

00010

XLIST

01970
00010

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00040
00050 EXTERN SETIOD, ADVBFE, ADVBFF, JBTADR, CLRBYT,STTYB1
00060 EXTERN SCNCHN, COMCNT, SCNSAV, SCNRET,STOP1, DEVLST,TTYTAB
00070 INTERN SCNINI
00080
00090 ;TTYPTR=DEVOAD+1
00100 ;TTYCTR=TTYPTR+1
00110 ;TTYBUF=TTYCTR+1
00120 PION=200 ;TURN PI ON BIT
00130 PIOFF=400 ;TURN PI OFF BIT
00140 ;SCNDDB ;NUMBER OF DEVICE DATA BLOCKS
00150 ;STTYBF7 ;SIZE OF TELETYPE BUFFER
00160 CHREC=TEM ;AC FOR CHARACTER
00170 VPOS=ITEM ;VERTICAL POSITION OF TELETYPE
00180 HPOS=VPOS+1 HORIZONTAL POS.
00190 DDB=DEV DAT
00200 LINE=TAC1 ;AC THAT HOLDS SCANNER LINE NUMBER
00210 SYNC=40000 ;1 WHEN A BUFFER IS READY TO TRANSFER
00220 DETH=10000 ;1 IF TTY DETACHED AND OUTPUT WAITING
00230 NIO=20000 ;STOP ALL IO
00240 TOUT=IO ;OUTPUT IN PROGRESS
00250 NCERR=IOBKTL ;CHARACTERS LOST ON TYPE IN
00260 DCHAR=177 ;DELETE CHARACTER
00270 ECHOF=IODTER ;ECHO FAILURE OCCURED
00280 TPMON=1000 ;IO IS FROM MONITOR
00290 SP=2000 ;SPECIAL TELETYPE CHAR. IS BEING INTERPRETED
00300 DDTM=100000 ;DDT MODE
00310 T35=4000 ;TELETYPE HAS TAB,FF,VT,ETC. MECHANISM
00320 USRB=100 ;TURN OFF TPMON WHEN OUTPUT IS FINISHED
00330 USRBC=20000 ;RT HALF MONITOR IOS WORD, REMAIN IN MONITOR MODE
00340 INTERNAL SCNINT,CTYINT,TTYUSR,TTYURC
00350 ENTRY TTYDSP
00360 EXTERN TSCNLN, TCONLN, MTTYLN, CPOPJ1
00370 EXTERN CPOPJ
00380 EXTERN FSNCHN, SCNCHL, OUT, PUUOAC, PJOBN, PUNIT, PIOMOD
00390 INTERNAL DDTGT, DDTRL, DDTIN, DDTOUT, TTYFND, TTYSTR, TTYFNU
00400 EXTERNAL WAIT1, WSYNC, CLRBYT, JOB, CLDS, CLEN, TTYBFE, TTYBM1
00410 EXTERNAL UXIT, ADRCK, TTYSAV, DEVPHY, DEVOPR
00420 EXTERNAL TTYCTR, TTYPTR, TTYBUF, TTYLST, MLTTYL, SETRUN, STTYBF, TTY0DB
00430
000000 270706 000007 00440 PHPOS: POINT 7,DEVIAD(DEV DAT),12 ;POINTER HORIZONTAL POSITION
000001 270506 000010 00450 PVPOS: POINT 5,DEVOAD(DEV DAT),12 ;POINTER VERTICAL POSITION
000002 340706 000010 00460 PLASTC: POINT 7,DEVOAD(DEV DAT),7 ;POINTER TO LAST CHARACTER OU
000003 360606 000007 00470 PSCHAR: POINT 6,DEVIAD(DEV DAT),5 ;POINTER TO ↑C OR ↑O
00480
000004 321102 000000 00490 TPCJOBN: POINT 9,TTYTAB(LINE),9 ;CONSOLE NUMBER FOR TTY

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00500
00510
000005 201040 100000 00520
000006 712200 000000 00530
000007 730200 004010 00540
000010 730300 001000 00550
000011 730200 004000 00560
000012 730300 000010 00570
000013 730440 000002 00580
000014 367040 000010 00590
000015 201040 000000 00600
000016 712201 003600 00610
000017 730200 000000 00620
000020 205040 000000 00630
000021 205240 010000 00640
000022 205000 001004 00650
000023 201300 000000 00660
000024 616246 000004 00670
000025 402006 000000 00680
000026 202006 000002 00690
000027 402006 000000 00700
000030 412246 000004 00710
000031 554306 000003 00720
000032 253040 000024 00730
000033 205040 000000 00740
000034 205100 010000 00750
000035 332301 000004 00760
000036 436106 000004 00770
000037 253040 000035 00780
000040 263140 000000 00790

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SCNINI:  MOVEI TAC,100000
         CONO TTY,0           ;SHUT DOWN CONSOLE TTY
         CONO DCSA,4010      ;RELEASE XMITTER,RECEIVER
         CONSZ DCSA, 1000
         CONO DCSA, 4000
         CONSZ DCSA, 10
         DATAI DCSB, TAC1
         SOJG TAC,.-4
         MOVEI TAC,SCNCHN
         CONO TTY,3600(TAC)  ;CLEAR TTY,ASSIGN CHANNEL
         CONO DCSA,FSNCHN   ;ASSIGN INTERRUPT CHANNELS
         MOVSI TAC,MLTTYL    ;NO. OF TTY DEV. DATA BLOCKS
         MOVSI DAT,TTYUSE    ;TTY DDB IN USE BIT
         MOVSI IOS,TPMON+IOFST ;VIRGIN STATUS
         MOVEI DDB,TTYLST    ;FIRST TTY DDB ADDRESS
SCN1:    TDNN DAT,DEVMOD(DDB) ;IS THIS TTY DDB IN USE?
         SETZM DEVNAM(DDB)   ;NO, SET NAME TO 0
         MOVEM IOS,DEVIOS(DDB)
         SETZM TTYSAV(DDB)   ;CLEAR USER MODE TTY STATUS WORD
         ANDCAM DAT,DEVMOD(DDB) ;CLEAR USE BIT
         HLRZ DDB,DEVSER(DDB) ;GET NEXT TTY DDB
         AOBJN TAC,SCN1
         MOVSI TAC,MTTYLN    ;SET DDB USE BITS FROM TRANSLATOR TABLE
         MOVSI TAC1,TTYUSE
SCN2:    SKIPE DDB,TTYTAB(TAC)
         IORM TAC1,DEVMOD(DDB)
         AOBJN TAC,SCN2
         POPJ PDP,

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			00800	
			00810	;ROUTINE TO RETURN TTY TO VIRGIN STATE
			00820	;CALL: MOVE DDB, ADDRESS OF DEVICE DATA BLOCK
			00830	; PUSHJ PDP,TTYKIL
			00840	
			00850	INTERNAL TTYKIL
			00860	
000041	200040	001144'	00870	TTYKIL: MOVE TAC,[XWD TTYUSE+TTYATC,ASSCON+ASSPRG]
000042	412046	000004	00880	ANDCAM TAC,DEVMOD(DEVDAT) ;CLEAR DDB USE BIT
000043	402006	000000	00890	SETZM DEVNAM(DEVDAT) ;CLEAR PHYSICAL NAME
000044	402006	000005	00900	SETZM DEVLOG(DEVDAT) ;CLEAR LOGICAL NAME
000045	254000	000052'	00910	JRST TTYDT1
			00920	
			00930	;ROUTINE TO DETACH TTY FROM JOB
			00940	;CALL: MOVE DEVDAT,ADDRESS OF TTY DDB TO BE DETACHED
			00950	
			00960	INTERNAL TTYDET
			00970	
000046	200046	000004	00980	TTYDET: MOVE TAC,DEVMOD(DEVDAT)
000047	627040	020000	00990	TLZN TAC,TTYATC ;WAS TTY ATTACHED?
000050	254000	000041'	01000	JRST TTYKIL ;NO, SO RETURN DDB TO POOL
000051	202046	000004	01010	MOVEM TAC,DEVMOD(DEVDAT) ;YES, JUST CLEAR ATTACH BIT
000052	135100	000000	01020	TTYDT1: LDB LINE,PUNIT
000053	402002	000035'	01030	SETZM TTYTAB(LINE)
000054	263140	000000	01040	POPJ PDP,
			01050	
			01060	
000055	000000	000000	01070	CCHAR: 0 ;HOLDS CHARACTER FOR CONSOLE TELETYPE
			01080	;CONTROL C - GO BACK TO MONITOR
			01090	;CONTROL 0 - SUPPRESS OUTPUT
			01100	
000056	334040	001145'	01110	TTYURC: SKIPA TAC,[XWD USRB,USRBC] ;START JOB BUT REMAIN IN MONI
000057	205040	000100	01120	TTYUSR: MOVSI TAC,USRB ;CAUSE TTY TO GO INTO
000060	436046	000002	01130	IORM TAC,DEVIOS(DEVDAT) ;USER MODE WHEN
000061	263140	000000	01140	POPJ PDP, ;OUTPUT FINISHES
			01150	
			01160	INTERNAL TTYSET
			01170	
000062	205040	000004	01180	TTYSET: MOVSI TAC,IOFST ;INITIALIZE USER TTY IOS WORD
000063	202046	000027'	01190	MOVEM TAC,TTYSAV(DEVDAT) ;FOR START COMMAND
000064	254000	000057'	01200	JRST TTYUSR

			01210	
			01220	;ROUTINE TO ATTACH TTY TO A JOB
			01230	;CALL: MOVE DEVDAT,ADDRESS OF TTY DEVICE DATA BLOCK
			01240	; MOVE ITEM,JOB NUMBER
			01250	; PUSHJ PDP,TTYATT
			01260	; ERROR ;DEVDAT=DDB ADR OF OTHER TTY
			01270	; ;IF ANOTHER ALREADY IS ATTACHED.
			01280	; OK RETURN ;DEVDAT, DAT AND TRANSLATOR TABLE SET
			01290	
			01300	INTERNAL TTYATT
			01310	
000065	135100	000052'	01320	TTYATT: LDB LINE,PUNIT ;LINE NO. OF THIS TTY
000066	201300	000023'	01330	MOVEI DEVDAT,TTYLST ;SEARCH FOR DDB THAT IS ATTACHED
000067	334000	000000	01340	SKIPA
000070	554306	000003	01350	TTYAT2: HLRZ DEVDAT,DEVSER(DEVDAT)
000071	322300	000115'	01360	JUMPE DEVDAT,TTYAT4
000072	135040	000000	01370	LDB TAC,PJOBN ;JOB NUMBER
000073	500046	000004	01380	HLL TAC,DEVMOD(DEVDAT) ;ATTACH AND USE BITS
000074	607040	000010	01390	TLNN TAC,DVTTY ;IS THIS STILL A TTY DDB?
000075	254000	000115'	01400	JRST TTYAT4 ;NO, THIS MUST BE IJOB
000076	306201	000000	01410	CAIN ITEM,(TAC) ;JOB NUMBER THE ONE TO ATTACH?
000077	607040	010000	01420	TLNN TAC,TTYUSE ;YES, IS IT THE DETACHED ONE?
000100	254000	000070'	01430	JRST TTYAT2 ;NO, KEEP LOOKING
000101	603040	020000	01440	TLNE TAC,TTYATC ;IS SOME TTY ALREADY ATTACHED?
000102	263140	000000	01450	POPJ PDP, ;YES, ERROR RETURN WITH DEVDAT SET
000103	261140	000006	01460	PUSH PDP,DEVDAT ;SAVE NEW DDB ADDRESS
000104	200302	000053'	01470	MOVE DEVDAT,TTYTAB(LINE)
000105	200046	000004	01480	MOVE TAC,DEVMOD(DEVDAT)
000106	260140	000046'	01490	PUSHJ PDP,TTYDET ;DETACH DDB FROM TTY
000107	262140	000006	01500	POP PDP,DEVDAT
000110	137200	000004'	01510	TTYAT3: DPB ITEM,TPCJOBN ;STORE ATTACHED JOB NO.
000111	137200	000072'	01520	DPB ITEM,PJOBN ;SET JOB NUMBER
000112	205040	020000	01530	MOVSI TAC,TTYATC ;SET ATTACHED BIT
000113	260140	000247'	01540	PUSHJ PDP,TTYDAT ;SETUP OUTPUT BYTE
000114	254000	000411'	01550	JRST SCIN ;GO INITIALIZE DDB
			01560	
000115	200302	000104'	01570	TTYAT4: MOVE DEVDAT,TTYTAB(LINE) ;RESTORE OLD DDB ADDRES
000116	254000	000110'	01580	JRST TTYAT3

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01590
01600 ;ROUTINE TO SETUP AC DEVDAT TO ADDRESS OF TTY WHICH HAS TYPED A COMMA
01610 ;AC DAT TO BYTE POINTER TO OUTPUT BUFFER FOR COMMAND MESSAGES
01620 ;AC TAC TO BYTE POINTER TO COMMAND STRING
01630 ;AC ITEM TO JOB NUMBER TTY IS ATTACHED TO
01640 ;CALL:   PUSHJ PDP,TTYCOM
01650 ;       NONE FOUND
01660 ;       ACS SETUP
01670
INTERNAL TTYCOM
01680
01690
000117 205100 000033' 01700 TTYCOM:  MOVSI LINE,MTTYLN
000120 331002 000115' 01710         SKIPL TTYTAB(LINE)
000121 253100 000120' 01720         AOBJN LINE,.-1
000122 327100 000000 01730         JUMPG LINE,CPOPJ
000123 205300 400000 01740         MOVSI DEVDAT,400000
000124 413302 000120' 01750         ANDCAB DEVDAT,TTYTAB(LINE)
000125 205240 440700 01760         MOVSI DAT,440700
000126 271246 000000 01770         ADDI DAT,TTYBUF(DEVDAT)
000127 200040 000005 01780         MOVE TAC,DAT
01790
01800 ;FALL INTO TTYJOB
01810
01820 ;ROUTINE TO RETURN IN AC ITEM JOB NUMBER WHICH TTY IS ATTACHED TO
01830 ;CALL:   MOVE DEVDAT,ADDRESS OF TTY DEVICE DATA BLOCK
01840
INTERNAL TTYJOB
01850
01860
000130 135100 000065' 01870 TTYJOB:  LDB LINE, PUNIT
000131 135200 000004' 01880         LDB ITEM,TPCJOBN
000132 254000 000000 01890         JRST CPOPJ1
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01900
01910 ;TELETYPE SCANNER UUO ROUTINES
01920 ;FOR DDT
01930
01940
01950 ;DDTGT WAITS FOR OUTPUT TO COMPLETE THEN PUTS
01960 ;TELETYPE INTO DDT MODE
01970
000133 260140 000231' 01980 DDTGT:   PUSHJ PDP,TTYSR1           ;FIND DEVICE DATA BLOCK
000134 200006 000002 01990           MOVE IOS,DEVIOS(DEVDAT)
000135 607000 100000 02000           TLNN IOS,DDTM
000136 607000 000020 02010           TLNN IOS,IO           ;OUTPUT IN PROGRESS?
000137 254000 000141' 02020           JRST DDTGT2          ;NO
                                ;           PUSHJ PDP,OUT           ;MAKE SURE OUTPUT STARTED
                                ;           PUSHJ PDP,WAIT1        ;WAIT FOR OUTPUT TO FINISH
000140 260140 000000 02040 DDTGT2:  TLO IOS,DDTM       ;SET DDT MODE BIT
000141 661000 100000 02050           MOVEM IOS,DEVIOS(DEVDAT)
000142 202006 000002 02060           JRST UXIT
000143 254000 000000 02070
                                ;RELEASE TELETYPE FROM DDT MODE
                                ;MAKE SURE OUTPUT IS FINISHED FIRST
02080
02090
02100
02110
000144 260140 000231' 02120 DDTRL:   PUSHJ PDP,TTYSR1           ;FIND DEVICE DATA BLOCK
000145 200006 000002 02130           MOVE IOS,DEVIOS(DEVDAT)
000146 603000 000020 02140           TLNE IOS,IO           ;OUTPUT IN PROGRESS?
000147 260140 000140' 02150           PUSHJ PDP,WAIT1        ;YES, WAIT
000150 205000 140000 02160           MOVSI IOS,DDTM+SYNC
000151 412006 000002 02170           ANDCAM IOS,DEVIOS(DEVDAT) ;TURN OFF DDT BIT
000152 254000 000143' 02180           JRST UXIT

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			02190		
			02200		
			02210		; INPUT TO DDT
			02220		; CALL AC, [SIXBIT /DDTIN/] AC CONTAINS POINTER TO BUFFER AREA
			02230		; BUFFER AREA MUST BE 21 WORDS LONG
			02240		
000153	260140	000231'	02250	DDTIN:	PUSHJ PDP,TTYSR1 ;SET UP DEVDAT
000154	200006	000002	02260		MOVE IOS,DEVIOS(DEV DAT)
000155	603000	000020	02270		TLNE IOS,IO ;OUTPUT IN PROGRESS
000156	260140	000147'	02280		PUSHJ PDP,WAIT1 ;YES, WAIT
000157	200006	000002	02290	DDTIN2:	MOVE IOS,DEVIOS(DEV DAT)
000160	603000	000040	02300		TLNE IOS,IOEND ;BUFFER READY?
000161	254000	000166'	02310		JRST DDTIN3 ;YES
000162	201000	010000	02320		MOVEI IOS,IOACT
000163	436006	000002	02330		IORM IOS,DEVIOS(DDB)
000164	260140	000000	02340		PUSHJ PDP,WSYNC ;NO, WAIT
000165	254000	000157'	02350		JRST DDTIN2
			02360		
000166	205040	120004	02370	DDTIN3:	MOVSI TAC,NIO+IOFST+DDTM
000167	436046	000002	02380		IORM TAC,DEVIOS(DEV DAT) ;STOP ALL IO
000170	200046	000000	02390		MOVE TAC,TTYPTR(DEV DAT)
000171	260140	000000	02400		PUSHJ PDP,CLRBYT ;CLEAR OUT REMAINING BYTES
000172	275046	000000	02410		SUBI TAC,TTYBM1(DEV DAT) ;NUMBER OF WORDS
000173	135100	000000	02420		LDB TAC1,PUUOAC ;PICK UP AC NUMBER
000174	271107	000000	02430		ADDI TAC1,(PROG) ;FIND REAL ADDRESS
000175	200102	000000	02440		MOVE TAC1,(TAC1) ;PICK UP POINTER
000176	271107	000000	02450		ADDI TAC1,(PROG) ;FIND REAL ADDRESS OF BUFFER
000177	505106	000126'	02460		HRLI TAC1,TTYBUF(DEV DAT)
000200	271042	000000	02470		ADDI TAC,(TAC1)
000201	251101	000000	02480		BLT TAC1,(TAC) ;TRANSFER MONITOR BUFFER TO U
000202	402001	000001	02490		CLEARM 1(TAC) ;MAKE SURE THERE ARE SOME NUL
000203	205040	020040	02500		MOVSI TAC,NIO+IOEND
000204	412046	000002	02510		ANDCAM TAC,DEVIOS(DEV DAT)
000205	254000	000152'	02520		JRST UXIT
			02530		

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000206 260140 000231'
000207 200006 000002
000210 603000 000020
000211 260140 000156'
000212 200000 001146'
000213 437006 000002
000214 135040 000173'
000215 505040 000011
000216 540060 000001
000217 505060 000001
000220 541046 000177'
000221 552046 000000
000222 200100 000001
000223 251042 000020
000224 505100 440700
000225 202106 000170'
000226 621000 020004
000227 260140 000303'
000230 254000 000205'

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;OUTPUT FROM DDT
;CALL AC,[SIXBIT /DDTOUT/]      AC HAS POINTER TO DDT OUTPUT BUFFER

DDTOUT:  PUSHJ PDP,TTYSR1
         MOVE IOS,DEVIOS(DEVDAT)
         TLNE IOS,IO              ;OUTPUT IN PROGRESS?
         PUSHJ PDP,WAIT1          ;YES, WAIT
         MOVE IOS,[XWD NIO+TOUT+DDTM,IOACT]
         IORB IOS,DEVIOS(DEVDAT)
         LDB TAC,PUUOAC           ;PICK UP AC NUMBER
         HRLI TAC,JDAT            ;CALC REAL ADDRESS OF AC
         HRR TAC,@TAC             ;PICK UP AC
         HRLI TAC,@TAC           ;CALC REAL ADDRESS OF DDT BUF
         HRRZM TAC,TTYCTR(DDB)    ;A SUITABLY LARGE NUMBER
         MOVE TAC1,TAC
         BLT TAC,20(TAC1)         ;MOVE DDT BUFFER TO MONITOR
         HRLI TAC1,440700

         MOVEM TAC1,TTYPTR(DEVDAT)
         TLZ IOS,NIO+IOFST
         PUSHJ PDP,TTYOU0
         JRST UXIT

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02790
02800
02810
000231 200200 000000 02820 TTYSR1: MOVE ITEM, JOB
000232 205100 000117' 02830 TTYSRC: MOVSI LINE, MTTYLN
000233 550302 000124' 02840 HRRZ DEVDAT, TTYTAB(LINE)
000234 322300 000240' 02850 JUMPE DEVDAT, TTYF0
000235 135040 000004' 02860 LDB TAC, TPCJOBN
000236 306044 000000 02870 CAIN TAC, (ITEM)
000237 263140 000000 02880 POPJ PDP, ;FOUND
000240 253100 000233' 02890 TTYF0: AOBJN LINE, TTYSRC+1
000241 205040 576062 02900 MOVSI TAC, 576062 ;SIXBIT /OPR/
000242 254000 000000 02910 JRST DEVPHY ;SEARCH PHYSICAL DEVICE NAMES
02920 ;AND RETURN OPERATOR TTY.
02930
02940 ;ROUTINE TO FIND TTY FOR A JOB
02950 ;CALL: MOVE ITEM, JOB NUMBER
02960 ; PUSHJ PDP, TTYFND
02970 ; ERROR RETURN
02980 ; RETURN WITH DEVDAT SET TO ADR OF DDB
02990 ; AND DAT SET TO BYTE POINTER TO MONITOR OUTPUT BUFFER
03000
03010
000243 200200 000231' 03020 TTYFNU: MOVE ITEM, JOB
000244 260140 000232' 03030 TTYFND: PUSHJ PDP, TTYSRC ;CALLED BY PUSHJ PDP, TTYFND
03040 ; PUSHJ PDP, WSYNC
03050 MOVSI TAC, NIO ;JOB NUMBER IN TAC1
000245 205040 020000 03060 IORM TAC, DEVIOS(DEVDAT)
000246 436046 000002 03070 TTYDAT: MOVEI DAT, TTYBUF(DEVDAT) ;SETUP OUTPUT BYTE POINTER
000247 201246 000220' 03080 HRLI DAT, 440700
000250 505240 440700 03090 POPJ PDP,
000251 263140 000000 03100
000252 200040 000005 03110 TTYSTR: MOVE TAC, DAT
000253 260140 000171' 03120 PUSHJ PDP, CLRBYT
000254 275046 000172' 03130 SUBI TAC, TTYBM1(DEVDAT)
000255 405040 777777 03140 ANDI TAC, -1
000256 221040 000005 03150 IMULI TAC, 5
000257 202046 000221' 03160 MOVEM TAC, TTYCTR(DEVDAT)
000260 201046 000247' 03170 MOVEI TAC, TTYBUF(DEVDAT)
000261 505040 440700 03180 HRLI TAC, 440700
000262 202046 000225' 03190 MOVEM TAC, TTYPTR(DEVDAT)
000263 200006 000002 03200 MOVE IOS, DEVIOS(DEVDAT)
000264 434000 001147' 03210 IOR IOS, [XWD TOUT+TPMON, IOACT]
000265 420000 001150' 03220 ANDCM IOS, [XWD NIO+IOFST, IODTER+IOBKTL]
000266 260140 000771' 03230 PUSHJ PDP, GCHAR
000267 263140 000000 03240 POPJ PDP, ;NOTHING TO TYPE
000270 254000 000311' 03250 JRST TTYOU2 ;START OUTPUT
03260
03270 ;DISPATCH TABLE
03280
000271 263140 000000 03290 TTYDSP: POPJ PDP, ;RELEASE
000272 254000 000000 03300 JRST OUT ;CLOSE
000273 254000 000301' 03310 JRST TTYOUT ;OUTPUT
000274 630000 001151' 03320 TDZ IOS, [XWD TPMON, ECHOF+NCERR] ;INPUT
000275 660000 010000 03330 TRO IOS, IOACT
000276 623000 000002 03340 TLZE IOS, IOBEG
000277 661000 000004 03350 TLO IOS, IOFST

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000300	254000	001133'	03360	JRST MIS1	
			03370		
			03380		
000301	670000	001152'	03390	TTYOUT:	TDO IOS,[XWD TOUT+IOFST,IOACT]
000302	630000	001151'	03400		TDZ IOS,[XWD TPMON,ECHOF+NCERR]
000303	135240	000000'	03410	TTYOU0:	LDB HPOS,PHPOS
000304	135200	000001'	03420		LDB VPOS,PVPOS
000305	260140	000771'	03430		PUSHJ PDP, GCHAR
000306	263140	000000'	03440		POPJ PDP,
000307	137240	000000'	03450		DPB HPOS,PHPOS
000310	137200	000001'	03460		DPB VPOS,PVPOS
000311	135100	000130'	03470	TTYOU2:	LDB LINE,PUNIT
000312	700200	000000'	03480		CONO CLDS ;DISABLE CLOCK
000313	306100	000000'	03490		CAIN LINE,TCONLN
000314	254000	000325'	03500		JRST CTYOUT
000315	730200	000000'	03510		CONO DCSA,0 ;DISABLE SCANNER
000316	730602	000000'	03520		CONO DCSB, (LINE)
000317	730140	000010'	03530		DATAO DCSA, CHREC
000320	730200	000017'	03540		CONO DCSA,FSNCHN
000321	137400	000002'	03550		DPB CHREC,PLASTC
000322	700200	000000'	03560	TTYOU1:	CONO CLEN ;RE-ENABLE CLOCK
000323	202006	000002'	03570		MOVEM IOS,DEVIOS(DEV DAT)
000324	263140	000000'	03580		POPJ PDP,
			03590		
000325	712200	000000'	03600	CTYOUT:	CONO TTY,0 ;DISABLE TTY
000326	712140	000010'	03610		DATAO TTY,CHREC
000327	202400	000055'	03620		MOVEM CHREC,CCHAR
000330	712200	000015'	03630		CONO TTY,SCNCHN ;RE-ENABLE
000331	254000	000322'	03640		JRST TTYOU1
			03650		
000332	712340	000050'	03660	CTYINT:	CONSO TTY,50
000333	254000	000333'	03670		JRST .
000334	712340	000040'	03680		CONSO TTY,40
000335	254000	000347'	03690		JRST CTYOU1
000336	202040	000055'	03700		MOVEM TAC, CCHAR ;DONT ECHO RUBOUT
000337	712040	000001'	03710		DATAI TTY, TAC
000340	405040	000177'	03720		ANDI TAC, 177
000341	306040	000177'	03730		CAIN TAC, 177
000342	254000	000346'	03740		JRST CTYRUB ;IS A RUBOUT
000343	712140	000001'	03750		DATAO TTY, TAC ;NOT, SO ECHO
000344	250040	000055'	03760		EXCH TAC, CCHAR
000345	254520	000000'	03770		JRST 12,@SCNCHL ;DISMISS INTERRUPT
			03780		
000346	250040	000055'	03790	CTYRUB:	EXCH TAC, CCHAR
000347	264000	000000'	03800	CTYOU1:	JSR SCNSAV
000350	201400	000330'	03810		MOVEI CHREC,SCNCHN
000351	712210	000200'	03820		CONO TTY,200(CHREC)
000352	200400	000055'	03830		MOVE CHREC,CCHAR
000353	201100	000313'	03840		MOVEI LINE,TCONLN
000354	254000	000364'	03850		JRST TCOMM
			03860		
000355	730340	001010'	03870	SCNINT:	CONSO DCSA,1010
000356	254000	000356'	03880		JRST .
000357	264000	000347'	03890		JSR SCNSAV
000360	730340	000010'	03900		CONSO DCSA,10 ;RECEIVER FLAG?
000361	254000	000440'	03910		JRST SCNIN1 ;NO,XMITTER FLAG
000362	730640	000002'	03920		CONI DCSB, LINE
000363	730440	000010'	03930		DATAI DCSB, CHREC
000364	405400	000177'	03940	TCOMM:	ANDI CHREC, 177
000365	303100	000353'	03950		CAILE LINE,TCONLN ;CTY LINE OR LESS?

000366	254000	000450'	03960
000367	332302	000233'	03970
000370	254000	000462'	03980
000371	260140	000400'	03990
000372	254000	000450'	04000
000373	403240	000004	04010
000374	730300	000700	04020
000375	306100	000365'	04030
000376	254000	000575'	04040
000377	254000	000511'	04050

JRST TYPX	;NO
SKIPE DDB,TTYTAB(LINE)	;DATA BLOCK ASSIGNED?
JRST INUSE	;YES
PUSHJ PDP,DDBSRC	;SEARCH FOR FREE TTY DEV. DATA BLOCK
JRST TYPX	;NONE FOUND, TYPE X
CLEARB HPOS,VPOS	;ASSUME TTY IS AT BEGIN OF FORM
CONSZ DCSA,700	;FULL DUPLEX?
CAIN LINE,TCOINLN	;CTY?
JRST INJEST	;NO, SWALLOW CHAR
JRST TYP1	

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04060
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04100
04110
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04180
04190
04200
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04220
04230
04240
04250
04260
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04310
04320
04330
04340
04350
04360
04370
04380
04390
04400
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04460
04470
04480
04490
04500
04510
04520
04530
04540
04550
04560
04570
04580
04590
000400 205000 000020'
000401 201300 000066'
000402 334040 001144'
000403 554306 000003
000404 612046 000004
000405 253000 000403'
000406 325000 000122'
000407 200000 001153'
000410 200040 001154'
000411 436046 000004
000412 137100 000311'
000413 205040 646471
000414 202046 000000
000415 200040 001155'
000416 261140 000002
000417 606100 000070
000420 254000 000425'
000421 241100 777775
000422 271100 000020
000423 136100 000001
000424 242100 000020
000425 271100 000020
000426 136100 000001
000427 262140 000002
000430 542302 000367'
000431 205040 436471
000432 306100 000375'
000433 202046 000000
000434 200046 000000
000435 336000 000000
000436 202040 000435'
000437 254000 000132'
000440 730040 000002
000441 201040 000320'
000442 730201 004000
000443 332302 000430'
000444 301100 000432'
000445 254000 000000
000446 135400 000002'
000447 254000 000471'

```

```

;ROUTINE TO SEARCH FOR FREE TTY DEV DATA BLOCK
;CALL:  MOVE LINE,TTY LINE NO
;       PUSHJ PDP,DDBSRC
;       NONE FOUND
;       RETURN DEVDAT, LINE SET

DDBSRC:  MOVSI IOS,MLTTYL      ;NO. OF TTY DDB
         MOVEI DEVDAT,TTYLST ;ADDRESS OF FIRST DDB
         SKIPA TAC,[XWD TTYUSE+TTYATC,ASSPRG+ASSCON]
         HLRZ DEVDAT,DEVSER(DEVDAT)
         TDNE TAC,DEVMOD(DEVDAT)      ;USE,ATTACH, AND BOTH ASSIGN
         AOBJN IOS,.-2
         JUMPGE IOS,CPOPJ      ;DDB FOUND?
         MOVE IOS,[XWD TPMON+IOFST,IOACT]
         MOVE TAC,[XWD TTYUSE,ASSCON]

;INITIALIZE TTY DEVICE DATA BLOCK(CALLED FROM TTYATT TOO)

SCNIN:   IORM TAC,DEVMOD(DEVDAT)
         DPB LINE,PUNIT      ;SET LINE NO. IN DDB
         MOVSI TAC,646471    ;SIXBIT /TTY/
         MOVEM TAC,DEVNAM(DEVDAT)
         MOVE TAC,[POINT 6,DEVNAM(DEVDAT),17]
         PUSH PDP,LINE      ;SAVE LINE NO.
         TRNN LINE,70       ;IS THERE A HIGH ORDER OCTAL DIGIT?
         JRST SCNIN0        ;NO
         ROT LINE,-3        ;YES, CONVERT TO SIXBIT
         ADDI LINE,20
         IDPB LINE,TAC      ;STORE HIGH ORDER SIXBIT DIGIT
         LSH LINE,20        ;IN PHYSICAL NAME

SCNIN0:  ADDI LINE,20
         IDPB LINE,TAC      ;STORE LOW ORDER DIGIT
         POP PDP,LINE

HRRM DEVDAT,TTYTAB(LINE)   ;SET LINE NO. IN TRANSLATOR T
MOVSI TAC,436471          ;SIXBIT /CTY/
CAIN LINE,TCONLN          ;IS THIS CONSOLE TTY?
MOVEM TAC,DEVNAM(DEVDAT)  ;YES, SET NAME TO CTY
MOVE TAC,DEVNAM(DEVDAT)
SKIPN DEVOPR              ;IS THIS FIRST CHAR. TYPED BY ANYONE?
MOVEM TAC,DEVOPR          ;YES, SET THIS TTY AS OPERATOR TTY
JRST CPOPJ1               ;SUCCESSFUL RETURN

SCNIN1:  DATAI DCSA,LINE   ;GET LINE NO. FROM FULL DUPLEX
         MOVEI TAC,FSNCHN
         CONO DCSA,4000(TAC) ;RELEASE XMITTER SCANNER
         SKIPE DDB,TTYTAB(LINE) ;DATA BLOCK ASSIGNED?
         CAIL LINE,TCONLN   ;LINE NO. TOO LARGE?
         JRST SCNRET        ;GO AWAY
         LDB CHREC,PLASTC
         JRST INUS1

```

```

000450 306400 000130 04600
000451 254000 000445' 04610
000452 201400 000130 04620
000453 302100 000444' 04630
000454 254000 000457' 04640
000455 712140 000010 04650
000456 254000 000451' 04660
000457 730602 000000 04670
000460 730140 000010 04680
000461 254000 000456' 04690
                                04700
                                04710
                                04720
000462 730300 000700 04730
000463 306100 000453' 04740
000464 254000 000471' 04750
000465 730602 000000 04760
000466 730140 000010 04770
000467 137400 000002' 04780
000470 254000 000461' 04790
                                04800
000471 200006 000002 04810
000472 135340 000111' 04820
000473 550347 000000 04830
000474 135240 000000' 04840
000475 135200 000001' 04850
000476 135046 000262' 04860
000477 603000 002000 04870
000500 254000 000533' 04880
000501 607000 000020 04890
000502 254000 000575' 04900
000503 312040 000010 04910
000504 254000 000527' 04920
000505 260140 000771' 04930
000506 254000 000520' 04940
000507 306100 000463' 04950
000510 254000 000524' 04960
000511 730602 000000 04970
000512 730140 000010 04980
000513 137400 000002' 04990
000514 202006 000002 05000
000515 137240 000000' 05010
000516 137200 000001' 05020
000517 254000 000470' 05030
000520 200046 000004 05040
000521 607040 020000 05050
000522 260140 000041' 05060
000523 254000 000515' 05070
                                05080
000524 712140 000010 05090
000525 202400 000055' 05100
000526 254000 000514' 05110

```

```

TYPX:  CAIN CHREC,"X"                ;CHARACTER RECEIVED AN X?
        JRST SCNRET                    ;YES, GO AWAY
        MOVEI CHREC,"X"
        CAIE LINE,TCONLN
        JRST TYPX1
        DATAO TTY,CHREC
        JRST SCNRET
TYPX1:  CONO DCSB,(LINE)
        DATAO DCSA,CHREC                ;TYPE AN X
        JRST SCNRET
INUSE:  CONSZ DCSA,700                  ;FULL DUPLEX?
        CAIN LINE,TCONLN
        JRST INUS1
        CONO DCSB,(LINE)
        DATAO DCSA,CHREC
        DPB CHREC,PLASTC
        JRST SCNRET
INUS1:  MOVE IOS,DEVIOS(DDB)
        LDB PROG,PJOBN
        HRRZ PROG,JBTADR(PROG)
        LDB HPOS,PHPOS
        LDB VPOS,PVPOS
        LDB TAC,TTYPTR(DDB)
        TLNE IOS,SP
        JRST SIM35
INUS2:  TLNN IOS,TOUT
        JRST INJEST
        CAME TAC,CHREC
        JRST ECHO
INUS3:  PUSHJ PDP,GCHAR
        JRST LEAV0
TYPE:   CAIN LINE,TCONLN
        JRST CTSER3
TYP1:  CONO DCSB,(LINE)
        DATAO DCSA,CHREC
        DPB CHREC,PLASTC                ;SAVE CHARACTER FOR FULL DUPLEX
LEAVE:  MOVEM IOS,DEVIOS(DDB)
LEAV1:  DPB HPOS,PHPOS
        DPB VPOS,PVPOS
        JRST SCNRET
LEAV0:  MOVE TAC,DEVMOD(DEVDAT)         ;IS TTY ATTCHED?
        TLNN TAC,TTYATC
        PUSHJ PDP,TTYKIL                ;NO,RETURN TO POOL
        JRST LEAV1
CTSER3: DATAO TTY,CHREC
        MOVEM CHREC,CCHAR
        JRST LEAVE

```

```

000527 670000 001156' 05120
000530 621000 000020 05130
000531 201400 000177 05140
000532 254000 000507' 05150
                                05160
                                05170
000533 205040 777766 05180
000534 200241 000545' 05190
000535 302405 000000 05200
000536 253040 000534' 05210
000537 135240 000000' 05220
000540 325040 000527' 05230
000541 204041 000545' 05240
000542 603040 000140 05250
000543 344241 000000 05260
000544 254001 000000 05270
                                05280
000545 000557'000040 05290
000546 000565'000012 05300
000547 000572'000177 05310
000550 000572'000134 05320
000551 000735'000015 05330
000552 000562'000136 05340
000553 000766'000103 05350
000554 000766'000117 05360
000555 000566'000132 05370
000556 000766'000125 05380
                                05390
                                05400
000557 606240 000007 05410
000560 254000 000566' 05420
000561 254000 000507' 05430
                                05440
000562 135400 000003' 05450
000563 660400 000100 05460
000564 254000 000507' 05470
                                05480
000565 367200 000507' 05490
000566 621000 002000 05500
000567 607000 000020 05510
000570 254000 000630' 05520
000571 254000 000505' 05530
                                05540
000572 625000 002000 05550
000573 640000 004000 05560
000574 254000 000514' 05570

```

```

ECHO:   TDO IOS,[XWD SP,ECHOF]
        TLZ IOS,TOUT
        MOVEI CHREC,177           ;SEND A RUBOUT AFTER ECHO CHE
        JRST TYPE

SIM35:  MOVSI TAC,-SCTABL
        MOVE HPOS, SCTAB(TAC)
        CAIE CHREC,(HPOS)
        AOBJN TAC,.-2
        LDB HPOS,PHPOS
        JUMPGE TAC, ECHO
        MOVS TAC, SCTAB(TAC)
        TLNE TAC, 140           ;SPACING CHARACTER
        AOJA HPOS,(TAC)        ;YES
        JRST (TAC)             ;NO

SCTAB:  XWD SPACE," "
        XWD SIMLF,12
        XWD SIMRO,177         ;RUBOUT
        XWD SIMRO,134        ;BACK SLASH
        XWD ASC3,15          ;CR
        XWD SIMVA,"+"
        XWD DELET1,"C"
        XWD DELET1,"O"
        XWD SIM4,"Z"
        XWD DELET1,"U"

SCTABL=.-SCTAB

SPACE:  TRNN HPOS,7           ;FINISHED SIMULATING TABS(8)
        JRST SIM4             ;YES
        JRST TYPE             ;NO, SEND ANOTHER SPACE

SIMVA:  LDB CHREC,PSCHAR
        TRO CHREC, 100
        JRST TYPE

SIMLF:  SOJG VPOS,TYPE        ;SEND ANOTHER LINE-FEED
SIM4:   TLZ IOS,SP
        TLNN IOS,TOUT
        JRST INJ4
        JRST INUS3

SIMRO:  TLZA IOS, SP
MOD35:  TRC IOS,T35
        JRST LEAVE

```



```

000575 306400 000003 05580
000576 254000 000644' 05590
000577 623000 000004 05600
000600 260140 000632' 05610
000601 603000 100000 05620
000602 661000 040040 05630
000603 306400 000017 05640
000604 254000 000657' 05650
000605 622000 100000 05660
000606 254000 000677' 05670
000607 602000 040000 05680
000610 254000 000514' 05690
000611 302400 000033 05700
000612 306400 000176 05710
000613 201400 000175 05720
000614 306400 000020 05730
000615 254000 000573' 05740
000616 603000 100000 05750
000617 254000 000622' 05760
000620 306400 000177 05770
000621 254000 000752' 05780
000622 136406 000476' 05790
000623 370046 000257' 05800
000624 301400 000040 05810
000625 303400 000137 05820
000626 254000 000701' 05830
000627 271240 000001 05840
000630 260140 001064' 05850
000631 254000 000514' 05860
000632 541046 000260' 05870
000633 505040 440700 05880
000634 202046 000622' 05890
000635 507000 000001 05900
000636 350000 000001 05910
000637 402006 000632' 05920
000640 251046 000000 05930
000641 201040 000111 05940
000642 202046 000623' 05950
000643 263140 000000 05960
05970
05980
05990

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```

INJEST:  CAIN CHREC,3          ;CONTROL C?
         JRST INJ5
         TLZE IOS,IOFST        ;IF FIRST CHARACTER IN, INITIALIZE
         PUSHJ PDP,SETMB1
         TLNE IOS,DDTM         ;1 DDT CHAR RESTARTS PROGRAM
         TLO IOS,SYNC+IOEND    ;YES, TERMINATE BUFFER
         CAIN CHREC,17         ;CONTROL 0?
         JRST INJ6             ;YES, FLUSH OUTPUT
         TRZE IOS,ECHOF        ;ECHO HAS OCCURRED?
         JRST INJ7             ;YES, NOW RESUME OUTPUT
         TRNE IOS,NCERR
         JRST LEAVE
         CAIE CHREC,033        ;NEW NEW ALT-MODE?
         CAIN CHREC,176        ;NEW ALT-MODE?
         MOVEI CHREC,175       ;CHANGE TO OLD
         CAIN CHREC,20         ;CONTROL P TAB SIMULATION FLIP FLOP SWI
         JRST MOD35
         TLNE IOS,DDTM
         JRST INJ25            ;SEND RUBOUTS ON TO DDT
         CAIN CHREC,177        ;RUBOUT
         JRST DELET
INJ25:   DPBI CHREC, TTYPTR(DDB)
         SOS TAC, TTYCTR(DDB)
         CAIL CHREC, 40
         CAILE CHREC, 137
         JRST SPCIN
INJ4:    ADDI HPOS,1
         PUSHJ PDP, MOVBUF
         JRST LEAVE
SETMB1:  HRRI TAC, TTYBUF(DDB)
         HRLI TAC, 440700
         MOVEM TAC, TTYPTR(DDB)
         HRLS TAC
         AOS TAC
         SETZM TTYBUF(DDB)
         BLT TAC,TTYBFE(DDB) ;CLEAR OUT MONITOR BUFFER
         MOVEI TAC, 111
         MOVEM TAC, TTYCTR(DDB)
         POPJ PDP,

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```

06000
06010
000644 260140 000632' 06020
000645 261140 000004 06030
000646 135200 000004' 06040
000647 332000 000004 06050
000650 260140 000000 06060
000651 262140 000004 06070
000652 607000 001000 06080
000653 202006 000063' 06090
000654 200000 001153' 06100
000655 201040 000103 06110
000656 254000 000674' 06120
06130
000657 261140 000002 06140
000660 623000 000001 06150
000661 260140 000000 06160
000662 262140 000002 06170
000663 603000 101000 06180
000664 254000 000667' 06190
000665 603000 000020 06200
000666 260140 000000 06210
000667 665000 000004 06220
000670 254000 000666' 06230
000671 620000 100000 06240
000672 660000 020000 06250
000673 201040 000117 06260
000674 137040 000003' 06270
000675 201400 000136 06280
000676 254000 000745' 06290
06300
000677 661000 000020 06310
000700 254000 000505' 06320

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```

INJ5:  PUSHJ PDP,SETMB1
        PUSH PDP,ITEM      ;+C
        LDB ITEM,TPCJOB   ;YES, GET USER CONSOLE NUMBER
        SKIPE ITEM
        PUSHJ PDP,STOP1   ;SHUT OFF JOB
        POP PDP,ITEM
        TLNN IOS,TPMON    ;SAVE STATUS OF TTY
        MOVEM IOS,TTYSAV(DDB) ;WHEN IT WAS IN USER MODE
        MOVE IOS,[XWD TPMON+IOFST,IOACT]
        MOVEI TAC,"C"
        JRST INJ61

INJ6:  PUSH PDP,TAC1      ;+0
        TLZE IOS,IOW
        PUSHJ PDP,SETIOD
        POP PDP,TAC1
        TLNE IOS,TPMON+DDTM
        JRST INJ6A
        TLNE IOS,TOUT
        PUSHJ PDP,ADVRFE

INJ6A: TLOA IOS,IOFST
        JRST .-2
        TRZ IOS,ECHOF
        TRO IOS,IODEND
        MOVEI TAC,"0"

INJ61: DPB TAC,PSCHAR
        MOVEI CHREC,"+"
        JRST SPC21

INJ7:  TLO IOS,TOUT
        JRST INUS3

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```

06330
000701 205040 777770 06340
000702 200101 000711' 06350
000703 302402 000000 06360
000704 253040 000702' 06370
000705 544040 000002 06380
000706 135100 000412' 06390
000707 321041 000000 06400
000710 254000 000630' 06410
06420
000711 000721' 000015 06430
000712 000727' 000012 06440
000713 000742' 000011 06450
000714 000724' 000013 06460
000715 000723' 000014 06470
000716 000737' 000025 06480
000717 000747' 000032 06490
000720 000727' 000175 06500
06510
06520
000721 201240 000000 06530
000722 254000 000735' 06540
06550
000723 334200 001157' 06560
000724 201200 000004 06570
000725 607000 004000 06580
000726 661000 002000 06590
000727 135040 000000 06600
000730 607000 001000 06610
000731 306040 000001 06620
000732 661000 040000 06630
000733 607000 002000 06640
000734 254000 000630' 06650
000735 201400 000012 06660
000736 254000 000507' 06670
06680
000737 260140 000632' 06690
000740 201040 000125 06700
000741 254000 000674' 06710
06720
000742 602000 004000 06730
000743 254000 000514' 06740
000744 201400 000040 06750
000745 661000 002000 06760
000746 254000 000507' 06770
06780
000747 661000 042040 06790
000750 201040 000132 06800
000751 254000 000674' 06810

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SPCIN:  MOVSI TAC,-SCITL      ;SEARCH FOR SPECIAL INPUT CHAR
        MOVE TAC1,SCITAB(TAC)
        CAIE CHREC,(TAC1)     ;FOUND?
        AOBJN TAC,.-2         ;NO
        HLR TAC,TAC1          ;SAVE DISPATCH ADDRESS
        LDB LINE,PUNIT        ;RESTORE TAC1
        JUMPL TAC,(TAC)
        JRST INJ4              ;CHARACTER NOT FOUND

SCITAB:  XWD SPCCR,15          ;CR
        XWD ASC1,12           ;LF
        XWD SPC2,11           ;HORIZ TAB
        XWD SPVT,13           ;VT
        XWD SPFF,14           ;FF
        XWD SPC4A,25          ;+U
        XWD SPC7,32           ;+Z
        XWD ASC1,175          ;ALT MODE

SCITL=.-SCITAB

SPCCR:  MOVEI HPOS,0
        JRST ASC3

SPFF:   SKIPA VPOS,[10]
SPVT:   MOVEI VPOS,4
        TLNN IOS,T35          ;DONT SIMULATE FOR A MOD 35
        TLO IOS,SP

ASC1:   LDB TAC,PIOMOD
        TLNN IOS,TPMON
        CAIN TAC,AL
        TLO IOS,SYNC

ASC2:   TLNN IOS,SP
        JRST INJ4

ASC3:   MOVEI CHREC,12        ;LINE FEED
        JRST TYPE

SPC4A:  PUSHJ PDP,SETMB1
        MOVEI TAC,"U"
        JRST INJ61

SPC2:   TRNE IOS,T35
        JRST LEAVE
        MOVEI CHREC," "

SPC21:  TLO IOS,SP
        JRST TYPE

SPC7:   TLO IOS,SYNC+IOEND+SP ;+Z
        MOVEI TAC,"Z"
        JRST INJ61          ;ECHO +Z

```

			06820
			06830
			06840
000752	200046	000642'	06850
000753	301040	000111	06860
000754	254000	000766'	06870
			06880
000755	205040	070000	06890
000756	270046	000634'	06900
000757	603040	400000	06910
000760	270040	001160'	06920
000761	202046	000756'	06930
000762	350006	000752'	06940
			06950
000763	201400	000334	06960
000764	661000	002000	06970
000765	254000	000507'	06980
			06990
000766	201200	000001	07000
000767	201400	000015	07010
000770	254000	000764'	07020

DELET: MOVE TAC,TTYCTR(DDB)
CAIL TAC,111
JRST DELET1

MOVSI TAC,070000
ADD TAC,TTYPTR(DDB)
TLNE TAC,400000
ADD TAC,[XWD 347777,-1]
MOVEM TAC,TTYPTR(DDB)
AOS TTYCTR(DDR)

DELET2: MOVEI CHREC,334
TLO IOS,SP
JRST TYPE

DELET1: MOVEI VPOS,1
MOVEI CHREC,15
JRST DELET2

;BACK SLASH

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07030
07040
07050
07060
07070
07080
07090
07100
07110
07120
07130
07140
07150
07160
07170
07180
07190
07200
07210
07220
07230
07240
07250
07260
07270
07280
07290
07300
07310
07320
07330
07340
07350
07360
07370
07380
07390
07400
07410
07420
07430
07440
07450
07460
07470
07480
07490
07500
07510
07520
07530
07540
07550
07560
07570
07580
07590

```

```

;ROUTINE TO GET NEXT CHARACTER FROM OUTPUT BUFFER
;CALL:  PUSHJ PDP,GCHAR
;      NO MORE LEFT
;      RETURN WITH CHAR. IN CHREC

GCHAR:  TLZN IOS, IOFST
        JRST GCHAR3
GCHAR1: HRRZ TAC,DEVOID(DDB)
        ADD TAC, [XWD 000700+PROG,1]
        MOVEM TAC, TTYPTR(DDB)
        HRRZ TAC, @TAC
        IMULI TAC, 5
GCHAR3: MOVEM TAC,TTYCTR(DDB)
        SOSGE TTYCTR(DDB)
        JRST GCHAR5
        LDBI CHREC, TTYPTR(DDB)
        JUMPE CHREC, GCHAR7
        CAIN CHREC, 11
        JRST HT
        CAIN CHREC, 12
        AOJA VPOS,GCH3
        CAIE CHREC, 13
        CAIN CHREC, 14
        JRST VTFF
        ADDI HPOS,1
        CAIN CHREC,15
        MOVEI HPOS,0
GCH3:   AOSA (PDP)
GCH3A:  MOVE IOS,TTYSAV(DDB)           ;RESTORE STATUS TO USER
GCHAR4: MOVEM IOS, DEVIOS(DDB)
        POPJ PDP,
GCHAR7: TLNN IOS,DDTM           ;DDT BUFFER TERMINATED WITH NULL
        JRST GCHAR3
GCHAR5: PUSH PDP,TAC1
        TLZE IOS, IOW
        PUSHJ PDP, SETIOD
        POP PDP,TAC1
        TLNN IOS,TPMON+DDTM
        PUSHJ PDP, ADVBFE
        TLOA IOS,IOFST
        JRST GCHAR1
        TDZ IOS,[XWD IO,IOACT]
        TLZN IOS,USRB
        JRST GCHAR4
        TLZ IOS,TPMON
        LDB LINE,PUNIT           ;GET LINE NO.
        PUSH PDP,ITEM
        LDB ITEM,TPCJOB
        PUSHJ PDP,SETRUN
        POP PDP,ITEM
        TRZN IOS,USRBC
        JRST GCH3A
        MOVSI IOS,TPMON+IOFST
        JRST GCHAR4

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001052	602000	004000	07600
001053	344240	001017'	07610
001054	661000	002000	07620
001055	201400	000240	07630
001056	254000	001017'	07640
			07650
			07660
001057	602000	004000	07670
001060	344200	001017'	07680
001061	201400	000012	07690
001062	661000	002000	07700
001063	254000	001017'	07710

HT:	TRNE IOS,T35
	AOJA HPOS,GCH3
	TLO IOS,SP
SPOUT:	MOVEI CHREC,240
	JRST GCH3
VTFF:	TRNE IOS,T35
	AOJA VPOS,GCH3
	MOVEI CHREC,12
	TLO IOS,SP
	JRST GCH3

			07720
0011064	603000	100000	07730
0011065	254000	001125'	07740
0011066	627000	040000	07750
0011067	337006	001001'	07760
0011070	254000	001072'	07770
0011071	254000	001133'	07780
0011072	603000	001000	07790
0011073	254000	001135'	07800
0011074	200046	000007	07810
0011075	602040	777777	07820
0011076	335020	000001	07830
0011077	254000	001132'	07840
0011100	261140	000002	07850
0011101	200046	001003'	07860
0011102	260140	000253'	07870
0011103	200046	000007	07880
0011104	260140	000000	07890
0011105	551041	000000	07900
			07910
0011106	201066	000007	07920
0011107	271040	000002	07930
0011110	540400	000001	07940
0011111	271040	000000	07950
0011112	505406	000637'	07960
0011113	251401	777777	07970
			07980
0011114	201040	000111	07990
0011115	274046	001067'	08000
0011116	271040	000004	08010
0011117	231040	000005	08020
0011120	201426	000007	08030
0011121	202050	000001	08040
0011122	260140	000000	08050
0011123	254000	001124'	08060
0011124	665000	000004	08070
0011125	261140	000002	08080
0011126	623000	000001	08090
0011127	260140	001027'	08100
0011130	262140	000002	08110
0011131	624000	050000	08120
0011132	660000	040000	08130
0011133	202006	000002	08140
0011134	263140	000000	08150
0011135	205040	400000	08160
0011136	436042	000443'	08170
0011137	661000	000004	08180
0011140	201040	000015	08190
0011141	137046	001101'	08200
0011142	350000	000000	08210
0011143	263140	000000	08220
			08230
0011144	030000	600000	08240
0011145	000100	020000	
0011146	120020	010000	
0011147	001020	010000	
0011150	020004	140000	

```

MOVRF:  TLNE IOS,DDTM
        JRST MOV3 ;DONT ADVANCE BUFFERS FOR DDT MODE
        TLZN IOS,SYNC
        SKIPG TTYCTR(DDB)
        JRST .+2
        JRST MIS1
        TLNE IOS,TPMON
        JRST MOVMON
        MOVE TAC,DEVIAD(DDB)           ;IS TTY EXPECTING INPUT?
        TRNE TAC,-1
        SKIPGE @TAC                   ;OR IS NEXT BUFFER READY?
        JRST MIS ;NO
        PUSH PDP,TAC1
        MOVE TAC,TTYPTR(DDB)
        PUSHJ PDP,CLRRYT
        MOVE TAC,DEVIAD(DDB)
        PUSHJ PDP,ADRCK ;MAKE SURE BUFFER WILL FIT
        HRRZI TAC,STTYB1(TAC)         ;LENGTH+1

        MOVEI TAC,@DEVIAD(DDB)
        ADDI TAC,2
        HRR CHREC,TAC
        ADDI TAC,STTYBF
        HRLI CHREC,TTYBUF(DDB)
        BLT CHREC,-1 (TAC)

        MOVEI TAC, 111
        SUB TAC, TTYCTR(DDB)
        ADDI TAC,4
        IDIVI TAC,5
        MOVEI CHREC,@DEVIAD(DDB)
        MOVEM TAC,1(CHREC)
        PUSHJ PDP, ADVBFF
        JRST .+1
MOV3:   TLOA IOS,IOFST
        PUSH PDP,TAC1
        TLZE IOS, IOW
        PUSHJ PDP, SETIOD
        POP PDP,TAC1
        TRZA IOS,NCERR+IOACT
MIS:    TRO IOS, NCERR
MIS1:   MOVEM IOS, DEVIOS(DDB)
        POPJ PDP,
MOVMON: MOVSJ TAC,400000
        IORM TAC,TTYTAB(LINE)         ;SET BIT FOR MONITOR
        TLO IOS,IOFST
        MOVEI TAC,15
        DPB TAC,TTYPTR(DDB) ;FORCE A CARRIAGE RET INTO MONITOR COMM
        AOS COMCNT
        POPJ PDP,

        END,

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001151	001000	140000
001152	000024	010000
001153	001004	010000
001154	010000	400000
001155	220606	000000
001156	002000	100000
001157	000000	000010
001160	347777	777777
001161	000707	000001
001162	000020	010000

THERE ARE NO ERRORS

PROGRAM BREAK IS 001163

SCNSER - SCANNER SERVICE
SYMBOL TABLE

A	000000	INT
AC1	000015	INT
AC2	000016	INT
AC3	000017	INT
ADRCK	001104'	EXT
ADVBF	001032'	EXT
ADVBF	001122'	EXT
AL	000001	INT
ASC1	000727'	
ASC2	000733'	
ASC3	000735'	
ASSCON	400000	INT
ASSPRG	200000	INT
B	000014	INT
BUFPNT	000012	INT
BUFWRD	000013	INT
CCHAR	000055'	
CHREC	000010	
CLDS	000312'	EXT
CLFN	000322'	EXT
CLOSB	002000	INT
CLRBYT	001102'	EXT
CLSIN	000002	INT
CLSOUT	000001	INT
COMCNT	001142'	EXT
CPOPJ	000406'	EXT
CPOPJ1	000437'	EXT
CTSER3	000524'	
CTYINT	000332'	INT
CTYOU1	000347'	
CTYOUT	000325'	
CTYRUB	000346'	
D	000017	INT
DAT	000005	INT
DCHAR	000177	
DCL	000001	INT
DCW	020000	INT
DDR	000006	
DDRSRC	000400'	
DDI	000007	INT
DDO	000006	INT
DDTGT	000133'	INT
DDTGT2	000141'	
DDTIN	000153'	INT
DDTIN2	000157'	
DDTIN3	000166'	
DDTM	100000	
DDTMEM	000037	INT
DDTOUT	000206'	INT
DDTRL	000144'	INT
DDTSYM	000036	INT
DELET	000752'	
DELET1	000766'	
DELET2	000764'	
DEN	000004	INT

SCNSER - SCANNER SERVICE
SYMBOL TABLE

DETH	010000	
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	EXT
DEVMOD	000004	INT
DEVNAM	000000	INT
DEVOAD	000010	INT
DEVOPR	000436'	EXT
DEVPHY	000242'	EXT
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
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
ECHO	000527'	
ECHOF	100000	
ENTRR	020000	INT
FSNCHN	000441'	EXT
GCH3	001017'	
GCH3A	001020'	
GCHAR	000771'	
GCHAR1	000773'	
GCHAR3	001001'	
GCHAR4	001021'	
GCHAR5	001025'	
GCHAR7	001023'	
HPOS	000005	
HT	001052'	
I	000010	INT
IB	000013	INT
IBUFR	200000	INT
INITB	400000	INT
INJ25	000622'	
INJ4	000630'	

SCNSER - SCANNER SERVICE
SYMBOL TABLE

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INJ5	000644'	
INJ6	000657'	
INJ61	000674'	
INJ6A	000667'	
INJ7	000677'	
INJEST	000575'	
INPB	010000	INT
INUS1	000471'	
INUS2	000501'	
INUS3	000505'	
INUSE	000462'	
IO	000020	INT
IOACT	010000	INT
IOREG	000002	INT
IORKTL	040000	INT
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
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
JBTADR	000473'	EXT
JBUF	000005	INT
JDAT	000011	INT
JERR	002000	INT
JIOW	100000	INT
JNA	004000	INT
JOR	000243'	EXT
LEAV0	000520'	
LEAV1	000515'	
LEAVE	000514'	
LINE	000002	
LOOKB	040000	INT
MIS	001132'	
MIS1	001133'	
MLTTYL	000400'	EXT
MOD35	000573'	
MOV3	001125'	
MOVBUF	001064'	

SCNSER - SCANNER SERVICE
 SYMROL TABLE

MOVMON	001135'	
MTTYLN	000232'	FXT
MTW	010000	INT
NCERR	040000	
NIO	020000	
OBUFB	100000	INT
OUT	000272'	EXT
OUTPB	004000	INT
PDP	000003	INT
PHPOS	000000'	
PICHN	000100	INT
PIOFF	000400	
PIOMOD	000727'	EXT
PION	000200	
PJOBN	000472'	EXT
PLASTC	000002'	
PROG	000007	INT
PSCHAR	000003'	
PUNIT	001041'	EXT
PUUOAC	000214'	EXT
PVPOS	000001'	
RUN	200000	INT
RUNABL	204000	INT
SCITAB	000711'	
SCITL	000010	
SCN1	000024'	
SCN2	000035'	
SCNCHL	000345'	EXT
SCNCHN	000350'	EXT
SCNIN	000411'	
SCNIN0	000425'	
SCNIN1	000440'	
SCNINI	000005'	INT
SCNINT	000355'	INT
SCNRET	000517'	EXT
SCNSAV	000357'	EXT
SCTAB	000545'	
SCTABL	000012	
SETIOD	001127'	EXT
SETMB1	000632'	
SETRUN	001044'	EXT
SIM35	000533'	
SIM4	000566'	
SIMLF	000565'	
SIMRO	000572'	
SIMVA	000562'	
SP	002000	
SPACE	000557'	
SPC2	000742'	
SPC21	000745'	
SPC4A	000737'	
SPC7	000747'	
SPCCR	000721'	
SPCIN	000701'	
SPFF	000723'	

SCNSER - SCANNER SERVICE
 SYMROL TABLE

SPOUT	001055'	
SPVT	000724'	
STOP1	000650'	EXT
STTYB1	001105'	EXT
STTYBF	001111'	EXT
SYNC	040000	
T35	004000	
TAC	000001	INT
TAC1	000002	INT
TCOMM	000364'	
TCONLN	000507'	EXT
TEM	000010	INT
TOUT	000020	
TPCJOB	000004'	
TPMON	001000	
TSCNLN	000000	EXT
TTY0DB	000000	EXT
TTYAT2	000070'	
TTYAT3	000110'	
TTYAT4	000115'	
TTYATC	020000	INT
TTYATT	000065'	INT
TTYBFE	000640'	EXT
TTYBM1	000254'	EXT
TTYBUF	001112'	EXT
TTYCOM	000117'	INT
TTYCTR	001115'	EXT
TTYDAT	000247'	
TTYDET	000046'	INT
TTYDSP	000271'	INT
TTYDT1	000052'	
TTYF0	000240'	
TTYFND	000244'	INT
TTYFNU	000243'	INT
TTYJOB	000130'	INT
TTYKIL	000041'	INT
TTYLST	000401'	EXT
TTYOU0	000303'	
TTYOU1	000322'	
TTYOU2	000311'	
TTYOUT	000301'	
TTYPTR	001141'	EXT
TTYSAV	001020'	EXT
TTYSET	000062'	INT
TTYSR1	000231'	
TTYSRC	000232'	
TTYSTR	000252'	INT
TTYTAB	001136'	EXT
TTYURC	000056'	INT
TTYUSE	010000	INT
TTYUSR	000057'	INT
TYP1	000511'	
TYPE	000507'	
TYPX	000450'	
TYPX1	000457'	

SCNSER - SCANNER SERVICE
SYMBOL TABLE

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USRB	000100	
USRBC	020000	
USRM0D	010000	INT
UU0	000014	INT
UXIT	000230'	EXT
VPOS	000004	
VTFF	001057'	
WAIT1	000211'	EXT
WSYNC	000164'	EXT

END OF ASSEMBLY