

00010

XLIST

```
01970
00010 ;SOME MACROS FOR DEFINING CONFIGURATION
00020
00030 DEFINE NAME (A)
00040 <DEFINE NAME1
00050 <CONFIG: ASCIZ /A/
00060 INTERNAL CONFIG
00070 >
00080 XP A,0
00090 SUBTTL A CONFIGURATION
00100 >
00110
00120 DEFINE DATE (A)
00130 <DEFINE DATE1
00140 <SYSDAT: ASCIZ /A/
00150 INTERNAL SYSDAT
00160 >>
00170
00180 DEFINE VERSION (A,B)
00190 <DEFINE VERS1
00200 <SYSNUM: XWD +D'A,+D'B
00210 XP SYSMOD,+D'A
00220 XP SYSVER,+D'B
00230 INTERNAL SYSNUM
00240 >>
00250
00260 DEFINE CUSPTAPE (A)
00270 <DEFINE CUSP1
00280 <SYSTAP: SIXBIT /A/
00290 INTERNAL SYSTAP
00300 >>
00310
00320 DEFINE ACPDL (J,CHJN,CHJPDN)
00330 < CH'J'N=CHJN
00340 CH'J'PDN=CHJPDN
00350 >
```

00360  
00370

NAME <MINIMAL>

```

00380          DATE <8-16-65>
00390          VERSION 1,4
00400          CUSPTAPE DTA0
00410
00420          ;DEFINE THE IO PART OF THE SYSTEM
00430          ;THAT IS:
00440          ;          DEFINE INTERRUPT SERVICE ROUTINES TO BE USED
00450          ;          ASSIGN DEVICES TO PI CHANNELS
00460
00470          DEFINE SYSTEM
00480          <
00490          ASSOC APR,6,<>
00500          ASSOC CTY,3,<>
00510          ASSOC SCN,3,<TTY0,TTY1>
00520          ASSOC DTC,4,<DTA0>
00530          >
00540
00550
00560          DTSIZ=1      ;MULTIPLE DECTAPE DIRECTORIES
00570
00580          SCNLIN=1
00590
00600          ;DEFINE HIGHEST AC TO SAVE AND LENGTH OF PD LIST FOR EACH PI CHANNEL
00610
00620          ACPDL (1,0,0)
00630          ACPDL (2,0,0)
00640          ACPDL (3,11,20)
00650          ACPDL (4,11,20)
00660          ACPDL (5,0,0)
00670          ACPDL (6,17,20)
00680          ACPDL (7,0,0)
00020          NAME1
000000 466231 644632  CONFIG:  ASCIZ /MINIMAL/
000001 406300 000000
000002 341326 133132  SYSDAT:  DATE1
000003 331520 000000  SYSDAT:  ASCIZ /8-16-65/
000004 000001 000004  SYSNUM:  VERS1
000005 446441 200000  SYSTAP:  XWD +D1,+D4
                                CUSP1
                                SIXBIT /DTA0/
00060
00070          ;CONFIGURATION INDEPENDANT PART OF IOINIT FOLLOWS:
00080
00090          EXTERNAL ERROR
00100
00110          ;SETUP CHANNEL SAVE AND RESTORE ROUTINES
00120
00130          CHANU1=0
00140          CHANU2=0
00150          CHANU3=0
00160          CHANU4=0
00170          CHANU5=0
00180          CHANU6=0
00190          CHANU7=0
00200
00210          DEFINE ASSOC(A,NO,D)

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```

00220 <IFE CHANU'NO,<
00230 CHANU'NO=1
00240 INTERNAL CH'NO'SAV,CH'NO',CH'NO'XIT,CH'NO'SAC
00250
00260 CH'NO'SAV: 0
00270 MOVEM CH'NO'N, CH'NO'SAC+CH'NO'N
00280 MOVEI CH'NO'N, CH'NO'SAC
00290 BLT CH'NO'N,CH'NO'SAC+CH'NO'N-1 ;DO ONLY ONCE FOR EACH CHANNE
00300 MOVE PDP, CH'NO'CJ
00310 JRST @CH'NO'SAV
00320
00330
00340 CH'NO'SAC: REPEAT CH'NO'N+1,<EXP 0> ;SPACE TO SAVE SOME AC'S
00350 EXP CH'NO'XIT ;FIRST ENTRY IN PD LIST(CHAN. EXIT)
00360 REPEAT CH'NO'PDN-1,<EXP 0> ;REST OF PD LIST
00370
00380 CH'NO'XIT: MOVSI CH'NO'N, CH'NO'SAC
00390 BLT CH'NO'N, CH'NO'N
00400 JEN @CH'NO
00410
00420 CH'NO'CJ: XWD -CH'NO'PDN+1,CH'NO'SAC+CH'NO'N+1 ;INIT. SETTING OF P
00430
00440 CH'NO': 0 ;PC STORED HERE BY JSR
00450 JRST .+1 ;INSTR. AT END OF SERVICE CHAIN
00460 AOS CH'NO'ERR ;SPURIOUS INTERRUPT, ADD TO COUNT
00470 JEN @CH'NO ;AND DISMISS
00480 >
00490 >
00500 ;GENERATE THE SAVE AND RESTORE ROUTINES
00510
00520

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```

000006 000000 000000 CH6SAV:
000007 202740 000033'
000010 201740 000014'
000011 251740 000032'
000012 200140 000057'
000013 254020 000006'
000014 000000 000000 EXP 0
000015 000000 000000 EXP 0
000016 000000 000000 EXP 0
000017 000000 000000 EXP 0
000020 000000 000000 EXP 0
000021 000000 000000 EXP 0
000022 000000 000000 EXP 0
000023 000000 000000 EXP 0
000024 000000 000000 EXP 0
000025 000000 000000 EXP 0
000026 000000 000000 EXP 0
000027 000000 000000 EXP 0
000030 000000 000000 EXP 0
000031 000000 000000 EXP 0
000032 000000 000000 EXP 0
000033 000000 000000 EXP 0
000034 000000 000054'
000035 000000 000000 EXP 0
000036 000000 000000 EXP 0
000037 000000 000000 EXP 0
000040 000000 000000 EXP 0
000041 000000 000000 EXP 0

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```

SYSTEM
ASSOC APR,6,<>
MOVEM CH6N, CH6SAC+CH6N
MOVEI CH6N, CH6SAC
BLT CH6N,CH6SAC+CH6N-1 ;DO ONLY ONCE FOR EACH CHANNEL
MOVE PDP, CH6CJ
JRST @CH6SAV

;SPACE TO SAVE SOME ACS
EXP CH6XIT ;FIRST ENTRY IN PD LIST(CHAN. EXIT)

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```

000042 000000 000000 EXP 0
000043 000000 000000 EXP 0
000044 000000 000000 EXP 0
000045 000000 000000 EXP 0
000046 000000 000000 EXP 0
000047 000000 000000 EXP 0
000050 000000 000000 EXP 0
000051 000000 000000 EXP 0
000052 000000 000000 EXP 0
000053 000000 000000 EXP 0
000054 205740 000014' CH6XIT: ;REST OF PD LIST
MOVSI CH6N, CH6SAC
BLT CH6N, CH6N
JEN @CH6
000055 251740 000017
000056 254520 000060' JEN @CH6
000057 777761 000034' CH6CJ: XWD -CH6PDN+1,CH6SAC+CH6N+1 ;INIT. SETTING OF PD POINTER(PDP)
CH6: 0 ;PC STORED HERE BY JSR
000060 000000 000000
000061 254000 000062' JRST .+1 ;INSTR. AT END OF SERVICE CHAIN
000062 350000 000317' AOS CH6ERR ;SPURIOUS INTERRUPT, ADD TO COUNT
000063 254520 000060' JEN @CH6 ;AND DISMISS
ASSOC CTY,3,<>

000064 000000 000000 CH3SAV: 0
000065 202440 000103' MOVEM CH3N, CH3SAC+CH3N
000066 201440 000072' MOVEI CH3N, CH3SAC
000067 251440 000102' BLT CH3N,CH3SAC+CH3N-1 ;DO ONLY ONCE FOR EACH CHANNEL
000070 200140 000127' MOVE PDP, CH3CJ
000071 254020 000064' JRST @CH3SAV
000072 000000 000000 EXP 0
000073 000000 000000 EXP 0
000074 000000 000000 EXP 0
000075 000000 000000 EXP 0
000076 000000 000000 EXP 0
000077 000000 000000 EXP 0
000100 000000 000000 EXP 0
000101 000000 000000 EXP 0
000102 000000 000000 EXP 0
000103 000000 000000 EXP 0 ;SPACE TO SAVE SOME ACS
000104 000000 000124' EXP CH3XIT ;FIRST ENTRY IN PD LIST(CHAN. EXIT)
000105 000000 000000 EXP 0
000106 000000 000000 EXP 0
000107 000000 000000 EXP 0
000110 000000 000000 EXP 0
000111 000000 000000 EXP 0
000112 000000 000000 EXP 0
000113 000000 000000 EXP 0
000114 000000 000000 EXP 0
000115 000000 000000 EXP 0
000116 000000 000000 EXP 0
000117 000000 000000 EXP 0
000120 000000 000000 EXP 0
000121 000000 000000 EXP 0
000122 000000 000000 EXP 0
000123 000000 000000 EXP 0 ;REST OF PD LIST
000124 205440 000072' CH3XIT: MOVSI CH3N, CH3SAC
BLT CH3N, CH3N
JEN @CH3
000125 251440 000011
000126 254520 000130' JEN @CH3
000127 777761 000104' CH3CJ: XWD -CH3PDN+1,CH3SAC+CH3N+1 ;INIT. SETTING OF PD POINTER(PDP)
CH3: 0 ;PC STORED HERE BY JSR
000130 000000 000000
000131 254000 000132' JRST .+1 ;INSTR. AT END OF SERVICE CHAIN
000132 350000 000314' AOS CH3ERR ;SPURIOUS INTERRUPT, ADD TO COUNT
000133 254520 000130' JEN @CH3 ;AND DISMISS
ASSOC SCN,3,<TTY0,TTY1>

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000134 000000 000000 CH4SAV: ASSOC DTC,4,<DTA0>
000135 202440 000153' 0
000136 201440 000142' MOVEM CH4N, CH4SAC+CH4N
000137 251440 000152' MOVEI CH4N, CH4SAC
000140 200140 000177' BLT CH4N,CH4SAC+CH4N-1 ;DO ONLY ONCE FOR EACH CHANNEL
000141 254020 000134' MOVE PDP, CH4CJ
000142 000000 000000 JRST @CH4SAV
000143 000000 000000 EXP 0
000144 000000 000000 EXP 0
000145 000000 000000 EXP 0
000146 000000 000000 EXP 0
000147 000000 000000 EXP 0
000150 000000 000000 EXP 0
000151 000000 000000 EXP 0
000152 000000 000000 EXP 0
000153 000000 000000 EXP 0 ;SPACE TO SAVE SOME ACS
000154 000000 000174' EXP CH4XIT ;FIRST ENTRY IN PD LIST(CHAN. EXIT)
000155 000000 000000 EXP 0
000156 000000 000000 EXP 0
000157 000000 000000 EXP 0
000160 000000 000000 EXP 0
000161 000000 000000 EXP 0
000162 000000 000000 EXP 0
000163 000000 000000 EXP 0
000164 000000 000000 EXP 0
000165 000000 000000 EXP 0
000166 000000 000000 EXP 0
000167 000000 000000 EXP 0
000170 000000 000000 EXP 0
000171 000000 000000 EXP 0
000172 000000 000000 EXP 0
000173 000000 000000 EXP 0 ;REST OF PD LIST
000174 205440 000142' CH4XIT: MOVSI CH4N, CH4SAC
000175 251440 000011 BLT CH4N, CH4N
000176 254520 000200' JEN @CH4
000177 777761 000154' CH4CJ: XWD -CH4PDN+1,CH4SAC+CH4N+1 ;INIT. SETTING OF PD POINTER(PDP)
000200 000000 000000 CH4: 0 ;PC STORED HERE BY JSR
000201 254000 000202' JRST .+1 ;INSTR. AT END OF SERVICE CHAIN
000202 350000 000315' AOS CH4ERR ;SPURIOUS INTERRUPT, ADD TO COUNT
000203 254520 000200' JEN @CH4 ;AND DISMISS

00530
00540 ;SET UP NULL CHANNEL ROUTINES FOR UNUSED CHANNELS
00550
00560 DEFINE NULCHN(J)
00570 <
00580 INTERNAL CH'J,CH'J'XIT
00590 CH'J: 0
00600 CH'J'XIT: AOS CH'J'ERR
00610 JEN @CH'J
00620 >
00630
00640 IFE CHANU1,<NULCHN(1)>
NULCHN(1)
000204 000000 000000 CH1: 0
000205 350000 000312' CH1XIT: AOS CH1ERR
000206 254520 000204' JEN @CH1
00650 IFE CHANU2,<NULCHN(2)>
NULCHN(2)
000207 000000 000000 CH2: 0

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000210	350000	000313'	CH2XIT:	AOS CH2ERR
000211	254520	000207'		JEN @CH2
			00660	IFE CHANU3,<NULCHN(3)>
			00670	IFE CHANU4,<NULCHN(4)>
			00680	IFE CHANU5,<NULCHN(5)>
			NULCHN(5)	
000212	000000	000000	CH5:	0
000213	350000	000316'	CH5XIT:	AOS CH5ERR
000214	254520	000212'		JEN @CH5
			00690	IFE CHANU6,<NULCHN(6)>
			00700	IFE CHANU7,<NULCHN(7)>
			NULCHN(7)	
000215	000000	000000	CH7:	0
000216	350000	000320'	CH7XIT:	AOS CH7ERR
000217	254520	000215'		JEN @CH7
			00710	

```

00720
00730 ;ASSIGN DEVICE TO CHANNELS AND SETUP CORESPONDENCE TABLE
00740 ;OF CHANNELS TO SERVICE ROUTINES
00750
00760 DEFINE ASSOC (A,N,D)
00770 < A'RET=CH'N'XIT
00780 A'SAV=CH'N'SAV
00790 A'SAC=CH'N'SAC
00800 A'CHL=CH'N
00810 A'CHN=N
00820 A'BIT=1
00830 REPEAT 7-N,<A'BIT=A'BIT*2>
00840 A'OFF=1000+A'BIT ;CONO PI, A'OFF WILL TURN CHANNEL OFF
00850 A'ON=2000+A'BIT ;TURN BACK ON
00860 A'ACT=4000+A'BIT ;FORCE INTERRUPT ON CHAN.
00870 INTERN A'RET, A'SAV, A'CHL, A'CHN, A'SAC
00880 INTERNAL A'OFF,A'ON,A'ACT,A'BIT
00890 XWD A'CHL,A'INT
00900 EXTERNAL A'INT
00910 >
00920
00930 INTERNAL DEVINT
00940 DEVINT: SYSTEM
ASSOC APR,6,<>
XWD APRCHL,APRINT
ASSOC CTY,3,<>
XWD CTYCHL,CTYINT
ASSOC SCN,3,<TTY0,TTY1>
XWD SCNCHL,SCNINT
ASSOC DTC,4,<DTA0>
XWD DTCCHL,DTCINT
00950 NDEV=-DEVINT ;NO. OF DEVICE INTERUPT SERVICE ROUTINES
00960 NDEVM1=NDEV-1 ;(USED BY ONCE)
00970 INTERNAL NDEVM1
00980
00990
000220 000060'000000
000221 000130'000000
000222 000130'000000
000223 000200'000000

```

```

01000
01010 ;INITIALIZE SOME IO DEVICES
01020 ;IOINI CALLED BY A PUSHJ PDP, FROM SYSINI AT SYSTEM INITIALIZATION
01030
01040 DEFINE IOINIT (A)
01050 <IRP A
01060 <      EXTERNAL A'INI
01070   PUSHJ PDP,A'INI
01080 >>
01090
01100 DEFINE ASSOC (A,B,C)
01110 <      IFIDN <A><MTC>,< IOINIT MTC>
01120   IFIDN <A><DTC>,< IOINIT DTC>
01130   IFIDN <A><LPT>,< IOINIT LPT>
01140   IFIDN <A><SCN>,< IOINIT SCN>
01150   IFIDN <A><PTP>,<IOINIT PTP>
01160   IFIDN <A><PTR>,<IOINIT PTR>
01170 >
01180
01190 INTERNAL IOINI
01200
01210 IOINI:   SYSTEM
        ASSOC APR,6,<>
        ASSOC CTY,3,<>
        ASSOC SCN,3,<TTY0,TTY1>
        PUSHJ PDP,SCNINI
        ASSOC DTC,4,<DTA0>
        PUSHJ PDP,DTCINI
01220           JRST CLKINI           ;ALWAYS INIT. CLOCK
01230
01240 EXTERNAL CLKINI

000224 260140 000000
000225 260140 000000
000226 254000 000000

```

```
01250
01260 ;CLOCK CONTROL PARAMETERS
01270
01280         CLDS=4000+APRCHN ;CLOCK DISABLE
01290         CLEN=2000+APRCHN ;CLOCK ENABLE
01300
01310         INTERNAL CLDS,CLEN
01320
01330
01340 ;BYTE POINTERS
01350
01360 PUUOAC:  POINT 4,UUO,12 ;UUO AC FIELD
01370 PIOMOD:  POINT 4,IOS,35 ;MODE BITS
01380 PJOBN:   POINT 9,DEVCHR(DEVDAT),8 ;DEVICE JOB ASSIGNMENT
01390 PJDCHN:  POINT 4,DEVCHR(DEVDAT),17 ;JOB DEVICE CHANNEL NO.
01400 PUNIT:   POINT 6,DEVCHR(DEVDAT),23 ;DEVICE UNIT NO.
01410
01420         INTERNAL PUUOAC,PIOMOD,PJOBN,PJDCHN,PUNIT
01430
01440 ;COMMON SUBROUTINE RETURNS
01450
01460 CPOPJ2:  AOS (PDP)
01470 CPOPJ1:  AOS (PDP)
01480 CPOPJ:   POPJ PDP,
01490
01500         INTERNAL CPOPJ,CPOPJ1,CPOPJ2
```

000227	270400	000014	01360
000230	000400	000000	01370
000231	331106	000001	01380
000232	220406	000001	01390
000233	140606	000001	01400
			01410
			01420
			01430
			01440
			01450
000234	350003	000000	01460
000235	350003	000000	01470
000236	263140	000000	01480
			01490
			01500

```

01510
01520 ,SYSTEM DATA STORAGE
01530
01540
01550 INTERNAL JOB, JOBADR, JBTADR, JBTSTS, USRREL, USRINF, USRJDA
01560 INTERNAL USRPDP, JOB DAT, USRDDT, USRS AV, USRUXT, USRLO, USRHI
01570 INTERNAL COMCNT, IOCOMP, USRPOV, STOPU, SCHEDF, TIME, JBTAD1
01580 INTERNAL MTAVAL, DCAVAL, DTAVAL, MTREQ, DCREQ, DTREQ, TTYTAB, CORTAB
01590 INTERNAL CH1ERR, CH2ERR, CH3ERR, CH4ERR, CH5ERR, CH6ERR, CH7ERR
01600 INTERNAL CORLST, CORTAB, CORTAL, SYSEND, SYSBEG, DEVOPR
01610
01620 JOBN=0 ;DEFINE NO. OF JOBS (0 THRU JOBN-1)
01630 ;THERE MUST BE MORE TTY DEVICE DATA BLOCKS THAN JOBS.
01640
01650 DEFINE ASSOC (A,N,D)
01660 <IRP D,<IFIDN <A><SCN>,<JOBN=JOBN+1>>>
01670 SYSTEM
ASSOC APR,6,<>
ASSOC CTY,3,<>
ASSOC SCN,3,<TTY0,TTY1>
ASSOC DTC,4,<DTA0>
01680 MJOBN=-JOBN
01690 INTERNAL JOBN,MJOBN
01700
01710
01720 SYSBEG: ;FIRST LOC IN SYSTEM DATA AREA
01730 XP SYSBG1,SYSBEG+1 ;FIRST LOC+1
01740 JOB: 0 ;CURRENT JOB NUMBER EXCEPT WEN SCHEDF IS NON-ZERO
01750 JOBADR: 0 ;CONTAINS ADDRESS OF JOB CURRENTLY RUNNING
01760 JOB DAT: 0 ;CONTAINS ADDRESS OF JOB DATA AREA
01770
01780 JBTADR: BLOCK JOBN ;C(LH)=PROTECT, C(RH)=RELOCATION
01790 XP JBTAD1,JBTADR+1 ;ADDRESS OF JOB 1(USED BY SYSMK)
01800 JBTSTS: BLOCK JOBN ;CONTAINS STATUS INFORMATION FOR EACH J
01810
01820 USRPDP: 0 ;USER PUSH DOWN POINTER
01830 USRREL: 0 ;LH=0, RH CONTAINS CONTENTS OF PROTECTION REGISTE
01840 USRLO: ;FIRST LOC CLEARED BY SETUSR SUBROUTINE
01850 USRUXT: 0 ;UNUSED, JOBUXT USED TO SAVE UO PC(UUO0)
01860 USRLEV: 0 ;UNUSED, JOBLEV USED TO SAVE LOC. 40
01870 USRS AV: 0 ;TEMPORARY STORAGE FOR UO HANDLER
01880 USRPOV: 0 ;PUSH DOWN OVERFLOW TRAP
01890 BLOCK 2
01900 USRINF: 0 ;UN LAYED OUT USER INFORMATION
01910 USRJDA: BLOCK 20 ;RH=JOB DEVICE ASSIGNMENTS FOR THIS USER,LH=UOOS
01920 XP USRHI,.-1 ;LAST LOC CLEARED BY SETUSR ROUTINE
01930 XP USRPFI,.-1 ;LAST LOC PROTECTED FROM IO SERVICE
01940 XP USRPFU,. ;LAST LOC PROTECTED FROM USER PROGRAM
01950 USRDDT: 0 ;STARTING ADDR OF USER DDT
01960
000237 000000 000000
000240 000000 000000
000241 000000 000000
000246 000000 000000
000247 000000 000000
000250 000000 000000
000251 000000 000000
000252 000000 000000
000253 000000 000000
000256 000000 000000
000277 000000 000000

```

			01970	
			01980	;DEVICE JUST BECOME AVAILABLE FLAGS
000300	000000	000000	01990	MTAVAL: 0 ;MAGNETIC TAPE
000301	000000	000000	02000	DCAVAL: 0 ;DATA CONTROL
000302	000000	000000	02010	DTAVAL: 0 ;DECTAPE
			02020	
			02030	;NUMBER OF JOBS WAITING FOR BUSY DEVICES(-1=NONE, 0=1 USING, 1=1 USIN
000303	777777	777777	02040	MTREQ: -1 ;MAGNETIC TAPE
000304	777777	777777	02050	DCREQ: -1 ;DATA CONTROL
000305	777777	777777	02060	DTREQ: -1 ;DECTAPE
000306	000000	000000	02070	IOCOMP: 0 ;NUMBER OF USERS IN IO WAIT STATE
000307	000000	000000	02080	COMCNT: 0 ;NUMBER OF COMMANDS TYPED-IN BUT NOT DECODED
000310	000000	000000	02090	STOPU: 0 ;NON-ZERO WHEN CLOCK INTERRUPT FORCED TO STOP USE
000311	000000	000000	02100	SCHEDF: 0 ;NON-ZERO WHEN CLOCK ROUTINE IS SCHEDULING
			02110	
000312	000000	000000	02120	CH1ERR: 0 ;SPURIOUS INTERRUPT COUNTS FOR EACH CHANNEL
000313	000000	000000	02130	CH2ERR: 0
000314	000000	000000	02140	CH3ERR: 0
000315	000000	000000	02150	CH4ERR: 0
000316	000000	000000	02160	CH5ERR: 0
000317	000000	000000	02170	CH6ERR: 0
000320	000000	000000	02180	CH7ERR: 0
			02190	
			02200	USRL01=USRL0+1
			02210	INTERNAL USRL01

```

000321 000000 000000 02220
02230
02240
02250
02260
02270
02280
02290
02300
000324 000000 000000 02310
02320
02330
02340
02350
02360
000335 000000 000000 02370
000336 000000 000000 02380
02390
02400
02410
02420
02430
02440
000337 000000 000000 02450
  
```

```

TIME: 0 ;TIME SYSTEM HAS RUN IN 60THS OF A SECO

XP TTYLEN,SCNLIN+1 ;LENGTH OF TTY TRANSLATOR TABLE(INCLUDING CTY)
TTYTAB: BLOCK TTYLEN ;TTY TRANSLATOR TABLE
;SIGN BIT = 1 IF COMMAND JUST TYPED
;BITS 1 - 9, JOB CONSOLE IS ATTACHED TO
;BITS 18-35, THE DEVICE DATA BLOCK FOR

DEVOPR: 0 ;SIXBIT PHYSICAL NAME OF OPERATORS
;CONSOLE SET BY SCNSER TO FIRST ACTIVE TTY.
;LOCATIONS FOR CORE ALLOCATION
XP CORBLK,+D256 ;NO. OF 1K BLOCKS POSSIBLE
CORTAB: BLOCK <CORBLK>/+D36+1 ;1K BLOCK USE BIT TABLE
;A 1 MEANS BLOCK IS IN USE

CORLST: 0 ;1 BIT BYTE POINTER TO LAST FREE BLOCK POSSIBLE
CORTAL: 0 ;TOTAL NO. OF FREE CORE BLOCKS LEFT
;CORLST AND CORTAL ARE SET UP AT SYSTEM INITIALIZATION

SYSEND=-1 ;LAST LOC. CLEARED BY SYSINI

INTERNAL SYSSIZ
EXTERNAL SYSFIN
SYSSIZ: EXP SYSFIN ;SIZE OF MONITOR(LAST LOC. USED)
  
```

02460  
02470  
02480

END.

THERE ARE NO ERRORS

PROGRAM BREAK IS 000340

A	000000	INT
AC1	000015	INT
AC2	000016	INT
AC3	000017	INT
AL	000001	INT
APRACT	004002	INT
APRBIT	000002	INT
APRCHL	000060'	INT
APRCHN	000006	INT
APRINT	000220'	EXT
APROFF	001002	INT
APRON	002002	INT
APRRET	000054'	INT
APRSAC	000014'	INT
APRSAV	000006'	INT
ASSCON	400000	INT
ASSPRG	200000	INT
B	000014	INT
BUFPNT	000012	INT
BUFWRD	000013	INT
CH1	000204'	INT
CH1ERR	000312'	INT
CH1N	000000	
CH1PDN	000000	
CH1XIT	000205'	INT
CH2	000207'	INT
CH2ERR	000313'	INT
CH2N	000000	
CH2PDN	000000	
CH2XIT	000210'	INT
CH3	000130'	INT
CH3CJ	000127'	
CH3ERR	000314'	INT
CH3N	000011	
CH3PDN	000020	
CH3SAC	000072'	INT
CH3SAV	000064'	INT
CH3XIT	000124'	INT
CH4	000200'	INT
CH4CJ	000177'	
CH4ERR	000315'	INT
CH4N	000011	
CH4PDN	000020	
CH4SAC	000142'	INT
CH4SAV	000134'	INT
CH4XIT	000174'	INT
CH5	000212'	INT
CH5ERR	000316'	INT
CH5N	000000	
CH5PDN	000000	
CH5XIT	000213'	INT
CH6	000060'	INT
CH6CJ	000057'	
CH6ERR	000317'	INT
CH6N	000017	

CH6PDN	000020	
CH6SAC	000014'	INT
CH6SAV	000006'	INT
CH6XIT	000054'	INT
CH7	000215'	INT
CH7ERR	000320'	INT
CH7N	000000	
CH7PDN	000000	
CH7XIT	000216'	INT
CHANU1	000000	
CHANU2	000000	
CHANU3	000001	
CHANU4	000001	
CHANU5	000000	
CHANU6	000001	
CHANU7	000000	
CLDS	004006	INT
CLEN	002006	INT
CLKINI	000226'	EXT
CLOSR	002000	INT
CLSIN	000002	INT
CLSOUT	000001	INT
COMCNT	000307'	INT
CONFIG	000000'	INT
CORBLK	000400	INT
CORLST	000335'	INT
CORTAB	000325'	INT
CORTAL	000336'	INT
CPOPJ	000236'	INT
CPOPJ1	000235'	INT
CPOPJ2	000234'	INT
CTYACT	004020	INT
CTYBIT	000020	INT
CTYCHL	000130'	INT
CTYCHN	000003	INT
CTYINT	000221'	EXT
CTYOFF	001020	INT
CTYON	002020	INT
CTYRET	000124'	INT
CTYSAC	000072'	INT
CTYSAV	000064'	INT
D	000017	INT
DAT	000005	INT
DCAVAL	000301'	INT
DCL	000001	INT
DCREQ	000304'	INT
DCW	020000	INT
DDI	000007	INT
DDO	000006	INT
DDTMEM	000037	INT
DDTSYM	000036	INT
DEN	000004	INT
DEVADR	000007	INT
DEVBUF	000006	INT
DEVCHR	000001	INT

DEVCTR	000011	INT
DEVDAT	000006	INT
DEVIAD	000007	INT
DEVINT	000220'	INT
DEVIOS	000002	INT
DEVLOG	000005	INT
DEVMOD	000004	INT
DEVNAM	000000	INT
DEVOAD	000010	INT
DEVOPR	000324'	INT
DEVPTR	000010	INT
DEVSER	000003	INT
DGF	000012	INT
DIN	000003	INT
DLK	000005	INT
DOU	000002	INT
DR	000016	INT
DRL	000000	INT
DSI	000011	INT
DSO	000010	INT
DTAVAL	000302'	INT
DTCACT	004010	INT
DTCBIT	000010	INT
DTCCHL	000200'	INT
DTCCHN	000004	INT
DTCINI	000225'	EXT
DTCINT	000223'	EXT
DTCOFF	001010	INT
DTCON	002010	INT
DTCRET	000174'	INT
DTC SAC	000142'	INT
DTC SAV	000134'	INT
DTREQ	000305'	INT
DTSIZ	000001	
DTW	040000	INT
DVAVAL	000040	INT
DVCDR	100000	INT
DVDIR	000004	INT
DVDIRI	400000	INT
DVIN	000002	INT
DVLPT	040000	INT
DVMTA	000020	INT
DVOUT	000001	INT
DVTTY	000010	INT
ENTRB	020000	INT
ERROR	000000	EXT
I	000010	INT
IB	000013	INT
IBUFB	200000	INT
INITB	400000	INT
INPB	010000	INT
IO	000020	INT
IOACT	010000	INT
IOREG	000002	INT
IORKTL	040000	INT

IOCOMP	000306'	INT
IOCON	000040	INT
IODEND	020000	INT
IODERR	200000	INT
IODISC	400000	INT
IODONE	400000	INT
IODTER	100000	INT
IOEND	000040	INT
IOFST	000004	INT
IOIMPM	400000	INT
IOINI	000224'	INT
IONRCK	000100	INT
IORDEL	000100	INT
IORET	000020	INT
IOS	000000	INT
IOSTRT	000010	INT
IOUSE	400000	INT
IOW	000001	INT
IOWC	000020	INT
IOWS	400000	INT
ITEM	000004	INT
JBFAADR	000000	INT
JBFCR	000002	INT
JBFPTR	000001	INT
JBTAD1	000243'	INT
JBTADR	000242'	INT
JBTSTS	000244'	INT
JBUF	000005	INT
JDAT	000011	INT
JERR	002000	INT
JIOW	100000	INT
JNA	004000	INT
JOB	000237'	INT
JORADR	000240'	INT
JORDAT	000241'	INT
JORN	000002	INT
LOOKB	040000	INT
MINIMA	000000	INT
MJOBN	777777777776	INT
MTAVAL	000300'	INT
MTREQ	000303'	INT
MTW	010000	INT
NDEV	000004	
NDEVM1	000003	INT
OBUFB	100000	INT
OUTPB	004000	INT
PDP	000003	INT
PICHN	000100	INT
PIOMOD	000230'	INT
PJDCHN	000232'	INT
PJOBN	000231'	INT
PROG	000007	INT
PUNIT	000233'	INT
PUUOAC	000227'	INT
RUN	200000	INT

RUNABL	204000	INT
SCHEDF	000311'	INT
SCNACT	004020	INT
SCNBIT	000020	INT
SCNCHL	000130'	INT
SCNCHN	000003	INT
SCNINI	000224'	EXT
SCNINT	000222'	EXT
SCNLIN	000001	
SCNOFF	001020	INT
SCNON	002020	INT
SCNRET	000124'	INT
SCNSAC	000072'	INT
SCNSAV	000064'	INT
STOPU	000310'	INT
SYSBEG	000237'	INT
SYSBG1	000240'	INT
SYSDAT	000002'	INT
SYSEND	000336'	INT
SYSFIN	000337'	EXT
SYSMOD	000001	INT
SYSNUM	000004'	INT
SYSSIZ	000337'	INT
SYSTAP	000005'	INT
SYSVER	000004	INT
TAC	000001	INT
TAC1	000002	INT
TEM	000010	INT
TIME	000321'	INT
TTYATC	020000	INT
TTYLEN	000002	INT
TTYTAB	000322'	INT
TTYUSE	010000	INT
USRDDT	000277'	INT
USRHI	000276'	INT
USRINF	000256'	INT
USRJDA	000257'	INT
USRLEV	000251'	
USRLO	000250'	INT
USRLO1	000251'	INT
USRMOD	010000	INT
USRDPD	000246'	INT
USRPFI	000276'	INT
USRPFU	000277'	INT
USRPOV	000253'	INT
USRREL	000247'	INT
USRSV	000252'	INT
USRXT	000250'	INT
UUO	000014	INT

END OF ASSEMBLY

00010

XLIST

```
01970
00010 ;SOME MACROS FOR DEFINING CONFIGURATION
00020
00030 DEFINE NAME (A)
00040 <DEFINE NAME1
00050 <CONFIG: ASCIZ /A/
00060 INTERNAL CONFIG
00070 >
00080 XP A,0
00090 SUBTTL A CONFIGURATION
00100 >
00110
00120 DEFINE DATE (A)
00130 <DEFINE DATE1
00140 <SYSDAT: ASCIZ /A/
00150 INTERNAL SYSDAT
00160 >>
00170
00180 DEFINE VERSION (A,B)
00190 <DEFINE VERS1
00200 <SYSNUM: XWD †D'A,†D'B
00210 XP SYSMOD,†D'A
00220 XP SYSVER,†D'B
00230 INTERNAL SYSNUM
00240 >>
00250
00260 DEFINE CUSPTAPE (A)
00270 <DEFINE CUSP1
00280 <SYSTAP: SIXBIT /A/
00290 INTERNAL SYSTAP
00300 >>
00310
00320 DEFINE ACPDL (J,CHJN,CHJPDN)
00330 < CH'J'N=CHJN
00340 CH'J'PDN=CHJPDN
00350 >
```

00360  
00370

NAME <MINIMAL>

```
00380          DATE <8-16-65>
00390          VERSION 1,4
00400          CUSPTAPE DTA0
00410
00420          ;DEFINE THE IO PART OF THE SYSTEM
00430          ;THAT IS:
00440          ;          DEFINE INTERRUPT SERVICE ROUTINES TO BE USED
00450          ;          ASSIGN DEVICES TO PI CHANNELS
00460
00470          DEFINE SYSTEM
00480          <
00490          ASSOC APR,6,<>
00500          ASSOC CTY,3,<>
00510          ASSOC SCN,3,<TTY0,TTY1>
00520          ASSOC DTC,4,<DTA0>
00530          >
00540
00550
00560          DTSIZ=1      ;MULTIPLE DECTAPE DIRECTORIES
00570
00580          SCNLIN=1
00590
00600          ;DEFINE HIGHEST AC TO SAVE AND LENGTH OF PD LIST FOR EACH PI CHANNEL
00610
00620          ACPDL (1,0,0)
00630          ACPDL (2,0,0)
00640          ACPDL (3,11,20)
00650          ACPDL (4,11,20)
00660          ACPDL (5,0,0)
00670          ACPDL (6,17,20)
00680          ACPDL (7,0,0)
00020
00030          ;DEFINITIONS OF DEVCHN AND DEVBIT
00040          ;THESE ALSO OCCUR IN IOINI1
00050
00060          DEFINE ASSOC (A,N,D)
00070          <
00080          A'CHN=N
00090          >
00100
00110          SYSTEM
          ASSOC APR,6,<>
          ASSOC CTY,3,<>
          ASSOC SCN,3,<TTY0,TTY1>
          ASSOC DTC,4,<DTA0>
00120
```

00130

```
00140
00150      ;APR PI BITS
00160
00170      APRBIT=1
00180      REPEAT 7-APRCHN,<APRBIT=APRBIT*2>
APRBIT=APRBIT*2
00190      XP PION,200      ;CONO PI,PION TURNS PI SYSTEM ON
00200      XP PIOFF,400     ;TURN IT OFF
00210      XP PICKL,PION+1B24+APRBIT      ;TURN PI ON, AND FORCE CLOCK INT.
00220      XP CLKOFF,1000+APRCHN      ;CONO APR,CLKOFF TURNS CLOCK FLAG OFF
```

ER

```

00230
00240 ;ASSEMBLE ALL DEVICE DATA BLOCKS AND LINK THEM TOGETHER
00250

00270
00280 DEFINE SCNDDB (A,B,C)
00290 < INTERNAL C'DB
00300 C'DB: ZZ=.
00310 SIXBIT /C/
00320 XWD A'CHN*PICHN,STTYBF+1 ;LONG ENOUGH FOR PRINTING
00330 ;SEQUENCED CARD IMAGE.
00340 ;USER BUFFERS ARE 2 WORDS
00350 ;LONGER THAN THE MONITORY TTY BUFFERS.
00360
00370 EXTERNAL TTYDSP
00380 XWD C,TTYDSP
00390 XWD DVTTY+DVIN+DVOUT,3
00400
00410
00420 XWD PROG,0
00430 XWD PROG,0
00440 XP TTYPTR,.-ZZ
00450
00460 XP TTYCTR,.-ZZ
00470
00480 XP TTYSAV,.-ZZ
00490
00500 XP TTYBUF,.-ZZ
00510 XP TTYBM1,TTYBUF-1
00520 XP STTYBF,20
00530 XP STTYB1,STTYBF+1 ;LENGTH+1
00540 BLOCK STTYBF
00550 XP TTYBFE,.-ZZ-1
00560
00570
00580 ;LINE NO. PARAMETERS
00590 XP TTYLEN,SCNLIN+1 ;LENGTH OF TTY TRANSLATOR TABLE(INCLUDING TTY)
00600 XP TSCNLN,SCNLIN-1 ;HIGHEST TTY LINE NO.(NOT COUNTING CTY)
00610 XP TCONLN,TSCNLN+1 ;CTY LINE NUMBER
00620 XP MTTYLN,-TTYLEN ;NEGATIVE LENGTH OF TRANSLATOR TABLE
00630 XP FSNCHN,SCNCHN*101 ;CHANNEL ASSIGN, FOR FULL DUPLEX SCN.
00640 XP TTYLST,TTY0DB ;FIRST TTY DEVICE DATA BLOCK
00650 >
00660
00670 ;NEG. NO. OF TELTYPE DEVICE DATA BLOCKS
00680
00690 MLTTYL=0
00700 DEFINE ASSOC (A,N,D)
00710 <IRP D,<IFIDN <A>,<SCN>,<MLTTYL=MLTTYL-1>>>
00720
00730
00740 SYSTEM
ASSOC APR,6,<>
ASSOC CTY,3,<>
ASSOC SCN,3,<TTY0,TTY1>
ASSOC DTC,4,<DTA0>

00750

```

00760  
00770

INTERNAL MLTTYL

```
00780
00790 ;MAG TAPE DEVICE DATA BLOCK
00800
00810 MTCNUM=0
00820
00830 DEFINE MTCDDB (A,B,C)
00840 < INTERNAL C'DB
00850 C'DB: SIXBIT /C/
00860 MTCNUM=MTCNUM+1
00870 XWD IORET+A'CHN*PICHN,<MTCNUM-1>*10000+201
00880
00890 0
00900 XWD C,MTDISP
00910 EXTERNAL MTDISP
00920 XWD 4400+DVMTA+DVIN+DVOUT,154403
00930 0
00940 0
00950 XWD PROG,0
00960 XWD PROG,0
00970 >
```

```
00980
00990 ;DECTAPE DEVICE DATA BLOCKS
01000
01010 DTCNUM=0
01020
01030 DEFINE DTCDDDB (A,B,C)
01040 < INTERNAL C'DB
01050 C'DB: ZZ=.
01060 SIXBIT /C/
01070 DTCNUM=DTCNUM+1
01080 XWD IORET+A'CHN*PICHN,<DTCNUM-1>*10000+200
01090 0
01100 XWD C,UTDSP
01110 EXTERNAL UTDSP
01120 XWD 4400+DVDIR+DVIN+DVOUT,154403
01130 0
01140 0
01150 0
01160 0
01170 XP UFREE,.-ZZ ;NEXT FREE BLOCK NO.
01180 0
01190 XP UDIR,.-ZZ ;LINK TO DIRECTORY IN DATA BLOCK
01200 IFE DTSIZ,< EXP DIRBUF
01210 >
01220 IFN DTSIZ,< EXP DTDIR+200*<DTCNUM-1>
01230 >
01240 >
01250 >
```

```
01260
01270 ;LINE PRINTER DEVICE DTA BLOCK
01280
01290 DEFINE LPTDDB (A,B,C)
01300 <INTERNAL LPTDB,LPTDAT,LPTCHR,LPTIOS,LPTSER,LPTMOD
01310 INTERNAL LPTBUF,LPTPTR,LPTADR,LPTSV1
01320 EXTERNAL LPTDSP
01330
01340 LPTDB:
01350 LPTDAT: SIXBIT /LPT/
01360 LPTCHR: XWD A'CHN*PICHN,32
01370 LPTIOS: 0
01380 LPTSER: XWD C,LPTDSP
01390 LPTMOD: XWD 0+DVOUT,3
01400 0
01410 LPTBUF: 0
01420 LPTPTR: 0
01430 LPTADR: XWD PROG,0
01440 LPTSV1: 0
01450
01460 XP LPTCLB,LPTCHN+200 ;PI CHANNEL AND BUSY FLAG
01470 XP LPTCHB,11*LPTCHN ;LINE PRINTER ERROR AND DATA CHANNELS
01480 >
```

```
01490  
01500 ;CARD READER DEVICE DATA BLOCK  
01510  
01520 DEFINE CDRDDB (A,B,C)  
01530 <INTERNAL CDRDB,CDRDAT,CRDIS  
01540 EXTERNAL CDRDSP  
01550  
01560 CDRDB:  
01570 CDRDAT: SIXBIT /CDR/  
01580 XWD A'CHN*PICHN,34 ;LONG ENOUGH FOR BINARY CARDS  
01590 0  
01600 XWD C,CDRDSP  
01610 XWD DVCDR+1400+DVIN,14403  
01620 0  
01630 0  
01640 XWD PROG,0  
01650 0  
01660 0  
01670 CRDIS: JRST .  
01680 >
```

```
01690
01700 ;PAPER TAPE READER DEVICE DATA BLOCK
01710
01720 DEFINE PTRDDB (A,B,C)
01730 <INTERNAL PTRDB,PTRDAT,PTRCHR,PTRIOS,PTRSER
01740 INTERNAL PTRMOD,PTRBUF,PTRADR,PTRPTR,PTRCTR,PTR SVC,PTRSV1
01750 EXTERNAL PTRDSP
01760
01770 PTRDB:
01780 PTRDAT: SIXBIT /PTR/
01790 PTRCHR: XWD A'CHN*PICHN,41
01800 PTRIOS: 0
01810 PTRSER: XWD C,PTRDSP
01820 PTRMOD: XWD 1000+DVIN,14403
01830 0
01840 PTRBUF: 0
01850 PTRADR: XWD PROG,0
01860 PTRPTR: 0
01870 PTRCTR: 0
01880 PTR SVC: 0
01890 PTRSV1: 0
01900 >
```

```
01910
01920 ;PAPER TAPE PUNCH DEVICE DATA BLOCK
01930
01940 DEFINE PTPDDB (A,B,C)
01950 <INTERNAL PTPDB,PTPDAT,PTPCHR,PTPIOS,PTPSER,PTPMOD,PTPBUF
01960 INTERNAL PTPPTR,PTPADR,PTPCTR,PTPCNT,PTPCHA,PTPSIO
01970 EXTERNAL PTPDSP
01980
01990 PTPDB:
02000 PTPDAT: SIXBIT /PTP/
02010 PTPCHR: XWD A'CHN*PICHN,41
02020 PTPIOS: 0
02030 PTPSER: XWD C,PTPDSP
02040 PTPMOD: XWD 1000+DVOUT,14403
02050 0
02060 PTPBUF: 0
02070 PTPPTR: 0
02080 PTPADR: XWD PROG,0
02090 PTPCTR: 0
02100 PTPCNT: 0
02110 PTPCHA: 0
02120 PTPSIO: 0
02130 >
```

```

02140
02150 ;GENERATE DEVICE DATA BLOCKS NEEDED FOR THIS CONFIGURATION
02160
02170 DEFINE ASSOC (A,B,C)
02180 <
02190 IRP C,<
02200 ;DEFINE FORWARD LINL SYMBOL
02210 LINK
02220 ;
02230 ;
02240 ;
02250 A'DDB A,B,C
02260
02270 C=0 ;SET LINK TO 0(IN CASE THIS IS LAST DDB)
02280 DEFINE LINK
02290 <C=.>
02300 >
02310 >
02320
02330 INTERNAL DEVLST
02340
000000 000001'000000 02350 DEVLST: XWD FIRDB,0 ;BEGINNING OF DEVICE DATA BLOCK CHAIN
02360
02370 DEFINE LINK
02380 <FIRDB=.>
02390
02400 SYSTEM
ASSOC APR,6,<>
ASSOC CTY,3,<>
ASSOC SCN,3,<TTY0,TTY1>
SIXBIT /TTY0/
XWD SCNCHN*PICHN,STTYBF+1 ;LONG ENOUGH FOR PRINTING
0
XWD TTY0,TTYDSP
XWD DVTTY+DVIN+DVOUT,3
0
0
XWD PROG,0
XWD PROG,0
0
0
0
SIXBIT /TTY1/
XWD SCNCHN*PICHN,STTYBF+1 ;LONG ENOUGH FOR PRINTING
0
XWD TTY1,TTYDSP
XWD DVTTY+DVIN+DVOUT,3
0
0
XWD PROG,0
XWD PROG,0
0
0
0
000001 646471 200000
000002 000300 000021
000003 000000 000000
000004 000035'000000
000005 000013 000003
000006 000000 000000
000007 000000 000000
000010 000007 000000
000011 000007 000000
000012 000000 000000
000013 000000 000000
000014 000000 000000
000035 646471 210000
000036 000300 000021
000037 000000 000000
000040 000071'000004'
000041 000013 000003
000042 000000 000000
000043 000000 000000
000044 000007 000000
000045 000007 000000
000046 000000 000000
000047 000000 000000
000050 000000 000000
000071 446441 200000
000072 000420 000200
XWD IORET+DTCCHN*PICHN,<DTCNUM-1>*10000+200

```

000073 000000 000000  
000074 000000 000000  
000075 004407 154403  
000076 000000 000000  
000077 000000 000000  
000100 000000 000000  
000101 000000 000000  
000102 000000 000000  
000103 000000 000104'

0  
XWD DTA0,UTDSP  
XWD 4400+DVDIR+DVIN+DVOUT,154403  
0  
0  
0  
0  
0  
0  
0  
EXP DTDIR+200\*<DTCNUM-1>

```
02410
02420          LIT
02430
02440          IFE DTSIZ,<          DIRBUF:  BLOCK 200
02450      INTERNAL DIRBUF
02460      >

02470      IFN DTSIZ,<DTDIR:  BLOCK DTCNUM*200
02480      INTERNAL DTDIR
02490      >
DTDIR:  BLOCK DTCNUM*200
INTERNAL DTDIR

02500
02510          END,
```

THERE ARE NO ERRORS

PROGRAM BREAK IS 000304

A	000000	INT
AC1	000015	INT
AC2	000016	INT
AC3	000017	INT
AL	000001	INT
APRBIT	000002	
APRCHN	000006	
ASSCON	400000	INT
ASSPRG	200000	INT
R	000014	INT
BUFPNT	000012	INT
BUFWRD	000013	INT
CH1N	000000	
CH1PDN	000000	
CH2N	000000	
CH2PDN	000000	
CH3N	000011	
CH3PDN	000020	
CH4N	000011	
CH4PDN	000020	
CH5N	000000	
CH5PDN	000000	
CH6N	000017	
CH6PDN	000020	
CH7N	000000	
CH7PDN	000000	
CLKOFF	001006	INT
CLOSB	002000	INT
CLSIN	000002	INT
CLSOUT	000001	INT
CTYCHN	000003	
D	000017	INT
DAT	000005	INT
DCL	000001	INT
DCW	020000	INT
DDI	000007	INT
DDO	000006	INT
DDTMEM	000037	INT
DDTSYM	000036	INT
DEN	000004	INT
DEVADR	000007	INT
DEVBUF	000006	INT
DEVCHR	000001	INT
DEVCTR	000011	INT
DEVDAT	000006	INT
DEVIAD	000007	INT
DEVIOS	000002	INT
DEVLOG	000005	INT
DEVLST	000000	INT
DEVMOD	000004	INT
DEVNAM	000000	INT
DEVOAD	000010	INT
DEVPTR	000010	INT
DEVSER	000003	INT
DGF	000012	INT

DIN	000003	INT
DLK	000005	INT
DOU	000002	INT
DR	000016	INT
DRL	000000	INT
DSI	000011	INT
DSO	000010	INT
DTA0	000000	
DTA0DB	000071	INT
DTCCHN	000004	
DTCNUM	000001	
DTDIR	000104	INT
DTSIZ	000001	
DTW	040000	INT
DVAVAL	000040	INT
DVCDR	100000	INT
DVDIR	000004	INT
DVDIRI	400000	INT
DVIN	000002	INT
DVLPT	040000	INT
DVMTA	000020	INT
DVOUT	000001	INT
DVTTY	000010	INT
ENTRB	020000	INT
FIRDB	000001	
FSNCHN	000303	INT
I	000010	INT
IB	000013	INT
IBUFB	200000	INT
INTR	400000	INT
INPB	010000	INT
IO	000020	INT
IOACT	010000	INT
IOBEG	000002	INT
IOBKTL	040000	INT
IOCON	000040	INT
IODEND	020000	INT
IODERR	200000	INT
IODISC	400000	INT
IODONE	400000	INT
IODTER	100000	INT
IOEND	000040	INT
IOFST	000004	INT
IOIMPM	400000	INT
IONRCK	000100	INT
IORDEL	000100	INT
IORET	000020	INT
IOS	000000	INT
IOSTRT	000010	INT
IOUSE	400000	INT
IOW	000001	INT
IOWC	000020	INT
IOWS	400000	INT
ITEM	000004	INT
JBFA DR	000000	INT

JBFCR	000002	INT
JBFPTR	000001	INT
JBUF	000005	INT
JDAT	000011	INT
JERR	002000	INT
JIOW	100000	INT
JNA	004000	INT
LOOKR	040000	INT
MINIMA	000000	INT
MLTTYL	777777777776	INT
MTCNUM	000000	
MTTYLN	777777777776	INT
MTW	010000	INT
OBUFB	100000	INT
OUTPR	004000	INT
PDP	000003	INT
PICHN	000100	INT
PICKL	004202	INT
PIOFF	000400	INT
PION	000200	INT
PROG	000007	INT
RUN	200000	INT
RUNABL	204000	INT
SCNCHN	000003	
SCNLIN	000001	
STTYB1	000021	INT
STTYRF	000020	INT
TAC	000001	INT
TAC1	000002	INT
TCONLN	000001	INT
TEM	000010	INT
TSCNLN	000000	INT
TTY0	000035'	
TTY0DB	000001'	INT
TTY1	000071'	
TTY1DB	000035'	INT
TTYATC	020000	INT
TTYBFE	000033	INT
TTYBM1	000013	INT
TTYBUF	000014	INT
TTYCTR	000012	INT
TTYDSP	000040'	EXT
TTYLEN	000002	INT
TTYLST	000001'	INT
TTYPTR	000011	INT
TTYSAV	000013	INT
TTYUSE	010000	INT
UDIR	000012	INT
UFREE	000011	INT
USRMOD	010000	INT
UTDSP	000074'	EXT
UUO	000014	INT
ZZ	000071'	

END OF ASSEMBLY