

LENGTH OF PRG 00117

1 IDENT CRHNDLR

```

2
3 *****
4 *
5 * THIS IS THE CARD READER (CDC 405) DRIVER.
6 *
7 * THIS ROUTINE WILL CONTROL ANY PRACTICAL NUMBER OF CARD
8 * READERS. DEVICE CONTROL MACROS ARE BUILT BY INITIAL
9 * AND CRSTART FOR ALL #CR# SYMBOLS IN THE SYMBOLS BLOCK
10 * AND THEY PROVIDE THE NECESSARY INFORMATION ABOUT QUEUEING
11 * TO THIS ROUTINE AND MOVEBUFF. ALL THIS ROUTINE DOES
12 * IS READ CARDS FROM THE VARIOUS CARD READERS, MOVEBUFF
13 * (UWBLOCK) DOES ALL THE REAL WORK.
14 *
15 * THIS ROUTINE HAS A NUMBER OF ENTRY POINTS WHOSE PURPOSES
16 * ARE AS FOLLOWS:
17 *
18 * CRINT ENTERED FROM INTSORT WHENEVER THERE IS A CARD
19 * READER INTERRUPT
20 * CRCONNEC ENTERED FROM DEVICE CONTROL MACROS WHEN
21 * AN I/O CHANNEL HAS BEEN OBTAINED
22 * CRCHANIN ENTERED FROM DEVICE CONTROL MACROS WHEN
23 * A CHANNEL INTERRUPT OCCURES
24 *
25 *****
    
```

```

26
27 INCLUDE ↑SYSMAC
27+001 SYSMAC COSY/ 03 V4.1 08/17/74 0453
    
```

```

28 00041 P
29 00012 P
30 00000 P
    
```

```

31 ENTRY CRCHANIN
32 ENTRY CRCONNEC
33 ENTRY CRINT
    
```

```

34 EXT BIT22
35 EXT BIT23
36 EXT NBIT22
37 EXT OPMSG
38 EXT UNCON
39 EXT UWBLOCKB
    
```

```

ROUTINE TO PRINT MESSAGE ON CONSO
ROUTINE TO GIVE BACK I/O CHANNEL
MOVEBUFF BLOCKING ROUTINE
    
```

```

40 00000
41 00000
42 00000
    
```

```

40 IO EQU 0
41 SELECT EQU 0
42 SENSE EQU 0
    
```

```

44 00001
45 00002
46 00003
    
```

```

44 X1 EQU 1
45 X2 EQU 2
46 X3 EQU 3
    
```

```

47 00000
    
```

```

47 CBI EQU 0
    
```

```

49 07773
    
```

```

49 DINT EQU 7773B
    
```

```

51 00000
    
```

```

51 IMPURE EQU 00000
52
    
```

```

54          CRMACDEF
102          *
103          *
104          *
105          *
106          *
107          *
108          CONBLOCK EQU 0          POINTER TO 8 WORD CONTROL BLOCK
109          BFPTR EQU CONBLOCK+1    POINTER TO CURRENT CORE BUFFER
110          *
111          *
112          *
113          *
114          *
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252          *
253          *
254          *
255          *
256          *
257          *
258          *
259          *

```

UWBLOCK BLOCK DEFINITIONS

```

-0 IF NO BUFFER PRESENT
CURRENT BLOCK POSITION
ADDRESS OF WORD COUNT AND IMAGE
CALL BACK ADDRESS
RTJ MACHERR
ENI BLCK,CBI
UJP IMPURE
TEMPORARY WCRC COUNT
ADDRESS OF CURRENT BLOCK
TEMPORARY FCR CURRENT POSITION
ADDRESS OF ASSOCIATED PSA
BUFFER UNSAFE FLAG
ENI BLCK,CBI
UJP IMPURE RETURN ADDRESS
TEMP TO SAVE THE CONTENTS OF PF1
TEMP TO SAVE WC AND CALL BACK
ADDRESS IF CALL TO UWBLOCKB
TEMP TO SAVE RETURN ADDRESS IF
CALL TO UWBLOCKB
BIT23 IF LAST RECORD WAS ILOGOFF
POINTER TO THE PROPER BATCH Q
DESTINATION LINE PRINTER CODE
NUMBER OF WORDS IN BLOCK
THE FOLLOWING ARE USED ONLY FOR
DEVICES THAT COME FROM THE PDP8
BIT23 SEZ EXPECTING DATA
BITS 14--0 HAVE 64 WORD BLOCK
ADDRESS
12 BIT BYTES WITH THE CONTROL
BLOCK INFORMATION
BITS 14--0 HAVE UWBLOCK ROUTINE
POINTER
NUMBER OF WORDS IN LONGER BLOCKS
ENI BLOCK,X1
UJP CRINT
ENI IMPURE,X1 ENTER CONNECT CODE
UJP CONNECT
RTJ CHANRET PROCESS CHANNEL INT
UJP 0,X2 WE WILL BE CALLED
BACK
ENI BLOCK,X1
UJP CRCONNEC
00 IMPURE CHANNEL INTERRUPT
NOT BIT23 SEZ CK TO READ
BIT22 SEZ FILLOUT NEEDED
ENI BLOCK,X1
UJP CRCHANIN ENTER THE DRIVER
BCD 1,ABC DEVICE NAME
WORD COUNT OF CURRENT BUFFER
BUFFER FOR THE I/O
SIZE OF BUFFER
LENGTH OF CR BLOCKS

```

```

*****
*
*   ENTER HERE ON EQUIPMENT INTERRUPTS
*
*****

00000 00000 P 61
00001 24077777 X 62 CRINT EQU *
00002 37100034 63 LCA BIT23 SAY OK TO READ
00003 40100034 64 LPA CHANRET,X1+CBI
00004 53300000 65 STA CHANRET,X1+CBI
00005 53600000 66 TIA X3 PUT RETURN ADDRESS INTO X2
00006 00005 P 67 TAI X2
00007 53100000 68 CRINTX EQU *
00008 53700000 69 TIA X1 FORM FAKE CALLING ADDRESS IN X3
00009 15300026 70 TAI X3
00010 14703720 71 INI CONCODE,X3
00011 01100026 72 ENQ 2000 WE WANT THE CHANNEL FOR 2 SECONDS
00012 01100026 73 UJP CONCODE,X1+CBI
00013 01100026 74

*****
*
*   ENTER HERE WHEN CONNECTED
*
*****

00012 00012 P 80
00013 77730000 81 CRCONNEC EQU *
00014 77100021 82 VED A12/DINT
00015 14000000 83 SEL 0021B,SELECT RELEASE INT ON READY AND NOT BUSY
00016 77200001 84 NOP 0 IGNORE REJECTS
00017 01000022 P 85 EXS 0001B,SENSE CHECK FOR READY
00018 77100020 86 UJP CRISOK JUMP READER IS OK
00019 14000000 87 SEL 0020B,SELECT SELECT READY AND NOT BUSY INTERRU
00020 01077777 X 88 NOP
00021 01077777 X 89 UJP UNCON GIVE UP THE CHANNEL

00022 00022 P 90
00023 20100013 91 CRISOK EQU *
00024 03300021 X 92 LDA DISKBUSY,X1+CBI CHECK IF OK TO READ
00025 77100002 93 AZJ,LT UNCON FLAKE OUT IF NOT OK
00026 01000023 X 94 SEL 0002B,SELECT ALWAYS READ BCD
00027 53100000 95 UJP UNCON THE DEVICE IS HAVING PROBLEMS
00028 15600041 96 TIA X1+CBI DEVICE CONTROL MACRO ADDRESS TO A
00029 44000035 P 97 INA BUFFADD
00030 15600050 98 SWA FWA SAVE THE FIRST WORD ADDRESS
00031 44000034 P 99 INA BUFFLEN
00032 20000000 X 100 SWA LWA AND THE LWA
00033 74000000 101 LDA BIT23 STATE ZERO FOR RELOCATION
00034 00400000 102 LWA INPW,INT IO,IMPURE,IMPURE
00035 00035 P 103 FWA EQU LWA+1
00036 01000034 P 104 UJP *-2
00037 34100034 105 RAD CHANRET,X1+CBI SAY NOT OK TO READ
00040 01200000 106 UJP 0,X2 VANISH UNTIL THE CHANNEL INTERRUPT
    
```

 *
 * ENTER HERE ON CHANNEL INTERRUPTS
 *

			109						
			110						
			111						
			113						
00041	20100034		114	CRCHANIN	LDA	CHANRET,X1+CBI		LOAD THE RETURN ADDRESS	
00042	53700000		115		TAI	X3			
00043	77130020		116		SEL	00200,SELECT		SELECT READY AND NOT BUSY INT	
00044	01000104	P	117		UJP	READERR		TROUBLES	
00045	77200001		118		EXS	00010,SENSE			
00046	01000054	P	119		UJP	GETLENG		JUMP IF READY	
00047	77202000		120		EXS	20000,SENSE		CHECK IF READER ERROR	
00050	01000104	P	121		UJP	READERR			
00051	35077777	X	122		SSA	BIT22		CHECK FOR HOPPER EMPTY	
00052	77200040		123		EXS	00400,SENSE		SKIP IF NOT HOPPER EMPTY	
00053	40100034		124		STA	CHANRET,X1+CBI			
00054	77550000		125	GETLENG	CIA			WHAT CHANNEL ARE WE USING	
00055	42000273	P 00056 3	126		SACH	*+7			
00056	53020000		127		TMA	IMPURE		GET ENDING ADDRESS	
00057	12077775		128		SHA	-2			
00060	53600000		129		TAI	X2		ENDING ADDRESS NOW IN X2	
00061	53100000		130		TIA	X1		DEVICE CONTROL MACRO ADDRESS TO A	
00062	15600041		131		INA	BUFFADD			
00063	16477777		132		XOA,S	-0		COMPUTE NUMBER OF WORDS IN RECORD	
00064	53640000		133		IAI	X2			
			134						
00065	53100000		135	CALLMOVE	TIA	X1+CBI		DEVICE CONTROL MACRO ADDRESS TO A	
00066	15600040		136		INA	WRDCOUNT			
00067	14700071	P	137		ENQ	CALLBACK		ENTER COMPLETION ADDRESS	
00070	01077777	X	138		UJP	UWBLOCKB		GO WRITE OUT THE CARD	
			139						
	00071	P	140	CALLBACK	EQU	*			
00071	24100034		141		LCA	CHANRET,X1+CBI		DO WE NEED A FILL OUT BLOCK	
00072	35077777	X	142		SSA	NBIT22			
00073	03100077	P	143		AZJ,NE	GENFILL		JUMP IF WE DO	
00074	20100034		144		LDA	CHANRET,X1+CBI		IS THE READER READY	
00075	03200005	P	145		AZJ,GE	CRINTX		JUMP IF IT IS OK TO READ	
00076	01200000		146		UJP	0,X2			
			147						
00077	34100034		148	GENFILL	RAD	CHANRET,X1+CBI			
00100	53200000		149		TIA	X2		MOVE RETURN ADDRESS TO X3	
00101	53700000		150		TAI	X3			
00102	14200000		151	ENIOX2	ENI	0,X2		SAY FILL OUT REQUEST	
00103	01000065	P	152		UJP	CALLMOVE			
			153						
00104	20100037		154	READERR	LDA	DIDENT,X1+CBI		LOAD THE DEVICE IDENT	
00105	40000112	P	155		STA	MESSAGE		AND SAVE IN THE ERROR MESSAGE	
00106	11000450	P 00112 0	156		ECHA	MESSAGE			
00107	14700021		157		ENQ	MESSAGEL			
00110	14200102	P	158		ENI	ENIOX2,X2		ENTER THE RETURN ADDRESS	
00111	01077777	X	159		UJP	OPMSG		TELL OPERATOR ABOUT THE PROBLEM	
			160						
00112	21222360		161	MESSAGE	BOD,C	17,ABO READER ERROR^			
	00021		162	MESSAGEL	EQU,C	*-MESSAGE			
			163						
			164	END					

NO LINES WITH ERRORS

