

00010

XLIST

01970

00030
00040 EXTERNAL APRCHN, APRCHL, CH6SAC, JBTADR, JOB, JOBAC, JOB DAT, JOBN
00050 EXTERNAL JOBPDP, USRDDT, USRPDP, JOBDDT
00060 EXTERNAL IORELS, JBTSTS, JOBADR, JOBCDP, JOBPC, JOBREL, JOBSA, JOBSYM
00070 EXTERNAL MESPNT, QUANT1, JOBDAC, TTYSTR, STOPU, SCHEDF
00080 EXTERNAL UXIT, IOCOMP, DCREQ, DCAVAL, DTREQ, DTAVAL, MTREQ, MTAVAL
00090 EXTERNAL CH1XIT, CH2XIT, CH3XIT, CH4XIT, CH5XIT, CH6XIT, CH7XIT
00100 EXTERNAL JOBFF, MJOBPD, JOBPD, IOCOMP, PJOBN, USRLO, USRLO1, USRHI
00110 EXTERNAL TTYFNU, RSCHED

			00120		
			00130	;EXIT UO ROUTINE	
			00140		
			00150	INTERNAL EXIT	
			00160	EXTERNAL IORELS,TTYFNU,MESPNT,IOKILL	
			00170		
000000	260140	000000	00180	EXIT: PUSHJ PDP,IORELS	;RELEASE ALL DEVICES
000001	260140	000000	00190	PUSHJ PDP,TTYFNU	
000002	201100	000005'	00200	MOVEI TAC1,EXMESS	
000003	260140	000000	00210	PUSHJ PDP,MESPNT	
000004	254000	000030'	00220	JRST HOLD	;STOP THIS USER IMMEDIATELY
			00230		
			00240	EXMESS: ASCIZ /	
000005	064250	554222	00250	EXIT	
000006	520321	200000	00260	/	
			00270	;RESET UO ROUTINE	
			00280		
			00290	INTERNAL RESET	
			00300		
000007	260140	000000	00310	RESET: PUSHJ PDP,IOKILL	;RELEASE ALL DEVICES
000010	260140	000230'	00320	PUSHJ PDP,SETUSR	;CLEAR PART OF JOB DATA AREA
000011	254000	000000	00330	JRST UOEXIT	;AND RETURN TO CALLER
			00340		

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00350
00360 ;COMMON ERROR HANDLING ROUTINES
00370 ;DEV DAT MUST BE SET UP TO TTY DDB ON WHICH TO PRINT ERROR MESSAGE
00380
00390 ;HERE ON ERROR DETECTED AT INTERRUPT SERVICE LEVEL
00400 ;Ø(PDP) CONTAINS ADR. OF DEVICE DATA BLOCK CAUSING ERROR
00410
00420 ;CALL: MOVE TAC, PI CHANNEL NO. DETECTING ERROR
00430 ; JRST HOLDI
00440
INTERNAL HOLDI,HOLD,HOLDI1
00450
00460
00470 HOLDI: MOVE TAC1, Ø(PDP) ;DEVICE DATA BLOCK
00480 LDB ITEM, [POINT 9, DEVCHR(TAC1), 8] ;GET JOB NUMBER
000012 200103 000000 00490 HOLDI1: PUSH PDP, TAC ;SAVE PI CHANNEL NO.
000013 135200 000266' 00500 PUSHJ PDP, HOLDSB
000014 261140 000001 00510 POP PDP, TAC
000015 260140 000032' 00520 JRST CHNTAB(TAC) ;GO RESTORE ACS AND DISMISS CHANNEL
000016 262140 000001 00530
000017 254001 000020' 00540 CHNTAB: JRST RSCHED ;INTERRUPT ON CLOCK CHANNEL,RESCHEDULE
00550 JRST CH1XIT
00560 JRST CH2XIT
00570 JRST CH3XIT
00580 JRST CH4XIT
00590 JRST CH5XIT
00600 JRST CH6XIT
00610 JRST CH7XIT
00620
00630 ;HERE ON ERROR FROM UØ LEVEL, ERROR MESSAGE ALREADY IN TTY BUFFER
00640
00650 ;DAT=BYTE POINTER TO END OF MESSAGE; DEV DAT=TTY DEV. DATA BLOCK
000030 200200 000000 00660 HOLD: MOVE ITEM, JOB ;NO. OF THIS JOB
000031 260140 000243' 00670 PUSHJ PDP, WAIT1 ;WAIT UNTIL TTY FINISHED
00680
00690 HOLDSB: PUSHJ PDP, CRLF
000032 260140 000000 00700 PUSHJ PDP, TTYSTR ;START UP TTY TO PRINT ERROR MESSAGE
000033 260140 000000 00710 EXTERNAL CRLF
00720
00730 ;ROUTINE TO STOP USER AND FLAG AS ERROR STOP
00740 ;CALL: MOVE ITEM, JOB NUMBER
00750 ; PUSHJ PDP, ESTOP
00760
INTERNAL ESTOP
00770
00780
00790
00800 ESTOP: MOVSI TAC, JERR ;SET ERROR BIT IN JOB STATUS
000034 205040 002000 00810 IORM TAC, JBTSTS(ITEM)
000035 436044 000000 00820 JRST STOP1
000036 254000 000071'

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,BLOCK TRANSFER PROGRAM OVER LOADER

INTERNAL LDRBLT
EXTERNAL USRREL

PGADR=2 ;AC CONTAINING BEGINNING OF PROGRAM(LOA

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LDRBLT:  PUSHJ PDP,IORELS
        HRRZ TAC, PGADR(JDAT) ;ADD OFFSET TO SYMBOL TABLE P
        SETZM PGADR(JDAT) ;THEN CLEAR SO SYSMAK WILL STILL WORK
        HRRZ DAT,PROG
        ADD DAT,TAC
        ADDM TAC,JOBSYM(DAT)
        HRL DAT,PROG
        HLRZ TAC,JOBSA(DAT)
        CAMLE TAC,USRREL ;IS HIGHEST DESTINATION STILL IN USER A
        MOVE TAC,USRREL ;NO, MAKE SURE IT IS.
        MOVSS DAT
        ADD TAC,DAT
        ADD DAT,[XWD 30,30] ;MOVE PROGRAM DOWN
        BLT DAT,(TAC)
        MOVE TAC,JOBDDT(JDAT)
        MOVEM TAC,USRDDT
        PUSHJ PDP,SETUSR
        PUSHJ PDP,TTYFNU
        MOVEI TAC1,LDRMES
        PUSHJ PDP,MESPNT
        JRST HOLD

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LDRMES: ASCIZ /
LOADER FINISHED

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01180
01190 INTERNAL STOP1, STOP2, CONT1, START1
01200
01210 PION=200
01220 PIOFF=400
01230
01240 ;ROUTINE TO PUT CURRENT JOB IN IO WAIT
01250 ;ROUTINE TO STOP CURRENT JOB
01260 ;MAY BE CALLED FROM ANY LEVEL
01270 ;CALL; PUSHJ PDP, STOP0
01280 ; RETURN ;RETURN HERE IMMEDIATELY, IF CALLED FRO
01290 ;PRIORITY CHANNEL THAN CLOCK, OTHERWISE RETURN WHEN JOB IS RUNABLE AG
01300
01310 INTERNAL STOP0
01320
000070 200200 000030' 01330 STOP0: MOVE ITEM, JOB ;CURRENT JOB NUMBER
01340
01350 ;ROUTINE TO STOP ANY JOB FROM BEING SCHEDULED
01360 ;CALL:
01370 ; MOVE ITEM, JOB NUMBER
01380 ; PUSHJ PDP, STOP1
01390 ; EXIT ;RETURN HERE IMMEDIATELY, IF CALLED FROM HIGHER
01400 ;PRIORITY CHANNEL THAN CLOCK, OTHERWISE RETURN WHEN JOB IC RUNABLE
01410 ;CALLED WHEN CONTROL C TYPED OR ON ERROR MESSAGES
01420
000071 205040 200000 01430 STOP1: MOVSI TAC, RUN
000072 700600 000400 01440 CONO PI, PIOFF ;DONE AT INTERRUPT LEVEL HIGHER THAN DT
000073 616044 000035' 01450 TDNN TAC, JBTSTS(ITEM) ;IS RUN BIT ON IN JOB STATUS
000074 254000 000105' 01460 JRST STOPA ;NO
000075 413044 000073' 01470 ANDCAB TAC, JBTSTS(ITEM) ;YES, SO CLEAR IT
000076 700600 000200 01480 CONO PI, PION
000077 603040 040000 01490 TLNE TAC, DTW ;WAITING TO USE DECTAPE
000100 370000 000000 01500 SOS DTREQ ;YES, REDUCE REQUEST COUNT
000101 603040 020000 01510 TLNE TAC, DCW ;DATA CONTROL
000102 370000 000000 01520 SOS DCREQ
000103 603040 010000 01530 TLNE TAC,MTW ;MAG TAPE
000104 370000 000000 01540 SOS MTREQ
000105 700600 000200 01550 STOPA: CONO PI, PION ;MAKE SURE PI ON
000106 332000 000000 01560 SKIPE SCHEDF ;IS CLOCK IN THE MIDDLE OF SCHEDULING
000107 254000 000112' 01570 JRST STOP2 ;YES, MAKE SURE THIS JOB WONT RUN
000110 312200 000070' 01580 CAME ITEM, JOB ;NO, IS THIS JOB CURRENT USER
PDP, ;NO
01600 ;YES, MAKE CLOCK RESCHEDULE
01610
01620 ;ROUTINE TO CAUSE CLOCK TO RESCHEDULE
01630 ;CALL :
01640 ; PUSHJ PDP, STOP2
01650 ; EXIT ;RETURN WHEN JOB RUNABLE AGAIN
01660
01670 EXTERNAL PICKL
01680
000112 700600 000400 01690 STOP2: CONO PI, PIOFF ;PREVENT CLOCK INTERRUPT
000113 476000 000000 01700 SETOM STOPU ;SET FLAG FOR CLOCK ROUTINE
000114 700600 000000 01710 CONO PI,PICKL ;REQUEST CLOCK INTERRUPT AND TURN PI ON
01720 ;CLOCK WILL TRAP IMMEDIATELY IF AT UO
000115 263140 000000 01730 POPJ PDP, ;RETURN HERE WHEN JOB RUNABLE AGAIN

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01740
01750 ;SUBROUTINE TO SETUP A MONITOR JOB TO BE RUN
01760 ;JOB MUST HAVE CORE ASSIGNED
01770 ;CALL: MOVE ITEM, JOB NUMBER
01780 ; HRRI TAC1, ADDRESS OF MONITOR JOB(A SUBROUTINE)
01790 ; HRLI TAC1, RETURN ADDRESS WHEN JOB FINISHED
01800 ; PUSH PDP, MONJOB
01810 ; RETURN IMMEDIATELY IF CALLED FROM CLOCK LEV OR HIGHER
01820
01830 ;ALL ACS WILL BE SAVED FOR THE MONITOR JOB
01840
01850 INTERNAL MONJOB
01860 EXTERNAL JOBDAC, JOB DHI, JOBPDP, MJOBPD, JOBPDL, JB TADR
01870
MONJOB: PUSH PDP, TAC1 ;SAVE ARG.
HRRZ JDAT, JB TADR(ITEM) ;ADDRESS OF JOB DATA AREA
MOVEI TAC1, JOBDAC(JDAT) ;SAVE 0-17 IN DUMP ACS
BLT TAC1, JOB DHI(JDAT) ;IN JOB DATA AREA
MOVSI TAC1, MJOBPD ;SET UP PD LIST IN JOB DATA AREA
HRRI TAC1, JOBPDL(JDAT)
HLRZ TAC, (PDP) ;WITH RETURN AS FIRST ITEM
PUSH TAC1, TAC
MOVEI TAC, JOBDAC(JDAT)
MOVEM TAC1, PDP(TAC)
POP PDP, TAC1 ;SET TO RUN
ANDI TAC1, 77777 ;FALL INTO STARTU
02000
02010
02020 ;ROUTINE TO START A JOB AND LEAVE CONSOLE IN COMMAND MODE
02030 ;CALL: MOVE TAC1, START PC
02040 ; MOVE ITEM, JOB NUMBER
02050 ; PUSHJ PDP, STARTU
02060 ; RETURN IMMEDIATELY
02070 INTERNAL STARTM
02080 EXTERNAL TTYURC
02090
STARTM: PUSHJ PDP, START1
JRST TTYURC
02100
02110
02120
02130 ;START WITH TTY IN USER MODE
02140
02150 INTERNAL STARTU
02160 EXTERNAL TTYSET
02170
STARTU: PUSHJ PDP, START1
JRST TTYSET ;SET SCANNER TO CALL SETRUN WHEN
;CR-LF AND INITIALIZE TTY
02200
02210
02220 INTERNAL CONTM
02230 EXTERNAL TTYURC
02240
CONTM: JRST TTYURC
02250
02260
02270 ;ROUTINE TO CONTINUE A JOB FROM COMMAND MODE
02280 ;CALL: MOVE ITEM, JOB NUMBER
02290 ; PUSHJ PDP, CONTU
02300 ; RETURN IMMEDIATELY

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000137 254000 000000

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INTERNAL CONTU
EXTERNAL TTYUSR

CONTU: JRST TTYUSR

;SET SCANNER TO CALL SETRUN WHEN CR-LF

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02360
02370 ;ROUTINE TO SET JOB STATE TO BE SCHEDULED TO RUN
02380 ;WITH SPECIFIED STARTING ADDRESS INCLUDING PC FLAGS
02390 ;CALL: MOVE TAC1,STARTING PC
02400 ;
02410 ; MOVE ITEM, JOB NUMBER
02420 ; MOVE JDAT, ADDRESS OF JOB DATA AREA(THERE MUST BE ONE)
02430 ; PUSHJ PDP, START1
02440 ; EXIT RETURN HERE IMMEDIATELY
02450
000140 200051 000000 02450 START1: MOVE TAC,JOBPC(JDAT) ;GET OLD PC
000141 202111 000140' 02460 MOVEM TAC1,JOBPC(JDAT) ;STORE NEW PC
000142 603100 010000 02470 TLNE TAC1,USRMOD ;IS NEW PC IN USER AREA?
000143 603040 010000 02480 TLNE TAC,USRMOD ;YES, WAS OLD PC IN USER AREA
000144 254000 000150' 02490 JRST START2 ;YES,DUMP ACS ARE HIS
000145 205111 000000 02500 MOVSI TAC1,(JDAT) ;NO, UWO ACS ARE HIS
000146 541111 000126' 02510 HRRI TAC1,JOBDAC(JDAT) ;MOVE THEM TO DUMP ACS
000147 251111 000121' 02520 BLT TAC1,JOBDDHI(JDAT)
000150 205100 172000 02530 START2: MOVSI TAC1,JERR+DCW+DTW+MTW+JIOW ;CLEAR WAIT BITS
000151 412104 000075' 02540 ANDCAM TAC1, JBTSTS(ITEM) ;IN JOB STATUS WORD
02550
02560 ;ROUTINE TO CONTINUE ANY JOB AT CURRENT PC
02570 ;CALL:
02580 ; MOVE ITEM, JOB NUMBER
02590 ; PUSHJ PDP, CONT1
02600 ;
02610 ; EXIT RETURN IMMEDIATELY
02620
000152 263140 000000 02630 CONT1: POPJ PDP,

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02640
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02670
02680 ;ROUTINE TO SET JOB STATUS RUN BIT
02690 ;CALL: MOVE ITEM, JOB NUMBER
02700 ;
02710
02720
02730 SETRUN: INTERNAL SETRUN
02740 MOVSI TAC, RUN
02750 IORB TAC, JBTSTS(ITEM)
02760 TLNN TAC, DCW ;IS JOB WAITING FOR DATA CONTROL?
02770 JRST CONT2 ;NO
02780 AOSG DCREQ ;YES, INCREMENT REQUEST COUNT
02790 SETOM DCAVAL ;AND SET DC AS AVAIL IF NOT IN USE
CONT2: TLNN TAC, DTW ;DECTAPE?
02800 JRST CONT3 ;NO
02810 AOSG DTREQ
02820 SETOM DTAVAL
CONT3: TLNN TAC, MTW ;MAG TAPE?
02830 JRST CONT4
02840 AOSG MTREQ
02850 SETOM MTAVAL
CONT4: TLNE TAC, IOWS ;IO WAIT SATISFIED?
02860 AOS IOCOMP ;YES
02870 MOVEI TAC, QUANT1 ;SET TIME TO RUN FOR STRAIGHT QUEUE COM
02880 HRRM TAC, JBTSTS(ITEM) ;RESPONSE IS FINISHED
02890 SKIPE JOB ;IS NULL JOB RUNNING?
02900 POPJ PDP, ;NO
02910 JRST STOP2 ;YES, RESCHEDULE
02920
02930
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000200	261140	000002	02980
000201	515100	010000	02990
000202	261140	000001	03000
000203	200040	000175'	03010
000204	436101	000174'	03020
000205	260140	000112'	03030
000206	262140	000001	03040
000207	262140	000002	03050
000210	263140	000000	03060
			03070
000211	261140	000002	03080
000212	515100	040000	03090
000213	254000	000202'	03100
			03110
000214	261140	000002	03120
000215	515100	020000	03130
000216	254000	000202'	03140
			03150

,ROUTINES TO INIATE A WAIT FOR MAG TAPE, DECTAPE, AND DATA CONTROL AV

INTERNAL MTTWAIT

MTWAIT: PUSH PDP,TAC1
HRLZI TAC1,MTW

DVWAIT: PUSH PDP, TAC
MOVE TAC,JOB
IORM TAC1,JBTSTS(TAC)
PUSHJ PDP,STOP2
POP PDP,TAC
POP PDP,TAC1
POPJ PDP,

INTERNAL DTWAIT

DTWAIT: PUSH PDP,TAC1
HRLZI TAC1,DTW
JRST DVWAIT

INTERNAL DCWAIT

DCWAIT: PUSH PDP,TAC1
HRLZI TAC1,DCW
JRST DVWAIT

INTERNAL DVWAIT

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03160
03170
03180 ,DEC 06 00 EX JOB L PT PRE 02 SETIOD
03190 ,H.R. MORSE 64-12-26
03200 ,CALLING SEQUENCE
03210 , PUSHJ PDP, SETIOD
03220 , EXIT ALWAYS RETURNS HERE
03230 ,SETS THE BIT (IOWS:=1) IN THE JOB STATUS WORD (JBTSTS)
03240 ,INFORMING THE SYSTEM THAT AN I/O WAIT HAS BEEN COMPLETED
03250 ,AND THE JOB IS READY TO RUN AGAIN.
03260 ,MONITOR INTERFACE
03270 , STORAGE: 6
03280 , SYMBOLS SET/USED:
03290 , ACCUMULATORS: DEVDAT U TAC S/U
03300 , PDP U TAC1 S/U
03310 ,
03320 , DEVICE DATA BLOCK: DEVCHR U
03330 , SYSTEM DATA STORAGE: JBTSTS S/U
03340 , JOB STATUS WORD: IOWS S
03350 , INTERN SETIOD
03360
000217 350000 000172' 03370 SETIOD: AOS IOCOMP
000220 135040 000000 03380 LDB TAC,PJOBN
000221 205100 400000 03390 MOVSI TAC1, IOWS ;SET IO-WAIT SATISFIED BIT
000222 436101 000204' 03400 IORM TAC1, JBTSTS(TAC)
000223 205100 100000 03410 MOVSI TAC1, JIOW ;CLEAR JOB IO-WAIT BIT
000224 412101 000222' 03420 ANDCAM TAC1, JBTSTS(TAC)
000225 336000 000203' 03430 SKIPN JOB ;IS NULL JOB RUNNING
000226 254000 000112' 03440 JRST STOP2 ;YES, FORCE CLOCK TO RE-SCHED
000227 263140 000000 03450 POPJ PDP,; RETURN
  
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			03460
			03470
			03480
			03490
			03500
000230	541040	000000	03510
000231	505040	000000	03520
000232	402000	000231'	03530
000233	251040	000000	03540
000234	205040	000122'	03550
000235	541040	000123'	03560
000236	202040	000000	03570
000237	200440	000000	03580
000240	544051	000046'	03590
000241	552051	000000	03600
000242	263140	000000	03610

;SET CURRENT JOB AREA IN SYSTEM AREA

INTERNAL SETUSR

SETUSR: HRRI TAC,USRLO1
HRLI TAC,USRLO
SETZM USRLO
BLT TAC,USRHI
MOVSI TAC,MJORPD
HRRI TAC,JOBPDL
MOVEM TAC,USRPDP
MOVE JDAT,JOBDAT
HLR TAC,JOBSA(JDAT)
HRRZM TAC,JOBFF(JDAT)
POPJ PDP,

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03620
03630 ,DEC 06 00 EX COM L PT PRE 02 WAIT1,WSYNC
03640 ,H.R. MORSE 64-12-26
03650 ,CALLING SEQUENCE
03660 , PUSHJ PDP, WAIT1
03670 , EXIT ALWAYS RETURNS HERE
03680
03690 ,IF THE DEVICE IS INACTIVE (IOACT=0), RETURNS TO EXIT. OTHERWISE, SET
03700 ,IOW:=1 AND ENTERS WAIT UNLESS IOACT BECOMES ZERO BEFORE THE
03710 ,JUMP IS MADE, IN WHICH CASE IT SETS IOW:=0 AND RETURNS TO EXIT.
03720 ,ON LEAVING THE WAIT STATE, RETURNS TO EXIT.
03730 ,THIS ROUTINE PREVENTS THE STATE IOACT=0 AND IOW=1 FROM OCCURING
03740 ,CALLING SEQUENCE
03750 , PUSHJ PDP, WSYNC
03760 , EXIT ALWAYS RETURNS HERE
03770 ,SETS IOW:=1 AND ENTERS WAIT ROUTINE. RETURNS TO EXIT WHEN IOACT=0.
03780 ,MONITOR INTERFACE
03790 , STORAGE: 13
03800 , ROUTINES CALLED: WAIT
03810 , SYMBOLS SET/USED:
03820 , ACCUMULATORS: DEVDAT U PDP U
03830 , IOS S/U TAC S/U
03840 , DEVICE DATA BLOCK: DEVIOS S/U
03850 , IO STATUS WORD: IOACT U
03860 , IOW S/U
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03870
03880          INTERN WAIT1, WSYNC
03890
03900          ; WAIT1 WAITS UNTIL DEVICE IS COMPLETELY INACTIVE BEFORE RETURNING
03910 WAIT1:      MOVE IOS, DEVIOS(DEV DAT)
03920          TRNN IOS, IOACT          ; IS DEVICE ACTIVE? (IOACT=1?)
03930          POPJ PDP, ;          RETURN
03940          PUSHJ PDP, WSYNC;      WAIT
03950          JRST WAIT1
03960
03970
03980          ; WSYNC IS CALLED TO WAIT UNTIL SETIOD IS CALLED BY INTERRUPT SERVICE
03990          ; IE UNTIL CURRENT BUFFER ACTIVITY IS COMPLETED
04000          ; DEV DAT MUST BE SET UP
04010
04020          PION=200
04030          PIOFF=400
04040
04050
04060          WSYNC:      REPEAT 0, < PUSH PDP, TAC          ; MUST THESE BE SAVED?
04070          PUSH PDP, TAC1
04080          PUSH PDP, DAT>
04090          MOVSI IOS, IOW
04100          MOVSI AC1, JIOW
04110          MOVE AC2, JOB
04120          MOVEI AC3, IOACT
04130          CONO PI, PIOFF          ; TURN PI OFF
04140          TDNN AC3, DEVIOS(DEV DAT) ; IS THE DEVICE ACTIVE?
04150          JRST WSYNC1          ; NO
04160          IORM IOS, DEVIOS(DEV DAT) ; YES, SET DEVICE IO-WAIT BIT
04170          IORM AC1, JBTSTS(AC2)    ; AND JOB IO-WAIT BIT
04180          CONO PI, PION          ; TURN PI ON
04190          PUSHJ PDP, STOP2        ; STOP THIS USER BY FORCING CL
04200          ; RETURN WHEN IO-WAIT FINISHED
04210          WSYNC1:     CONO PI, PION
04220          ANDCAB IOS, DEVIOS(DEV DAT) ; CLEAR DEVICE IO-WAIT BIT
04230          REPEAT 0, < POP PDP, DAT
04240          POP PDP, TAC1
04250          POP PDP, TAC>
04260          POPJ PDP,
04270
04280          END,
000243  200006 000002 03910
000244  606000 010000 03920
000245  263140 000000 03930
000246  260140 000250' 03940
000247  254000 000243' 03950
000250  205000 000001 04090
000251  205640 100000 04100
000252  200700 000225' 04110
000253  201740 010000 04120
000254  700600 000400 04130
000255  616746 000002 04140
000256  254000 000263' 04150
000257  436006 000002 04160
000260  436656 000224' 04170
000261  700600 000200 04180
000262  260140 000112' 04190
000263  700600 000200 04210
000264  413006 000002 04220
000265  263140 000000 04260
000266  331102 000001 04280
000267  000030 000030

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THERE ARE NO ERRORS

PROGRAM BREAK IS 000270

RUNCSS - RUN CONTROL SUBROUTINES
 SYMBOL TABLE

A	000000	INT
AC1	000015	INT
AC2	000016	INT
AC3	000017	INT
AL	000001	INT
APRCHL	000000	EXT
APRCHN	000000	EXT
ASSCON	400000	INT
ASSPRG	200000	INT
R	000014	INT
BUFPNT	000012	INT
BUFWRD	000013	INT
CH1XIT	000021'	EXT
CH2XIT	000022'	EXT
CH3XIT	000023'	EXT
CH4XIT	000024'	EXT
CH5XIT	000025'	EXT
CH6SAC	000000	EXT
CH6XIT	000026'	EXT
CH7XIT	000027'	EXT
CHNTAB	000020'	
CLOSB	002000	INT
CLSIN	000002	INT
CLSOUT	000001	INT
CONT1	000152'	INT
CONT2	000161'	
CONT3	000165'	
CONT4	000171'	
CONTM	000136'	INT
CONTU	000137'	INT
CRLF	000032'	EXT
D	000017	INT
DAT	000005	INT
DCAVAL	000160'	EXT
DCL	000001	INT
DCREQ	000157'	EXT
DCW	020000	INT
DCWAIT	000214'	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
DEVMOD	000004	INT
DEVNAM	000000	INT
DEVOAD	000010	INT
DEVPTR	000010	INT

RUNCSS - RUN CONTROL SUBROUTINES
 SYMBOL TABLE

PAGE 17

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	000164'	EXT
DTREQ	000163'	EXT
DTW	040000	INT
DTWAIT	000211'	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
DVWAIT	000202'	INT
ENTRB	020000	INT
ESTOP	000034'	INT
EXIT	000000'	INT
EXMESS	000005'	
HOLD	000030'	INT
HOLDI	000012'	INT
HOLDI1	000014'	INT
HOLDSB	000032'	
I	000010	INT
IB	000013	INT
IBUFB	200000	INT
INTR	400000	INT
INPB	010000	INT
IO	000020	INT
IOACT	010000	INT
IOREG	000002	INT
IOBKTL	040000	INT
IOCOMP	000217'	EXT
IOCON	000040	INT
IODEND	020000	INT
IODERR	200000	INT
IODISC	400000	INT
IODONE	400000	INT
IODTER	100000	INT
IOFND	000040	INT
IOFST	000004	INT
IOIMPM	400000	INT
IOKILL	000007'	EXT
IONRCK	000100	INT
IORDEL	000100	INT
IORELS	000037'	EXT
IORET	000020	INT

RUNCSS - RUN CONTROL SUBROUTINES
 SYMBOL TABLE

IOS	000000	INT
IOSTRT	000010	INT
IOUSE	400000	INT
IOW	000001	INT
IOWC	000020	INT
IOWS	400000	INT
ITFM	000004	INT
JBFADR	000000	INT
JBFCTR	000002	INT
JBFPTR	000001	INT
JBTADR	000117'	EXT
JBTSTS	000260'	EXT
JBUF	000005	INT
JDAT	000011	INT
JERR	002000	INT
JIOW	100000	INT
JNA	004000	INT
JOB	000252'	EXT
JOBAC	000000	EXT
JOBADR	000000	EXT
JORCDP	000000	EXT
JORDAC	000146'	EXT
JORDAT	000237'	EXT
JORDDT	000055'	EXT
JORDHI	000147'	EXT
JOFF	000241'	EXT
JORN	000000	EXT
JOBPC	000141'	EXT
JORPDL	000235'	EXT
JORPDP	000000	EXT
JORREL	000000	EXT
JORSA	000240'	EXT
JORSYM	000044'	EXT
LDRBLT	000037'	INT
LDRMES	000064'	
LOOKB	040000	INT
MESPNT	000062'	EXT
MJOBPD	000234'	EXT
MONJOB	000116'	INT
MTAVAL	000170'	EXT
MTREQ	000167'	EXT
MTW	010000	INT
MTWAIT	000200'	INT
OBUIB	100000	INT
OUTPB	004000	INT
PDP	000003	INT
PGADR	000002	
PICLN	000100	INT
PICKL	000114'	EXT
PIOFF	000400	
PION	000200	
PJOBN	000220'	EXT
PROG	000007	INT
QUANT1	000173'	EXT
RESET	000007'	INT

RUNCSS - RUN CONTROL SUBROUTINES
SYMBOL TABLE

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RSCHED	000020'	EXT
RUN	200000	INT
RUNABL	204000	INT
SCHEDF	000106'	EXT
SETIOD	000217'	INT
SETRUN	000153'	INT
SETUSR	000230'	INT
START1	000140'	INT
START2	000150'	
STARTM	000132'	INT
STARTU	000134'	INT
STOP0	000070'	INT
STOP1	000071'	INT
STOP2	000112'	INT
STOPA	000105'	
STOPU	000113'	EXT
TAC	000001	INT
TAC1	000002	INT
TEM	000010	INT
TTYATC	020000	INT
TTYFNU	000060'	EXT
TTYSET	000135'	EXT
TTYSTR	000033'	EXT
TTYURC	000136'	EXT
TTYUSE	010000	INT
TTYUSR	000137'	EXT
USRDDT	000056'	EXT
USRHI	000233'	EXT
USRLO	000232'	EXT
USRLO1	000230'	EXT
USRMOD	010000	INT
USRDPD	000236'	EXT
USRREL	000050'	EXT
UUO	000014	INT
UXIT	000011'	EXT
WAIT1	000243'	INT
WSYNC	000250'	INT
WSYNC1	000263'	

END OF ASSEMBLY