

```

1          ;***COPYRIGHT 1969, DIGITAL EQUIPMENT CORP., MAYNARD, MASS.***
2
3
4          ;THIS SUB-PROGRAM ASSEMBLED WITH SYSTEM PARAMETER FILE - S,MAC(V414)
5          XLIST
6          LIST
7          TITLE DLSINT - INT. SERV. FOR DLS (DATA LINE SCANNER DC10)
8          SUBTTL M. FREDRIKSEN/RCC TS 01 JUN 69 V005
9          XP      VDLSIT,005*
10         ;PUT VERSION NUMBER IN GLOB LISTING AND LOADER STORAGE MAP
11
12         ;MODULAR HARDWARE INTERFACE WITH EITHER CONSER OR TTYSER
13
14         EXTERNAL TYPX
15
16         IFE FTTYSER,<XP FULTWX,200000>
17
18         IFN FTTYSER,<XP FULTWX,4>*
19
20         ;ACCUMULATOR ASSIGNMENTS
21
22         000010      CHREC=TEM          ;AC FOR CHARACTER
23         000006      DDR=DEV DAT       ;ADDRESS OF DEVICE DATA BLOCK
24         000002      LINE=TAC1         ;SCANNER LINE NUMBER
25         000005      HPOS=DAT         ;HORIZONTAL POSITION OF TTY.(0-71)
26
27         ;BYTE POINTERS
28
29
30         EXTERNAL PLASTC
31
32
33
34
35         000240      DLS=240           ;DC10 DEVICE NUMBER
36         ;BITS IN CHREC TO COMMUNICATE WITH DLS
37
38         000100      USORLN=100        ;USE DIRECTED LINE NUMBER
39         000400      TDSABL=400        ;TRANSMIT DISABLE
40         000400      RCVBIT=400        ;RECEIVE BIT AFTER DATAI DLS,CHREC

```

```

41 ;DEVICE DEPENDENT PORTION OF INITIALIZATION CODE
42 ;CALL: MOVEI TAC,CHANNEL NUMBER
43 ; PUSHJ PDP,SCNINI
44
45 INTERNAL SCNINI
46
47 000000 DLSINI:
48 000000 724200 000040 SCNINI: CONO DLS,40 ;INIT DLS COMPLETELY (I/O RESET)
49 000001 724201 000000 CONO DLS,(TAC) ;ASSIGN PI CHANNEL NUMBER
50 000002 263140 000000 POPJ PDP,
51
52 ;SCANNER INTERRUPT SERVICE ROUTINE.
53
54 ENTRY DLSINT
55
56 INTERNAL SCNINT
57 EXTERNAL SCNSAV,TCONLN,TTYTAB,XMTINT,TYPE,INUS2,RECINT
58
59 000003 DLSINT:
60 000003 724340 000030 SCNINT: CONSO DLS,30 ;ANY INTERRUPTS ON DLS?
61 000004 254000 000003' JRST SCNINT ;NO
62 000005 264000 000000 JSR SCNSAV
63 000006 724040 000010 DATAI DLS,CHREC ;GET CHARACTER & LINE INFO
64 000007 554100 000010 HLRZ LINE,CHREC ;PUT LINE NUMBER IN AC LINE
65 000010 301100 000000 CAIL LINE,TCONLN ;ARE WE ENABLED FOR THIS LINE NUMBER?
66 000011 254000 000030' JRST SCNIN2 ;NO,TURN OFF TRANSMIT(IF ON) AND DISMISS
67 000012 602400 000400 TRNE CHREC,RCVBIT ;WAS IT A RECEIVER INTERRUPT?
68 000013 254000 000000 JRST RECINT ;YES, RECEIVER INT, HANDLER
69 000014 724140 000057' DATA0 DLS,[EXP TDSABL] ;CLEAR HARDWARE FLAG
70 000015 254000 000000 JRST XMTINT ;GO PROCESS CHAR IN SCNSRF OR SCNSRH

```



```

95          ;COMMON TO RECEIVE AND TRANSMIT.
96
97 000032 553000 000006 INUSE: HRRZS DDR          ;LINE DISABLED IF RH TTYTAB=-1
98 000033 306300 777777      CAIN DDB,-1
99 000034 263140 000000      POPJ PDP,
100 000035 200006 000002      MOVE IOS,DEVIOS(DDR)      ;SETUP IOS
101 000036 301100 000025'     CAIL LINE,TCONLN      ;CTY OR PTY ?
102 000037 254000 000026'     JRST INUS2              ;YES
103 000040 603000 000004      TLNE IOS,FULTWX        ;IS THIS SELF ECHOING FULL DUPLEX?
104 000041 254000 000037'     JRST INUS2              ;YES,(USER TYPED CONTROL B)
105 000042 504400 000002      HRL CHREC,LINE        ;INSERT LINE NUMBER IN DATAO
106 000043 661400 000100      TLO CHREC,USDRLN
107 000044 620400 000400      TRZ CHREC,TDSABL
108 000045 724140 000010      DATAO DLS,CHREC
109 000046 137400 000000      DPB CHREC,PLASTC
110 000047 263140 000000      POPJ PDP,          ;DISMISS INTERRUPT
111
112          ;ROUTINE TO OUTPUT A CHARACTER ON A LINE
113          ;CALLED FROM TYP OR TYPL IN SCNSER

114
115          INTERNAL SCNTYP
116
117 000050          SCNTYP:
118 000050 504400 000002      DLSTYP: HRL CHREC,LINE      ;SET UP LINE NUMBER IN CHREC
119 000051 661400 000100      TLO CHREC,USDRLN      ;USE THAT AS DIRECTED LINE#
120 000052 620400 000400      TRZ CHREC,TDSABL      ;INSURE TRANSMISSION NOT DISABLED
121 000053 724140 000010      DATAO DLS,CHREC      ;OUT IT GOES
122 000054 332000 000006      SKIPE DDB
123 000055 137400 000046'     DPB CHREC,PLASTC      ;SAVE CHAR FOR FULL DUPLEX
124 000056 263140 000000      POPJ PDP,
125
126 000057          LIT
127 000057 000000 000400
128 000060          DLSEND: END

```

NO ERRORS DETECTED
PROGRAM BREAK IS 000060

CHREC	000010	DAT	000005 INT	DDB	000006
DDBSRC	000020' EXT	DEV DAT	000006 INT	DEVIOS	000002 INT
DLS	0000240	OLSEND	000060'	DLSINI	000000'
DLSINT	000003' INT	OLSTYP	000050'	FDTTYS	777777 777777
FULTWX	000004 INT	HPOS	000005	INJEST	000024' FXT
INUS2	000041' EXT	INUSE	000032'	IOS	000000 INT
LINE	000002	PDP	000003 INT	PLASTC	000055' FXT
RCVBIT	000000	RECINT	000013' EXT	SCNIN2	000030' FXT
SCNINI	000000' INT	SCNINT	000003' INT	SCNSAV	000005' FXT
SCNTYP	000050' INT	TAC	000001 INT	TAC1	000002 INT
TCOMM	000016' INT	TCOINL	000036' EXT	TDSARL	000400
TEM	000010 INT	TTYTAB	000016' EXT	TYPE	000027' FXT
TYPX	000021' EXT	USDRLN	000100	VDLSIT	000005 INT
XMTINT	000015' EXT				

DLSTYP	118#		
DMT	6#	6	
DNAERR	6#	6	
DOU	6#	6	
DR	6#	6	
DRL	6#	6	
DRN	6#	6	
OSER	6#	6	
OSI	6#	6	
OSKRLB	6#	6	
OSO	6#	6	
DVAVAL	6#	6	
DVCDR	6#	6	
DVDIR	6#	6	
DVDIRI	6#	6	
DVDIS	6#	6	
DVDSK	6#	6	
DVDTA	6#	6	
DVIN	6#	6	
DVLNG	6#	6	
DVLPT	6#	6	
DVMTA	6#	6	
DVOUT	6#	6	
DVPTP	6#	6	
DVPTR	6#	6	
DVTTY	6#	6	
ENTRH	6#	6	
FBMERR	6#	6	
FNFERR	6#	6	
FRGSEG	6#	6	
FT2REL	6#		
FTATTA	6#		
FTCHEC	6#		
FTEXAM	6#		
FTFINI	6#		
FTGETT	6#		
FTHALT	6#		
FTKCT	6#		
FTMONP	6#		
FTPRV	6#		
FTRA10	6#		
FTRCHK	6#		
FTREAS	6#		
FTSLEE	6#		
FTTALK	6#		
FTTIME	6#		
FTTRAC	6#		
FTTRPS	6#		
FTTYS	6#	16	18
FULTWX	19#	19	103
HPOS	25#	81	
HSAMSK	6#	6	
HSAPOS	6#	6	

NECERR	6#	6						
NLEERR	6#	6						
NSDERR	6#	6						
NSFERR	6#	6						
NSHF	6#	6						
NSRBIT	6#	6						
NSWP	6#	6						
NXM	6#	6						
OBUFR	6#	6						
OCLOSB	6#	6						
OUTBFB	6#	6						
OUTPR	6#	6						
PDP	6#	6						
PLASTC	30	109	50	79	94	99	110	124
POV	6#		123					
PROG	6#	6						
PRTERR	6#	6						
PVSPYA	6#	6						
PVSPYM	6#	6						
PVTRPS	6#	6						
RCVBIT	40#	67						
RECINT	57	68						
RENMR	6#	6						
RUN	6#	6						
RUNABL	6#	6						
RUNMSK	6#	6						
SCNIN2	66	90#						
SCNINI	45	48#						
SCNINT	56	60#	61					
SCNSAV	57	62						
SCNTYP	115	117#						
SD	6#	6						
SHF	6#	6						
SHRSEG	6#	6						
SLEVEL	6#	6						
SLICE	6#	6						
SNA	6#	6						
SPYSEG	6#	6						
STOPIO	6#	6						
STTYB1	6#	6						
STTYBF	6#	6						
SWP	6#	6						
SWPCLR	6#	6						
SYSDEV	6#	6						
TAC	6#	6	49					
TAC1	6#	6	24					
TCOMM	74	76#						
TCONLN	57	65	82	84	101			
TDSABL	39#	69	90	107	120			
TEM	6#	6	22					
TRNERR	6#	6						
TTYATC	6#	6						
TTYBIU	6#	6						

TTYTAB	57	77	
TTYUSE	6#	6	
TYPE	57	86	
TYPX	14	80	
UCHN	6#	6	
UIDMOD	6#	6	
USDRLN	38#	106	119
USRMOD	6#	6	
UUD	6#	6	
UWP	6#	6	
UWPOFF	6#	6	
VDLSIT	10#	10	
WTMASK	6#	6	
XMTINT	57	70	

CODES	6#			
DISABL	6#			
ENABLE	6#			
NOSCHE	6#			
NOSHUF	6#			
QUEUES	6#			
SCHEDU	6#			
SHUFFL	6#			
STARTD	6#			
XP	6#	6	9	18

57	000024	727201	000000	CONO DSK,(TAC)
58	000025	546040	000200'	WLRM TAC,DSKCOM
59	000026	700000	000012'	CONO PI,PION
60	000027	551040	000013'	WRRZI TAC,DCRCHN
61	000030	720601	004350	CONO DCB,XMOVE+P18+DFNUM(TAC)