

LENGTH OF PRG 01162

Line	Length	PRG	IDENT	INTSORT
1			IDENT	INTSORT
2				
3			INCLUDE	↑SYSMAC
3+001		SYSMAC	COSY/	03 V4.1 08/17/74 0453
4	00651	P	ENTRY	CONNECT
5	00454	P	ENTRY	BDPCR
6	01115	P	ENTRY	CHACTBL
7	00746	P	ENTRY	CHCHECK
8	01135	P	ENTRY	CHERRTAB
8+001	00577	P	ENTRY	FAKECBI
9	01075	P	ENTRY	FLAGS
10	00040		ENTRY	FXBIT
11	00200		ENTRY	HOURLBIT
11+001	00023	P	ENTRY	IGNOR.1
12	00000	P	ENTRY	INNER
13	00134	P	ENTRY	INSTL
13+001	00004		ENTRY	INTBIT
14	00324	P	ENTRY	INTPDL
15	00611	P	ENTRY	IOCL
16	00002		ENTRY	IOCLBIT
17	00010		ENTRY	MSBIT
18	00255	P	ENTRY	REGSAVE
19	00035	P	ENTRY	RETURN
20	00100		ENTRY	SWAPBIT
21	00001		ENTRY	SWBIT
22	00020		ENTRY	TABBIT
23	00732	P	ENTRY	UNCON
24				
25			EXT	A
26			EXT	BIT17
27			EXT	BIT22
28			EXT	BIT23
29			EXT	BLKCHECK
30			EXT	CHCHKRTN
31			EXT	CLOKIN
32			EXT	CMQSET
33			EXT	CR
34			EXT	CREATBAT
35			EXT	DELAY
36			EXT	DKCLK
37			EXT	EXEC
38			EXT	FREEMEM
39			EXT	FSX
40			EXT	GETMEM
41			EXT	HOURUP
42			EXT	I1
43			EXT	I3
44			EXT	IDLE
45			EXT	INAOV
46			EXT	INSCD
47			EXT	INDVF
48			EXT	INFPF
49			EXT	IOBOUND
50			EXT	IOCLEAR
51			EXT	IS
52			EXT	KZERO
53			EXT	LJA
53+001			EXT	MANINT
54			EXT	MSC
55			EXT	MSPBLK
56			EXT	MSUNITM1
57			EXT	NBIT23
58			EXT	NDELAY
59			EXT	NKBITS
60			EXT	NTIMWAIT
61			EXT	OPMSGX
62			EXT	PAGEREQ
63			EXT	PF1
64			EXT	PRTYPSA
65			EXT	PSA3LK
66			EXT	RPSAPTR
67			EXT	SWAPSTR
68			EXT	SWITCH
69			EXT	SWITCH
70			EXT	TIMWAIT
71			EXT	TIMLIM
72			EXT	TIMSET
73			EXT	TTNUM

ROUTINE TO CHECK FOR HUNG DISKS

ARITHMETIC OVERFLOW PROCESSOR
 BCD FAULT PROCESSOR
 DIVIDE FAULT PROCESSOR
 FLOATING POINT FAULT PROCESSOR

MANUAL INTERRUPT PROCESSOR

TIMER ROUTINE ENTRY
 NUMBER OF TELETYPES

	74		EXT	VANISH
	75		EXT	WCTIME
	76			
00401	77	CH0	EQU	4013
00402	78	CH1	EQU	4023
00404	79	CH2	EQU	4043
00410	80	CH3	EQU	4103
00420	81	CH4	EQU	4203
00440	82	CH5	EQU	4403
00500	83	CH6	EQU	5003
00600	84	CH7	EQU	6003
	85			
07773	86	DINT	EQU	7773B
07774	87	EINT	EQU	7774B
	88			
00024	89	RTEMP1	EQU	24B
00035	90	NU	EQU	35B
00036	91	LEVEL	EQU	36B
	92			
00001	93	PFL0C	EQU	0013
00000	94	PFR	EQU	0000
00000	95	PFW	EQU	0000
	96			
00000	97	SENSE	EQU	0
	98			
00000	99	IMPURE	EQU	0
	100			
00001	101	X1	EQU	1
00002	102	X2	EQU	2
00003	103	X3	EQU	3
00000	104	PSA	EQU	0
00000	105	CHANNEL	EQU	0
00000	106	CNBLK	EQU	0
	107			
	108			
	109			

NUMBER OF USERS WORD

INDEX CONTAINS PSA POINTER

FCBDEF

	65	*****			
	66	*****			
	67	*****			
	68	*****			
	69	*****			
	70	*****			
	71	*****			
00000	71	ACCPWORD	EQU	0	ACCOUNTING WORD (MUST BE 0)
00001	72	LP	EQU	1	LOAD POINT BLOCK
00002	73	COREP	EQU	2	CORE POINTER IF NON-ZERO
	74				IF BIT23 = 1, CORE BLOCK HAS
	75				BEEN WRITTEN INTO
00003	76	CBP	EQU	COREP+1	BLOCK NUMBER OF THE CURRENT BLOC
00004	77	CPP	EQU	4	CURRENT POSITION POINTER
	78				(REL. POSIT. WITHIN BLOCK CBP)
	79				BIT23 SEZ READ-ONLY
	80				BIT22 SEZ AT LOAD POINT
	81				BIT21 SEZ END OF DATA
	82				BIT20 SEZ FILE MARK JUST READ
	83				
	84				BIT18 SEZ BINARY RECORD PROCESSE
	85				BIT17 SEZ ABNCRMAL/UNAVAILABLE
	86				BIT16 SEZ ADDRESS ERROR
	87				BIT15 SEZ SAVED FILE
00005	88	BLKR	EQU	5	NUMBER OF BLOCKS BEYOND
	89				THE CURRENT BLOCK
00006	90	EPP	EQU	6	END POSITION POINTER
	91				BIT22 SEZ THE FILE HAS CHANGED
	92				BIT21 SEZ POSITIONER READY
	93				BIT20 SEZ DESTRUCTIVE READ
	94				FILE DIRECTORY
	95				BITS 15-18 CONTAIN THE HI
00007	96	IPL	EQU	7	BITS 00-14 CONTAIN END POSITION
	97				TOTAL LENGTH IN BLOCKS

```

112 *
113 *
114 * ROUTINE CALLED FOR ANY INTERRUPT THAT TRAPS TO LOCATION 4.
115 * THIS INCLUDES THE EXTERNAL EQUIPMENT AND CHANNEL INTERRUPTS
116 * AS WELL AS CERTAIN INTERNAL INTERRUPTS, INCLUDING THE
117 * ARITHMETIC INTERRUPTS, THE TIMER INTERRUPT, THE SEARCH/MOVE
118 * INTERRUPT, THE MANUAL INTERRUPT, THE ASSOCIATED PROCESSOR
119 * INTERRUPT, AND THE EXECUTIVE INTERRUPT.
120 * THIS ROUTINE DETERMINES WHICH OF THESE CAUSED THE INTERRUPT
121 * AND CALLS THE ROUTINE FOR THAT INTERRUPT WITH THE INTERRUPTS
122 * ENABLED FOR ALL BUT ANOTHER OF THE SAME TYPE. THE INTERRUPT
123 * MASK AND THE ENTIRE STATUS OF THE CURRENT PROGRAM IS SAVED IN
124 * A PUSH-DOWN LIST AND MAY BE RESTORED UPON RETURN FROM THE
125 * INTERRUPT PROCESSING ROUTINE.
126 *
127 *

```

```

00000 00700255 P
00001 54100005
00002 20100134 P
00003 53600000
00004 12077760
00005 17600777
00006 16637000
00007 44000010 P
00010 77530000
00011 17600377
00012 03000017 P
00013 53100000
00014 77540000
00015 77300207
00016 01000455 P
00017 14300035 P
00020 77740000
00021 01200000

```

129	INNER	EQU	*	
130				
131				
132		RTJ	REGSAVE	GO SAVE REGISTERS AND STATUS
133	DECODE	LDI	00005B,X1+CHANNEL	LOAD THE INTERRUPT CODE
134		LDA	INSTL,X1+CHANNEL	
135		TAI	X2	
136		SHA	-15	
137		ANA	00777B	LEAVE THE CHANNEL MASK BITS
138		XCA	37000B	NO INTERNAL FAULT INTERRUPTS
139		SWA	*+1	
140		SCIM	IMPURE	
141		ANA	377B	LEAVE A NON-ZERO IF CHANNEL TRANS
142		AZJ,EQ	INEINT	JUMP IF INTERNAL INTERRUPT
143		TIA	X1+CHANNEL	
144		ACI		CHANNEL NUMBER TO CIR
145		INS	0207B,SENSE	SENSE FOR CHANNEL INTERRUPTS
146		UJP	CHANINT	AND PARITY ERRORS, ETC.
147	INEINT	ENI	RETURN,X3	ENTER THE RETURN ADDRESS
148		VFD	A12/EINT	
149		UJP	0,X2	CALL THE INTERRUPT PROCESSOR

```

152 *
153 *
154 * INTERRUPT HAS NOW BEEN PROCESSED. RESTORE
155 * PROGRAM STATUS AND THE INTERRUPT MASK REGISTER
*****

```

00022	14200035	P	00022	157				
00023	53100000	P	00022	158	XINERR	EQU	*	
00024	12000017	P	00023	159	IGNORE	EQU	XINERR	
00025	14177775	P	00023	159+001	IGNOR.1	ENI	RETURN,X2	RETURN FOR CPMESG
00026	13000003	P	00023	159+002	IGNOR.1	EQU	*	ENTRY FOR DISK INTER. ERR.
00027	17700007	P	00023	160		TIA	X1	INTERUPT CODE TO A
00030	43404704	P	01161 0	161		SHA	24-9	9 BITS OF INFO
00031	02100026	P	01155 0	162		ENI	-2,X1	
00032	11004664	P	01155 0	163		SHAQ	3	SHIFT TO LOWER Q
00033	14700022	X		164		ANQ	7B	
00034	01077777	X		165		SQCH	IEMESCD+2,X1	STORE CODE IN THE MESSAGE
				166		IJI	*-3,X1	LOOP TILL DECODED
				168		ECHA	IEMES	
				169		ENQ	IEMESL	LENGTH OF MESSAGE
				170		UJP	OPMSGX	USE THE CONDITIONAL PRINT OUT
				171				
00035	77740000	P	00035	172	RETURN	EQU	*	RETURN FROM INTERRUPT PROCESSOR
00036	53230036	P		173		VFD	A12/EINT	
00037	04200324	P		174		TMI	LEVEL,X2	
00040	01000062	P		175		ISE	INTPDL,X2	
00041	77520777	P		176		UJP	UNSTACK	
00042	20001075	P		177		SSIM	0777B	ENABLE ALL I/O AND THE CLOCK
00043	77730000	P		178		LDA	FLAGS	
00044	03000066	P		179		VFD	A12/DINT	
00045	13500026	P		180		AZJ, EQ	QZ	
00046	14477776	P		181		SCAQ	22,X1	
00047	12100000	P		182		ENA, S	77776B	
00050	34001075	P		183		SHA	0,X1	
00051	01100052	P		184		RAD	FLAGS	
				185		UJP	ZZ,X1	DECODE THE REQUEST
				186				
				187				
	00052	P		188	ZZ	EQU	*	
				189				
00052	01077777	X	00001	190	SWBIT	EQU	2↑(*-ZZ)	SWITCH USERS
			00002	191		UJP	SWITCH	
00053	01000601	P		192	IOCLBIT	EQU	2↑(*-ZZ)	OPERATOR WANTS CHANNEL IOCLD
			00004	193		UJP	CHIOCL	
00054	01000576	P	193+001	193+001	INTBIT	EQU	2↑(*-ZZ)	DEVICE STARTUP CALL
			00010	193+002		UJP	INTFAKE	
00055	01077777	X		194	MSBIT	EQU	2↑(*-ZZ)	MASS STORAGE COMPLETION INTERRUPT
			00020	195		UJP	MSC	
00056	01077777	X		196	TABBIT	EQU	2↑(*-ZZ)	LOCK AT THE DISK TABLES
			00040	197		UJP	BLKCHECK	
00057	01077777	X		198	FXBIT	EQU	2↑(*-ZZ)	FREE STORAGE EXPANSION
			00100	199		UJP	FSX	
00060	01077777	X		200	SWAPBIT	EQU	2↑(*-ZZ)	START THE SWAPPING LOGIC
			00200	201		UJP	SWAPSTR	
00061	01077777	X		202	HOURLBIT	EQU	2↑(*-ZZ)	PERFORM END OF HOUR PROCESSING
				203		UJP	HOURUP	
				204				
				205				
00062	15277767	P		206	UNSTACK	INI	-8,X2	
00063	53630036	P		207		TIM	LEVEL,X2	
00064	77730000	P		208		VFD	A12/DINT	PREVENT INTERFERENCE
00065	02600073	P		209		IJD	USTACKR,X2	

00066	54277777	X	211	QZ	LDI	RPSAPTR,X2	
00067	20277777	X	212		LDA	PF1,X2	
00070	77640001		213		APF	PFLOC+PFW	
00071	53430036		214		TIM	LEVEL,0	
00072	70600454	P	215		LBR	BDPCR	RESTORE BCR ON LEVEL ZERO EXIT
00073	20277777	X	216	USTACKR	LDA	IS,X2	LOAD THE INTERNAL STATUS
00074	77507000		217		INCL	7000B	CLEAR INTERNAL FAULTS
00075	77540000		218		ACI		RESTORE THE CHANNEL INDEX
00076	12000017		219		SHA	15	FLOATING POINT FAULT INDICATOR
00077	03200101	P	220		AZJ,GE	*+2	
00100	77710000		221		SFPF		
00101	12000025		222		SHA	21	
00102	03200104	P	223		AZJ,GE	*+2	
00103	77720000		224		SBCD		
00104	37000133	P	225		LPA	STAMSK	
00105	16620000		226		XOA	20000B	SET FOR SSIM COMMAND
00106	44000116	P	227		SWA	ISM	STORE INTO SSIM
00107	12000002		228		SHA	2	
00110	03200113	P	229		AZJ,GE	*+3	
00111	21077777	X	230		LDQ	NBIT23	
00112	15700001		231		INQ	1	TURN ON OVERFLOW
00113	12000027		232		SHA	23	
00114	03200116	P	233		AZJ,GE	*+2	
00115	51077777	X	234		DVA	KZERO	
00116	77520000		235	ISM	SSIM	IMPURE	TO RESTORE BITS
00117	25277777	X	236		LDAQ	I3,X2	LOAD INDEX 3 AND RETURN ADDRESS
00120	53700000		237		TAI	X3	RESTORE INDEX 3
00121	13000030		238		SHAQ	24	
00122	44000132	P	239		SWA	INRET	STORE RETURN ADDRESS
00123	25277777	X	240		LDAQ	I1,X2	RESTORE INDEX 1 AND INDEX 2
00124	53500000		241		TAI	X1	
00125	53410024		242		TQM	RTEMP1	
00126	20277777	X	243		LDA	CR,X2	RESTORE THE CONDITION REGISTER
00127	77634000		244		ACR		TAKE HEED NO JUMPS
00130	25277777	X	245		LDAQ	A,X2	RESTORE A AND Q
00131	53230024		246		TMI	RTEMP1,X2	RESTORE INDEX 2
00132	01000000		247	INRET	UJP	IMPURE	RETURN TO PROGRAM
			248				
			249				
00133	77703777		250	STAMSK	OCT	77703777	

 *
 * TABLE TO SORT OUT INTERRUPTS
 *

253
 254
 255
 257
 258
 259
 260
 261
 262
 263
 264
 265
 266
 267
 268
 269
 270
 271
 272
 273
 274
 275
 276
 277
 278
 279
 280
 281
 282
 283
 284
 285
 286
 287
 288
 289
 290
 291
 292
 293
 294
 295
 296
 297
 298
 299
 300
 301
 302
 303
 304
 305
 306
 307
 308
 309
 310
 311
 312
 313
 314
 315
 316
 317
 318
 319
 320
 321
 322
 323
 324
 325
 326
 327
 328
 329
 330

00134 P

INSTL

EQU

*

EQUIPMENT 0
 EQUIPMENT 1
 EQUIPMENT 2
 EQUIPMENT 3
 EQUIPMENT 4
 EQUIPMENT 5
 EQUIPMENT 6
 EQUIPMENT 7

00134	40100022	VFD	A9/CH0,A15/XINERR
00135	40200022	VFD	A9/CH1,A15/XINERR
00136	40400022	VFD	A9/CH2,A15/XINERR
00137	41000022	VFD	A9/CH3,A15/XINERR
00140	42000022	VFD	A9/CH4,A15/XINERR
00141	44000022	VFD	A9/CH5,A15/XINERR
00142	50000022	VFD	A9/CH6,A15/XINERR
00143	60000022	VFD	A9/CH7,A15/XINERR
00144	40100022	VFD	A9/CH0,A15/XINERR
00145	40200022	VFD	A9/CH1,A15/XINERR
00146	40400022	VFD	A9/CH2,A15/XINERR
00147	41000022	VFD	A9/CH3,A15/XINERR
00150	42000022	VFD	A9/CH4,A15/XINERR
00151	44000022	VFD	A9/CH5,A15/XINERR
00152	50000022	VFD	A9/CH6,A15/XINERR
00153	60000022	VFD	A9/CH7,A15/XINERR
00154	40100022	VFD	A9/CH0,A15/XINERR
00155	40200022	VFD	A9/CH1,A15/XINERR
00156	40400022	VFD	A9/CH2,A15/XINERR
00157	41000022	VFD	A9/CH3,A15/XINERR
00160	42000022	VFD	A9/CH4,A15/XINERR
00161	44000022	VFD	A9/CH5,A15/XINERR
00162	50000022	VFD	A9/CH6,A15/XINERR
00163	60000022	VFD	A9/CH7,A15/XINERR
00164	40100022	VFD	A9/CH0,A15/XINERR
00165	40200022	VFD	A9/CH1,A15/XINERR
00166	40400022	VFD	A9/CH2,A15/XINERR
00167	41000022	VFD	A9/CH3,A15/XINERR
00170	42000022	VFD	A9/CH4,A15/XINERR
00171	44000022	VFD	A9/CH5,A15/XINERR
00172	50000022	VFD	A9/CH6,A15/XINERR
00173	60000022	VFD	A9/CH7,A15/XINERR
00174	40100022	VFD	A9/CH0,A15/XINERR
00175	40200022	VFD	A9/CH1,A15/XINERR
00176	40400022	VFD	A9/CH2,A15/XINERR
00177	41000022	VFD	A9/CH3,A15/XINERR
00200	42000022	VFD	A9/CH4,A15/XINERR
00201	44000022	VFD	A9/CH5,A15/XINERR
00202	50000022	VFD	A9/CH6,A15/XINERR
00203	60000022	VFD	A9/CH7,A15/XINERR
00204	40100022	VFD	A9/CH0,A15/XINERR
00205	40200022	VFD	A9/CH1,A15/XINERR
00206	40400022	VFD	A9/CH2,A15/XINERR
00207	41000022	VFD	A9/CH3,A15/XINERR
00210	42000022	VFD	A9/CH4,A15/XINERR
00211	44000022	VFD	A9/CH5,A15/XINERR
00212	50000022	VFD	A9/CH6,A15/XINERR
00213	60000022	VFD	A9/CH7,A15/XINERR
00214	40100022	VFD	A9/CH0,A15/XINERR
00215	40200022	VFD	A9/CH1,A15/XINERR
00216	40400022	VFD	A9/CH2,A15/XINERR
00217	41000022	VFD	A9/CH3,A15/XINERR
00220	42000022	VFD	A9/CH4,A15/XINERR
00221	44000022	VFD	A9/CH5,A15/XINERR
00222	50000022	VFD	A9/CH6,A15/XINERR
00223	60000022	VFD	A9/CH7,A15/XINERR
00224	40100022	VFD	A9/CH0,A15/XINERR
00225	40200022	VFD	A9/CH1,A15/XINERR
00226	40400022	VFD	A9/CH2,A15/XINERR
00227	41000022	VFD	A9/CH3,A15/XINERR
00230	42000022	VFD	A9/CH4,A15/XINERR
00231	44000022	VFD	A9/CH5,A15/XINERR
00232	50000022	VFD	A9/CH6,A15/XINERR
00233	60000022	VFD	A9/CH7,A15/XINERR

331
332
333
335
336
337
338
340
341
342
343
344
345
346
347
348
349
350
351
353
354
355
356
358
359
360
361
362
363
364
365
366
367

00234 40100022
00235 40200022
00236 40400022
00237 41000022
00240 42000022
00241 44000022
00242 50000022
00243 60000022

*
CHANNEL INTERRUPTS
STARTING AT 100 OCTAL
*

VFD A9/CH0,A15/IGNORE
VFD A9/CH1,A15/IGNORE
VFD A9/CH2,A15/IGNORE
VFD A9/CH3,A15/IGNORE
VFD A9/CH4,A15/IGNORE
VFD A9/CH5,A15/IGNORE
VFD A9/CH6,A15/IGNORE
VFD A9/CH7,A15/IGNORE

*
SPECIAL INTERRUPTS
STARTING AT 110 OCTAL
*

00244 40077777 X
00245 00077777 X
00246 00077777 X
00247 00077777 X
00250 00077777 X
00251 00000022 P
00252 00077777 X
00253 00000022 P
00254 00077777 X

40 CLOKIN REAL TIME CLOCK INTERRUPT
00 INAOV ARITHMETIC OVERFLOW
00 INDVF DIVIDE FAULT
00 INFPE EXPONENT FAULT
00 INBCD BCD FAULT
00 IGNORE SEARCH/MOVE INTERRUPT
00 MANINT MANUAL INTERRUPT
00 IGNORE ASSOCIATED PROCESSOR
00 EXEC EXECUTIVE INTERRUPT

```

*****
370 *
371 *
372 * ROUTINE TO SAVE STATUS OF PROGRAM IN PUSH DOWN LIST
373 * USES RTEMP1 FOR TEMPORARY STORAGE
374 *
375 *
*****
    
```

```

00255 01000000 377
00256 53630024 378 REGSAVE UJP IMPURE
00257 53230036 379 TIM RTEMP1,X2 SAVE INDEX 2
00260 02600263 P 380 TMI LEVEL,X2
00261 70700454 P 381 IJD *+3,X2
00262 54200066 X 382 SBR BDPCR SAVE BCR IF INTERRUPT FROM USER
00263 45200130 X 383 LDI RPSAPTR,X2
00264 77630000 384 STAQ A,X2 SAVE A AND G
00265 44200126 X 385 CRA
00266 53010024 386 SWA CR,X2 SAVE THE CONDITION REGISTER
00267 53100000 387 TMQ RTEMP1
00270 45200123 X 388 TIA X1
00271 53300000 389 STAQ I1,X2 SAVE INDEX 1 AND INDEX 2
00272 21000004 390 TIA X3
00273 45200117 X 391 LDQ 4 LOAD PC
00274 77550000 392 STAQ I3,X2 SAVE INDEX 3 AND THE PC
00275 13077774 393 CIA SAVE CHANNEL INDEX REGISTER
00276 77300000 394 SHAQ -3 CIA TO LEFT OF G
00277 12077774 395 CINS SENSE
00300 13000003 396 SHA -3 DROP LOWER THREE BITS OF A
00301 40200073 X 397 SHAQ 3 PACK CIR INTO A
00302 53330036 398 STA IS,X2 SAVE THE INTERNAL STATUS
00303 02700321 P 399 TMI LEVEL,X3
00304 77650001 400 IJD STACK,X3 JUMP IF STACKED INTERRUPTS
00305 44200067 X 401 PFA PFLOC+PFR
00306 20200265 X 402 SWA PF1,X2
00307 17600010 402+001 LDA CR,X2+PSA GET LAST CONDITION REGISTER
00310 03000320 P 402+002 ANA 000108 MASK TO PROGRAM STATE JUMP BIT
00311 77560000 402+003 AZJ,EQ NOLJA JUMP IF NOT UPDATED
00312 13077760 402+004 JAA GET LAST JUMP ADDRESS
00313 77674000 402+005 SHAQ -15 DOWN INTO G
00314 03000320 P 402+006 ISA GET INSTRUCTION STATE REGISTER
00315 17600001 402+007 AZJ,EQ NOLJA JUMP IF FROM MCNITOR
00316 13000017 402+008 ANA 1 MASK TO PROPER BANK
00317 46277777 X 402+009 SHAQ 15 ALL THE WAY BACK UP FOR STORE
00320 14300313 P 402+010 SCHA LJA,X2+PSA AND SAVE INTO THE PSA FOR USER
00321 15300011 402+011 EQU *
00322 53730036 403 ENI INTPDL-9,X3
00323 01000255 P 404 STACK INI 9,X3 ADVANCE THE PUSHDOWN LEVEL
405 TIM LEVEL,X3 SAVE THE NEW LEVEL
406 UJP REGSAVE
    
```

```

*****
409 *
410 * INTERRUPT PUSH DOWN LIST
411 *
*****
    
```

```

00324 413 INTPOL BSS 8*11 ALLOW 11 STACKED INTERRUPTS
00454 414 BDPCR BSS 1 STORAGE FOR THE BCR
415
    
```

 *
 * ROUTINE TO PROCESS CHANNEL INTERRUPTS *
 *

```

418
419
420
422
00455 17100007 P 423 CHANINT EQU *
00456 77300007 424 ANI 7,X1+CHANNEL
00457 01000556 P 425 INS 7,SENSE SKIP IF CHANNEL INTERRUPT
          00460 P 426 UJP CHERROR
00460 14200007 427 CHLABEL EQU *
00461 14700000 428 ENI 7,X2 SET INDEX TWO NON-ZERO
00462 14600001 429 RLSCHANX ENQ 0
00463 12100000 430 ENA 1
00464 77730000 431 SHA 0,X1+CHANNEL SHIFT INTO THE CHANNEL POSITION
00465 44000466 P 432 VFD A12/DINT PREVENT INTERFERENCE
00466 77500000 433 SWA *+1 PUT THE CHANNEL BIT INTO THE WORD
00467 16620000 434 INCL IMPURE CLEAR THE CHANNEL INTERRUPT
00470 44000535 P 435 XOA 20000B
00471 20101115 P 436 SWA CHSSIM
00472 03000022 P 437 LDA CHACTBL,X1+CHANNEL
00473 40000476 P 438 AZJ,EQ IGNORE DATA CHANNEL ERRORS
00474 20101135 P 439 STA CHANEND
00475 04200000 440 LDA CHERRTAB,X1+CHANNEL
00476 00000000 441 ISE 0,X2 SKIP ONLY IF UNCONNECT
          * 442 CHANEND 00 COMMAND TO BE EXECUTED PRIOR TO
          * 443 * RELEASING THE CHANNEL
          * 444 CIA GET CHANNEL NUMBER
          * 445 TAI X1 RESTORE IT TO INDEX ONE
00501 00700513 P 446 RTJ GETREQST GET THE NEXT QUEUED REQUEST
00502 03000533 P 447 AZJ,EQ CHNOTQED JUMP IF NO MORE REQUESTS
00503 25200001 448 LDAQ CHCR,X2 MOVE CONNECT DATA OUT OF
00504 45001100 P 449 STAQ CHQUEUE+CHCR THE FREE STORAGE BLOCK
00505 25200003 450 LDAQ RELEASE,X2
00506 45001102 P 451 STAQ CHQUEUE+RELEASE
00507 25200005 452 LDAQ RTNADR,X2 LOAD THE RETURN ADDRESS AND THE
00510 53700000 453 TAI X3 CONNECT COMMAND
00511 41000666 P 454 STQ CON
00512 01000665 P 455 UJP ICON JUMP INTO THE CONNECT ROUTINE
          * 456 *
          * 457 *
          * 458 *
          * 459 *
00513 01000000 460 GETREQST UJP IMPURE GET NEXT REQUEST IN THE
00514 20101105 P 461 LDA CHQPTR,X1+CHANNEL CHANNEL QUEUE.
00515 53600000 462 TAI X2 X1 MUST CONTAIN THE CHANNEL NUMBE
00516 37077777 X 463 LPA BIT17 EXIT WITH A=0 IF NO REQUESTS
00517 03000513 P 464 AZJ,EQ GETREQST X2 POINTS TO THE REQUEST BLOCK
00520 20200000 465 LDA 0,X2
00521 14777777 466 ENQ 77777B
00522 03600525 P 467 AQJ,GE *+3 JUMP IF NOT THE LAST ELEMENT
00523 14601105 P 468 ENA CHQPTR
00524 53140000 469 AIA X1+CHANNEL GENERATE EMPTY QUEUE POINTER
00525 40101105 P 470 STA CHQPTR,X1+CHANNEL REMOVE FIRST ELEMENT
00526 53200000 471 TIA X2 GET ADDRESS OF REQUEST BLOCK
00527 14300003 472 ENI 3,X3 INDICATE AN 8 WORD BLOCK
00530 00777777 X 473 RTJ FREEMEM FREE THE BLOCK
00531 53200000 474 TIA X2 SET A NON-ZERO
00532 01000513 P 475 UJP GETREQST RETURN
    
```

00533	40101115	P	476	CHNOTQED	STA	CHACTBL,X1+CHANNEL	CLEAR THE ACTIVITY WORD
00534	00701066	P	477		RTJ	CLCA	
00535	77520000		478	CHSSIM	SSIM	IMPURE	SET THE BIT IN THE MASK
00536	77400377		479		INTS	377B,SENSE	SENSE FOR EXTERNAL INTERRUPTS
00537	77300006		480		INS	6,SENSE	FORGET IF CHANNEL BUSY
00540	01000035	P	481		UJP	RETURN	SCRAM IF NO INTERRUPTS
00541	14600200		482		ENA	00200B	EQUIPMENT 7 BIT
00542	44000543	P	483		SWA	*+1	
00543	77400000		484		INTS	IMPURE,SENSE	CHECK FOR THE INTERRUPT
00544	01000550	P	485		UJP	*+4	THIS IS THE ONE
00545	12077776		486		SHA	-1	CHECK THE NEXT EQUIPMENT NUMBER
00546	03100542	P	487		AZJ,NE	*-4	CHECK ALL EQUIPMENT NUMBERS
00547	01000035	P	488		UJP	RETURN	THE MACHINE HAS BEEN KNOWN TO LIE
00550	13700026		489		SCAQ	22,X3	CALCULATE THE EQUIPMENT NUMBER
00551	53300000		490		TIA	X3	PUT IT INTO THE A REGISTER
00552	12000003		491		SHA	3	SHIFT INTO POSITION
00553	53140000		492		AIA	X1+CHANNEL	COMBINE WITH THE CHANNEL NUMBER
00554	44000005		493		SWA	00005B	
00555	01000001	P	494		UJP	DECODE	JUMP INTO THE INTERRUPT ROUTINE
			495				
			496				
00556	77300000		497	CHERROR	CINS	SENSE	
00557	17600001		498		ANA	1	LEAVE CHANNEL PARITY BIT
00560	35101135	P	499		SSA	CHERRTAB,X1+CHANNEL	SET ERROR BITS INTO TABLE
00561	40101135	P	500		STA	CHERRTAB,X1+CHANNEL	
00562	20101125	P	501		LDA	CONTBL,X1+CHANNEL	SEE IF THIS DEVICE IS CONNECTED
00563	12077771		502		SHA	-6	EQUIPMENT NUMBER TO SECOND DIGIT
00564	17600070		503		ANA	70B	LEAVE EQUIPMENT NUMBER ALONE
00565	21000005		504		LDQ	5	GET CURRENT INTERRUPT CODE
00566	17500170		505		ANQ,S	170B	LEAVE ONLY INTERRUPT CODE
00567	77300206		506		INS	0206B,SENSE	
00570	03401060	P	507		AQJ,EQ	CHCLEAR	JUMP IF THIS DEVICE HUNG
00571	77511377		508		CILQ	377B	MAYBE SOMEONE FORGOT
00572	77300206		509		INS	0206B,SENSE	
00573	01000244	X	510		UJP	CLOKIN	FAKE A CLOCK INTERRUPT
00574	54100005		511		LDI	00005B,X1+CHANNEL	RESTORE THE INTERRUPT CODE
00575	01000017	P	512		UJP	INEINT	

512+002 * ROUTINE TO CALL MOVEBUFF SO POOR OL# PHANTOM CAN GET IT GOING

00576	14300035	P	512+003				
00577	14100000		512+004	INTFAKE	ENI	RETURN,X3	RETURN ADDRESS
00600	01000000		512+005	FAKECBI	ENI	IMPURE,X1	MACRO ADDRESS TO DIDDLE
			512+006		UJP	IMPURE	ENTRY TO MOVEBUFF TO GOTG

```

515 *
516 * ROUTINE TO PERFORM IOCL OPERATION ON A SINGLE DATA CHANNEL *
517 * AND TO INITIATE RECOVERY OPERATIONS. *
518 * ASSUMES CHANNEL NUMBER IN RIGHT CHARACTER OF IOCL. *
519 *
*****

```

```

00601 77730000 521
00602 22003047 P 00611 3 522 CHIOCL VFD A12/DINT PREVENT INTERFERENCE
00603 53500000 523 LACH IOCL+3
00604 77540000 524 TAI X1 PLACE CHANNEL NUMBER IN INDEX
00605 14600001 525 ACI PLACE INTO CHANNEL INDEX
00606 12100000 526 ENA 1
00607 16610000 527 SHA 0,X1 SHIFT BIT TO POSITION
00610 44000611 P 528 XOA 10000B FOR IOCL COMMAND
00611 77510000 529 SWA IOCL
00612 00700513 P 530 IOCL IOCL ZAP
00613 03100614 P 531 RTJ GETREQST GET NEXT CHANNEL REQUEST
00614 20101115 P 532 AZJ,NE *+1 LOOP UNTIL NO MORE REQUESTS
00615 03000634 P 533 LDA CHACTBL,X1 LOAD ACTIVITY WORD
00616 40000631 P 534 AZJ,EQ CHIOCL04 JUMP IF NO ONE CONNECTED
00617 20101125 P 535 STA CHIOCL03 STORE COMPLETION COMMAND
00620 14300062 536 LDA CONTRL,X1 LOAD CONNECT CODE
00621 44000622 P 537 ENI 50,X3
00622 77000000 538 SWA *+1
00623 02700622 P 539 CON IMPURE,0 DEVICE DRIVERS ASSUME
00624 14700000 540 IJD *-1,X3 DEVICE CONNECTED MAYBE
00625 41101115 P 541 ENQ 0
00626 14600200 542 STQ CHACTBL,X1 ZERO OUT ACTIVITY TABLE
00627 35101135 P 543 ENA 2000 ENTER IOCL BIT
00630 41101135 P 544 SSA CHERRTAB,X1 SET IN PREVIOUS ERRORS
00631 00000000 545 STQ CHERRTAB,X1
00632 77550000 546 CHIOCL03 VFD A24/IMPURE EXECUTE CHANNEL COMPLETION OP
00633 53500000 547 CIA FIND CHANNEL NUMBER
00634 14300007 548 TAI X1 BACK TO INDEX
00635 47100644 P 549 ENI 7,X3 EIGHT EQUIPMENTS
00636 47300645 P 550 CHIOCL05 STI CHIOCL06,X1 SAVE THE INDEX
00637 20100134 P 551 STI CHIOCL07,X3 SAVE INDEX
00640 53600000 552 LDA INSTL,X1 LOAD TABLE WORD
00641 14300644 P 553 TAI X2
00642 04200022 P 554 ENI *+3,X3 ENTER THE RETURN ADDRESS
00643 01200000 555 ISE XINERR,X2
00644 14100000 556 UJP 0,X2
00645 14300000 557 CHIOCL06 ENI IMPURE,X1 RESTORE INDEX
00646 15100010 558 CHIOCL07 ENI IMPURE,X3 RESTORE INDEX
00647 02700635 P 559 INI 100,X1 NEXT CODE
00650 01000035 P 560 IJD CHIOCL05,X3
561 UJP RETURN

```

```

564 *
565 *
566 * ROUTINE TO CONNECT TO A DEVICE ON THE CHANNEL SPECIFIED BY
567 * THE CONNECT CODE.
568 * ENTER WITH THE CONNECT CODE IN INDEX ONE AND THE MAXIMUM
569 * AMOUNT OF TIME THAT THE CHANNEL WILL BE USED IN THE G REGISTER
570 * CALLING SEQUENCE IS AS FOLLOWS -
571 *
572 * (ENTER INFORMATION INTO INDEX 1 AND G)
573 * ENI ,X3
574 * UJP CCONNECT
575 * XX XXXXX
576 * UJP YYYYYY
577 *
578 * (SOME RANDOM INSTRUCTION)
579 *
580 * INSTRUCTION TO BE EXECUTED UPON
581 * PROCESSING OF THE CHANNEL INT
582 * RETURNS HERE IF THE CHANNEL IS
583 * BUSY WITH INDEX 2 RESTORED
584 * CONTROL IS RETURNED TO HERE
585 * WITH INDEX 2 RESTORED IF THE
586 * CHANNEL WAS NOT INITIALLY BUSY
587 * OR THE RETURN ADDRESS IN INDEX
588 * 2 IF THE CALL WAS QUEUED
589 *
590 * A HAS THE CONNECT CODE IN IT AT
591 * EXIT
592 *
*****

```

00651	77630000	P	587	CONNECT	EQU	*	
00652	45001100	P	588		CRA		SAVE THE CONDITION REGISTER
00653	20300002		589		STAQ	CHCR+CHQUEUE	
00654	40001102	P	590		LDA	2,X3	LOAD THE COMPLETION COMMAND
00655	47201103	P	591		STA	RELEASE+CHQUEUE	AND SAVE THEM
00656	47100666	P	592		STI	INDEX2+CHQUEUE,X2	
00657	53100000		593		STI	CON,X1	SAVE THE CONNECT CODE
00660	12077763		594		TIA	X1	GET CONNECT CCDE TO A
00661	77540000		595		SHA	-12	CHANNEL NUMBER TO LOWER
00662	53500000		596		ACI		SET CHANNEL INDEX
00663	20101115	P	597		TAI	X1+CHANNEL	
00664	03100706	P	598		LDA	CHACTBL,X1+CHANNEL	CHECK FOR CHANNEL ACTIVITY
00665	14200002		599		AZJ,NE	CHQIT	QUEUE THE CALL IF ALREADY ACTIVE
00666	77000000		600	ICON	ENI	2,X2	ALLOW TWO CONNECT REJECTS
00667	02600666	P	601	CON	CON	IMPURE,0	CONNECT
00670	20001101	P	602		IJD	CON,X2	
00671	40101145	P	603		LDA	CHQUEUE+MAXTIME	LOAD CHANNEL TIME LIMIT
00672	20001102	P	604		STA	CHMAXTIM,X1+CHANNEL	STORE IT IN THE TIME TABLE
00673	40101115	P	605		STA	CHQUEUE+RELEASE	PUT THE OTHER PARAMETERS INTO
00674	54201103	P	606		LDA	CHACTBL,X1+CHANNEL	THE APPROPRIATE TABLES
00675	20001100	P	607		LDI	CHQUEUE+INDEX2,X2	RESTORE INDEX TWO
00676	77634000		608		LDA	CHQUEUE+CHCR	LOAD THE CONDITION REGISTER
00677	14600000		609		ACR		RESTORE THE CONDITION REGISTER
00700	40101135	P	610		ENA	0	
00701	77511377		611		STA	CHERTAB,X1+CHANNEL	
00702	20000666	P	612		CIL0	377B	
00703	40101125	P	613		LDA	CON	SAVE THE CONNECT CODE IN THE
00704	17677777		614		STA	CONTRBL,X1+CHANNEL	TABLE
00705	01300004		615		ANA	77777B	SOME DRIVERS DEPEND ON THIS
			616		UJP	4,X3	RETURN

00706	20101125	P	619	CHQIT	EQU	*		
00707	36000666	P	620		LDA	CON	BL,X1+CHANNEL	LOAD THE PREVIOUS CONNECT CODE
00710	03000665	P	621		SCA	CON		SAME UNIT TCO
00711	47301104	P	622		AZJ, EQ	ICON		JUMP IF RECONNECTING
00712	14300003	P	623		STI	RTNADR+CHQUEUE, X3		SAVE THE RETURN ADDRESS
00713	00777777	X	624		ENI	3, X3		EIGHT WORDS ARE NEEDED
00714	40300000	X	625		RTJ	GETMEM		SO GET THEM
00715	35000516	X	626		STA	0, X3		POINT THE LAST ENTRY AT ITSELF
00716	40501105	P	627		SSA	BIT17		ADD THE INDIRECT BIT
00717	25001100	P	628		STA, I	CHQPTR, X1+CHANNEL		LINK IN THE LAST REQUEST
00720	45300001	P	629		LDAQ	CHCR+CHQUEUE		GET CR AND MAXTIME
00721	20001102	P	630		STAQ	CHCR, X3		
00722	14700035	P	631		LDA	RELEASE+CHQUEUE		
00723	45300003	P	632		ENQ	RETURN		
00724	20001104	P	633		STAQ	RELEASE, X3		
00725	21000666	P	634		LDA	RTNADR+CHQUEUE		
00726	45300005	P	635		LDQ	CON		
00727	53700000	P	636		STAQ	RTNADR, X3		
00730	54201103	P	637		TAI	X3		
00731	01300003	P	638		LDI	INDEX2+CHQUEUE, X2		RESTORE INDEX 2
			639		UJP	3, X3		RETURN

			640					
			641					
			642					
	00732	P	643	UNCON	EQU	*		
00732	77550000		644		CIA			CHANNEL NUMBER TO THE A REGISTER
00733	53500000		645		TAI	X1+CHANNEL		
00734	20101105	P	646		LDA	CHQPTR, X1+CHANNEL		
00735	53700000	P	647		TAI	X3		SAVE ADDRESS OF NEXT REQUEST
00736	37000715	X	648		LPA	BIT17		
00737	03100742	P	649		AZJ, NE	*+3		JUMP IF A REQUEST
00740	40101115	P	650		STA	CHACTBL, X1+CHANNEL		CLEAR ACTIVITY WORD
00741	01200000	P	651		UJP	0, X2		RETURN
			652					
00742	53200000	P	653		TIA	X2		RETURN ADDRESS TO A
00743	40300004	P	654		STA	INDEX2, X3		AND SAVE IT IN THE BLOCK
00744	14200000	P	655		ENI	0, X2		INDICATE DISCONNECT ONLY
00745	01000461	P	656		UJP	RLSCHANX		SIMULATE A CHANNEL INTERRUPT

```

659 *
660 *
661 * ROUTINE FOR CHANNEL OVERTIME CHECKING.
662 * TIMEHOUR MUST COUNT DOWN THE ENTRIES IN CHMAXTIM EVERY HOUR
663 * WHEN IT ADJUSTS THE REAL TIME CLOCK.
664 * THIS ROUTINE SIMULATES A CHANNEL INTERRUPT IF A DEVICE
665 * HOLDS A CHANNEL LONGER THAN THE TIME IT REQUESTED WHEN
666 * IT CALLED THE CONNECT ROUTINE

```

00746	47377777	X	668	CHCHECK	STI	CHCHKRTN,X3	SAVE THE RETURN ADDRESS
00747	14601750		669				
00750	14700746	P	670				
00751	00777777	X	671		ENA	1000	CHECK EVERY SECOND
			672		ENQ	CHCHECK	CALL HERE ON END OF INTERVAL
			673		RTJ	TIMSET	CALL TIME SETTING ROUTINE
			674				
00752	14300755	P	675		ENI	*+3,X3	ENTER THE RETURN
00753	10001076	P	676		SSH	DISKFLAG	SHOULD WE CHECK FOR HUNG UP
00754	01077777	X	677		UJP	DKCLK	DISK UNITS
			678				
			679	*			THIS CODE REMOVES DELAY BY CHOOSING A DELAYED USER
			680	*			AND CLEARING THE DELAY BIT.
			681				
00755	54377777	X	682		LDI	PRTYPSA,X3+PSA	GET CURRENT BACKGROUND USER
00756	05300001		683		ISG	1,X3+PSA	SKIP IF ONE EXISTS
00757	54700262	X	684		LDI,I	RPSAPTR,X3+PSA	USE RANDOM USER
00760	20377777	X	685		LDA	IOBOUND,X3+PSA	GET IOBOUND BITS
00761	17677777	X	686		ANA	NK8BITS	LOOK FOR TERMINAL WAIT
00762	10001077	P	687		SSH	UNDCTR	SKIP IF TIME TO CHANGE PRTYPSA
00763	03001007	P	688		AZJ,EQ	UND06	JUMP IF USER COMPUTING
00764	21077777	X	689		LQ	BIT22	LARGE POSITIVE NUMBER
00765	53130035		690		TMI	NU,X1	NUMBER OF USERS TO X1
00766	47000755	X	691		STI	PRTYPSA,0	FORGET LAST BACKGROUND USER
00767	20300760	X	692	UND02	LDA	IOBOUND,X3+PSA	GET USERS IOBOUND
00770	17677777	X	693		ANA	DELAY	CHECK FOR DELAY
00771	03000776	P	694		AZJ,EQ	UND04	JUMP IF NOT DELAYED
00772	20377777	X	695		LDA	PAGEREQ,X3+PSA	GET BADNESS COEFFICIENT
00773	03600776	P	696		AQJ,GE	UND04	JUMP IF A NASTIER USER
00774	13000030		697		SHAQ	24	REMEMBER HOW BAD THIS USER IS
00775	47300766	X	698		STI	PRTYPSA,X3+PSA	NOMINATE FOR BACKGROUND USER
00776	20300000		699	UND04	LDA	0,X3+PSA	EXAMINE NEXT USER
00777	53700000		700		TAI	X3+PSA	
01000	02500767	P	701		IJO	UND02,X1	JUMP IF MORE USERS
01001	14477777	X	702		ENA,S	NDELAY	ALL BITS EXCEPT DELAY
01002	54300775	X	703		LDI	PRTYPSA,X3+PSA	GET PRIORITY USER'S PSA
01003	04300000		704		ISE	0,X3+PSA	SKIP IF NOT A USER
01004	00777777	X	705		RTJ	IOCLEAR	CLEAR DELAY BIT
01005	10001077	P	706		SSH	UNDCTR	THIS CODE RESETS UNDCTR
01006	01001005	P	707		UJP	*-1	INEFFICIENTLY
			708				
	01007	P	709	UND06	EQU	*	
01007	53130035		710		TMI	NU,X1	
01010	14377777	X	711		ENI	IDLE,X3	
01011	01001032	P	712		UJP	WC03	
01012	14600001		713	WC01	ENA	1	
01013	34377777	X	714		RAD	WCTIME,X3	
01014	20300767	X	715		LDA	IOBOUND,X3+PSA	CHECK FOR USER TIME DELAY REQUEST
01015	17677777	X	716		ANA	TIMWAIT	
01016	03001025	P	717		AZJ,EQ	WC02	JUMP IF NOT DELAYED
01017	20300263	X	718		LDA	A,X3+PSA	SEE HOW MUCH TIME IS LEFT
01020	15477776		719		INA,S	-1	COUNT DOWN BY ONE SECOND
01021	40301017	X	720		STA	A,X3+PSA	PUT IT BACK FOR NEXT TIME
01022	03101025	P	720+001		AZJ,NE	WC02	JUMP IF NOT FINISHED WITH WAIT
01023	14477777	X	723		ENA,S	NTIMWAIT	GET THE MASK TO CLEAR HIM
01024	34301014	X	724		RAD	IOBOUND,X3+PSA	CLEAR TIMWAIT BIT
	01025	P	725	WC02	EQU	*	
01025	24300772	X	726		LCA	PAGEREQ,X3+PSA	
01026	12077774		727		SHA	-3	DIVIDE BY 8
01027	34301025	X	728		RAD	PAGEREQ,X3+PSA	REDUCE PAGEREQ BY 1/8
01030	20300000		729		LDA	0,X3	
01031	53700000		730		TAI	X3	
01032	02501012	P	731	WC03	IJO	WC01,X1	
			732				
01033	14377777	X	733		ENI	MSUNITM1,X3	CHARGE USER DISK PACKS FOR
01034	20377777	X	734	MSFC02	LDA	MSFBLK,X3	WALL CLOCK TIME
01035	03001041	P	735		AZJ,EQ	MSFC04	JUMP IF NOT ON LINE
01036	53600000		736		TAI	X2+CNBLK	
01037	14600001		737		ENA	1	

01040	34200005		738	RAD	BLKR,X2+CNBLK	
01041	02701034	P	739	MSFC04	IJD	MSFC02,X3
			740			
01042	14100007		741	ENI	7,X1+CHANNEL	CHECK ALL EIGHT CHANNELS
01043	20101115	P	742	CHCMAL	LDA	CHACTBL,X1+CHANNEL
01044	03001051	P	743	AZJ,EQ	CHNOAC	JUMP IF NO DRIVER IS CONNECTED
01045	20101145	P	744	LDA	CHMAXTIM,X1+CHANNEL	LOAD THE TIME LIMIT
01046	03301053	P	745	AZJ,LT	CHWOT	JUMP IF CHANNEL IS HUNG UP
01047	15476027		746	INA,S	-1000	DECREMENT THE TIME LIMIT
01050	40101145	P	747	STA	CHMAXTIM,X1+CHANNEL	AND STORE IT BACK
01051	02501043	P	748	CHNOAC	IJD	CHCMAL,X1+CHANNEL
			749			LOOP UNTIL DONE
01052	01077777	X	750	UJP	CREATBAT	
			751			
	01053	P	752	CHWOT	EQU	*
01053	14600400		753	ENA	400B	ENTER OVERTIME SPECIFIER AND
01054	35101135	P	754	SSA	CHERRTAB,X1+CHANNEL	SET INTO THE CHANNEL ERROR TABLE
01055	40101135	P	755	STA	CHERRTAB,X1+CHANNEL	
01056	53100000		756	TIA	X1+CHANNEL	CHANNEL NUMBER TO A
01057	77540000		757	ACT		SET CHANNEL INDEX
01060	77300000		758	CHCLEAR	CINS	SENSE
			759	ANA	7	COPY CHANNEL STATUS
01061	17600007		760	SSA	CHERRTAB,X1+CHANNEL	LEAVE ERROR BITS
01062	35101135	P	761	STA	CHERRTAB,X1+CHANNEL	
01063	40101135	P	762	RTJ	CLCA	
01064	00701066	P	763	UJP	CHLABEL	
01065	01000460	P	764			
			765			
01066	01000000		766	CLCA	UJP	IMPURE
01067	14600001		767	ENA	1	
01070	12100000		768	SHA	0,X1+CHANNEL	
01071	16612000		769	XOA	12000B	
01072	44001073	P	770	SWA	*+1	
01073	77512000		771	CLCA	IMPURE	
01074	01001066	P	772	UJP	CLCA	

01075	00000000		774	FLAGS	VFD	A24/IMPURE	
01076	37773777		775	DISKFLAG	VFD	A24/37773777B+IMPURE	0 BIT SEZ GC SHAKE DISKS
01077	01010101		776				
	01077	P	777	UNDCTR	VFD	A24/01010101B+IMPURE	6 SECOND COUNTER
	000001		778	CHQUEUE	EQU	*-1	
01100	00000000		779	CHCR	EQU	1	IMPURE
	000002		780			2	IMPURE
01101	00000000		781	MAXTIME	EQU	3	IMPURE
	000003		782			4	IMPURE
01102	00000000		783	RELEASE	EQU	5	IMPURE
	000004		784				
01103	00000000		785	INDEX2	EQU		
	000005		786				
01104	00000000		787	RTNADR	EQU		
			788				
01105	00001105	P	789	CHQPTR	00	*	
01106	00001106	P	790			*	POINTERS TO THE CHANNEL
01107	00001107	P	791			*	REQUEST BLOCKS. THE INDIRECT
01110	00001110	P	792			*	BIT SHOULD BE SET IN ALL BUT
01111	00001111	P	793			*	THE LAST BLOCK, WHICH SHOULD
01112	00001112	P	794			*	POINT TO ITSELF.
01113	00001113	P	795			*	
01114	00001114	P	796			*	
			797			*	
			798				
01115	00000000		799	CHACTBL	00	IMPURE	
01116	00000000		800			IMPURE	
01117	00000000		801			IMPURE	
01120	00000000		802			IMPURE	
01121	00000000		803			IMPURE	
01122	00000000		804			IMPURE	
01123	00000000		805			IMPURE	
01124	00000000		806			IMPURE	
			807				
01125	00000000		808	CONTBL	00	IMPURE	
01126	00000000		809			IMPURE	
01127	00000000		810			IMPURE	
01130	00000000		811			IMPURE	
01131	00000000		812			IMPURE	
01132	00000000		813			IMPURE	
01133	00000000		814			IMPURE	
01134	00000000		815			IMPURE	
			816				
01135	00000000		817	CHERRTAB	00	IMPURE	CHANNEL ERROR TABLE
01136	00000000		818			IMPURE	BIT 0 SEZ CHANNEL PARITY ERROR
01137	00000000		819			IMPURE	
01140	00000000		820			IMPURE	
01141	00000000		821			IMPURE	BIT 3 SEZ MEMORY PARITY ERROR
01142	00000000		822			IMPURE	
01143	00000000		823			IMPURE	
01144	00000000		824			IMPURE	
			825				
01145			826	CHMAXTIM	BSS	8	
			827				
01155	22212460		828	IEMES	BCD,C	14,BAD INTERRUPT	
01160	63606767		829	IEMESCD	BCD,C	4,XXXXA	
	00022		830	IEMESL	EQU,C	*-IEMES	
01161			831		BSS	0	
			832		END		

NO LINES WITH ERRORS

