

```

                                IDENT  GETCARD
                                PROGRAM LENGTH
                                BLOCKS

000000 003130 ABSOLUTE* ABSOLUTE

0000001 C.READ EQU 1
0000003 C.READ EQU 3
0000004 C.WRITE EQU 4
0000005 C.SENDE EQU 5
0000006 C.HANG EQU 6
*
0000031 C.JOB EQU 25
0000032 C.CARDIN EQU 26
0000033 C.CARDIN EQU 27
0000034 C.CARDF EQU 28
0000035 C.SDVCF EQU 29
*
* DEFINE C-R RESPONSE BITS
*
* STATUS BITS:
0000044 F.DS EQU 36 DEVICE STATUS FILED
0000043 F.RDY EQU F.DS-1
0000042 F.BUSY EQU F.DS-2
0000041 F.BIN EQU F.DS-3
0000040 F.FILE EQU F.DS-4
0000037 F.FEED EQU F.DS-5
0000036 F.EMPTY EQU F.DS-6
0000035 F.EOF EQU F.DS-7
0000031 F.COMP EQU F.DS-11
*
0000030 F.REQD EQU 24 ** REQUEST DONE FIELD
0000000 F.SEQN EQU 0 ** SEQUENCE NUMBER
0000000 F.O FIELD MACRO NEW,OLD
                                IFC NE,*OLD**,1
                                SET F.OLD
                                SET F.NEW-OLDPOS
                                IFC CNT*0:1
                                SET 60+CNT
                                SET F.NEW
                                CAT CNT
                                ENDM
                                LIST 0
CAP MACRO A
                                VFD 60/C.A
                                ENDM
XJ MACRO W,S
+ VFD 12/0130B.18/W.30/S
                                ENDM

```

CAPAB
DATA

000027	23012605000000000000
000030	17200522012405000000
000031	22052324172200000000
000032	17200522012405000000
000033	23051406000000000000
000034	17200522012405000000
000035	
000035	07052405260600000000
000036	17200522012405000000
000037	23052104101600000000
000040	17200522012405000000
000041	
000041	03012011160000000000
000042	17200522012405000000
000043	
000043	03021413000000000000
000044	17200522012405000000
000045	
000045	22052425221600000000

[illegible]

GETCARD .. CARD READER DRIVER
SUBPROCESS DESCRIPTOR

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000046 17200523012405000000
000047 07052463012204000000
000050 23000000000000000000
000051 00000000000000000000

DATA 0LOPERATE
DATA 0LGETCARD,0LS
C.CARDS EQU NCAP
DATA 0

CAPAB .1

11 78
12
40
7
61

000052 40000000000000000000
000053 00000000000000000000
000054 00000000000000000000
000055 00000000000000000000
000057 00000000000000000001
000060 00000000000000000000
000061 00000000000000000000
000062 00000000000000000000
000063 00000000000000000000
000064 00000000000000000000
000065 00000000000000000000
000066 00000000000000000000
000067 0000

0017
0021
0000
0101
000070 0000
0017
0021
0400
0101

000071 00000000000000000000
000072 00000000000000000000
000073 00000000000000000000
000074 00000000000000000000
000075 00000000000000000000
000101 00000000000000000000
000102 00000000000000000000
000103 00000000000000000000
000103 00000000000000000003
000104 000000000000000000031
000105 00000000000000000000
000106 000000000000000000073
000107 000000000000000000001
000110 000000000000000000006
000111 000000000000000000022
000112 000000000000000000005
000113 000000000000000000022
000114 000000000000000000000
000115 000000000000000000004
000116 000000000000000000031
000117 000000000000000000000
000120 000000000000000000031
000121 000000000000000000000
000122

MODE DATA 4S57
HOLCKCOL DATA 0
BUFFPNT DATA 0
STATUS BSSZ 2
STEP DATA 1
CARD CNT DATA 0
EVSEQN DATA 0
RECNUM DATA 0
THISREC DATA 0
ERR DATA 0
CRERROR DATA 0
EVENTP DATA 0
EVENTS VFD 12/0
VFD 12/15
VFD 12/218
VFD 12/0
VFD 12/101B
VFD 12/0
VFD 12/15
VFD 12/218
VFD 12/256
VFD 12/101B
PURGEFLG DATA 0
CARDLOC DATA 0
BANNER DATA 0
BSIZE DATA 0
JOBFILE BSSZ 4
PURGEF DATA 0
SEQN DATA 0
GETBAN CAP READ
VFD 60/C.READ
CAP JOB
VFD 60/C.JOB
LOGREC DATA 0
VFD 60/BANNER
DATA 1
GETSEQ CAP HANG
VFD 60/C.HANG
CAP SEQCHN
VFD 60/C.SEQCHN
EVSEQ CAP SENDE
VFD 60/C.SENDE
CAP SEQCHN
VFD 60/C.SEQCHN
DATA 0
CAP WRITE
VFD 60/C.WRITE
CAP JOB
VFD 60/C.JOB
FILEADR DATA 0
VFD 60/BUFFSTRT
WORDC DATA 0
CREATEB CAP CBLK

.. COLUMN NUMBER OF HOLERTH CHECK

.. SEQUENCE NUMBER
.. NUMBER OF REQUESTS TO DO
.. BUFFER SIZE
.. BUFFER ADDRESS
.. INPUT REQUEST
.. SEQUENCE NUMBER OF SECOND EVENT

.. BUFFER ADDRESS
.. INPUT REQUEST

CAP .1
CAP .1
CAP .1
CAP .1
CAP .1
CAP .1
CAP .1
CAP .1

000122	00000000000000000024	VFD	60/C.CBLK	CAP	.1
000123		CAP	JOB		
000123	00000000000000000031	VFD	60/C.JOB	CAP	.1
000124	00000000000000000000	DATA	0		
000125		CAP	CAPIN		
000125	00000000000000000023	VFD	60/C.CAPIN	CAP	.1
000126		CAP	SELF		
000126	00000000000000000020	VFD	60/C.SELF	CAP	.1
000127	00000000000000000002	DATA	2		
000130		CAP	SDVCF		
000130	00000000000000000035	VFD	60/C.SDVCF	CAP	.1
000131		CAP	READ		
000131	00000000000000000003	VFD	60/C.READ	CAP	.1
000132		CAP	SDVCF		
000132	00000000000000000035	VFD	60/C.SDVCF	CAP	.1
000133	00000000000000000001	DATA	1		
000134	000000000000000000136	VFD	60/CAPNUM		
000135	00000000000000000001	DATA	1		
000136	00000000000000000000	DATA	0		
000137		CAP	READ		
000137	00000000000000000003	VFD	60/C.READ	CAP	.1
000140		CAP	CARDF		
000140	00000000000000000034	VFD	60/C.CARDF	CAP	.1
000141	00000000000000000000	DATA	0		
000142	000000000000000000213	VFD	60/READBUFF		
000143	00000000000000000000	DATA	0		
000144	000000000000000000146	VFD	60/*+2		
000145	00000000000000000000	DATA	0		
000172		BSSZ	20		
000172	00000000000000000006	CAP	HANG		
000172		VFD	60/C.HANG	CAP	.1
000173		CAP	CARDIN		
000173	00000000000000000032	VFD	60/C.CARDIN	CAP	.1
000174		CAP	SENDE		
000174	00000000000000000005	VFD	60/C.SENDE	CAP	.1
000175		CAP	CARDO		
000175	00000000000000000033	VFD	60/C.CARDO	CAP	.1
000176	00000000000000000000	DATA	0		
000177		CAP	GETEVF		
000177	00000000000000000021	VFD	60/C.GETEVF	CAP	.1
000200		CAP	CARDIN		
000200	00000000000000000032	VFD	60/C.CARDIN	CAP	.1
000201	03171425151655555555	DATA	10HCOLUMN		
000203	00000000000000000000	DATA	0		
000204	03012204551625155555	DATA	10HCARD NUM		
000205	00000000000000000000	DATA	0		
000206	55220303172204555555	DATA	10H RECORD		
000207	00000000000000000000	DATA	0		
000210	00000000000000000000	DATA	1LE		
000211	00000000000000000000	DATA	0		
000212	00000000000000000000	DATA	0		
000213		BSSZ	270		

```

000631
001631
001662
001702
001722 00000000000000000000
001723 000000000000000000055
001724 000000000000000000034
001725 000000000000000000035
001726 000000000000000000036
001727 000000000000000000037
001730 000000000000000000040
001731 000000000000000000041
001732 000000000000000000042
001733 000000000000000000043
001734 000000000000000000044
001735 000000000000000000053
001736 000000000000000000054
001737 000000000000000000054
001740 000000000000000000074
001741 000000000000000000055
001742 000000000000000000061
001743 000000000000000000045
001744 000000000000000000001
001745 000000000000000000002
001746 000000000000000000003
001747 000000000000000000004
001750 000000000000000000005
001751 000000000000000000006
001752 000000000000000000007
001753 000000000000000000010
001754 000000000000000000011
001755 000000000000000000072
001756 000000000000000000057
001757 000000000000000000052
001760 000000000000000000075
001761 000000000000000000076
001762 000000000000000000077
001763 000000000000000000046
001764 000000000000000000012
001765 000000000000000000013
001766 000000000000000000014
001767 000000000000000000015
001770 000000000000000000016
001771 000000000000000000017
001772 000000000000000000020
001773 000000000000000000021
001774 000000000000000000022
001775 000000000000000000066
001776 000000000000000000053
001777 000000000000000000047
002000 000000000000000000070
002001 000000000000000000071
002002 000000000000000000073

```

```

BUFFSTRT BSSZ 512
ENDBUFF BSSZ 25
REG1 BSSZ 16
REG2 BSSZ 16
TABLEP DATA 0
RCDDIS DATA 1R 00
DATA 28,29,30,31,32,33,34,35,36 01-11

```

```

DATA 1R,1R= 12,13
DATA 64B,74B 14,15
DATA 55B,61B .. 16,17
DATA 1R, 20
DATA 1,2,3,4,5,6,7,8,9 21-31

```

```

DATA 1R< 32
DATA 1R,1R, 33,34
DATA 75B,76B 35,36
DATA 77B,1R, 37,40
DATA 10,11,12,13,14,15,16,17,18

```

```

DATA 66B,1R$,1R*
DATA 70B,71B 55,56
DATA 73B,33B 57,60

```

```

002003 0000000000000000000033
002004 0000000000000000000050
002005 0000000000000000000023
002006 0000000000000000000024
002007 0000000000000000000025
002010 0000000000000000000026
002011 0000000000000000000027
002012 0000000000000000000030
002013 0000000000000000000031
002014 0000000000000000000032
002015 0000000000000000000032
002016 0000000000000000000056
002017 0000000000000000000051
002020 0000000000000000000065
002021 0000000000000000000060
002022 0000000000000000000067
002023 0000000000000000000066
002024 0000000000000000000072

```

DATA

50B

61

DATA

19,20,21,22,23,24,25,26

DATA

1R,1R,1R

72,73,74

DATA

65B,66B,67B

75,76,77

DATA

66B

11-0 : 100B

DATA

72B

12-0:101B

		N	MACRO	SUBR,N		
			DATA	0		
			JP	NPG		
			ENDM			
002025	00000000000000000000	STARTF	SUBR	DATA	.. START NEW JOB FILE	
002025	00000000000000000000	STARTF		0		SUBR .1
002026	0200002335		JP	STARTFPG		SUBR .1
		ENDF	SUBR	DATA	.. END JOB FILE	
002027	00000000000000000000	ENDF		0		SUBR .1
002030	02000002352		JP	ENDFPG		SUBR .1
		WEOR	SUBR	DATA	.. WRITE END OF RECORD LEVEL IN X5	
002031	00000000000000000000	WEOR		0		SUBR .1
002032	0200002401		JP	WEORPG		SUBR .1
		CRACK	SUBR	DATA	.. CRACK JOB CARD	
002033	00000000000000000000	CRACK		0		SUBR .1
002034	0200002426		JP	CRACKPG		SUBR .1
		FLUSH	SUBR	DATA	.. FLUSH OUTPUT BUFFER	
002035	00000000000000000000	FLUSH		0		SUBR .1
002036	0200002465		JP	FLUSHPG		SUBR .1
		MAKERLK	SUBR	DATA	.. MAKE NEXT OUTPUT FILE BLOCK	
002037	00000000000000000000	MAKERLK		0		SUBR .1
002040	0200002473		JP	MAKERLPG		SUBR .1
		CONVOCT	SUBR	DATA	.. CONVERT OCTAL COLUMN VALUE	
002041	00000000000000000000	CONVOCT		0		SUBR .1
002042	0200002500		JP	CONVOCTPG		SUBR .1
		OCTBCD	SUBR	DATA	.. CONVERT BINARY TO BCD	
002043	00000000000000000000	OCTBCD		0		SUBR .1
002044	0200002506		JP	OCTBCDPG		SUBR .1
		READ	SUBR	DATA	.. READ NEXT CARD, DETERMINE TYPE	
002045	00000000000000000000	READ		0		SUBR .1
002046	0200002520		JP	READPG		SUBR .1
		CONVRIN	SUBR	DATA	.. CONVERT BINARY CARD	
002047	00000000000000000000	CONVRIN		0		SUBR .1
002050	0200002543		JP	CONVRINPG		SUBR .1
		CONVRCD	SUBR	DATA	.. CONVERT HOLERITH CARD	
002051	00000000000000000000	CONVRCD		0		SUBR .1
002052	0200002565		JP	CONVRCDPG		SUBR .1
		IDENT	SUBR	DATA	.. PRINT CARD IDENTIFICATION	
002053	00000000000000000000	IDENT		0		SUBR .1
002054	0200002537		JP	IDENTPG		SUBR .1
		MESSAGE	SUBR	DATA	.. PRINT MESSAGE ON CONSOLE TELETYPE	
002055	00000000000000000000	MESSAGE		0		SUBR .1
002056	0200002551		JP	MESSAGEPG		SUBR .1
		CRPULSE	SUBR	DATA	.. PULSE CARD READER FOR MORE CARDS	
002057	00000000000000000000	CRPULSE		0		SUBR .1
002060	0200003005		JP	CRPULSEPG		SUBR .1
		CRCHK	SUBR	DATA	.. GET CARD READER ERROR BITS AND PROCESS	
002061	00000000000000000000	CRCHK		0		SUBR .1
002062	0200003015		JP	CRCHKPG		SUBR .1
		CLEARCR	SUBR	DATA	.. CLEAR C-R EVENT CHANNEL, FLIP ERROR BIT	
002063	00000000000000000000	CLEARCR		0		SUBR .1
002064	0200003071		JP	CLEARCRPG		SUBR .1
		PULSTAT	SUBR	DATA	.. GET C-R STATUS BITS	

GETCARD ** CARD READER DRIVER
SUBROUTINE ENTRY POINTS

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002065	00000000000000000000	PULSTAT	DATA	0		SUBR	.1
002066	0200003076		JP	PULSTAT*G		SUBR	.1
002067	00000000000000000000	NEXTV	SUBR	DATA	** SEND NEXT EVENT TO CARD READER	SUBR	.1
002070	0200003103	NEXTV	JP	0		SUBR	.1
				NEXTV*G			
002071	00000000000000000000	CRSP	SUBR	DATA	** GET RESPONSE FROM CARD READER	SUBR	.1
002072	0200003117	CRSP	JP	0		SUBR	.1
002073		LRW	BSS	CRSP*G			
				0			

002073		INIT	XJ	READSELF .. READ DATA AREA		
002073	01300021370000000000	+	VFD	12/0130B,18/READSELF,30/	XJ	.1
002074			XJ	CAPIN GET SDEVICE FILE		
002074	01300001250000000000	+	VFD	12/0130B,18/CAPIN,30/	XJ	.1
002075			XJ	READSDV		
002075	01300001310000000000	+	VFD	12/0130B,18/READSDV,30/	XJ	.1
002076	5110000136		SA1	CAPNUM		
	7261000006		SA6	X1+6		
002077	5160000127		SA6	WHAT		
	7170000034		SA7	C.CARDF		
002100	5170000130		SA7	WHERE		
002101	01300001250000000000	+	XJ	CAPIN		
			VFD	12/0130B,18/CAPIN,30/	XJ	.1
002102	7266000001		SA6	X6+1		
	5160000127		SA6	WHAT		
002103	7170000033		SA7	C.CARDF		
	5170000130		SA7	WHERE		
002104			XJ	CAPIN		
002104	01300001250000000000	+	VFD	12/0130B,18/CAPIN,30/	XJ	.1
002105	7266000001		SA6	X6+1		
	5160000127		SA6	WHAT		
002106	7170000032		SA7	C.CARDIN		
	5170000130		SA7	WHERE		
002107			XJ	CAPIN		
002107	01300001250000000000	+	VFD	12/0130B,18/CAPIN,30/	XJ	.1
002110			XJ	CLEAR:1 .. CLEAR EVENT CHANNEL		
002110	01300001770000000001	+	VFD	12/0130B,18/CLEAR,30/1	XJ	.1
002111	0200002113		JP	*+2		
002112	0200002110		JP	*-2		
002113	5110002145		SA1	SELBIN		
002114	5160000176		SA6	X1		
	10611		SA6	EVENT		
002115	01300001740000000000	+	XJ	SENDV		
			VFD	12/0130B,18/SENDV,30/	XJ	.1
002116	5110002146		SA1	SELBIN+1		
002117	5160000176		SA6	X1		
	10611		SA6	EVENT		
002120	01300001740000000000	+	XJ	SENDV		
			VFD	12/0130B,18/SENDV,30/	XJ	.1
002121			XJ	CRSPEV		
002121	01300001720000000000	+	VFD	12/0130B,18/CRSPEV,30/	XJ	.1
002122	5170000055		SA7	STATUS		
			XJ	CRSPEV		
002123	01300001720000000000	+	VFD	12/0130B,18/CRSPEV,30/	XJ	.1
002124	5170000056		SA7	STATUS+1		
	5110000055		SA1	STATUS		
002125	0341002130		IR	X1,ERBOK		
	5110000056		SA1	STATUS+1		
002126	0351002144		OR	X1,IMPOS		
	43601		MX6	1		
002127	5160000064		SA6	ERB		
002130	5110000001	ERBOK	SB1	1		
	0100002067		RJ	NEXTV		

.. START THE ALL ROLLING

GETCARD ** CARD READER DRIVER
INITIALIZATION AND FINI

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002131	0200002147	*	JP	NEXTJOB		
002132	6110002134	FINI	SH1	FINMSG		
	0100002055		RJ	MESSAGE		
002133			XJ	RETURN		
002133	01300021360000000000	+	VFD	12/0130B.18/RETURN.30/	XJ	.1
002134	05160455170655242201	FINMSG	DIS	*END OF TRAY*		
002135	31000000000000000000					
002136		RETURN	CAP	RETURN		
002136	00000000000000000025		VFD	60/C.RETURN	CAP	.1
002137		READSELF	CAP	READ		
002137	00000000000000000003		VFD	60/C.READ	CAP	.1
002140			CAP	CARDS		
002140	00000000000000000026		VFD	60/C.CARDS	CAP	.1
002141	00000000000000000000		DATA	0.0		
002142	00000000000000000000					
002143	00000000000000000073		VFD	60/LRW		
002144		IMPOS				
002144	00000000000000000000					
002145	00000000000000000001	SELBIN	VFD	48/0.12/1		
002146	40000000000000000001		VFD	1/1.47/0.12/1		

002147	0100002045
002150	0270002151
002151	0200002132
002152	0200002132
002153	0200002173
002154	0200002147
002155	0200002173
002156	0200002173
002157	0200002160
002160	6130000031
	0100002051
002161	0550002173
	0100002033
002162	0100002025
002163	76600
	76710
	5170000060
002164	5170000063
002165	5160000062
	5160000052
	5160000073
002166	5160000105
	5170000117
002167	7170000004
	5170000103
002170	
002170	0130000103
002171	0100002037
002172	0200002212
002173	6110002175
	0100002055
002174	0200002201
002175	121702552213113202005
002176	645555755312178253003
002177	01220455052222172200
002200	0000000000000000000000
002201	0100002045
002202	0270002203
002203	0200002132
002204	0200002132
002205	0200002201
002206	0200002147
002207	0200002201
002210	0200002201
002211	0200002201
	0100002045
002212	0270002214
002213	0200002223
002214	
002215	0200002212
002216	0200002227
002217	0200002230
002220	0200002243

```

NEXTJOB      RJ      READ      .. GET JOB CASRD
              JP      *+1*B7
              JP      FINI      .. POWERED DOWN
              JP      FINI      .. EOF SWITHC ON
              JP      ILLCARD   .. FORM CARD
              JP      NEXTJOB   .. EOF
              JP      ILLCARD   .. FOR
              JP      ILLCARD   .. BINARY
              JP      GOODJOB   .. HOLERITH
GOODJOB      S83     RUFFSTRT
              RJ      CONVBCD   .. CONVERT JOB CAFD
              NJ      RS,ILLCARD .. HOLCHK
              RJ      CRACK     .. GET JOB NAME
              RJ      STARTF    .. START JOB FILE
              SA6     S0
              SA7     R1
              SA7     CARDCNT   .. START CARD COUNTER
              SA7     THISREC
              SA6     MODE      .. HOLERITH MODE
              SA6     RECNUM    .. RECORD 0
              SA6     BANNER
              SA6     LOGREC
              SA7     FILEADR
              SA7     CWRITE
              SA7     GETBAN
              XJ      GETBAN*1
              VFD     12/01308,18/GETBAN,30/1
              RJ      MAKEBLK
              JP      CARDLOOP
ILLCARD      SB1     SKIPJOB
              RJ      MESSAGE
              JP      WAITEOJ
SKIPJOB      DIS     ,*JOB SKIPPED .. JOB CARD ERROR*

WAITEOJ      RJ      READ
              JP      *+1*B7
              JP      FINI      .. POWERED DOWN
              JP      FINI      .. EOF
              JP      WAITEOJ   .. FORM
              JP      NEXTJOB   .. EOF
              JP      WAITEOJ   .. FOR CARD
              JP      WAITEOJ   .. BINARY
              JP      WAITEOJ   .. HOLERITH

CARDLOOP     RJ      READ
              JP      *+1*B7
              JP      MIDDLE    .. POWERED DOWN
              JP      CARDLOOP  .. EOF AND TRAY EMPIY
              JP      FORM
              JP      ENDJOB
              JP      FOR

```

002221 0200002267
002222 0200002314
002223 6110002225 0100002055
002224 0200002212
002225 12170255102516075511
002226 16552205010405220000
002227 0000000000
002230 0100002035
002231 7150000017
002232 5110000117 0100002031
5120002242
002233 10611 10722
5160000105
002234 5170000073 7160000004
002235 5160000103
002236 01300001030000000001
002237 0100002037
002240 0100002027
002241 0200002147
002242 70741033000000000000
002243 0100002035
002244 56120 43060
20130
15310
002245 0100002041
002246 0356002257 73560
002247 0376002254 20114
15310
002250 0100002041
002251 0356002257
002252 7245777775 0376002254
002253 20503 0324002257
12556
002254 0100002031
002255 76600
5160000063
002256 0200002308
002257 66500 0100002053
002260 6110002262

MIDDLE

MIDMSG

* FORM

* ENDJOB

EOI

EOR

HAVELVL

ILLEOR

JP
JP
SB1
RJ
JP
DIS
PS
RJ
SA5
RJ
SA1
SA2
BX6
BX7
SA6
SA7
SA6
SA8
XJ
VFD
RJ
RJ
JP
VFD
RJ
SA1
MX0
LX1
BA3
RJ
OR
X5
ID
LX1
BA3
RJ
OR
ID
SA1
PL
LX5
BA5
RJ
SA6
SA6
JP
SB5
RJ
SB1

BIN
HOL
MIDMSG
MESSAGE
CARDLOOP
JOB HUNG IN READER
FLUSH
178
WEOR
FILEADR ** WRITE END OF FILE
EOI
X1
X2
LOGREC
RANNER
C.WRITE
GETBAN
GETBAN*1 ** WRITE END OF *NFORMATION
12/0130B*18/GETBAN*30/1
MAKEBLK
ENDF ** END JOB FILE
NEXTJOB
6/70B*18/741033B*36/0
FLUSH ** FLUSH BUFFER
B2
48
24 ** COL 2
-X0*X1
CONVOCT
X6*ILLEOR
X6 ** SAVE COLUMN VALUE
X6*HAVELVL ** SENSE BLANK COLUMN
12
-X0*X1 ** COL 3
CONVOCT
X6*ILLEOR
X6*HAVELVL
X5-2
X4*ILLEOR
X5*X6
WEOR ** WRITE EOR
R0
THISREC
INCRCC
B0
IDENT
FORMSG

XJ

.1

0100002055		RJ	MESSAGE
002261 76500		SX5	B0
0200002254		JP	HAVELVL
002262 55111414050701145505	EORMSG	DIS	,* ILLEGAL EOR LEVEL TRATED AS 0*
002263 17225514050505145505			
002264 22012705050505145505			
002265 000000000000000000			
002266 76610			
54610	SETBIN	SA6	B1
5160000102		SA6	A1
002267 5110000052	BIN	SA6	SEQN
0351002256		SA1	MODE
002270 0301002325		OR	X1:SETBIN
7163776146		SX6	X1:MODECHG
002271 0336002272	+	RC	B3=ENDBUFF
0100002035		RC	X6:#+1
002272 0100002047		RC	FLUSH
002273 5110000102		SA1	CONVBIN
73611		SA6	SEQN
		SA6	X1+B1
002274 63610		SA6	A1
0467002306		RC	X1
76610		RC	B6,B7:INCRCC
002275 5160000071		SX6	B1
0670002303		SA6	PURGEFLG ** SET FLAG DO DELETE FILE
002276 66500		RC	B7,SEQERR ** NO CHKSUM ERROR
0100002053		RC	B0 ** NO COLUMN
002277 6110002301		SA1	IDENT
0100002055		RC	SUMMSG
002300 0200002306		RC	MESSAGE
002301 55031005031355232515	SUMMSG	DIS	INCRCC
002302 55052221722000000000		DIS	,* CHECK SUM ERROR*
002303 76671	SEQERR	SX6	B7+B1
6150000000		SA6	0
		SA6	** NO COLUMN
002304 0100002053		RC	A1
002305 6110002311		RC	IDENT
0100002055		SA1	SEQMSG
002306 5110000060	INCRCC	RC	MESSAGE
73611		SA1	CARDCNT
54610		SX6	X1+B1
002307 5110000063		SA6	A1
73611		SA1	THISREC
		SX6	X1+B1
002310 0200002212		SA6	A1
002311 55230521250516030555	SEQMSG	RC	CARDLOOP
002312 05222217220000000000		DIS	,* SEQUENCE ERROR*
002313 76600			
54610	SETHOL	SX6	B0
002314 5110000052	HOL	SA6	A1
0351002313		SA1	MODE
		OR	X1:SETHOL

002315	0311002325	7163776146		NZ	X1:MODECHG
				SX6	R3-ENDBUFF
002316	0336002317	0100002035	+	NG	X6,**1
				RJ	FLUSH
002317	0100002051			RJ	CONVBCD
002320	0450002306	0100002053		RJ	B5:INCRCC ** NO HOLERITH CHECK
				RJ	IDENT
002321	6110002323	0100002055		SEL	HOLMSG
				RJ	MESSAGE
002322	0200002306			JP	INCRCC
002323	55101714052211241055		HOLMSG	DLS	** HOLERITH CHECK*
002324	03100503130000000000				
002325	66500		*MODECHG	SES	B0
	0100002053				IDENT
002326	6110002323	0100002055		SEL	MODEMSG
				RJ	MESSAGE
002327	5110000052	76610		SA1	MODE
				SEL	B1
		13661		SA6	X6-X1
002330	54610			SA6	A1
	63760	0200002331		SEL	** SWITCH MODES
				JP	X6
002331	0200002314		MODESEL	MODESEL	B7
002332	0200002267			HOL	
002333	55151706055503100116		MODEMSG	DLS	BIN
002334	07050000000000000000				** MODE CHANGE*

002335		STARTFG	XJ	SAVEREG1		
002335	01300023460000000000	+	VFD	12/0130B,18/SAVEREG1,30/	XJ	.1
002336	5110000075		SE1	JOBFILE		
	6170000031		SB7	C.JOB		
002337	56600		SB6	B0	.. READ LOCATE FUNCTION	
	10522		BAB	X2		
	5160000212		SA6	FNAME		
002340			XJ	CALLBEAD		
002340	01300030040000000000	+	VFD	12/0130B,18/CALLBEAD,30/	XJ	.1
002341	5111000003		SA1	B1*3		
	43036		MX0	30		
	15610		BX6	-X0*X1	.. NEXT BLOCK	
002342	5160000124		SA6	NEWB		
	21136		AX1	30		
	73610		SX0	X1		
002343	5160000074		SA6	RSIZE	.. BLOCK SIZE	
			XJ	RSTREG1		
002344	01300023500000000000	+	VFD	12/0130B,18/RSTREG1,30/	XJ	.1
002345	0200002825		JP	STARTF		
002346		SAVEREG1	CAP	SAVE		
002346	00000000000000000016		VFD	60/C.SAVE	CAP	.1
002347	00000000000000001662		VFD	60/REG1		
002350		RSTREG1	CAP	RESTOR		
002350	00000000000000000017		VFD	60/C.RESTOR	CAP	.1
002351	00000000000000001662		VFD	60/REG1		

002352
002352 01300023460000000000
002353 5110000074 5120000124
002354 20136 12212 5160000100
002355 5110000075 6170000031
002356 5110000071 6261000001
002357
002357 01300030040000000000
002360 5110000081 5110000060
002361 0100002043
002362 5140000212 6110000211
002363 20636 43036 11606 20430
002364 43044 15540 11404 12665
002365 7170000046 20730 12667
002366 56610 10644 54640
002367 0100002055
002370 5110000071 76600 54610
002371 0311002374
002372 01300023500000000000
002373 0200002027
002374 6110002376 PRGMSG
002375 0200002027
002376 12170255202522070504
002377 55575755052222172223
002400 00000000000000000000

ENDFG

+

SA1
SA2
LX1
BX6
SA6
SB1
SB7
SA1
SB6
XJ
VFU
SB1
SA1
RJ
SA4
SB1
LX6
MX0
BX6
LX4
MX0
BA5
BA4
BA6
SX7
LX7
BX6
SA6
BA6
SA6
RJ
SA1
SA6
SA6
N4
XJ
VFU
JP
SB1
RJ
JP
MSG
DIS

PRGMSG

MSG

SAVEREG1
12/0130B,18/SAVEREG1,30/
RSIZE
NEWB
30
X1*X2
JOBFILE*3 ** PUT LAST BLOCK AND BSIZE TOGETHER
JOBFILE
C.JOB
PURGEFLG
X1*1
CALLBEAD ** RETURN FILE
12/0130B,18/CALLBEAD,30/
1
CARD CNT
OCTBCD
FNAME
NUMC
30
30
X0*X6
24
60-24
-X0*X4
X0*X4
X6*X5
IR
24
X6*X7
R1
X4
A4
MESSAGE
PURGEFLG
R0
A1
X1,PRGMSG
RSTREG1
12/0130B,18/RSTREG1,30/
ENDF
PMSG
MESSAGE
ENDF
**JOB PURGED ** ERRORS*

XJ .1

XJ .1

XJ .1

002401	5110000117		WEORG	X5 LEVEL NUMBER		
	5120000105			CLEAR MODE TO OR, INCREMENTS RECNUM		
002402	37212			SA1 FILEADR .. GET CURRENT FILE ADDRESS		
	7222777776			SA2 LOGREC .. GET LAST BANNER ADDRESS		
002403	5130000062	43052		IX2 X1-X2		
	73631			SX2 X2-1 .. LENGTH OF NEW LOG REC		
002404	7170000003	54030		MA0 42		
	5170000103			SA3 RECNUM		
002405				SA6 X3+B1		
002406	01300001030000000000			SA6 A3		
	5110000073			SA7 C.READ		
002407	11101			SA7 GETBAN		
	12512			XQ GETBAN		
	54610	54770		VFD 12/0130B,18/GETBAN,30/	XJ	.1
002410				SA1 BANNER		
002411	01300001030000000000			SA7 C.WRITE		
	5130002424	7215777760		BX1 X0+X1		
002412	0311002414	0312002414		BA6 X1+X2		
	5130002027			SA6 A1		
002414	20562		NOTFIL	SA7 A7		
	12335	5150000052		XJ GETBAN .. REWRITE OLD BANNER	XJ	.1
002415	20545			VFD 12/0130B,18/GETBAN,30/		
	12335	43601		SA3 ENDREC		
002416	20222	54650		SA1 X5-178		
	12532	5160000073		NZ X1,NOTFIL .. NOT ZERO LENGTH RECORD		
002417	5110000117			NZ X2,NOTFIL .. NOT LEVEL 17		
	76610	36061		SA3 ENDF		
002420	54610			LX5 36+14 .. POSITION LEVEL NUMBER		
	10711	5170000105		BX3 X3+X5		
002421				SA6 MODE		
002422	01300001030000000001			LX5 36+1 .. POSITION MODE		
	0100002037			BX3 X3+X5		
002423	0200002031			SA6 A5		
	40000021000000000000			LX2 18 .. POSITION LENGTH OF LR		
002424	60000031000000000000			BA6 X3+X2		
				SA6 BANNER		
002425				SA1 FILEADR		
				SA6 B1		
				IX6 X6+X1		
				SA6 A1		
				BA7 X1		
				SA7 LOGREC .. ADDRESS OF NEW BANNER		
				XQ GETBAN,1		
				VFD 12/0130B,18/GETBAN,30/1	XJ	.1
				RJ MAKEBLK		
				JF WEOR		
				VFD 6/40B,18/21B,36/0		
				VFD 6/60B,18/31B,36/0		
				ENDREC		
				ENDFIL		

002426 43066 5110000631 20106
002427 6170000011 6160002431
002430 0200002461
002431 7227777722 0302002430
002432 7227777744 0322002443
002433 73670 6150000030
002434 6160002436
002435 0200002461
002436 7227777744 0332002443
002437 7227777732 0322002443
002440 20606 12567
002441 0550002435 6155777771
002442 0200002445 66500
002443 5150002457 10655 66500
002444 76610 5190000071
002445 22256 20214 5110002460
002446 01300001100000000000
002447 73471 15640 7266777732
002450 0336002453 21406 73441
002451 7264777732 20406 73441
002452 0336002453 7140000101
002453 12227 20222 73640
002454 5160000114

```
*
* CRACKS JOB CARD AT BUFFSTRT
* RETURNS IN X2 JOBNAME
* AND SEQUENCE NUMBER
* SETS X1 TO INPUT
CRACKG MX0 54
SA1 BUFFSTRT
LX1 6
SB7 9
SB6 FINDLET+1
FINDLET JP GETCHAR
SA2 X7-1R
ZK X2,FINDLET
SX2 X7-1R0
PL X2,JCE .. FIRST LETTER MUST BE LETTER
SA6 X7 .. SAVE FIRST LETTER
SB5 4*6
SB6 FINDNUM+1
FINDNUM JP GETCHAR
SX2 X7-1R0
NG X2,JCE
SA2 X7-1R+
PL X2,JCE
LX6 6
BX6 X6+X7
SB5 85-6
N4 85,FINDNUM
SB5 80
JP ENDNAME
JCE SA5 ERRORN
BX6 X5
SB5 80
SA6 81
SA6 PURGEFLG
ENDNAME LX2 X6,B5
LX2 12 .. READY FOR SEQ NUMBER
SA1 INPUT
X0 GETSEQ .. GET SEQUENCE NUMBER
* VED 12/0130B*18/GETSEQ*30/
SX4 X7+B1
BX6 -X0*X4 GET BOTTOM CHAR
SA6 X6-1R+
NG X6,SENDSEQ .. SENSE NO OVERFLOW
AX4 6
X4+B1 .. INCREMENT NEXT CHAR
SX6 X4-1R+
LX4 6
SX4 X4+B1 .. ADD BOTTOM A
NG X6,SENDSEQ .. SENSE NO OVERFLOW
SX4 2RAA .. COMPLETE WRAP AROUND
BX6 X2+X7
LX2 18
SA6 X4
SA6 EVSEQ+2
```

XJ .1

GETCARD .. CARD READER DRIVER
 CRACK JOB CARD

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002455 01300001120000000000
 002456 0200002033
 002457 00000000000522221722
 002460 11162025240000000000

+
 VFD
 JF
 DATA
 DATA
 INPUT
 INPUT
 *

EVSEQ
 12/0130B*18/EVSEQ,30/
 CRACK
 5RERROR
 0LINPUT

XJ .1

002461 15710
 0570002463
 54111

GETCHAR

BX7
 NZ
 SA1
 SB7
 LX1
 SB7
 ZK

-X0*X1 .. GET NEXT CHAR FROM JOB CARD

R7,CHK0

A1+B1

10

6

R7-B1

X7,JCE

002462 6170000012
 002463 20106
 67771
 0307002443

CHK0

B6

.. RETURN WITH NEXT CHARACTER IN X7

002464 0260000000

JP

FLUSH BUFFER

002465	7163777146	FLUSHG	SA6	B3-BUFFSTRT		
	5160000121		SA6	WORDC		
002466	0130000031		SA6	RUFFSTRT		
	0306002035		SA6	X6,FLUSH .. SENSE NO WORDS		
002467		FLUSH2	XJ	WRITEB,1		
002467	01300001150000000001	+	VTD	12/0130B,18/WRITEB,30/1	XJ	.1
002470	0100002037		RU	MAKEBLK		
002471	5110000117		SA1	FILEADR		
	5120000121		SA2	WORDC		
002472	36612		IA6	X1+X2		
	54010		SA6	A1		
	0200002035		JP	FLUSH		
002473		MAKEBLK	XJ	CREATEB		
002473	01300001220000000000	+	VTD	12/0130B,18/CREATEB,30/	XJ	.1
002474	5110000074		SA1	PSIZE		
	5120000124		SA2	NEWB		
002475	36612		IA6	X1+X2		
	54020		SA6	A2		
	5110002037		JP	MAKEBLK		
002476	76611		SA6	B1+B1		
	20036		LX6	30		
	37616		IA6	X1-X6		
	54010		SA6	A1		
002477	0200002037		JP	MAKEBLK		

002500 7160000007
 002501 37437 7170000004
 0304002041 20701
 002502 7266777776
 002503 0313002505 0326002501
 43602
 002504 0200002041
 002505 43601 0200002041

* X3 COLUMN
 * USES B7,X3,X4,X7
 * X5 = OCTAL DIGIT IF LEGAL
 * X6 = ID IF BLANK COLUMN
 * X5 = OR ID ILLEGAL OCTAL PUNCH
 CONVOC76 SX6 7
 CL SX7 4
 IX4 X3-X7
 ZX X4,CONVOCT
 LX7 1
 SX6 X6-1
 PL X6,CL
 N4 X3,OCTCHK
 MX6 2
 JP CONVOCT
 OCTCHK MX6 1
 JP CONVOCT

002506	9170777771	* OCTBCDG	NUMBER IN X1, DISPLAY CODE +N X6
			SB7 -6
002507	5120002516 43066		MA0 54
	77301		SA2 TENBLNK
002510	6160777765		SA3 -81
002511	73116	COUNT	SB6 -10
	73331		SA1 X1+86
	0321002511		SA3 X3+B1
002512	7211000045		PL X1+COUNT
	20266		SA1 X1+1R0+10
	11202		LA2 60-6
002513	12221		BX2 X0+X2
	73130		BA2 X2+X1 ** ADD CHARACTER
	6177000006		SA1 X3
002514	77301		SB7 B7+6
	0311002511		SA3 -81
	22672		NA X1+COUNT
002515	0200002043		LA6 X2+B7
002516	55555555555555555555	TENBLNK	JP OCTBCD
			DATA 10H

```

002517 0100002057
002520 5110000072
002521 5120000954 0301002535
002522 54620 7262000021
        63220 7271777776
002523 54710 56120 0371002520
002524 43060 56121 20114
        15310
002525 56221 72237770000
002526 6170000002 0302002045
002527 7223777760 6170000003
002530 0302002045 7223777770
002531 6170000004 0302002045
002532 43071 15330 7223777772
002533 6170000005 0302002045
002534 6170000006 0200002045
002535 0100002061
002536 7160000213 5160000054
002537 0270002540
002540 0200002517
002541 6170000000 0200002045
002542 6170000001 0200002045

```

```

* RETURNS IN B7:
* 0 READER POWERED DOWN
* 1 EOF SWITCH ON, TRAY EMPTY
* 2 FORM CARD
* 3 EOJ CARD
* 4 EOR CARD
* 5 BINARY CARD
* 6 HOLERITH CARD

READOK RJ CRPULSE
READG SA1 CARDLOC .. GET NUMBER OF CARDS LEFT IN BUFFER
        ZK X1:READMORE .. NO MORE CARDS IN BUFFER
        SA2 RUFFPNT
        SA6 X2+17
        SA6 A2
        SB2 X2 .. MAKE B2 CORRECT
        SX7 X1-1
        SA7 A1
        SA1 R2 .. GET HEADER WORD
        ID X1:READG .. NO CARD PRESENT
        MAX 60-12
        SA1 R2+B1
        EX1 12
        BAX -X0*X1 .. COL 1
        SB2 R2+B1
        SX2 X3-7777B
        SB7 2
        ZK X2:READ .. FORM CARD
        SX2 X3-178
        SB7 3
        ZK X2:READ .. EOJ CARD
        SX2 X3-78
        SB7 4
        ZK X2:READ
        MAX 60-3
        BAX -X0*X3
        SX2 X3-58
        SB7 5
        ZK X2:READ .. BINARY CARD
        SB7 6
        READ READ
        READMORE RC CRCHK .. CHECK LAST READ FOR ERROR CONDITION
        SA6 READBUFF
        SA6 RUFFPNT
        JP **1+B7
        JP READOK .. NO ERROR
        SB7 0
        JP READ .. READER POWERED DOWN
        SB7 1
        JP READ .. EOF SWITCH ON

```



```

#
# RETURNS IN B7:
+ SEQ - GOOD CARD
-1 - CHK SUM ERROR

REGISTER USAGE
B1      INPUT BUFFER
B2      OUTPUT BUFFER
B3      WORD COUNT FROM CARD
X0      24 BIT HOLE
X1      FIRST WORD OF CARD
X5      CHECK SUM
CONVRING SA5 R0 .. CLEAR CHECK SUM
MX0     60-24
SA1     R2 .. GET FIRST WORD
MA7     6
BA2     X7*X1 .. GET WORD COUNT
LA2     6
SB4     X2
NEWWORD SA2 R2
SAB SB1 A2*B1
SB2 R2+B1
SB4 R4-B1 .. DECREMENT CARD COUNT
LX2 24
BX2 X0*X2
BA3 -X0*X3
BX3 X2+X3
SA3 R3
SB3 R3+B1
IX3 X5-X6
NA R4-NEWWORD
LXI 6 .. GET ROW 4
MX0 60-12
NG XI,CHKSEQ .. SENSE NO SUM CHECK REQUESTED
LXI 18
BX1 -X0*X1 .. GET CHECK SUM FROM CARD
BA2 -X0*X5
DU 4,3
AAS 12
BAS -X0*X5
IAS X2+X3
AAI 12
BX1 -X0*X5
IAI X2+X3
AAS 12
BAS -X0*X5
IAI X2+X3
AAI 12
BX1 -X0*X5
IAI X2+X3
AAS 12
BAS -X0*X5

```

[illegible]

GETCARD .. CARD READER DRIVER
 CONVERT BINARY CARD

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002555 36223

000002

15320

21214

36223

002556 15320

21214

36223

13421

002557 17440

02314002562

002560 5021000017

63720

002561 0200002047

002562 6170777774

002563 0000000000

002564 0200002047

CHKSEQ

SUMERR

IX2
 DUP
 BX3
 AX2
 IX2
 BX3
 AX2
 IX2
 BX3
 AX2
 IX2
 BX4
 BX4
 N4
 SA2
 SB7
 JP
 SB7
 PS
 JP
 X2+X3
 2*3
 -X0*X2
 12
 X2+X3
 -X0*X2
 12
 X2+X3
 -X0*X2
 12
 X2+X3
 X2-X1
 -X0-X4
 X4:SUMERR
 A1+15
 X2
 CONVBIN
 -1
 CONVBIN

DUPLICAT.1

DUPLICAT.1

DUPLICAT.1

DUPLICAT.1

DUPLICAT.1

DUPLICAT.1

DUPLICAT.1

.. COMPARE COMPUTED CHECK SUM WITH CARD
 .. GET COMPLEMENT OF COMPARISON

.. GET LAST WORD
 .. GET SEQ NUMBER

* RETURNS IN B5 THE COLUMN WITH HOL CHK OR 0
 *
 * REGISTER USAGE:
 * B1 1
 * B2 INPUT BUFFER PTR
 * B3 OUTPUT BUFFER PTR
 * B4 FIRST OR LAST 5 CHARS OF OUTPUT WORD
 * B5 COL 1-80 OF CARD
 * B6 BYTE 1-5 OF INPUT WORD
 * X0 3 BIT MASK
 * X1 INPUT WORD
 * X6 OUTPUT WORD
 * X7 9 B+T HOLE
 * CONVRCDB SB5 -79
 * MA0 3
 * MA7 60-9
 * SX6 B0
 * SB4 R1+B1
 * SA6 HOLCRCOL ** CLEAR HOLCITH CHECKS
 * JP NEWIN
 * SA6 B3 ** STORE CHARACTERS
 * SB3 R3+B1 ** INCREMENT BUFFER POINTER
 * SA6 0 ** NEW OUTPUT WORD
 * SA1 R2 ** NEXT INPUT WORD
 * SB2 R2+B1
 * SB6 5 ** RESET BYTE COUNT
 * ZR X1:ALLBLNK
 * NEXTBYTE BX2 X0*X1 ** GET ZONE BITS
 * LX2 3
 * SA2 X2+ZONES
 * LX1 12
 * BX3 -X7*X1 ** GET FILED BITS
 * ID X2*SPCL ** SENSE SPECIAL ZONE
 * SX4 R1+B1 ** GET 8 PUNCH
 * BX4 X4*X1
 * BX3 -X4*X3 ** ZERO 8 PUNCH
 * LX4 2
 * LX3 X2*X4 ** VALUE OF 8 ZONE
 * LX3 38
 * LX4 38-3
 * BX5 X3*X4 ** 8 AND 9 PUNCH
 * N4 X5:HOLCHK ** TRUE
 * PX3 X3
 * N4 X3,B7 ** GET PUNCH VALUE +N B7
 * SA4 B7-48
 * ZR X4:ADDCHAR ** NO PUNCHES
 * SA2 X2+B7 ** ADD TO CHAR VALUE
 * LX3 13 ** CHECK IF OTHER PUNCHES
 * AX3 60-13
 * NZ X3:HOLCHK
 * ADDCHAR SA2 X2+BCDDIS
 * LX6 6
 * BX6 X6*X2 ** ADD C

002565 6150777660 43003 43763
 002566 76600 66411 5160000053
 002567 0200002571
 002570 56630 66331 7160000000
 002571 56120 66221 6160000005
 002572 0301002924
 002573 11201 20203 5222002626
 002574 20114 15317 0372002621
 002575 76411 11441 15334 20402
 002576 36224 20346 20443 11434
 002577 0314002622 27303 24373
 002500 7147777717 0304002603
 002501 73227 20315 21357
 002502 0313002622
 002503 5222001723 20606 12662

1 — 9

LX4
 BX5
 NZ

8 SHIP
 X3:XY
 X5:HOLCHK

```

002604 12662
          67661
          66551
002605 0560002573
002606 67441
          0540002571
          66411
002607 0750002570
          5120002516
002610 6150000010
          43060
          56630
002611 66331
          76600
          56630
          66331
002612 5133777775
          13523
          15450
002613 0314002617
          0315002616
002614 5063000000
          67331
          67551
002615 0550002612
          0200002617
002616 6133777776
          11603
          54630
002617 5110000053
          63510
002620 0200002051
002621 0332002622
          0303002603
002622 7175000120
          5170000053
002623 43763
          76200
          0200002603
002624 5120002636
          20636
          12662
002625 6155000005
          0200002606
          00000000000000000000
002626 00000000000000000000
002627 00000000000000000000
002630 00000000000000000000
002631 17770000000000000000
002632 00000000000000000000
002633 17770000000000000000
002634 60000000000000000000
002635 60000000000000000000

```

X1EMPTY

ZAPBLANK

ZERO12

ENDCONV

SPCL

HOLCHK

ALLBLNK

*
ZONES

```

BX6
SB6
SB5
N4
SB4
N2
SB4
N0
SA2
SB5
MX0
SA6
SB3
SA6
SA6
SB3
SA3
BA5
BA4
N4
SA6
SB3
SB5
N4
JP
SB3
BA5
SA6
SA1
SB5
JP
N0
ZK
SA7
MA7
SA2
JP
SA2
LA6
BA6
SB5
JP
DATA
DATA
DATA
VFD
DATA
VFD
VFD
VFD

```

```

X6+X2 .. ADD DISPLAY CODE CHARACTER TO STRING
R6+B1 .. NEXT BYTE
R5+B1 .. NEW COL
R6+NEXTBYTE .. SENSE X1 NOT EMPTY
R4+B1
R4+NEWIN .. SENSE X6 NOT FULL
R1+B1
R5+NEWOUT
TENBLNK .. CHECK FOR ALL BLANK WORDS
R
60-12
R3 .. STORE LAST WORD
R3+B1
R0
R3 .. STORE TRAILING ZERO WORD
R3+B1
R3-2 .. GET LAST WORD
X2-X3
-X0-X5
X4+ENDCONV .. BOTTOM 2 CHARS NOT BLANKS
X5+ZERO12 .. ALL 60 BITS NOT BLANKS
A3+0 .. ZERO THIS WORD
R3-B1
R5+B1
R5+ZAPBLANK .. NOT 80 COLS
ENDCONV .. RETURN B5
R3-1
X0+X3 .. ZERO BOTTOM 12 BITS
A3
HOLCKCOL .. RETREIVE HOLCKITH CHECK COLUMN NUMBER
X1
CONVBOD
X2+HOLCHK .. SENSE 12-11 PUNCH
X3+ADDOCHAR .. SENSE NO OTHER PUNCHES
R5+80 .. GET COLUMN NUMBER
HOLCKCOL
R1 .. REFORM MASK
R0 .. INSERT BLANK COLUMN
ADDOCHAR
FIVEBLNK
30
X6+X2
R5+5
X1EMPTY
0 NO PUNCHES
40B 0 PUNCH
40B .. 11 PUNCH
12/1777B,48/100B .. 11-0 PUNCH
20B .. 12 PUNCH
12/1777B,48/101B .. 12-0 PUNCH
12/6000B,48/0 .. 12-11 PUNCH
12/6000B,48/0 12-11-0 PUNCH

```

GEICARD ** CARD READER DRIVER
CONVERT CARD TO BCD

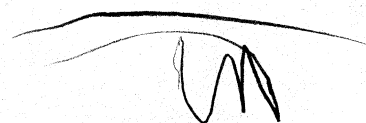
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002636 000000000555555555

FIVERLNK DATA

5R

		*	BP	COLUMN NUMBER TO BE PRINTED
002637	0450002843	IDENTG	ZK	B5+NOCOL
	76150		SA1	R5
002640	0100002043		RJ	OCTBCD
002641	5160000202		SA6	COLUMN
	6110000201		SB1	COLMSG
002642	0100002055		RJ	MESSAGE
002643	5110000063	NOCOL	SA1	THISREC
	0100002043		RJ	OCTBCD
002644	5160000205		SA6	CARD
	5110000062		SA1	RECNUM
002645	0100002043		RJ	OCTBCD
002646	5160000207		SA6	RECORD
	6110000204		SB1	CARDMSG
002647	0100002055		RJ	MESSAGE
002650	0200002053		JP	IDENT



002651 013000300000000000
002652 43066 56110 6110000001
002653 6120000146 7160000011
002654 63361 66400 66500
002655 67331 66441 0630002657
002656 54111 6130000011
002657 20106 15210 5222002700
002660 0372002667 0352002675
002661 0302002665 67501
002662 20607 12662 0326002655
002663 56620 66221 7160000011
002664 0200002655
002665 66551 0450002662 67441
002666 0200002655
002667 20607 0326002667 77741
002670 5170000145 6110000144
002671 56620 6120000005
002672 01300030040000000000
002673 01300030020000000000
002674 6110000001 0200002055
002675 20607 7130000155 12663
002676 66441 0326002667

* B1 POINTER TO DISPLAY CODE MESSAGE
MESSAGE2 XJ SAVEREG2
+ VFD 12/0130B,18/SAVEREG2,30/ XJ .1
MX0 54
SA1 R1
SB1 1
SB2 OUTP
SX6 9
SB3 X6+B1
SB4 R0
SB5 R0 ** RESET BLANK COUNT
NEWCHAR SB3 R3+B1
SB4 R4+B1
PL- R3,NEWCHAR
SA1 A1+B1
SB3 9
NEWCHAR LA1 6
BA2 =X0*X1
SA2 X2+DISASCII
ID- X2,RTN
OR X2,CR
ZN X2,BLNK ** SENSE BLANK CHARACTER
SB5 =B1 ** RESET BLANK COUNT
ADDNEXT LX6 7
BA6 X6+X2
PL- X6,NEWCHAR
SA6 R2
SB6 R2+B1
SA6 9
JP NEWCHARA
* BLNK SB5 R5+B1
ZN R5,ADDNEXT ** SENSE FIRST BLANK
SB4 R4+B1
JP NEWCHARA
RTN LX6 7
PL X6,*
SA7 R4
SA7 CHARCNT
SB1 MSGOUT
SA6 R2
SB6 5
XJ- CALLBEAD
+ VFD 12/0130B,18/CALLBEAD,30/ XJ .1
XJ RSTREG2
+ VFD 12/0130B,18/RSTREG2,30/ XJ .1
SB1 1
JP MESSAGE
CR LX6 7
SA3 1558
BA6 X6+X3
SB4 R4+B1
PL- X6,RTN

56620
002677 66221
77741
0200002670

SAG B2
SB2 R2+B1
SAG R4+B1
JP STOCNT

002700 377700000000000000
002701 0000000000000000041

*
DISASCII VFD 12/3777B:48/0 .. CR
DATA 33,34,35,36,37,38,39,40,41,42,43,44,45,46,47,48,49,5
,0,51,52,53,54,55,56,57,58 .. ALL OF THE LETTERS

002702 0000000000000000042
002703 0000000000000000043
002704 0000000000000000044
002705 0000000000000000045
002706 0000000000000000046
002707 0000000000000000047
002710 0000000000000000050
002711 0000000000000000051
002712 0000000000000000052
002713 0000000000000000053
002714 0000000000000000054
002715 0000000000000000055
002716 0000000000000000056
002717 0000000000000000057
002720 0000000000000000060
002721 0000000000000000061
002722 0000000000000000062
002723 0000000000000000063
002724 0000000000000000064
002725 0000000000000000065
002726 0000000000000000066
002727 0000000000000000067
002730 0000000000000000070
002731 0000000000000000071
002732 0000000000000000072
002733 0000000000000000073
002734 0000000000000000074
002735 0000000000000000075
002736 0000000000000000076
002737 0000000000000000077
002740 0000000000000000080
002741 0000000000000000081
002742 0000000000000000082
002743 0000000000000000083
002744 0000000000000000084
002745 0000000000000000085
002746 0000000000000000086
002747 0000000000000000087
002750 0000000000000000090
002751 0000000000000000091
002752 0000000000000000092
002753 0000000000000000093
002754 0000000000000000094
002755 0000000000000000095
002756 0000000000000000096

DATA 16,17,18,19,20,21,22,23,24,25 .. THE NUMBERS

DATA 13B,15B .. + AND -
DATA 12B,17B .. + AND /
DATA 8,9 .. (ADN)
DATA 4 .. \$
DATA 35B .. =
DATA 0 55B
DATA 14B,16B .. . AND .

GETCARD .. CARD READER DRIVER
MESSAGE SENDER

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002757 00000000000000000016
002760 17770000000000000000
002761
003000
003000 00000000000000000016
003001 0000000000000000001702
003002
003002 00000000000000000017
003003 0000000000000000001702
003004
003004 000000000000000000001

SAVEREG2

RSTREG2

CALLBEAD

VFD
BSSZ
CAP
VFD
VFD
CAP
CAP
VFD
VFD
CAP
VFD

12/1777B,48/0

15

SAVE

60/C.SAVE

60/REG2

RESTOR

60/C.RESTOR

60/REG2

READ

60/C.BEAD

60B

CAP .1

CAP .1

CAP .1

003005 0100002071
003006 5110000055 10711
20730
003007 43060 15970 5160000072
003010 10166 20104 36661
003011 5160000143 20744 76610
003012 11667 20610 5160000141
003013 01300001370000000000
003014 6120000213 0200002057

CRPULSEG RJ
SA1
BX7
FIELD
LA7
MXU
BX6
SA6
BA1
LA1
IX6
SA6
FIELD
LA7
SX6
BX6
LA6
SA6
XJ
VFD
SB2
JP

CRSP
STATUS
X1
REQD:0
CNT
60-12
-X0*X7
CARDLOC
X6
4
X6*X1
CARDWC
SEQN
CNT
B1
X6*X7
R
BUFFLOC
READIN
12/0130B:18/READIN:30/
READBUFF
CRPULSE

.. GET RESPONSE EVENT

.. NUMBER OF REQ DNE

*16
.. *17
.. WORD COUNT FOR CR FILE
.. GET EVEN OR ODD SEQUENCE
.. COMPUTE BUFFER ADDRESS

FIELD .1

FIELD .1

XJ .1

		*	RETURNS IN B7:		
		*	0	NO ERRORS	
		*	1	READER POWERED DOWN	
		*	2	EOF SWITCH ON	
003015	5110000055	CRCHKG	SA1	STATUS	
	0331003021		NG	X1:ERROR	
003016	0100002067		RJ	NEXTV	.. SEND OFF NEXT EVENT
003017	76600		SX6	R0	
	66700		SB7	R0	
	5160000065		SA6	CRERROR	.. CLEAR ERROR FLAGS
003020	0200002061		JP	CRCHK	
003021	10711	ERROR	BA7	X1	
	20731		FIELD	COMP	
	0337003037		LA7	CNT	FIELD .1
003022			NG	X7:COMPARE	
003022	20704		FIELD	EOF	
	0337003032		LA7	CNT	FIELD .1
	20701		NG	X7:EOF	
003023	0337003031		FIELD	EMPTY	
			LA7	CNT	FIELD .1
	20701		NG	X7:EMPTY	
003024	0337003030		FIELD	FEED	
			LA7	CNT	FIELD .1
	20704		NG	X7:FEEDF	
003025	0337003027		FIELD	RDY	
	7160000001		LA7	CNT	FIELD .1
			NG	X7:UKNWN	
003026	0200003045		SA6	E:NOTRDY	
003027	7160000011	UKNWN	JP	CRMSG	
			SA6	E:HELP	
003030	7160000005	FEEDF	JP	CRMSG	
	0200003045		SA6	E:FEED	
003031	7160000003	EMPTY	JP	CRMSG	
	0200003045		SA6	E:EMPTY	
003032	5110000065	EOF	JP	CRMSG	
	0311003050		SA1	CRERROR	
			N2	X1:NOMSG	
003033	0100002063		RJ	CLEARCR	
003034	0100002065		RJ	PULSTAT	
003035	0100002071		RJ	CRSP	.. READY STATUS FOR NEXT TIME AROUND
003036	5170000002		SB7	2	
	0200002061		CRCHK		
003037		COMPARE	FIELD	FEED:COMP	.. CHECK IF CARD FEED
003037	20706		LA7	CNT	FIELD .1
	0337003041		NG	X7:RPD	
003040	7160000007		SA6	E:COMP	.. SENSE NO FEED AND COMPARE
	0200003045		JP	CRMSG	
003041	0100002063	RPD	RJ	CLEARCR	
003042	0100002065		RJ	PULSTAT	
003043	0100002071		RJ	CRSP	
003044	5170000001		SB7	1	
	0200002061		JP	CRCHK	

003045 5110000065
37116
003046 0321003050
54610
003047 6216003056
0100002055
003050 0100002063
003051 0100002065
003052 0100002071
003053 5110000055
0331003021
003054 0100002067
003055 0200003015

CRMSG SA1 CRERROR
IX1 X1-X6
PL X1,NOMSG ** SENSE NEW ERROR LESS SERIOUS THAN LAST
SA6 A1
SB1 X6+CRMSGs
RJ MESSAGE
NOMSG RJ CLEARCR ** CLEAR CARD READER
RJ PULSTAT ** ASK FOR STATUS
RJ CRSP ** GET RESPONSE
SA1 STATUS
NG X1,ERROR ** SENSE ERROR IS STILL THERE
RJ NEXTV ** RESTART CARD READER
JP CRCHKG *** RESET FLAGS AT CRCHKG

*
MACRO CRMSG,N,MSG
BSS 0
E.N EQU *-CRMSGs
DIS ,*MSG*

003056 00000000000000000000
003057
003057
003057 16172455220501043100
003060 00000000000000000000
003061
003061
003061 24220131550515202431
003062 00000000000000000000
003063
003063
003063 05050505050601111425
003064 22050000000000000000
003065
003065
003065 03171520012205550522
003066 22172200000000000000
003067
003067
003067 20012211243155052222
003070 17220000000000000000

CRMSGs ENUM
NOTRDY DATA 0
CRMSG (NOT READY)
BSS 0
DIS ,*NOT READY* CRMSG .1
CRMSG .1
EMPTY CRMSG (TRAY EMPTY)
BSS 0
DIS ,*TRAY EMPTY* CRMSG .1
CRMSG .1
FEED CRMSG (FEED FAILURE)
BSS 0
DIS ,*FEED FAILURE* CRMSG .1
CRMSG .1
COMP CRMSG (COMPARE ERROR)
BSS 0
DIS ,*COMPARE ERROR* CRMSG .1
CRMSG .1
HELP CRMSG (PARITY ERROR)
BSS 0
DIS ,*PARITY ERROR* CRMSG .1
CRMSG .1

GEICARD :: CARD READER DRIVER
CLEAR CARD READER

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003071
003071 01300001770000000001
003072 0200003074
003073 0200003071
003074 5110000064
43601
13661
003075 54610
0200002063

CLEARCRG XJ
+ VFD
JP
JP
SA1
MX6
BX6
SA6
JP

CLEAR.1 .. GET ALL EVENTS FROM CHANNEL
12/0130B:18/CLEAR.30/1
**2
CLEARCRG .. ALL DONE
CLEARCRG .. LOOP FOR MORE EVENTS
ERB
1
X6-X1
A1
CLEARCR

XJ .1

GETICARD ** CARD READER DRIVER
GET C-R STATUS

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003076 5110000064

PULSTATG SA1

ERB

003077 12661 7160000100

SA6

100B

** STATUS REQUEST

5190000179

BA6

X6+X1

SA6

EVENT

XJ

SENDV

003100 01300001740000000000

+

VFD

12/0130B:18/SENDV.30/

XJ

.1

003101 7266777774

SA6

X6-3

** MAKE SURE EVENT TAKEN

0336002065

NG

X6:PULSTAT

003102 0200003122

JP

HELP

GEICARD ** CARD READER DRIVER
SEND NEW EVENT

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003103 5110000066
76610
13661
003104 5221000067
5130000064
003105 5140000061
73741
43162
003106 15771
54740
20460
12334
003107 54610
12732
5170000176
003110 01300001740000000000
003111 7266777774 0336002067
003112 5110003114
0100002055
003113 0000000000
003114 16175522171715551116
003115 55052605162455031001
003116 16160514000000000000

NEXTVG

+

NOROOM

SA1
SA6
BX6
SA2
SA3
SA4
SA7
MX1
BA7
SA7
LA4
BX3
SA6
BA7
SA7
XJ
VFD
SA6
NG
SB1
RJ
PS
DIS

EVENTP
R1
X6-X1
X1+EVENTS
ERB
EVSEQN
X4+B1
50
-X1*X7
A4
48
X3+X4
A1
X3+X2
EVENT
SENDV
12/0130B:18/SENDV:30/
X6-3 ** CHECK EVENT CODE RESPONSES
X6,NEXTV ** SENSE EVENT SENT OK
NOROOM
MESSAGE
**NO ROOM IN EVENT CHANNEL*

XJ .1

GET CR RESPONSE

003117		CRSPG	XJ	CRSPEV		
003117	01300001720000000000	*	VFD	12/013008:18/CRSPEV:30/		
003120	5170000055		SA7	STATUS		XJ .1
	0337002071		NG	X7:CRSP		
003121	0347002071		IX	X7:CRSP		
003122	6110003125	HELP	SB1	HELPMMSG		
	5170000056		SA7	STATUS:1		
003123	0100002055		XJ	MESSAGE		
003124	0000000000		DS			
003125	0322000052	HELPMMSG	DIS	*CR EVENT ERROR .. STOPPING*		
003126	2222172255					
003127	1720201155					
003130	150700000000	FL	BSS	0		
000000			END			

1484 STATEMENTS

236 SYMBOLS

GETCARD ** CARD READER DRIVER
SYMBOLIC REFERENCE TABLE

(PAGE-LOCATION)

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ADUCHAR	0002603	27-02600, 28-02621, 28-02623
ADUNEXT	0002662	31-02665
ALLBLNK	0002624	27-02572
BANNER	0000073	4-00106, 12-02165, 13-02234, 18-02406, 18-02416
BCNDIS	0001723	27-02603
BTNDIS	0002267	13-02221, 15-02332
BLNK	0002665	31-02661
BSIZE	0000074	16-02343, 17-02353, 21-02474
BUFFLOC	0000141	34-03012
BUFFPNT	0000054	24-02521, 24-02536
BUFFSTRT	0000631	4-00120, 12-02160, 19-02426, 21-02465, 21-02466
CALBEAD	0003004	16-02340, 17-02357, 31-02672
CASIN	0000125	10-02074, 10-02101, 10-02104, 10-02107
CASNUM	0000135	10-02134, 10-02106
CARD	0000205	30-02644
CARDCNT	0000060	12-02163, 14-02306, 17-02360
CARDLOG	0000072	24-02520, 34-03007
CARDLOOP	0002212	12-02172, 12-02215, 13-02224, 14-02310
CARDMSG	0000204	30-02646
CARDWC	0000143	34-03011
CHARCNT	0000145	31-02670
CHNSEQ	0002560	25-02551
CHK0	0002462	20-02461
CL	0002501	22-02502
CLEAR	0000177	10-02110, 37-03071
CLEARCR	0000163	35-03033, 36-03050, 37-03075
CLEARCRG	0003071	35-03054, 34-03073
CNTARC	0000006	34-03006, 34-03011, 34-03011, 35-03021, 35-03022, 35-03022, 35-03023, 35-03024, 35-03037
COLMSG	0000201	30-02641
COLUMN	0000202	30-02641
COMPARE	0003037	35-03021
CONVBCD	0002051	12-02160, 15-02217, 28-02620
CONVBCDG	0002055	12-02160, 15-02217, 28-02620
CONVBIN	0002047	12-02160, 15-02217, 28-02620
CONVBING	0002043	12-02160, 15-02217, 28-02620
CONVOCT	0002041	13-02245, 14-02250, 22-02501, 22-02504, 22-02505
CONVOCTG	0002050	22-02501, 22-02504, 22-02505
COUNT	0002011	22-02511, 22-02514
CR	0002675	31-02660
CRACK	0002033	12-02161, 20-02456
CRACKG	0002426	8-02034
CRCHK	0002061	24-02303, 35-03036, 35-03044
CRCHKG	0003015	8-02062, 16-02059
CREATER	0000122	21-02473
CREATOR	0000065	35-03017, 35-03032, 36-03045
CRMSG	0003005	35-03030, 35-03031, 35-03033, 35-03035, 36-03067
CRMSGG	0003005	35-03030, 35-03031, 35-03033, 35-03035, 36-03067
CRPULSE	0002057	24-02517, 34-03014
CRPULSEG	0002005	38-02060
CRSP	0002071	38-03085, 35-03035, 35-03043, 36-03052, 40-03120, 40-03121
CRSPDEV	0000172	10-02121, 10-02123, 40-03117
CRSPG	0003117	9-02072
C.BEAD	0000001	33-03004

C.CAPIN	0000023	5-00125
C.CARDF	0000034	5-00140, 10-02077
C.CARDIN	0000032	5-00173, 5-00200, 10-02106
C.CARDO	0000033	5-00175, 10-02103
C.CARDS	0000026	11-02140
C.CBLK	0000024	5-00122
C.CETEVF	0000021	5-00177
C.HANG	0000006	4-00110, 5-00172
C.JOB	0000031	4-00104, 5-00116, 5-00123, 16-02336, 17-02355
C.READ	0000003	4-00103, 5-00137, 11-02137, 18-02405
C.RESTOR	0000017	16-02350, 33-03002
C.RETURN	0000025	11-02136
C.SAVE	0000016	16-02346, 33-03000
C.SDVCF	0000035	5-00130, 5-00132
C.SELF	0000020	5-00126
C.SENDE	0000005	4-00112, 5-00174
C.SEQCHN	0000022	4-00111, 4-00113
C.WRITE	0000004	4-00115, 12-02167, 13-02234, 18-02406
DISASCI	0002700	31-02657
EMPTY	0003031	35-03023
ENDBUFF	0001631	14-02270, 15-02315
ENDCONV	0002617	28-02613, 28-02615
ENDF	0002027	13-02240, 17-02373, 17-02375, 18-02413
ENDFG	0002352	8-02030
ENDJOB	0002230	12-02217
ENDNAME	0002445	19-02442
ENDREC	0002424	18-02411
EOF	0003032	35-03022
EOI	0002242	13-02232
EOH	0002243	12-02220
EORMSG	0002262	13-02260
ERB	0000064	10-02127, 37-03074, 38-03076, 39-03104
ERBOK	0002130	10-02125
ERROR	0003021	35-03015, 36-03053
ERRORN	0002457	19-02443
EVENT	0000176	10-02114, 10-02117, 38-03077, 39-03107
EVENTP	0000066	39-03103
EVENTS	0000067	39-03104
EVSEQ	0000112	19-02454, 20-02455
EVSQCN	0000061	39-03105
E.COMP	0000007	35-03040
E.EMPTY	0000003	35-03031
E.FEED	0000005	35-03030
E.HELP	0000011	35-03027
E.NOTROY	0000001	35-03025
FEEDF	0003030	35-03024
FILEAUR	0000117	12-02166, 13-02232, 18-02401, 18-02417, 21-02471
FINDLET	0002430	19-02437, 19-02431
FINDNUM	0002435	19-02434, 19-02441
FINI	0002132	12-02151, 12-02152, 12-02203, 12-02204
FINMSG	0002134	11-02132
FIVEBLNK	0002636	28-02624
FL	0003130	2-00006, 2-00024

FLUSH	0002035	13-02230, 13-02243, 14-02271, 15-02316, 21-02466, 21-02472
FLUSHG	0002465	8-02036
FNAME	0000212	16-02337, 17-02392
FORM	0002227	12-02216
F.COMP	0000031	35-03021, 35-03021, 35-03037
F.DS	0000044	1-00000, 1-00000, 1-00000, 1-00000, 1-00000, 1-00000, 1-00000, 1-00000
F.EMPTY	0000036	35-03022, 35-03022
F.FOF	0000035	35-03022, 35-03022
F.FEED	0000037	35-03023, 35-03023, 35-03037, 35-03037
F.RDY	0000043	35-03024, 35-03024
F.HEED	0000039	34-03006, 34-03006
F.SEQN	0000000	34-03011, 34-03011
F.Q	0000000	34-03006, 35-03021
GETBAN	0000103	12-02167, 12-02170, 13-02235, 13-02236, 18-02404, 18-02405, 18-02410, 18-02421
GETCHAR	0002461	19-02430, 19-02435
GETSEQ	0000110	19-02446
GOODJOB	0002160	12-02157
HAVELVL	0002254	13-02247, 13-02251, 14-02261
HELP	0003122	38-03102
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HOL	0002314	13-02222, 15-02331
HOLCHK	0002622	27-02577, 27-02602, 28-02621
HOLCKCOL	0000053	27-02566, 28-02617, 28-02622
HOLMSG	0002323	15-02321
IDENT	0002053	13-02257, 14-02276, 14-02304, 15-02320, 15-02325, 30-02650
IDENTG	0002637	8-02054
ILLEGALD	0002173	12-02153, 12-02155, 12-02156, 12-02161
ILLEGALB	0002257	13-02246, 13-02251, 13-02252
IMPOS	0002144	10-02126
INCRCC	0002306	13-02256, 14-02274, 14-02300, 15-02320, 15-02322
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INPUT	0002460	19-02445
JCE	0002443	19-02432, 19-02436, 19-02437, 20-02463
JOHFILE	0000075	16-02336, 17-02354, 17-02355
LOGREC	0000105	12-02166, 13-02233, 18-02401, 18-02420
LRW	0002073	2-00007, 2-00016, 2-00022, 2-00023, 2-00024, 11-02143
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MAKEBLKG	0002473	8-02040
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MESSAGEG	0002651	8-02056
MIDDLE	0002223	12-02214
MIDMSG	0002225	13-02223
MOVE	0000052	12-02164, 14-02267, 14-02314, 15-02327, 18-02414
MOVECHG	0002325	14-02270, 15-02315
M.DMSG	0002333	15-02326
MOVESEL	0002331	15-02330
MSGOUT	0000144	31-02670
NCAP	0000026	2-00027, 2-00031, 2-00031, 2-00031, 2-00033, 2-00033, 2-00035, 2-00035, 2-00037, 2-00037, 2-00041, 2-00041, 2-00043, 2-00043, 2-00045, 2-00045, 3-00051
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NEWCHARA	0002655	31-02662, 31-02664, 31-02666

NEWIN	0002571	27-02567, 28-02606
NEWOUT	0002570	28-02607
NEWWORD	0002545	25-02550
NEXTBYTE	0002573	28-02605
NEXTJOB	0002147	11-02131, 12-02154, 12-02206, 13-02241
NEXTTV	0002067	10-02130, 35-03016, 36-03054, 39-03111
NEXTV6	0003103	9-02070
NOCOL	0002643	30-02637
NOMSG	0003050	35-03032, 36-03046
NOROOM	0003114	39-03112
NOIFIL	0002414	18-02412, 18-02412
NUMC	0000211	17-02362
OCBCD	0002043	17-02361, 23-02515, 30-02640, 30-02643, 30-02645
OCTBCDG	0002506	8-02044
OCTCHK	0002505	22-02503
OLDPOS	0000037	34-03006, 34-03011, 35-03021, 35-03022, 35-03022, 35-03023, 35-03024, 35-03037
OUIP	0000146	31-02653
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PRMSG	0002374	17-02371
PULSTAT	0002065	35-03034, 35-03042, 36-03051, 38-03101
PULSTAT6	0003076	9-02066
PURGEFCG	0000071	14-02275, 17-02356, 17-02370, 19-02444
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READG	0002520	8-02046, 24-02523
READIN	0000137	34-03013
READMORE	0002535	24-02520
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READSDV	0000131	10-02075
READSELF	0002137	10-02073
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RSTREG2	0003002	31-02673
RTN	0002667	31-02660, 31-02676
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SENDSEQ	0002453	19-02450, 19-02452
SENDV	0000174	10-02115, 10-02120, 38-03100, 39-03110
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SERMSG	0002311	14-02305
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SETBIN	0002266	14-02267
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SKIPJOB	0002175	12-02173
SPCL	0002621	27-02574
STARTE	0002025	12-02162, 16-02345

CARD
 ..
 SYMBOLIC REFERENCE TABLE

CARD READER DRIVER

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STMCNT	0002670	32-02677
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SUMMSG	0002301	14-02277
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THISREC	0000063	12-02164, 13-02255, 14-02307, 30-02643
UNKNOWN	0003027	35-03025
WAITEOU	0002201	12-02174, 12-02205, 12-02207, 12-02210, 12-02211
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ZAPBLANK	0002612	28-02615
ZERO12	0002616	28-02613
ZONES	0002626	27-02573