINIT; R11 IS RETURN REG
696   02 00129   64000000 A          RD,0     0                 CHECK SENSE SWITCHES
697   02 0012A   68400000 X          BCR,4    COCINIT           B/SS2 DOWN; DON'T CHECK BACK-TO-BACK
698   02 00128   22300000 A          LI,R3    0                 L/O; COC NUMBER
699        02 00126                  NXTCOC   EQU      $
700   02 0012C   52060000 X          LH,R0    COH:DN,R3         L/COC DEVICE ADR
701   02 0012D   C0000000 A          :TIO,R0  *R0               TIO, SEE IF COC IS THERE
702   02 0012E   69C00136            BCS,12   GTNXTCOC          B/COC NOT THERE; SKIP TO NEXT
703   02 0012F   22700000 A          LI,R7    0                 L/O; LINE NUMBER
704        02 00130                  NXTLINE  EQU      $
705   02 00130   67060000 X          EXU      CO:RCVDOFF,R3     TURN RECEIVER L DATASET OFF *
706                                  *                          TURN BACK-TO-BACK TEST OFF
707   02 00131   20700001 A          AI,R7    1                 +1 TO LINE NUMBER
708   02 00132   12460000 X          LD,R4    COD:LPC,R3        L/LIMITS OF LOGICAL LINES FOR COC
709   02 00133   38500004 A          SW,R5    R4                LAST PHYSICAL LINE # = LAST LOGICAL
710                                  *                          FIRST LOGICAL LINE #
711   02 00134   31700005 A          CW,R7    R5                C/CURRENT LINE # W/LAST LINE #
712   02 00135   68200130            BLE      NXTLINE           BLE; CHECK NEXT LINE
713        02 00136                  GTNXTCOC EQU      $
714   02 00136   20300001 A          AI,R3    1                 +1 TO COC NUMBER
715   02 00137   21300000 N          CI,R3    LCOC              C/CURRENT COC # W/LAST COC #
716   02 00138   6820012C            BLE      NXTCOC            BLE; CHECK NEXT COC
717   02 00139   22817000 A          LI,R8    X'17000'          DELAY FOR AT LEAST 80 MILLI-SECONDS
718   02 0013A   6480013A            BDR,R8   $                    BEFORE INITIALIZING COC
719   02 0013B   68000000 X          B        COCINIT           B/COCINIT; R11 IS RETURN REG
  1*  02 0013C                      FECPINIT RES
  2*  02 0013C   22100000 N          LI,1     INT#              MOVE INTERRUPTS
```

```
  3*  02 0013D   683n0142          BEZ     FINIT1          NONE
  4*  02 0013E   3202n000 X        LW,0    INTCONT,1
  5*  02 0013F   7222n000 X        LB,2    INTLOC,1
  6*  02 00140   3504n000 A        STW,0   0,2
  7*  02 00141   6410013E          BDR,1   $-3
  8*  02 00142                FINIT1  RES
  9*  02 00142   2270n000 N        LI,7    FECP#
 10*  02 00143   E830n008 A        BEZ     *8
 11*  02 00144   52CEn000 X  FINIT2  LH,12   FEH!ALV,7        ARM THE INTERRUPT
 12*  02 00145   670En000 X        EXU     FE!ARM,7
 13*  02 00146   72CEn000 X        LB,12   FEB!CDX,7         DCTX OF FECP
 14*  02 00147   49C0014E          BR,12   SUPCODE           FUNCTION, ETC.
 15*  02 00148   1800n000 A        SD,0    0               NO END ACTION
 16*  02 00149   18E0000E A        SD,14   14              NO BYTES
 17*  02 0014A   6AB0n000 X        BAL,11  NEWQ
 18*  02 0014B   0200n000 A        NOP                     IGNORE DOWN DEVICES
 19*  02 0014C   6470n144          BDR,7   FINIT2
 20*  02 0014D   E800n008 A        B       *8
 21*  02 0014E   00FF1000 N  SUPCODE  GEN,8,24 FEF!SUP,X'FF1000'
```

```
    721                             *
    722                             *
    723   02 0014F    940000001 A   DEVOPN   GEN,1,7,7,17  1,X'14',0,1  OPEN *1
    724   02 00150    000400003 A            DATA     X'000400031'       DEVICE
    725   02 00151    800000002 A            PZE      *2
    726         02 00003                     END      GHOST1

CONTROL SECTION SUMMARY: 01 00000   PT 0     02 00152   PT 1
```

```
*    SYMBOL VALUES
     ANLZT/02 000EE          ANSPROC/00000000        BITS/00000000           BLANK/02 00104
     BLNKLN/02 00090         BOOTYPE/02 00000        CINIT50/02 00120        CLSDUMP/02 0006B
     CLSPATCH/02 0004B       COCINITNR/02 0011D      CONT/02 00103           CONTDOWN/02 0008B
     CONTINU/02 000A1        DABN/02 00063           DABN1/02 00068          DCBPROC/00000000
     DEVDOWN/02 00085        DEVOPN/02 0014F         DISCBPROC/00000000      DISPLAY/02 00092
     DOWNC/00000018          DOWNCA/00000010         DOWNCP/00000008         DOWND/00000020
     ENDITMS/02 00115        ENDPRT/02 0009D         ERFLG/02 00070          ERSKIP/02 00075
     EXIT/02 000EB           FECPINIT/02 0013C       FILLT/02 000FO          FINIT1/02 00142
     FINIT2/02 00144         FNAME/02 000F6          GOGJOB/02 000E7         GOTYPE/02 000B6
     GTNXTCOC/02 00136       IDLE/00000001           ITMPRT/02 00105         KRD1/02 000DO
     LOGFIL/02 000DA         LOGFIL2/02 000E9        LOGRCVG/02 000CE        MASTER/02 000FE
     MONPROC/00000000        MOSTOP/02 000E1         MPBITS/00000001         MSGPRT/02 0010D
     NCPU/00000001  S        NSTARTB/00000001  S     NSTOPB/00000002  S      NXTCOC/02 0012C
     NXTCONT/02 00081        NXTDEV/02 00078         NXTLINE/02 00130        OPNAB/02 000B1
     OPNDUMP/02 00056        PAGE/02 00102           PASOCHK/02 00046        PRINT/02 000FF
     RECOV/02 00043          RECVRTN/02 0006F        RSTTM/02 0004E          RO/00000000
     R1/00000001             R10/0000000A            R11/0000000B            R12/0000000C
     R13/0000000D            R14/0000000E            R15/0000000F            R2/00000002
     R3/00000003             R4/00000004             R5/00000005             R6/00000006
     R7/00000007             R8/00000008             R9/00000009             SETSTL/02 00024
     SETSTL1/02 0002E        SETSTL2/02 00038        STARTBIT/00000001       STOPBIT/00000002
     STOPPED/00000000        SUPCODE/02 0014E        S69PROC/00000001        TOP:PAGE/02 0008D
     TXCF:FIL/02 000F8       TXCRBBAT/02 000F2       TXCRVGST/02 000F4       TXFROG/02 000FC
     TXMROSE/02 000FA        UFLAGS/00000000         USER/00000002           UTSPROC/00000001
     VPXPSDT/00000001        2NXTCONT/02 00085       2NXTDEV/02 00078        :A/02 0012D
     #BOOTS/00000005
*    EXTERNAL DEFINITIONS
     GHOST1/02 00003         GHOST1D/02 00000        PASORTN/02 0006E
*    PRIMARY REFERENCES
     BOOTFLG         CORED           DCTSIZ          DCT16           DCT3            DCT8            DCT9
     DSCCVT          DUMPFILE        ERRLOG          LLNDD           M:DO            M:LL            M:LO
     M:PATCH         M:TM            NB31TO0         NEWQ            NSCPU           PASSO           RBLIMS
     RCVCODE         RCVRCNT         RECOVER2        RT:REBOOT       S:ACORE         S:ADR           S:PCORE
     S:STLC          SEEK4000        SL:CORE         SL:RSVP         SL:STLM         SMAKFLG         SMUIS
     SNDDX           SUABTFLE        SYSMAK          T:BTSCHED       T:GJOBSTRT      XFC
*    SECONDARY REFERENCES
```

```
   C8:RCVD8FF     C8:XPSD8       C8C            C8CINIT        C8D:LPC        C8H:DN         C8H:I8
   FE:ARM         FEB:CDX        FECP#          FEF:SUP        FEH:ALV        HASPI8         INT#
   INTC8NT        INTI8C         LC8C           RASIZE         SB:INIT        SB:RCVA        SB:RCVR
   SL:BSTRT       SL:PWP         2780I8
* N8 UNDEFINED SYMB8LS
*    ERR8R SEVERITY LEVEL: 0
* N8 ERR8R LINES
```