

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 ;SCNDDDB ;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,PJOB,N,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 TTYSAB(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: MOVSJ 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: MOVSJ TAC,IOFST ;INITIALIZE USER TTY IOS WORD
000063	202046	000027'	01190	MOVEM TAC,TTYSAB(DEVDAT) ;FOR START COMMAND
000064	254000	000057'	01200	JRST TTYUSR

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01210
01220
01230
01240
01250
01260
01270
01280
01290
01300
01310
000065 135100 000052' 01320
000066 201300 000023' 01330
000067 334000 000000 01340
000070 554306 000003 01350
000071 322300 000115' 01360
000072 135040 000000 01370
000073 500046 000004 01380
000074 607040 000010 01390
000075 254000 000115' 01400
000076 306201 000000 01410
000077 607040 010000 01420
000100 254000 000070' 01430
000101 603040 020000 01440
000102 263140 000000 01450
000103 261140 000006 01460
000104 200302 000053' 01470
000105 200046 000004 01480
000106 260140 000046' 01490
000107 262140 000006 01500
000110 137200 000004' 01510
000111 137200 000072' 01520
000112 205040 020000 01530
000113 260140 000247' 01540
000114 254000 000411' 01550
01560
000115 200302 000104' 01570
000116 254000 000110' 01580

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;ROUTINE TO ATTACH TTY TO A JOB
;CALL:  MOVE DEVDAT,ADDRESS OF TTY DEVICE DATA BLOCK
;        MOVE ITEM,JOB NUMBER
;        PUSHJ PDP,TTYATT
;        ERROR      ;DEVDAT=DDB ADR OF OTHER TTY
;                  ;IF ANOTHER ALREADY IS ATTACHED.
;        OK RETURN ;DEVDAT, DAT AND TRANSLATOR TABLE SET

INTERNAL TTYATT

TTYATT:  LDB LINE,PUNIT      ;LINE NO. OF THIS TTY
        MOVEI DEVDAT,TTYLST ;SEARCH FOR DDB THAT IS ATTACHED
        SKIPA

TTYAT2:  HLRZ DEVDAT,DEVSER(DEV DAT)
        JUMPE DEVDAT,TTYAT4
        LDB TAC,PJOBN      ;JOB NUMBER
        HLL TAC,DEVMOD(DEV DAT) ;ATTACH AND USE BITS
        TLNN TAC,DVTTY     ;IS THIS STILL A TTY DDB?
        JRST TTYAT4        ;NO, THIS MUST BE IJOB
        CAIN ITEM,(TAC)    ;JOB NUMBER THE ONE TO ATTACH?
        TLNN TAC,TTYUSE    ;YES, IS IT THE DETACHED ONE?
        JRST TTYAT2        ;NO, KEEP LOOKING
        TLNE TAC,TTYATC    ;IS SOME TTY ALREADY ATTACHED?
        POPJ PDP,          ;YES, ERROR RETURN WITH DEV DAT SET
        PUSH PDP,DEV DAT   ;SAVE NEW DDB ADDRESS
        MOVE DEV DAT,TTYTAB(LINE)
        MOVE TAC,DEVMOD(DEV DAT)
        PUSHJ PDP,TTYDET   ;DETACH DDB FROM TTY
        POP PDP,DEV DAT

TTYAT3:  DPB ITEM,TPCJOBN   ;STORE ATTACHED JOB NO.
        DPB ITEM,PJOBN     ;SET JOB NUMBER
        MOVSI TAC,TTYATC   ;SET ATTACHED BIT
        PUSHJ PDP,TTYDAT   ;SETUP OUTPUT BYTE
        JRST SCNIN        ;GO INITIALIZE DDB

TTYAT4:  MOVE DEV DAT,TTYTAB(LINE) ;RESTORE OLD DDB ADDRES
        JRST TTYAT3

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			01590
			01600
			01610
			01620
			01630
			01640
			01650
			01660
			01670
			01680
			01690
000117	205100	000033'	01700
000120	331002	000115'	01710
000121	253100	000120'	01720
000122	327100	000000	01730
000123	205300	400000	01740
000124	413302	000120'	01750
000125	205240	440700	01760
000126	271246	000000	01770
000127	200040	000005	01780
			01790
			01800
			01810
			01820
			01830
			01840
			01850
			01860
000130	135100	000065'	01870
000131	135200	000004'	01880
000132	254000	000000	01890

```

;ROUTINE TO SETUP AC DEVDAT TO ADDRESS OF TTY WHICH HAS TYPED A COMMA
;AC DAT TO BYTE POINTER TO OUTPUT BUFFER FOR COMMAND MESSAGES
;AC TAC TO BYTE POINTER TO COMMAND STRING
;AC ITEM TO JOB NUMBER TTY IS ATTACHED TO
;CALL:   PUSHJ PDP,TTYCOM
;        NONE FOUND
;        ACS SETUP

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INTERNAL TTYCOM

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TTYCOM:  MOVSI LINE,MTTYLN
         SKIPL TTYTAB(LINE)
         AOBJN LINE,.-1
         JUMPG LINE,CPOPJ
         MOVSI DEVDAT,400000
         ANDCAR DEVDAT,TTYTAB(LINE)
         MOVSI DAT,440700
         ADDI DAT,TTYBUF(DEV DAT)
         MOVE TAC,DAT

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;FALL INTO TTYJOB

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;ROUTINE TO RETURN IN AC ITEM JOB NUMBER WHICH TTY IS ATTACHED TO
;CALL:   MOVE DEVDAT,ADDRESS OF TTY DEVICE DATA BLOCK

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INTERNAL TTYJOB

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TTYJOB:  LDB LINE, PUNIT
         LDB ITEM,TPCJOB
         JRST CPOPJ1

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			01900		
			01910	;TELETYPE SCANNER UO 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
			02030	; PUSHJ PDP,OUT	;MAKE SURE OUTPUT STARTED
000140	260140	000000	02040	PUSHJ PDP,WAIT1	;WAIT FOR OUTPUT TO FINISH
000141	661000	100000	02050	DDTGT2: TLO IOS,DDTM	;SET DDT MODE BIT
000142	202006	000002	02060	MOVEM IOS,DEVIOS(DEVDAT)	
000143	254000	000000	02070	JRST UXIT	
			02080		
			02090	;RELEASE TELETYPE FROM DDT MODE	
			02100	;MAKE SURE OUTPUT IS FINISHED FIRST	
			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	

		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: MOVSJ 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	SUBJ TAC,TTYBM1(DEV DAT) ;NUMBER OF WORDS
000173	135100 000000	02420	LDB TAC1,PUUOAC ;PICK UP AC NUMBER
000174	271107 000000	02430	ADDJ TAC1,(PROG) ;FIND REAL ADDRESS
000175	200102 000000	02440	MOVE TAC1,(TAC1) ;PICK UP POINTER
000176	271107 000000	02450	ADDJ TAC1,(PROG) ;FIND REAL ADDRESS OF BUFFER
000177	505106 000126'	02460	HRLJ TAC1,TTYBUF(DEV DAT)
000200	271042 000000	02470	ADDJ TAC,(TAC1)
000201	251101 000000	02480	BLT TAC1,(TAC)
000202	402001 000001	02490	CLEARM 1(TAC) ;TRANSFER MONITOR BUFFER TO U
000203	205040 020040	02500	MOVSJ TAC,NIO+IOEND ;MAKE SURE THERE ARE SOME NUL
000204	412046 000002	02510	ANDCAM TAC,DEVIOS(DEV DAT)
000205	254000 000152'	02520	JRST UXIT
		02530	

			02540
			02550
			02560
			02570
			02580
000206	260140	000231'	02590
000207	200006	000002	02600
000210	603000	000020	02610
000211	260140	000156'	02620
000212	200000	001146'	02630
000213	437006	000002	02640
000214	135040	000173'	02650
000215	505040	000011	02660
000216	540060	000001	02670
000217	505060	000001	02680
000220	541046	000177'	02690
000221	552046	000000	02700
000222	200100	000001	02710
000223	251042	000020	02720
000224	505100	440700	02730
			02740
000225	202106	000170'	02750
000226	621000	020004	02760
000227	260140	000303'	02770
000230	254000	000205'	02780

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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, TPCJORN
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
03060      IORM TAC, DEVIOS(DEVDAT)
000245 205040 020000 03070      TTYDAT:  MOVEI DAT, TTYBUF(DEVDAT)      ;SETUP OUTPUT BYTE POINTER
000246 436046 000002 03080      HRLI DAT, 440700
000247 201246 000220' 03090      POPJ PDP,
000250 505240 440700 03100
000251 263140 000000 03110
000252 200040 000005 03120      TTYSTR:  MOVE TAC, DAT
000253 260140 000171' 03130      PUSHJ PDP, CLRBYT
000254 275046 000172' 03140      SUBI TAC, TTYBM1(DEVDAT)
000255 405040 777777 03150      ANDI TAC, -1
000256 221040 000005 03160      IMULI TAC, 5
000257 202046 000221' 03170      MOVEM TAC, TTYCTR(DEVDAT)
000260 201046 000247' 03180      MOVEI TAC, TTYBUF(DEVDAT)
000261 505040 440700 03190      HRLI TAC, 440700
000262 202046 000225' 03200      MOVEM TAC, TTYPTR(DEVDAT)
000263 200006 000002 03210      MOVE IOS, DEVIOS(DEVDAT)
000264 434000 001147' 03220      IOR IOS, [XWD TOUT+TPMON, IOACT]
000265 420000 001150' 03230      ANDCM IOS, [XWD NIO+IOFST, IODTER+IOBKTL]
000266 260140 000771' 03240      PUSHJ PDP, GCHAR
000267 263140 000000 03250      POPJ PDP, ;NOTHING TO TYPE
000270 254000 000311' 03260      JRST TTYOU2      ;START OUTPUT
03270
03280      ;DISPATCH TABLE
03290
000271 263140 000000 03300      TTYDSP:  POPJ PDP, ;RELEASE
000272 254000 000000 03310      JRST OUT ;CLOSE
000273 254000 000301' 03320      JRST TTYOUT      ;OUTPUT
000274 630000 001151' 03330      TDZ IOS, [XWD TPMON, ECHOF+NCERR]      ;INPUT
000275 660000 010000 03340      TRO IOS, IOACT
000276 623000 000002 03350      TLZE IOS, IOBEG
000277 661000 000004 03360      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(DEVDAT)
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,TCONLN	;CTY?
JRST INJEST	;NO, SWALLOW CHAR
JRST TYP1	

```

04060
04070
04080
04090
04100
04110
04120
000400 205000 000020' 04130
000401 201300 000066' 04140
000402 334040 001144' 04150
000403 554306 000003 04160
000404 612046 000004 04170
000405 253000 000403' 04180
000406 325000 000122' 04190
000407 200000 001153' 04200
000410 200040 001154' 04210
04220
04230
04240
000411 436046 000004 04250
000412 137100 000311' 04260
000413 205040 646471 04270
000414 202046 000000 04280
000415 200040 001155' 04290
000416 261140 000002 04300
000417 606100 000070 04310
000420 254000 000425' 04320
000421 241100 777775 04330
000422 271100 000020 04340
000423 136100 000001 04350
000424 242100 000020 04360
000425 271100 000020 04370
000426 136100 000001 04380
000427 262140 000002 04390
04400
000430 542302 000367' 04410
000431 205040 436471 04420
000432 306100 000375' 04430
000433 202046 000000 04440
000434 200046 000000 04450
000435 336000 000000 04460
000436 202040 000435' 04470
000437 254000 000132' 04480
04490
04500
000440 730040 000002 04510
000441 201040 000320' 04520
000442 730201 004000 04530
000443 332302 000430' 04540
000444 301100 000432' 04550
000445 254000 000000 04560
000446 135400 000002' 04570
000447 254000 000471' 04580
04590

```

;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,DEVSR(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	TYPX:	CAIN CHREC,"X" ;CHARACTER RECEIVED AN X?
000452	201400	000130	04620		JRST SCNRET ;YES, GO AWAY
000453	302100	000444'	04630		MOVEI CHREC,"X"
000454	254000	000457'	04640		CAIE LINE,TCONLN
000455	712140	000010	04650		JRST TYPX1
000456	254000	000451'	04660		DATAO TTY,CHREC
000457	730602	000000	04670		JRST SCNRET
000460	730140	000010	04680	TYPX1:	CONO DCSB,(LINE)
000461	254000	000456'	04690		DATAO DCSA,CHREC ;TYPE AN X
			04700		JRST SCNRET
			04710		
			04720		
000462	730300	000700	04730	INUSE:	CONSZ DCSA,700 ;FULL DUPLEX?
000463	306100	000453'	04740		CAIN LINE,TCONLN
000464	254000	000471'	04750		JRST INUS1
000465	730602	000000	04760		CONO DCSB,(LINE)
000466	730140	000010	04770		DATAO DCSA,CHREC
000467	137400	000002'	04780		DPB CHREC,PLASTC
000470	254000	000461'	04790		JRST SCNRET
			04800		
000471	200006	000002	04810	INUS1:	MOVE IOS,DEVIOS(DDB)
000472	135340	000111'	04820		LDB PROG,PJOBN
000473	550347	000000	04830		HRRZ PROG,JBTADR(PROG)
000474	135240	000000'	04840		LDB HPOS,PHPOS
000475	135200	000001'	04850		LDB VPOS,PVPOS
000476	135046	000262'	04860		LDB TAC,TTYPTR(DDB)
000477	603000	002000	04870		TLNE IOS, SP
000500	254000	000533'	04880		JRST SIM35
000501	607000	000020	04890	INUS2:	TLNN IOS, TOUT
000502	254000	000575'	04900		JRST INJEST
000503	312040	000010	04910		CAME TAC, CHREC
000504	254000	000527'	04920		JRST ECHO
000505	260140	000771'	04930	INUS3:	PUSHJ PDP, GCHAR
000506	254000	000520'	04940		JRST LEAV0
000507	306100	000463'	04950	TYPE:	CAIN LINE,TCONLN
000510	254000	000524'	04960		JRST CTSER3
000511	730602	000000	04970	TYP1:	CONO DCSB,(LINE)
000512	730140	000010	04980		DATAO DCSA, CHREC
000513	137400	000002'	04990		DPB CHREC,PLASTC ;SAVE CHARACTER FOR FULL DUPLEX
000514	202006	000002	05000	LEAVE:	MOVEM IOS, DEVIOS(DDB)
000515	137240	000000'	05010	LEAV1:	DPB HPOS,PHPOS
000516	137200	000001'	05020		DPB VPOS,PVPOS
000517	254000	000470'	05030		JRST SCNRET
000520	200046	000004	05040	LEAV0:	MOVE TAC,DEVMOD(DEVDAT) ;IS TTY ATTCHED?
000521	607040	020000	05050		TLNN TAC,TTYATC
000522	260140	000041'	05060		PUSHJ PDP,TTYKIL ;NO,RETURN TO POOL
000523	254000	000515'	05070		JRST LEAV1
			05080		
000524	712140	000010	05090	CTSER3:	DATAO TTY,CHREC
000525	202400	000055'	05100		MOVEM CHREC,CCHAR
000526	254000	000514'	05110		JRST LEAVE

```

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

```

```

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
			05870
			05880
000632	541046	000260'	05890
000633	505040	440700	05900
000634	202046	000622'	05910
000635	507000	000001	05920
000636	350000	000001	05930
000637	402006	000632'	05940
000640	251046	000000	05950
000641	201040	000111	05960
000642	202046	000623'	05970
000643	263140	000000	05980
			05990

```

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
          ADDI HPOS,1
INJ4:     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,

```

			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

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(DDDB)	;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	

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

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

		07030	
		07040	;ROUTINE TO GET NEXT CHARACTER FROM OUTPUT BUFFER
		07050	;CALL: PUSHJ PDP,GCHAR
		07060	; NO MORE LEFT
		07070	; RETURN WITH CHAR. IN CHREC
		07080	
		07090	
000771	627000	000004	GCHAR: TLZN IOS, IOFST
000772	254000	001001'	JRST GCHAR3
000773	550046	000010	GCHAR1: HRRZ TAC,DEVOAD(DDB)
000774	270040	001161'	ADD TAC, [XWD 000700+PROG,1]
000775	202046	000761'	MOVEM TAC, TTYPTR(DDB)
000776	550060	000001	HRRZ TAC, @TAC
000777	221040	000005	IMULI TAC, 5
001000	202046	000762'	MOVEM TAC,TTYCTR(DDB)
001001	375006	001000'	GCHAR3: SOSGE TTYCTR(DDB)
001002	254000	001025'	JRST GCHAR5
001003	134406	000775'	LDBI CHREC, TTYPTR(DDB)
001004	322400	001023'	JUMPE CHREC, GCHAR7
001005	306400	000011	CAIN CHREC, 11
001006	254000	001052'	JRST HT
001007	306400	000012	CAIN CHREC, 12
001010	344200	001017'	AOJA VPOS,GCH3
001011	302400	000013	CAIE CHREC, 13
001012	306400	000014	CAIN CHREC, 14
001013	254000	001057'	JRST VTFF
001014	271240	000001	ADDI HPOS,1
001015	306400	000015	CAIN CHREC,15
001016	201240	000000	MOVEI HPOS,0
001017	354003	000000	GCH3: AOSA (PDP)
001020	200006	000653'	GCH3A: MOVE IOS,TTYSAB(DDB) ;RESTORE STATUS TO USER
001021	202006	000002	GCHAR4: MOVEM IOS, DEVIOS(DDB)
001022	263140	000000	POPJ PDP,
		07350	
		07360	
001023	607000	100000	GCHAR7: TLNN IOS,DDTM ;DDT BUFFER TERMINATED WITH NULL
001024	254000	001001'	JRST GCHAR3
001025	261140	000002	GCHAR5: PUSH PDP,TAC1
001026	623000	000001	TLZE IOS, IOW
001027	260140	000661'	PUSHJ PDP, SETIOD
001030	262140	000002	POP PDP,TAC1
001031	607000	101000	TLNN IOS,TPMON+DDTM
001032	260140	000666'	PUSHJ PDP, ADVBFE
001033	665000	000004	TLOA IOS,IOFST
001034	254000	000773'	JRST GCHAR1
001035	630000	001162'	TDZ IOS,[XWD IO,IOACT]
001036	627000	000100	TLZN IOS,USRB
001037	254000	001021'	JRST GCHAR4
001040	621000	001000	TLZ IOS,TPMON
001041	135100	000706'	LDB LINE,PUNIT ;GET LINE NO.
001042	261140	000004	PUSH PDP,ITEM
001043	135200	000004'	LDB ITEM,TPCJOB
001044	260140	000000	PUSHJ PDP,SETRUN
001045	262140	000004	POP PDP,ITEM
001046	626000	020000	TRZN IOS,USRBC
001047	254000	001020'	JRST GCH3A
001050	205000	001004	MOVSI IOS,TPMON+IOFST
001051	254000	001021'	JRST GCHAR4
		07580	
		07590	

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
001064	603000	100000	07730
001065	254000	001125'	07740
001066	627000	040000	07750
001067	337006	001001'	07760
001070	254000	001072'	07770
001071	254000	001133'	07780
001072	603000	001000	07790
001073	254000	001135'	07800
001074	200046	000007	07810
001075	602040	777777	07820
001076	335020	000001	07830
001077	254000	001132'	07840
001100	261140	000002	07850
001101	200046	001003'	07860
001102	260140	000253'	07870
001103	200046	000007	07880
001104	260140	000000	07890
001105	551041	000000	07900
			07910
001106	201066	000007	07920
001107	271040	000002	07930
001110	540400	000001	07940
001111	271040	000000	07950
001112	505406	000637'	07960
001113	251401	777777	07970
			07980
001114	201040	000111	07990
001115	274046	001067'	08000
001116	271040	000004	08010
001117	231040	000005	08020
001120	201426	000007	08030
001121	202050	000001	08040
001122	260140	000000	08050
001123	254000	001124'	08060
001124	665000	000004	08070
001125	261140	000002	08080
001126	623000	000001	08090
001127	260140	001027'	08100
001130	262140	000002	08110
001131	624000	050000	08120
001132	660000	040000	08130
001133	202006	000002	08140
001134	263140	000000	08150
001135	205040	400000	08160
001136	436042	000443'	08170
001137	661000	000004	08180
001140	201040	000015	08190
001141	137046	001101'	08200
001142	350000	000000	08210
001143	263140	000000	08220
			08230
001144	030000	600000	08240
001145	000100	020000	
001146	120020	010000	
001147	001020	010000	
001150	020004	140000	

```
MOVBUF:  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,ADVBF
          JRST .+1
          TLOA IOS,IOFST
          PUSH PDP,TAC1
          TLZE IOS,IOW
          PUSHJ PDP,SETIOD
          POP PDP,TAC1
          TRZA IOS,NCERR+IOACT
          TRO IOS,NCERR
          MOV3:  MOVEM IOS,DEVIOS(DDB)
          POPJ PDP,
          MIS:
          MIS1:  MOVMON:  MOVSI 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,
```

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

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A	000000	INT
AC1	000015	INT
AC2	000016	INT
AC3	000017	INT
ADRCK	001104'	EXT
ADVBFE	001032'	EXT
ADVBFF	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

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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
DVTY	000010	INT
ECHO	000527'	
ECHO'	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'	

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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
IORCTL	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
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'	

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MOVMON	001135'	
MTTYLN	000232'	EXT
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'	
SIMR0	000572'	
SIMVA	000562'	
SP	002000	
SPACE	000557'	
SPC2	000742'	
SPC21	000745'	
SPC4A	000737'	
SPC7	000747'	
SPCCR	000721'	
SPCIN	000701'	
SPFF	000723'	

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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'	

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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