

00010

XLIST

01970

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00030  
00040  
00050 EXTERNAL STODAT, ADVBFF, IOSET, SETIOD, SETBYT, STOSQD  
00060 EXTERNAL CDRSAV, CDRCHN, CDRRET, ILLOUT, PIOMOD  
00070 INTERNAL CDRINT  
00080  
00090 ;DEVICE DATA BLOCK LINKAGE  
00100 EXTERNAL CDRDB, CDRDAT, CRDIS  
00110 ENTRY CDRDSP
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```
00120
00130
00140
00150 ,CDR PARAMETER ASSIGNMENTS
00160
00170 , CDR CONTROL REGISTER
00180         CRDONE=10;         DONE FLAG
00190         CRBUSY=20;        BUSY FLAG
00200         CRBIN=40;         BINARY
00210         CRALL=100;        ALL FLAG
00220         CRMIS=200;        DATA MISSED
00230         CREOC=400;        END OF CARD
00240         CREOFF=1000;      END OF FILE
00250         CRERR=2000;       ERROR
00260         CHCHN=2
00270 , ACCUMULATORS
00280         CRDAT1=TEM
00290         CRAC=JDAT
00300
00310 , SPECIAL IO STATUS WORD ASSIGNMENTS
00320         CRMFST=40000;       FIRST CARD
00330         CRMBIN=200000;      BINARY
00340         CRMIMG=100000;      IMAGE
00350 , SPECIAL CHARACTERS
00360         S2EOF=32;           END OF FILE
00370
00380 REPEAT 0,<
00390 ,CDR DATA BLOCK
00400
00410 CDRDAT:  SIXBIT /CDR/
00420         34
00430         0
00440         EXP CDRDSP
00450         XWD 1400+PROG,10403
00460         0
00470         0
00480         XWD PROG,0
00490         0
00500         0
00510 CRDIS:  JRST .
00520 >

00530
00540 ,CDR SERVICE DISPATCH TABLE
00550
00560 CDRDSP:  CONO CR,0 ;RELEASE
00570         POPJ PDP,;         CLOSE
00580         JRST ILLOUT        ;OUTPUT
00590         JRST CRINP;        INPUT

000000 711600 000000
000001 263140 000000
000002 254000 000000
000003 254000 000004'
```

			00600
			00610
000004	621000	000002	00620
			00630
000005	661000	040004	00640
000006	135040	000000	00650
000007	306040	000014	00660
000010	661000	200000	00670
000011	306040	000010	00680
000012	661000	100000	00690
000013	660000	010000	00700
000014	202006	000002	00710
000015	260140	000000	00720
000016	202046	000010	00730
000017	201040	000000	00740
000020	711601	000160	00750
000021	263140	000000	00760

```
CRINP:  TLZ IOS,IOBEG;          VIRGIN DEVICE?  IOBEG:=0
CDRIN1:  TLO IOS,IOFST+CRMFST;    IOFST:=CRMFST:=1
        LDB TAC,PIOMOD
        CAIN TAC,B;              MODE=BINARY?
        TLO IOS,CRMBIN;         YES.  CRMBIN:=1
        CAIN TAC,I;             MODE=IMAGE?
        TLO IOS,CRMIMG;        YES.  CRMIMG:=1
        TRO IOS,IOACT;         IOACT:=1
        MOVEM IOS,DEVIOS(DEV DAT)
        PUSHJ PDP,SETBYT;      TAC0-5:=TAC12-13:=0; TAC6-11:=BYTE SIZE
        MOVEM TAC,DEVPTR(DEV DAT)
        MOVEI TAC,CDRCHN;      ASSIGN PI CHANNEL
        CONO CR,CRBIN+CRALL+CRBUSY(TAC);  SELECT BINARY, ALL
        POPJ PDP,;            RETURN
```

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00770
00780
000022 711740 000010 00790
000023 254000 000022' 00800
000024 264000 000000 00810
000025 201300 000000 00820
000026 200006 000002 00830
000027 711700 002200 00840
000030 660000 200000 00850
000031 711440 000010 00860
000032 260140 000000 00870
000033 627000 040000 00880
000034 256000 000000 00890
                                00900
000035 640400 007400 00910
000036 646400 007400 00920
000037 254000 000047' 00930
000040 711700 001000 00940
000041 254000 000051' 00950
000042 603000 200000 00960
000043 254000 000125' 00970
000044 603000 100000 00980
000045 254000 000144' 00990
000046 254000 000067' 01000
                                01010
                                01020
000047 201040 000017' 01030
000050 711601 000020 01040
000051 661000 000040 01050
000052 201240 000032 01060
000053 260140 000000 01070
000054 330000 000000 01080
000055 254000 000217' 01090
000056 201040 000056' 01100
000057 542040 000034' 01110
000060 711740 000400 01120
000061 254000 000226' 01130
000062 260140 000000 01140
000063 330000 000000 01150
000064 661000 000002 01160
000065 254000 000231' 01170
                                01180
000066 260140 000164' 01190
000067 201040 000074' 01200
                                01210
000070 711640 000002 01220
000071 620100 000160 01230
000072 711602 000000 01240
000073 254000 000112' 01250
                                01260

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CDRINT:  CONSO CR,CRDONE;   DONE FLAG?
         JRST CDRINT
         JSR CDRSAV;           SAVE ACCUMULATORS AND ESTABLI
         MOVEI DEVDAT,CDRDAT
         MOVE IOS,DEVIOS(DEVDAT)
         CONSZ CR, CRMIS+CRERR; DATA MISSED OR ERROR?
         TRO IOS,IODERR;     IODERR:=1
         DATAI CR, CRDAT1;  INPUT INFORMATION
         PUSHJ PDP,IOSET;   PROG:=C(JBTADR18-35), ITEM:=C(DEVPTR)
         TLZN IOS,CRMFST;   FIRST CARD?  CRMFST:=0
         XCT CRDIS          ;NOT FIRST, GO TO SUBROUTINE

CRFIRS:  TRC CRDAT1, 7400;  FIRST COL OF FIRST CARD
         TRCN CRDAT1,7400;  Y, X, 0, OR 1 PUNCH?
         JRST CREOFC;       NO, END OF FILE CARD
         CONSZ CR, CREOFF;  END OF FILE?
         JRST CREOF;       YES
         TLNE IOS,CRMBIN;  CRMBIN=1?
         JRST CRFSTB;     YES
         TLNE IOS,CRMIMG;  CRMIMG=1?
         JRST CRFSTI;     YES
         JRST CRFSTL+1

CREOFC:  MOVEI TAC,CDRCHN   ;WAIT FOR EOC
         CONO CR,CRBUSY(TAC)

CREOF:   TLO IOS, IOEND;   IOEND:=1
         MOVEI DAT,S2EOF
         PUSHJ PDP,STODAT; STORE END OF FILE CHARACTER
         SKIP
         JRST CRLST2;     BLOCK FULL OR BLOCK COMPLETE
         MOVEI TAC,..;    DATA STORED PROPERLY
         HRRM TAC, CRDIS; SET DISPATCH TO RETURN HERE.
         CONSO CR, CREOC; END OF CARD?
         JRST CREXIT;    NO.
         PUSHJ PDP,ADVBFF; ADVANCE BUFFER
         SKIP
         TLO IOS,IOBEG;   IOBEG:=1
         JRST CROFF

CRFSTL:  PUSHJ PDP, CRITMS; STORE ITEM
         MOVEI TAC,CRCV;  TAC:=CRCV.  HOLLERITH READ

CRREST:  CONI CR, TAC1
         TRZ TAC1, CRBIN+CRALL+CRBUSY; SELECT HOLLERITH, ALL:=0, BUS
         CONO CR, (TAC1);  RESET CARD READER
         JRST CREXT1;     CHANGE DISPATCH AND GO

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			01270
			01280
			01290
			01300
000074	200440	000241'	01310
000075	711740	000400	01320
000076	200440	000142'	01330
000077	134040	000011	01340
000100	231040	000005	01350
000101	135242	000206'	01360
000102	260140	000053'	01370
000103	254000	000052'	01380
000104	254000	000115'	01390
000105	603440	760000	01400
000106	254000	000077'	01410
000107	711700	000400	01420
000110	254000	000115'	01430
000111	201040	000074'	01440
			01450
000112	542040	000057'	01460
000113	254000	000226'	01470
000114	000000	006424	01480
			01490
000115	200440	000143'	01500
000116	134240	000011	01510
000117	260140	000102'	01520
000120	330000	000000	01530
000121	254000	000217'	01540
000122	603440	760000	01550
000123	254000	000116'	01560
000124	254000	000213'	01570
			01580

, HOLLERITH READ MODE

CRCV:	MOVE CRAC, [POINT 6,CRDAT1,23];	COLUMNS 79 AND 80
	CONSO CR,CREOC;	END OF CARD?
	MOVE CRAC,CRC1;	NO. LOOK AT ALL CHARACTERS
	LDBI TAC,CRAC	;CONVERT HOLLERITH
	IDIVI TAC, 5;	TO ASCII
	LDB DAT, CRCV1(TAC1)	
	PUSHJ PDP,STODAT;	STORE IN BU FER
	JRST CREOF+1	
	JRST CRINS	
	TLNE CRAC, 760000;	WORD COMPLETE?
	JRST CRCV+3;	NO
	CONSZ CR,CREOC;	END OF CARD?
	JRST CRINS;	YES
	MOVEI TAC, CRCV;	NEXT DISPATCH TO CRCV. HOLLERITH READ
CREXT1:	HRRM TAC, CRDIS;	UPDATE DISPTACHER
	JRST CREXIT	
CRCON:	OCT 6424	
CRINS:	MOVE CRAC,CRC2;	BLOCK FULL OR BLOCK COMPLETE INSERT CR
	LDBI DAT, CRAC	
	PUSHJ PDP,STODAT;	STORE CHAR
	SKIP;	EXIT1.
	JRST CRLST2;	EXIT2. BLOCK FULL OR BLOCK COMPLETE
	TLNE CRAC,760000;	THATS ALL?
	JRST CRINS+1;	NO
	JRST CRLAST;	END OF THE CARD

			01590
			01600
			01610
000125	135040	000242'	01620
000126	302040	000005	01630
000127	660000	400000	01640
000130	711640	000001	01650
000131	620040	000120	01660
000132	711601	000000	01670
000133	201040	000135'	01680
000134	254000	000112'	01690
			01700
000135	201040	000137'	01710
000136	542040	000112'	01720
			01730
000137	200240	000010	01740
000140	260140	000165'	01750
000141	254000	000226'	01760
			01770
000142	440600	000010	01780
000143	170700	000114'	01790

,BINARY READ MODE

CRFSTB: LDB TAC,[POINT 3,CRDAT1,35]; 7-9 PUNCH?
CAIE TAC, 5
TRO IOS, IOIMPM; YES. IOIMPM:=1
CONI CR, TAC
TRZ TAC, CRBUSY+CRALL; BUSY FLAG:=0, ALL FLAG:=0
CONO CR,(TAC); RESET TO RE-READ COL 3
MOVEI TAC, CRCOL2; DISPATCH TO CRCOL2 ON NEXT INTERRUPT
JRST CREXT1

CRCOL2: MOVEI TAC, CRCOL4; DISPATCH TO CRCOL4 ON NEXT INTERRUPT
HRRM TAC,CRDIS

CRCOL4: MOVE DAT, CRDAT1
PUSHJ PDP, CRITMS+1; STORE THE WORD FROM DAT
JRST CREXIT

CRC1: POINT 6,CRDAT1
CRC2: POINT 7,CRCOL2

			01800
			01810
			01820
			01830
000144	201040	000147'	01840
000145	137400	000243'	01850
000146	254000	000112'	01860
			01870
000147	260140	000164'	01880
000150	434400	000240'	01890
000151	201040	000153'	01900
000152	254000	000157'	01910
			01920
000153	711640	000002	01930
000154	620100	000120	01940
000155	711602	000000	01950
			01960
000156	201040	000156'	01970
000157	711700	000400	01980
000160	254000	000213'	01990
000161	202026	000010	02000
000162	350006	000010	02010
000163	254000	000112'	02020
			02030
000164	661000	000004	02040
000165	260140	000117'	02050
000166	254000	000052'	02060
000167	254000	000052'	02070
000170	263140	000000	02080
			02090
000171	575426	231550	02100
000172	325546	734162	
000173	301730	057116	02110
000174	561005	751650	
000175	526552	754262	02120
000176	551665	424104	
000177	215125	545226	02130
000200	462331	647640	
000201	506447	222124	02140
000202	555744	625602	
000203	412070	442614	02150
000204	436211	137534	
000205	246727	420576	02160
			02170
000206	350701	000171'	02180
000207	260701	000171'	02190
000210	170701	000171'	02200
000211	100701	000171'	02210
000212	010701	000171'	02220

,IMAGE READ MODE

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CRFSTI:  MOVEI TAC, .+3;      DISPATCH TO CRFSTI + 3 ON NEXT INTERRUPT
          DPB CRDAT1,[POINT 24,CRTEM,23];      SAVE COLUMN 1 AS MI
          JRST CREXT1

          PUSHJ PDP, CRITMS;  SET ITEM AND CHECK SIZE
          IOR CRDAT1, CRTEM;  CRTEM12-35:=COL 1 AND 2
          MOVEI TAC, .+2;      DISPATCH TO CRFSTI + 7 ON NEXT INTERRUPT
          JRST CRIM1+1

          CONI CR, TAC1
          TRZ TAC1, CRBUSY+CRALL;      BUSY FLAG:=ALL FLAG:=0
          CONO CR, (TAC1);      RESET READER ON COL 3

CRIM1:   MOVEI TAC,.;          DISPATCH TO CRIM1 ON NEXT INTERRUPT
          CONSZ CR, CREOC;      END OF CARD?
          JRST CRLAST;          YES
          MOVEM @DEVPTR(DEVDAT)
          AOS DEVPTR(DEVDAT); INCREMENT ITEM POINTER
          JRST CREXT1

CRITMS:  TLO IOS, IOFST;      IOFST:=1
          PUSHJ PDP, STODAT;    STORE WORD
          JRST CREOF+1
          JRST CREOF+1
          POPJ PDP,;           RETURN

CRCNV:   ASCII .+123456789.

          ASCII .0=@+'\' \ /ST.

          ASCII .UVWXYZ;,( ".

          ASCII .#%-JKLMNOP.

          ASCII .QR:$*[]>&+A.

          ASCII :BCDEFGHI?.:

          ASCII :)]<!?:

CRCV1:   POINT 7,CRCNV(TAC),6
          POINT 7,CRCNV(TAC),13
          POINT 7,CRCNV(TAC),20
          POINT 7,CRCNV(TAC),27
          POINT 7,CRCNV(TAC),34
    
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			02230		
			02240		
000213	301200	000122	02250	CRLAST:	CAIL ITEM,+D82; C(ITEM)<82?
000214	254000	000234'	02260		JRST CRCONT; NO
000215	260140	000000	02270	CRLST0:	PUSHJ PDP,STOSQD; STORE WORD COUNT
000216	330000	000000	02280		SKIP
000217	260140	000062'	02290	CRLST2:	PUSHJ PDP,ADVBFF; ADVANCE BUFFER
000220	254000	000231'	02300		JRST CROFF; EXIT1. NEXT BUFFER FULL
000221	201040	000047'	02310		MOVEI TAC, CDRCHN
000222	711601	000160	02320		CONO CR, CRBIN+CRALL+CRBUSY(TAC); SELECT BINARY, ALL
			02330		,ASSIGN PI CHANNEL
000223	661000	040004	02340	CRLST1:	TLO IOS,IOFST+CRMFSST; IOFST:=CRMFSST:=1
000224	623000	000001	02350		TLZE IOS, IOW; IN A WAIT? IOW:=0
000225	260140	000000	02360		PUSHJ PDP, SETIOD; IOWS:=1
			02370		
000226	202006	000002	02380	CREXIT:	MOVEM IOS,DEVIOS(DEVDAT); C(CRIOS):=C(IOS)
000227	202206	000011	02390		MOVEM ITEM, DEVCTR(DEVDAT); C(CRCTR):=C(ITEM)
000230	254000	000000	02400		JRST CDRRET; RESTORE ACCUMULATORS AND DISMISS INTERR
			02410		
000231	620000	010000	02420	CROFF:	TRZ IOS,IOACT; IOACT:=0
000232	711600	000000	02430		CONO CR,0; CLEAR CDR CONTROL REGISTER
000233	254000	000223'	02440		JRST CRLST1
			02450		
000234	201040	000221'	02460	CRCONT:	MOVEI TAC, CDRCHN; ASSIGN PI CHANNEL
000235	711601	000160	02470		CONO CR, CRBIN+CRALL+CRBUSY(TAC); SELECT BINARY, ALL,
000236	661000	040000	02480		TLO IOS,CRMFSST; CRMFSST:=1
000237	254000	000226'	02490		JRST CREXIT
			02500		
000240	000000	000000	02510	CRTEM:	0
			02520		
000241	140600	000010	02530	END,	
000242	000300	000010			
000243	143000	000240'			

THERE ARE NO ERRORS

PROGRAM BREAK IS 000244

CDRSER - CARD READER SERVICE
SYMBOL TABLE

PAGE 11

A	000000	INT
AC1	000015	INT
AC2	000016	INT
AC3	000017	INT
ADVBFF	000217'	EXT
AL	000001	INT
ASSCON	400000	INT
ASSPRG	200000	INT
B	000014	INT
RUFNT	000012	INT
RUFWRD	000013	INT
CDRCHN	000234'	EXT
CDRDAT	000025'	EXT
CDRDR	000000	EXT
CDRDSP	000000'	INT
CDRIN1	000005'	
CDRINT	000022'	INT
CDRRET	000230'	EXT
CDRSV	000024'	EXT
CHCHN	000002	
CLOSB	002000	INT
CLSIN	000002	INT
CLSOUT	000001	INT
CRAC	000011	
CRALL	000100	
CRRIN	000040	
CRRUSY	000020	
CRC1	000142'	
CRC2	000143'	
CRCNV	000171'	
CRCOL2	000135'	
CRCOL4	000137'	
CRCON	000114'	
CRCONT	000234'	
CRCV	000074'	
CRCV1	000206'	
CRDAT1	000010	
CRDIS	000136'	EXT
CRDONE	000010	
CREOC	000400	
CREOF	000051'	
CREOFC	000047'	
CRFOFF	001000	
CRERR	002000	
CREXIT	000226'	
CRFXT1	000112'	
CRFIRS	000035'	
CRFSTB	000125'	
CRFSTI	000144'	
CRFSTL	000066'	
CRIM1	000156'	
CRINP	000004'	
CRINS	000115'	
CRITMS	000164'	
CRLAST	000213'	

CDRSER - CARD READER SERVICE
SYMBOL TABLE

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CRLST0	000215'	
CRLST1	000223'	
CRLST2	000217'	
CRMBIN	200000	
CRMFST	040000	
CRMIMG	100000	
CRMISS	000200	
CROFF	000231'	
CRREST	000070'	
CRTEM	000240'	
D	000017	INT
DAT	000005	INT
DCL	000001	INT
DCW	020000	INT
DDI	000007	INT
DDO	000006	INT
DDTMEM	000037	INT
DDTSYM	000036	INT
DEN	000004	INT
DEVADR	000007	INT
DEVBUF	000006	INT
DEVCHR	000001	INT
DEVCTR	000011	INT
DEVDAT	000006	INT
DEVIAD	000007	INT
DEVIOS	000002	INT
DEVLOG	000005	INT
DEVMOD	000004	INT
DEVNAM	000000	INT
DEVOAD	000010	INT
DEVPTR	000010	INT
DEVSER	000003	INT
DGF	000012	INT
DIN	000003	INT
DLK	000005	INT
DOU	000002	INT
DR	000016	INT
DRL	000000	INT
DSI	000011	INT
DSO	000010	INT
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
ENTRR	020000	INT
I	000010	INT
IB	000013	INT
IBUFB	200000	INT
ILLOUT	000002'	EXT

CDRSER - CARD READER SERVICE
 SYMROL TABLE

PAGE 13

INITR	400000	INT
INPB	010000	INT
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
IOSET	000032	EXT
IOSTRT	000010	INT
IOUSE	400000	INT
IOW	000001	INT
IOWC	000020	INT
IOWS	400000	INT
ITFM	000004	INT
JBFAADR	000000	INT
JBFCTR	000002	INT
JBFPTR	000001	INT
JBUF	000005	INT
JDAT	000011	INT
JERR	002000	INT
JIOW	100000	INT
JNA	004000	INT
LOOKB	040000	INT
MTW	010000	INT
OBUF	100000	INT
OUTPB	004000	INT
PDP	000003	INT
PICHN	000100	INT
PIOMOD	000006	EXT
PROG	000007	INT
RUN	200000	INT
RUNABL	204000	INT
S2FOF	000032	
SETBYT	000015	EXT
SETIOD	000225	EXT
STODAT	000165	EXT
STOSQD	000215	EXT
TAC	000001	INT
TAC1	000002	INT
TEM	000010	INT
TTYATC	020000	INT
TTYUSE	010000	INT
USRMOD	010000	INT

CDRSER - CARD READER SERVICE
SYMBOL TABLE

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UUO 000014 INT

END OF ASSEMBLY