

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
3 COPY LOG7860 ** MAP EC HISTORY **
4 *****
5 *
6 * ** PREREQUISITES **
7 *
8 * NONE
9 *
10 *****
11 *
12 * ** MODIFICATIONS **
13 *
14 * CHANGES MADE TO MEET PROGRAM REQUIREMENTS
15 *
16 *****
17 *
18 * ** REA'S INCOPPORATED **
19 *
20 * NONE
21 *
22 *****
23 *
24 * ** SPECIAL INSTRUCTIONS **
25 *
26 * NONE
27 *
28 *****
29 *
30 * ** E. C. HISTORY **
31 *
32 * DATE 17DEC76 DATE 18JAN77 DATE 04MAR77 DATE 10JUN77
33 * E.C. 578486 E.C. 578573 E.C. 578638 E.C. 578625
34 *
35 * DATE 01MAR78 DATE DATE DATE
36 * E.C. 755285 E.C. E.C. E.C.
37 *
38 *****
39 I7860 START X'2500' START ADDRESS OF ALL 'I' TYPE PROG
40 @QUES EQU X'0100' EQUATED VALUE FOR MDI STATEMENT
41 @FIXT EQU X'0101' EQUATED VALUE FOR MDI STATEMENT
42 @STOP EQU X'0102' EQUATED VALUE FOR MDI STATEMENT
43 @GOTO EQU X'0200' EQUATED VALUE FOR MDI STATEMENT
44 @CALL EQU X'0201' EQUATED VALUE FOR MDI STATEMENT
45 @INPT EQU X'0300' EQUATED VALUE FOR MDI STATEMENT
46 @OUXX EQU X'0400' EQUATED VALUE FOR MDI STATEMENT
47 @TUXX EQU X'0500' EQUATED VALUE FOR MDI STATEMENT
48 @NVLD EQU X'0600' EQUATED VALUE FOR MDI STATEMENT
49 @ EQU X'0000' EQUATE FOR EQUAL
50 @E EQU X'0004' EQUATE FOR NOT EQUAL
51 @HI EQU X'0008' EQUATE FOR HIGH
52 @NH EQU X'000C' EQUATE FOR NOT HIGH
53 @LO EQU X'0010' EQUATE FOR LOW
54 @NL EQU X'0014' EQUATE FOR NOT LOW
55 @LT EQU X'0010' EQUATE FOR LESS THAN
56 @LE EQU X'000C' EQUATE FOR LESS THAN OR EQUAL TO
57 @GT EQU X'0008' EQUATE FOR GREATER THAN
58 @GE EQU X'0014' EQUATE FOR GREATER THAN OR EQUAL TO
59 @ON EQU X'0200' EQUATE FOR ON
60 @OF EQU X'0202' EQUATE FOR OFF
61 @MX EQU X'0204' EQUATE FOR MIXED
62 @EBC EQU X'0000' EQUATE FOR EBCDIC DATA TRANSFER
63 @HEX EQU X'0001' EQUATE FOR HEX DATA TRANSFER
64 @XTRNL EQU X'0001' EQUATE FOR EXTERNAL REFERENCE
65 @INTRNL EQU X'0000' EQUATE FOR INTERNAL REFERENCE
66 @PARM EQU X'0000' EQUATE INDICATING PARAMETER
67 @DA EQU X'0001' EQUATE FOR DEVICE ADDRESS
68 @UA EQU X'0002' EQUATE FOR UNIT ADDRESS
69 @DUMMY EQU X'0000' DUMMY EQUATE
70 @PID EQU *-X'0D00' ADDRESS OF MDI HEADER
71 @PTYPE EQU *-X'22CF' ADDRESS OF PROCESSOR TYPE FIELD
72 @STEPNUM EQU PID+X'000C' ADDRESS OF DECIMAL STEP NUMBER
73 @OPWD1 EQU PID+X'000E' ADDRESS OF OPTION WORD ONE
74 @OPWD2 EQU PID+X'0010' ADDRESS OF OPTION WORD TWO
75 @TSTATUS EQU PID+X'0018' ADDRESS OF TU STATUS WORD
76 @TUWORK EQU PID+X'001A' ADDRESS OF TU WORK AREA
77 @TUPARM1 EQU PID+X'009A' ADDRESS OF PARM 1 POINTER
78 @TUPARM2 EQU PID+X'009C' ADDRESS OF PARM 2 POINTER
79 @TUPARM3 EQU PID+X'009E' ADDRESS OF PARM 3 POINTER
80 @TUPARM4 EQU PID+X'00A0' ADDRESS OF PARM 4 POINTER
81 @TUPARM5 EQU PID+X'00A2' ADDRESS OF PARM 5 POINTER
82 @TUPARM6 EQU PID+X'00A4' ADDRESS OF PARM 6 POINTER
83 @TUPARM7 EQU PID+X'00A6' ADDRESS OF PARM 7 POINTER
84 @TUPARM8 EQU PID+X'00A8' ADDRESS OF PARM 8 POINTER
85 @TUPARM9 EQU PID+X'00AA' ADDRESS OF PARM 9 POINTER
86 @TUPARM10 EQU PID+X'00AC' ADDRESS OF PARM 10 POINTER
87 @TUPARM11 EQU PID+X'00AE' ADDRESS OF PARM 11 POINTER
88 @TUPARM12 EQU PID+X'00B0' ADDRESS OF PARM 12 POINTER
89 @TUPARM13 EQU PID+X'00B2' ADDRESS OF PARM 13 POINTER
90 @TUPARM14 EQU PID+X'00B4' ADDRESS OF PARM 14 POINTER
91 @TUPARM15 EQU PID+X'00B6' ADDRESS OF PARM 15 POINTER
92 @TUPARM16 EQU PID+X'00B8' ADDRESS OF PARM 16 POINTER
93 @TUMSGWTR EQU PID+X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
94 @TUA EQU PID+X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
95 @TUD EQU PID+X'00C0' ADDRESS OF DEVICE ADDRESS IN MAP
96 @TUBUFF EQU PID+X'00C2' ADDRESS OF LAST USED WORD IN MAP
97 @TULAST EQU PID+X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
98 @TURESULN EQU PID+X'00C6' ADDRESS OF LENGTH OF TU RESULTS
99 @TURESUL EQU PID+X'00C8' ADDRESS OF TU RESULTS FIELD
100 @MAFNAME EQU PID+X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
101 @TUINPT EQU PID+X'0148' ADDRESS OF SINPT DATA
102 @PARMARA EQU PID+X'016E' ADDRESS OF SINPT INPUT AREA
103 @DCADD1 EQU PID+X'01B8' MDI POINTER
104 @DCADD2 EQU PID+X'01BA' MDI POINTER
105 @SUPSTAT EQU PID+X'01D0' ADDRESS OF MDI STATUS
106 @DEVADD EQU PID+X'01D0' ADDRESS OF DEVICE ADDRESS TABLE 0
107 @DEVADD1 EQU PID+X'01DA' ADDRESS OF DEVICE ADDRESS TABLE 1
108 @DEVADD2 EQU PID+X'01E4' ADDRESS OF DEVICE ADDRESS TABLE 2
109 @DEVADD3 EQU PID+X'01EE' ADDRESS OF DEVICE ADDRESS TABLE 3
110 @DEVADD4 EQU PID+X'01F8' ADDRESS OF DEVICE ADDRESS TABLE 4
111 @DEVADD5 EQU PID+X'0202' ADDRESS OF DEVICE ADDRESS TABLE 5
112 @DEVADD6 EQU PID+X'020C' ADDRESS OF DEVICE ADDRESS TABLE 6
113 @DEVADD7 EQU PID+X'0216' ADDRESS OF DEVICE ADDRESS TABLE 7
114 PRINT OFF

002500
000100
000101
000102
000200
000201
000300
000400
000500
000600
000000
000004
000008
00000C
000010
000014
000010
00000C
000008
000014
000200
000202
000204
000000
000001
000001
000000
000000
000001
000002
000000
001800
001802
00180C
00180E
001810
001818
00181A
00189A
00189C
00189E
0018A0
0018A2
0018A4
0018A6
0018A8
0018AA
0018AC
0018AE
0018B0
0018B2
0018B4
0018B6
0018B8
0018BA
0018B7
0018C0
0018C2
0018C4
0018C6
0018C8
0018FC
001948
00196E
0019B8
0019BA
0019C4
0019D0
0019DA
0019E4
0019EE
0019F8
001A02
001A0C
001A16

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002500 25D2 201 DC A(ENTPT) POINT TO MAP ENTRY POINT TABLE
202 *****
203 *****
204 **
205 ** THE FOLLOWING TABLES ARE USED BY THE MDI SUPERVISOR (D3C00)
206 ** TO LOCATE THE CORRECT RULE TO INVOKE, TO OBTAIN THE PROPER
207 ** PARAMETERS TO PASS TO THE TU'S AND TO PASS TO THE OPERATOR
208 ** THE INDICATED MESSAGE(S). THERE ARE FOUR TABLES USED FOR THIS
209 ** PURPOSE THEY ARE:
210 **
211 ** STEP AND RULE ADDRESS TABLE
212 ** THIS TABLE GIVES THE ADDRESS OF THE RULE TO INVOKE AND
213 ** THE ASSOCIATED STEP DECIMAL STEP NUMBER OF THAT RULE.
214 ** ENTRIES ARE AS FOLLOWS
215 ** A) AN ADDRESS OF THE RULE DC START AREA
216 ** B) THE STEP NUMBER IN DECIMAL
217 ** C) AN EQUATE FOR THE STEP NUMBER
218 **
219 ** RULE INFORMATION TABLE
220 ** THIS TABLE CONTAINS THE REQUIRED INFORMATION TO EXECUTE
221 ** THE APPROPRIATE RULE UNDER MDI. EACH RULE HAS ITS OWN
222 ** UNIQUELY DEFINED AREA INDICATED BELOW. END OF TABLE IS
223 ** INDICATED WITH A X'0000' FOR THE RULE EQUATE.
224 **
225 ** \$QUES
226 ** A) RULE EQUATE X'0100'
227 ** B) ADDRESS OF THE YES LEG RULE
228 **
229 ** \$FIXT
230 ** A) RULE EQUATE X'0101'
231 ** B) ADDRESS OF MESSAGE TO PRINT
232 **
233 ** \$STOP
234 ** A) RULE EQUATE X'0102'
235 ** B) ADDRESS OF MESSAGE
236 **
237 ** \$GOTO
238 ** A) RULE EQUATE X'0200'
239 ** B) ADDRESS OF MESSAGE
240 ** C) NAME OF MAP TO GO TO
241 ** D) ENTRY POINT WITHIN GO TO MAP TO USE
242 ** E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
243 **
244 ** \$CALL
245 ** A) RULE EQUATE X'0201'
246 ** B) ADDRESS OF MESSAGE
247 ** C) NAME OF MAP TO CALL
248 ** D) ENTRY POINT WITHIN CALLED MAP TO USE
249 ** E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
250 **
251 ** \$INPT
252 ** A) RULE EQUATE X'0300'
253 ** B) INPUT TYPE (EBCDIC OR HEX)
254 ** C) ADDRESS OF YES LEG RULE
255 ** D) DESTINATION LOCATION OF INPUT DATA
256 ** E) LENGTH OF INPUT DATA
257 ** F) LOWER LIMIT OF GOOD DATA
258 ** G) HIGHER LIMIT OF GOOD DATA
259 **
260 ** \$QUXX
261 ** A) RULE EQUATE X'0400'
262 ** B) ADDRESS OF YES LEG RULE
263 ** C) TU BRANCH TO ADDRESS (INITIAL)
264 ** D) TU BRANCH TO ADDRESS (SECONDARY)
265 ** E) LENGTH OF PARAMETER IN BYTES
266 ** F) PARAMETER TO PASS TO TU
267 ** G) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
268 **
269 ** \$TUXX
270 ** A) RULE EQUATE X'0500'
271 ** B) ADDRESS OF YES LEG RULE
272 ** C) TU BRANCH TO ADDRESS
273 ** D) TYPE OF COMPARE TO MAKE ON RESULTS
274 ** E) LENGTH OF COMPARED RESULTS
275 ** F) MASK FIELD FOR COMPARE
276 ** G) LENGTH OF PARAMETER IN BYTES
277 ** H) PARAMETER TO PASS TO THE TU
278 ** I) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
279 **
280 ** \$NVLD
281 ** A) RULE EQUATE X'0600'
282 **
283 **
284 **
285 ** ENTRY POINT TABLE
286 ** THIS TABLE CONTAINS THE ENTRY POINTS WITHIN THE MAP THAT
287 ** THE MAP CAN BE ENTERED FROM THESE ENTRY POINTS ARE
288 ** REFERENCED BY NAME AND ADDRESS. ENTRIES ARE AS FOLLOWS:
289 **
290 ** A) NAME OF ENTRY POINT
291 ** B) ADDRESS OF ENTRY POINT RULE TABLE
292 **
293 ** THE ENTRY POINT TABLE END IS INDICATED BY A X'0000'
294 **
295 ** MESSAGE TABLE
296 ** THIS TABLE CONTAINS THE MESSAGE PASSED TO THE OPERATOR
297 ** VIA THE MDI SUPERVISOR. THE TABLE IS AS FOLLOWS:
298 **
299 ** A) EQUATE FOR START OF MESSAGE BLOCK
300 ** B) NUMBER OF LINES OF MESSAGE
301 ** C) LENGTH OF FOLLOWING LINE
302 ** D) FIRST LINE OF MESSAGE
303 ** E) LENGTH OF FOLLOWING LINE
304 ** F) SECOND LINE OF MESSAGE
305 ** G) ETC.
306 **
307 *****
308 *****

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311 *****
312 *****
313 **
314 ** STEP AND RULE ADDRESS TABLE **
315 **
316 *****
317 *****
002502 2550 318 DC AL2(N00001)
002504 0001 319 DC XL2'0001'

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425 N00009 \$FIXT FT=(F00009),CT=(C00025)
426+N00009 DC A(@FIXT)
427+N00009 DC A(F00009)
428 N00010 \$QUES QT=(Q00062),YES=N00012,CT=(C00063)
429+N00010 DC A(@QUES)
430+N00010 DC AL2(N00012)
431 N00011 \$FIXT FT=(F00067),CT=(C00025)
432+N00011 DC A(@FIXT)
433+N00011 DC A(F00067)
434 N00012 \$FIXT FT=(F00006),CT=(C00025)
435+N00012 DC A(@FIXT)
436+N00012 DC A(F00006)
437 N00013 \$QUXX T7872,REPT=T72A,QT=(Q00075),YES=N00015,CT=(C00073), X
438+N00013 DC A(@QUXX)
439+N00013 DC AL2(N00015)
440+N00013 DC A(T7872)
441+N00013 DC AL2(T72A)
442+N00013 DC AL2(0)
443+N00013 DC C'AA'

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0027C8 0000 540+*
541+OPTN2 DC X'0000'
542+*
543+B48 EQU 16
544+B49 EQU 17
545+B50 EQU 18
546+B51 EQU 19
547+B52 EQU 20
548+B53 EQU 21
549+B54 EQU 22
550+B55 EQU 23
551+B56 EQU 24
552+B57 EQU 25
553+B58 EQU 26
554+B59 EQU 27
555+B60 EQU 28
556+B61 EQU 29
557+B62 EQU 30
558+B63 EQU 31
559+CH EQU 30
560+CMF EQU 31
0027CA 0000 562+OPTN3 DC X'0000'
563+*
564+* 0 MYSTERY INTERRUPT MI
565+* 1 ERROR INTERRUPT ER
566+* 2 EXPECTED INTERRUPT XI
567+* 3 INTERRUPT RECEIVED IN
568+*
569+* 4 EXPECTED ERR/ATTENT YE
570+* 5 HARD ERROR FOUND HE
571+* 6 WRONG INTR LEVEL $LE
572+* 7 NO INTR EXPECTED NI
573+*
574+MI EQU 32
575+ER EQU 33
576+XI EQU 34
577+IN EQU 35
578+XE EQU 36
579+HE EQU 37
580+$LE EQU 38
581+NI EQU 39
582+CS EQU 40
583+CSA EQU 41
584+CE EQU 42
585+ISBON EQU 43
586+NG EQU 44
587+IOCC EQU 45
588+NOIN EQU 46
589+INCC EQU 47
590+*
591+* COMMON BUFFER FOR PRINTING DATA
592+*
593+$TUID DC A(*-*)
594+$IOPN DC A(*-*)
595+$ISB DC A(*-*)
596+$LSTIO DC A(*-*)
597+$DEV1 DC A(*-*)
598+$DEV2 DC A(*-*)
599+$DEV3 DC A(*-*)
600+$DEV4 DC A(*-*)
601+$SCDID EQU DEV1
602+$DCBIF EQU *
603+$DCB1 DC A(*-*)
604+$DCB2 DC A(*-*)
605+$DCB3 DC A(*-*)
606+$DCB4 DC A(*-*)
607+$DCB5 DC A(*-*)
608+$DCB6 DC A(*-*)
609+$DCB7 DC A(*-*)
610+$DCB8 DC A(*-*)
611+$DCB9 DC A(*-*)
612+*
613+$CSBUF EQU *
614+$CSTL1 DC A(*-*)
615+$CSTL2 DC A(*-*)
616+$CSTL3 DC A(*-*)
617+$CSTL4 DC A(*-*)
618+$CSTL5 DC A(*-*)
619+$CSTL6 DC A(*-*)
620+$CSTL7 DC A(*-*)
621+$CSTL8 DC A(*-*)
622+*
623+$SUBN DC A(*-*)
624+$DATA DC 2A(*-*)
625+$INTR DC X'0021'
626+$TURTN DC A(*-*)
627+$DVID DC X'00B2'
628+$SVCAL DC A(DEVADD)
629+ DC A(*-*)
630+*
631+* THIS TEST UNIT WILL RETURN TO MDI WITHOUT DOING ANY PROGRAM
632+* FUNCTION. THE RESULTS THAT WERE SET UP IN THE RESULTS AREA ARE
633+* STILL VALID BUT A DIFFERENT TEST IS TO BE PERFORMED.
634+*
635+T3C02 MVWI X'3C02', $TUID SET UP TEST UNIT ID
636+ BXS (R7) RETURN TO MDI SUPVR
637+ COPY COMEQU
638+
639+*****
640+*
641+* EQUATED NAMES FOR SUPPORTED SVC'S
642+*
643+*****
644+ OUT EQU 0
645+ OUTIN EQU 1
646+ IDLE EQU 2
647+ ASCII EQU 3
648+ CHNGE EQU 4
649+ PGMCK EQU 5
650+ EXIT EQU 6
651+ TERM EQU 7
652+ RESET EQU 8
653+ RID EQU 9
654+ START EQU 10
655+ STCSS EQU 11
656+ PREP EQU 12

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00000D 657 READ0 EQU 13
00000E 658 READ1 EQU 14
00000F 659 RSTAT EQU 15
000010 660 WRIT0 EQU 16
000011 661 WRIT1 EQU 17
000012 662 CTRL EQU 18
000013 663 RICEB EQU 19
000014 664 CICEB EQU 20
000015 665 HIO EQU 21
000016 666 REQSD EQU 22
000017 667 RELSD EQU 23
000018 668 HALT EQU 24
000019 669 HTOH EQU 25
00001A 670 HTOA EQU 26
00001B 671 ATOH EQU 27
00001C 672 HTOA EQU 28
00001D 673 ETOA EQU 29
00001E 674 ATOE EQU 30
00001F 675 READI EQU 31
000020 676 WRITI EQU 32
678 *****
679 *
680 * EQUATES USED BY TU'S AS CONSTANTS
681 *
682 *****
683 PLUS EQU C'+ ' PLUS CHAR
684 MINUS EQU C'- ' MINUS CHAR
685 ZERO EQU 0
686 ONE EQU 1
687 TWO EQU 2
688 THREE EQU 3
689 FOUR EQU 4
690 FIVE EQU 5
691 SIX EQU 6
692 SEVEN EQU 7
693 EIGHT EQU 8
694 NINE EQU 9
695 TEN EQU 10
696 ELEVEN EQU 11
697 TWELVE EQU 12
698 THIRTEEN EQU 13
699 FOURTEEN EQU 14
700 FIFTEEN EQU 15
701 SIXTEEN EQU 16
702 SEVENTEEN EQU 17
703 EIGHTEEN EQU 18
704 NINETEEN EQU 19
705 TWENTY EQU 20
706 TWENTYONE EQU 21
707 TWENTYTWO EQU 22
708 TWENTYTHREE EQU 23
709 TWENTYFOUR EQU 24
710 TWENTYFIVE EQU 25
711 TWENTYSIX EQU 26
712 TWENTYSEVEN EQU 27
713 TWENTYEIGHT EQU 28
714 TWENTYNINE EQU 29
715 THIRTY EQU 30
716 *****
717 *
718 * THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE
719 * BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.
720 *
721 *****
722 BS0 EQU 0
723 BS1 EQU 1
724 BS2 EQU 2
725 BS3 EQU 3
726 BS4 EQU 4
727 BS5 EQU 5
728 BS6 EQU 6
729 BS7 EQU 7
730 BS8 EQU 8
731 BS9 EQU 9
732 BS10 EQU 10
733 BS11 EQU 11
734 BS12 EQU 12
735 BS13 EQU 13
736 BS14 EQU 14
737 BS15 EQU 15
739 COPY T7870 01DEC76
740 T7870 TUIT $PRP$
741 *****06FEB76**
742+*
743+* TEST UNIT
744+*
745+* FILE STATUS TEST 6/13/77
746+*
747+* PURPOSE
748+*
749+* FUNCTION: INITIAL RESET OF SEEK OPERATIONS.
750+*
751+* PROGRAM INITIALIZES ATTACHMENT.
752+* CHECK STATUS OF LINES IN ATTACHMENT AND 4962 RELATED TO SERKS
753+*
754+* CALLING SEQUENCE
755+*
756+* PROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
757+* TURESUL BIT 0-----PLO OUT OF SYNC CHECK
758+* TURESUL BIT 1-----DATA UNSAFE
759+* TURESUL BIT 2-----INTERRUPT
760+* TURESUL BIT 3-----FILP NOT READY
761+*
762+* TURESUL BIT 4-----RECAL
763+* TURESUL BIT 5-----NOT USED
764+* TURESUL BIT 6-----NOT USED
765+* TURESUL BIT 7-----NOT USED
766+*
767+* TURESUL BIT 8-----BEHIND HOME
768+* TURESUL BIT 9-----ACCESS HEAD NOT HOME
769+* TURESUL BIT 10----- (NOT) EVEN TRACK INDICATED
770+* TURESUL BIT 11-----NOT USED
771+*
772+* TURESUL BIT 12-----RECALIBRATE NOT RESET
773+* TURESUL BIT 13-----NOT USED
774+* TURESUL BIT 14-----SEEK 1 & 2 NOT RESET
775+* TURESUL BIT 15----- (NOT) ON TRACK

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776+* : TURESUL BITS 16-31 CS STATS FOR FAILING OP
777+* :
778+* :
779+* EXITS NORMAL
780+* RETURNS TO MDI SUPERVISOR WHEN DONE.
781+* :
782+* EXITS ERROR
783+* RETURNS TO MDI SUPERVISOR.
784+* :
785+* RETURN CONTROL
786+* :
787+* B TURTN* RETURN TO MDI SUPERVISOR
788+* :
789+*****
790+T7870 MVW R7,TURTN SAVE RETURN ADDRESS
791+ MVWI X'7870',STUID SAVE TU ID FOR DISPLAY
792+ MVA OPTN1,R4 SET UP POINTER ADPS IN R4
793+ BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
794+ DC A(\$ERR\$) ERROR ADPS FOR INVALID PREP
795+*
796+ MVB DEVADD,IDCB1+1 LOAD DEVICE ADDRESS IN IDCB
797+ MVB DEVADD,IDCB0+1 LOAD DEVICE ADDRESS IN IDCB
798+ MVB CPUID,R0 DETERMINE CPU TYPE
799+ CBI 37,R0 *
800+ JNE TT70 JUMP IF NOT 4955
801+ MVWI X'254C',TT70A+2 LOAD TIME CONSTANT FOR 2 SEC
802+ J TT70B
803+ TT70 MVWI X'0COE',TT70A+2 LOAD TIME CONSTANT FOR 2 SEC
804+ TT70B MVA IOBLK,R7 SETUP IOBLK
805+ SVC RESET ISSUE IO RESET
806+ TT70A MVWI X'0000',R0 TIME OUT 2 SEC
807+ TT70C SVC TLE *
808+ JCT TT70C,R0 *
809+ MVWZ TURESUL,R2 CLEAR RESULTS WORD
810+ MVWZ TURESUL+2,R2 CLEAR RESULTS WORD 2
811+ MVA TURESUL,R2 ADDRESS OF RESULTS
812+ T70Z BAL XIOCS,R6 START CYCLE STEAL STATUS
813+ DC A(\$ERR\$) ERROR
814+ TBTR (R4,ER) INTERRUPT ERPOP
815+ BON \$ERR\$ YES
816+ MVW CSBUF+2,STATS ADDRESS OF CYCLE STEAL STATUS
817+ MVA STATS,R5 *
818+ TBTR (R5,7) TEST FOR UNSAFE
819+ JCT T701,R5 *
820+ TBTR (R2,1) TURN ON DATA UNSAFE
821+ TBTR (R5,15) TEST NOT READY
822+ JOFF T702 *
823+ TBTS (R2,3) TURN ON NOT READY
824+ T702 TBTR (R5,11) RESET UNSAFE BITS
825+ TBTR (R5,12) *
826+ TBTR (R5,13) *
827+ CWI 0,STATS ANY OTHER ERROR BITS ON?
828+ JE T70B NO
829+ TBTS (R2,4) RECAL ERROR
830+ TBTS (R2,2) INTERRUPT ERROR
831+ MVW CSBUF+2,TURESUL+2 CS STATS
832+ J T701 EXIT
833+ T70B BAL SENS1,R6 GET SENSE WORD ONE
834+ DC A(\$ERR\$) ERROR
835+ MVA RDATA,R1 ADDRESS OF SENSE DATA
836+ TBT (R1,1) TEST PLO OUT OF SYNC
837+ JOFF T703 *
838+ TBTS (R2,0) SET 'PLO OUT OF SYNC'
839+ T703 TBT (R1,9) TEST NOT BEHIND HOME
840+ JON T704 *
841+ TBTS (R2,8) SET BEHIND HOME
842+ T704 TBT (R1,5) TEST HOME POSITION
843+ JON T705 *
844+ TBTS (R2,9) SET ACCESS HEAD NOT HOME
845+ T705 TBT (R1,15) TEST EVEN TRACK
846+ JON T706 *
847+ TBTS (R2,10) SET NOT EVEN TRACK INDICATED
848+ T706 TBT (R1,13) TEST NOT SEEK 1 AND 2
849+ JON T708 *
850+ TBTS (R2,14) SET SEEK 1 AND 2 NOT RESET
851+ T708 TBT (R1,10) TEST ON TRACK
852+ JON T709 *
853+ TBTS (R2,15) SET NOT ON TRACK
854+ T709 BAL SENS0,R6 GET SENSE WORD ZEPO
855+ DC A(\$ERR\$) ERROR
856+ MVA RDATA0,R1 ADDRESS OF SENSE DATA
857+ TBT (R1,3) TEST RECALIBRATE TRIGGER
858+ JOFF T70A *
859+ TBTS (R2,12) SET 'RECALIBRATE NOT RESET'
860+ T70A TXIT *
861+T70A B \$CONX RETURN TO MDI CONTROLLER
862+*****
863+*
864+* COPY T7872 01DEC76
865+*****
866+*T7872
867+* THIS TU INHIBITS INTERRUPT 12/01/76*
868+* CALLING ROUTINE LOOPS ON T72A
869+*****
870+*
871+*****
872+T7872 MVW R7,TURTN SAVE RETURN ADDRESS
873+ MVWI X'0020',IODCB PREP TO LEVEL 2 WITH THE 'I' BIT OFF
874+ MVA IOBLK,R7 *
875+ SVC PREP *
876+ J T72B *
877+ T72A MVW R7,TURTN SAVE RETURN ADDRESS
878+ T72B B \$CONX EXIT
879+*
880+* COPY T78DCB 01DEC76
881+* (T78DCB)
882+*****12/1/76*****
883+*
884+* DCB TABLES AND DC'S
885+*
886+*
887+*****
888+*
889+***** DIAGNOSTIC DCB *****
890+*
891+ DGDCB DC X'2008' DIAGNOSTIC DCB

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892 DC X'0000' NOT USED
893 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
894 DC X'0000' NOT USED
895 DC X'0000' NOT USED
896 DC A(*-*) CHAINING ADDRESS
897 DC X'0100' BYTE COUNT
898 DC A(*-*) DATA ADDRESS
899 *
900 *
901 *
902 ***** RECALIBRATE DCB *****
903 *
904 CLDCB DC X'0007' RECALIBRATE DCB
905 DC 7A(*-*)
906 *
907 ***** WRITE SECTOR ID **
908 *
909 WSDCB DC X'0002' WRITE SECTOR ID CONTROL WORD
910 DC X'0000' NOT USED
911 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
912 DC A(*-*) NOT USED
913 DC A(*-*) NOT USED
914 DC X'0006' CHAIN ADDRESS
915 DC A(WRSID) BYTE COUNT
916 ***** READ SECTOR ID DCB *****
917 *
918 RSDCB DC X'200A' READ SECTOR ID
919 DC X'0000' NOT USED
920 DC X'0000' 0-7 = PHYSICAL SECTOR # MINUS ONE
921 DC X'0000' NOT USED
922 DC X'0000' NOT USED
923 DC X'0000' CHAIN ADDRESS
924 DC X'0006' BYTE COUNT FOR READ SECTOR ID
925 DC A(SCTID) SECTOR ID DATA ADDRESS
926 *
927 *
928 ***** READ SECTOR ID IMMEDIATE DCB *****
929 *
930 RIDCB DC X'200E' READ SECTOR ID
931 DC X'0000' NOT USED
932 DC X'0000' NOT USED
933 DC X'0000' NOT USED
934 DC X'0000' NOT USED
935 DC A(*-*) CHAIN ADDRESS
936 DC X'0006' BYTE COUNT FOR READ SECTOR ID
937 DC A(SCTID) SECTOR ID DATA ADDRESS
938 *
939 *
940 ***** SEEK DCB *****
941 *
942 SKDCB DC X'0005' SEEK DCB
943 DC X'0000' BIT 0-3=0;BIT4=DIRECTION;5-15=DIFFER
944 DC F'0'
945 DC F'0'
946 DC X'0000' 0-7 = HEAD;8-15 NOT USED
947 DC A(*-*) CHAIN ADDRESS
948 DC F'0' NOT USED
949 DC F'0' NOT USED
950 *
951 ***** CYCLE STEAL STATUS DCB *****
952 *
953 CSDCB DC X'2000' CONTROL WORD
954 DC F'0' NOT USED
955 DC F'0' NOT USED
956 DC F'0' NOT USED
957 DC F'0' NOT USED
958 DC F'0' NOT USED
959 DC X'0008' 4 WORDS OF STATS
960 DC A(CSBUF) ADDRESS OF CYCLE STEAL STATUS DATA
961 *
962 ***** WRITE DCB *****
963 *
964 WRDCB DC X'0001' WRITE CONTROL WORD
965 DC F'0' NOT USED
966 DC X'0000' 0-7=0;8-15 = FLAG BYTE
967 DC X'0000' SEARCH ARGUMENT CYLINDER
968 DC X'0000' SEARCH ARGUMENT HEAD-SECTOR
969 DC A(*-*) CHAIN ADDRESS
970 DC F'0' BYTE COUNT
971 DC A(*-*) WRITE DATA ADDRESS
972 *
973 ***** VERIFY DCB *****
974 *
975 VRDCB DC X'200C' CONTROL WORD
976 DC F'0' NOT USED
977 DC X'0000' 0-7=0;8-15 = FLAG BYTE
978 DC X'0000' CYLINDER
979 DC X'0000' HEAD - SECTOR
980 DC A(*-*) CHAIN ADDRESS
981 DC F'0' BYTE COUNT
982 DC A(*-*) VERIFY DATA ADDRESS
983 *
984 ***** READ DCB *****
985 *
986 RDCB DC X'2009' READ DCB CONTROL WORD
987 DC F'0' NOT USED
988 DC X'0000' 0-7=0;8-15 = FLAG BYTE
989 DC X'0000' SEARCH ARGUMENT CYLINDER
990 DC X'0101' SEARCH ARGUMENT H-R
991 DC A(*-*) CHAIN ADDRESS
992 DC F'0' BYTE COUNT
993 DC A(*-*) READ DATA ADDRESS
994 *
995 ***** WRITE SECTOR ID SKEWED ****
996 *
997 WKDCB DC X'0003' CONTROL WORD
998 DC X'0000' NOT USED
999 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
1000 DC A(*-*) NOT USED
1001 DC A(*-*) NOT USED
1002 DC A(*-*) CHAIN ADDRESS
1003 DC X'0006' BYTE COUNT
1004 DC A(WRSID) ADDR OF SECTOR ID DATA
1005 *

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1006 **** READ SECTOR ID SKEWED ****
1007 *
1008 RKDCB DC X'200B' CONTROL WORD
1009 DC X'0000' NOT USED
1010 DC X'0000' 0-7 = PHYSICAL SECTOR # MINUS ONE
1011 DC X'0000' NOT USED
1012 DC X'0000' NOT USED
1013 DC A(*-*) CHAIN ADDRESS
1014 DC X'0006' BYTE COUNT FOR READ SECTOR ID
1015 DC A(SCTID) SECTOR ID DATA ADDRESS
1016 *
1017 * CONSTANTS AND DEFINED STORAGE LOCATIONS
1018 ZERO DC X'0000' CONSTANT ZERO
1019 ONE DC X'0001' CONSTANT ONE
1020 TIMEOUT DC 2A(*-*) TIMEOUT COUNT
1021 TONE DC X'0000' CONSTANT FOR ADD DOUBLE
1022 DC X'0001' *
1023 COUNT DC F'1280' BYTE COUNT (1280)
1024 DIFF DC A(*-*) SEEK DIFFERENCE
1025 XXX DC A(*-*) WORK WORD INT TO ZERO
1026 BCNT DC X'0000' BYTE COUNT
1027 JOE DC A(*-*) WRITE PARAMETER POINTER
1028 JOE1 DC A(*-*) SAVE LOC FOR PARM LIST ADDRESS
1029 WDATA DC X'DEB6' WRITE DATA
1030 DC X'16ED' *
1031 TABLE DC A(*-*) ADDR OF WRT PAR LIST FOR FORMAT RTNS
1032 LGSEC DC X'0000' LOGICAL SECTOR #
1033 PHYS DC X'0000' CONVERTED PHYSICAL SEC #
1034 CB29 DC X'1D00' CONSTANT BYTE 29
1035 FIVE9 DC X'3B00' CONSTANT BYTE 59
1036 WRSID DC X'0000' FLAG,CYLINDER (WRT SECTOR ID DATA)
1037 DC X'0000' CYLINDER,HEAD
1038 DC X'0000' LOG SECTOR,NOT USED
1039 CDAT DC X'00FF' INVALID DATA CONSTANT
1040 WSIDT DC X'FF34' *
1041 WDATA DC X'15E7' *
1042 DC X'19A0' *
1043 SCTST DC X'0000' READ SECTOR ID TEST DATA BUFFER
1044 DC X'0000' *
1045 DC X'0000' *
1046 CTR01 DC X'0000' COUNTER
1047 CTR02 DC X'0000' COUNTER
1048 CTR03 DC X'0000' COUNTER
1049 CTR04 DC X'0000' COUNTER
1050 CTR05 DC X'0000' COUNTER
1051 CTR06 DC X'0000' COUNTER
1052 SAVE3 DC X'0000' SAVE AREA
1053 SAVE5 DC X'0000' SAVE AREA
1054 WR2 DC X'0000' *
1055 SVSEK DC X'0000' *
1056 ICT DC X'0000' *
1057 T56AA DC X'0000' *
1058 T56BB DC X'0000' *
1059 T56CC DC X'0000' *
1060 T56DD DC X'0000' *
1061 T56EE DC X'0000' *
1062 T56FF DC X'0000' *
1063 T56GG DC X'0000' *
1064 T86AA DC X'0000' *
1065 T86BB DC X'0000' *
1066 T86CC DC X'0000' *
1067 T86DD DC X'0000' *
1068 T86EE DC X'0000' *
1069 T86FF DC X'0000' *
1070 T86GG DC X'0000' *
1071 T41D DC X'0000' *
1072 T41LP DC X'0000' *
1073 WRLCT DC X'0000' *
1074 CILOC DC X'0000' *
1075 PASS1 DC A(*-*)
1076 HEAD0 DC A(*-*)
1077 HEAD1 DC A(*-*)
1078 GDSE0 DC A(*-*)
1079 GDSE1 DC A(*-*)
1080 ERO0 DC A(*-*)
1081 ERO1 DC A(*-*)
1082 HDOSV DC A(*-*)
1083 HD1SV DC A(*-*)
1084 EROSV DC A(*-*)
1085 ER1SV DC A(*-*)
1086 PATR DC A(*-*)
1087 CECYL DC A(*-*)
1088 STATS DC A(*-*)
1089 *
1091 COPY T78DPCIO 01DEC76
1092 ** (T78DPCIO)
1093 *
1094 * EXECUTE DPC INPUT/OUTPUT COMMANDS 2/07/77
1095 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1096 *
1097 * 1 BAL CEOP1,R6 CE DIAGNOSTIC OP1(TURN ON DIAG MODE)
1098 *
1099 * 2 BAL CEOP2,R6 WRITE DIAG CLOCK STEP DATA
1100 *
1101 * 3 BAL SENS0,R6 CE READ SENSE WORD ZERO
1102 *
1103 * 4 BAL SENS1,R6 CE READ SENSE WORD ONE
1104 *
1105 * 5 BAL WRAP,R6 READ DIAGNOSTIC WRAP
1106 *
1107 * BXS (R6,2) RETURN
1108 *
1109 *****
1110 *
1111 * CE DIAGNOSTIC OP2 DATA WORD (CLOCK STEP)
1112 *
1113 * BIT 00 - SET READY
1114 * BIT 01 - RESET READY
1115 * BIT 02 - SET WRITE CLOCK
1116 * BIT 03 - SET READ CLOCK
1117 * BIT 04 - INDEX PULSE
1118 * BIT 05 - SECTOR PULSE
1119 * BIT 06 - STANDARD READ DATA
1120 * BIT 07 - SPEED PULSE

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1121 * BIT 08 - BEHIND HOME
1122 * BIT 09 - SET SEEK COMPLETE
1123 * BIT 10 - RESET SEEK COMPLETE
1124 * BIT 11 - DLO OUT OF SYNC
1125 * BIT 12 - PST RD/WPT CLOCK
1126 * BIT 13 -
1127 * BIT 14 -
1128 * BIT 15 - RESET DIAGNOSTIC MODE
1129 *
1130 *****
1131 *
1132 *
1133 WRAP MVW R6,LSTIO SAVE ADDRESS OF LAST IO
1134 MVB DEVADD,IDCBRAP+1 LOAD DEVICE ADDRESS IN IDCB
1135 IO IDCBRAP READ SENSE WORD 1
1136 BNCC 7,CCERR CHECK COND CODE
1137 BXS (R6,2) RETURN TO CALLER
1138 *
1139 CEOP1 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
1140 MVB DEVADD,IDCBCE1+1 LOAD DEVICE ADDRESS IN IDCB
1141 IO IDCBCE1 SET DIAGNOSTIC MODE
1142 BNCC 7,CCERR CHECK COND CODE
1143 BXS (R6,2) RETURN TO CALLER
1144 *
1145 CEOP2 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
1146 MVB DEVADD,IDCBCE2+1 LOAD DEVICE ADDRESS IN IDCB
1147 IO IDCBCE2 WRITE DIAG CLOCK STEP
1148 BNCC 7,CCERR CHECK COND CODE
1149 BXS (R6,2) RETURN TO CALLER
1150 *
1151 *
1152 SENS1 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
1153 MVB DEVADD,IDCB1+1 LOAD DEVICE ADDRESS IN IDCB
1154 IO IDCB1 READ SENSE WORD 2
1155 BNCC 7,CCERR CHECK COND CODE
1156 BXS (R6,2) RETURN TO CALLER
1157 *
1158 SENS0 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
1159 MVB DEVADD,IDCB0+1 LOAD DEVICE ADDRESS IN IDCB
1160 IO IDCB0 READ SENSE WORD 1
1161 BNCC 7,CCERR CHECK COND CODE
1162 BXS (R6,2) RETURN TO CALLER
1163 *
1164 CCERP DC X'706E' COPY STATUS ANY LEVEL INTO R3
1165 SRL 13,R3 POSITION CC CODE TO BITS 13-15
1166 MVB R3,\$IOIN * PUT IN LOG AREA
1167 B (R6)* RETURN TO USER
1168 *
1169 IORST DC X'6F05' RESET IO
1170 IDCB0 DC X'2205' SENSE WORD ZERO
1171 RDATA DC A(*-*) DATA WORD
1172 IDCB1 DC X'2105' SENSE WORD ONE
1173 RDATA DC A(*-*)
1174 IDCBCE1 DC X'4005' CE DIAG OP1
1175 CEDAT DC A(*-*) SENSE DATA
1176 IDCBCE2 DC X'4105' CE DIAG OP2
1177 CEDAT2 DC A(*-*) SENSE DATA
1178 IDCBRAP DC X'2F05' READ DIAG WRAP
1179 RAPDAT DC A(*-*) SENSE DATA
1180 CPUID EQU X'0232' CPU ID
1181 *
1182 * COPY T78IO 01DEC76
1183 ** (T78IO)
1184 *****12/01/76*****
1185 *
1186 * SUBROUTINE
1187 *
1188 * PURPOSE
1189 *
1190 *
1191 * COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
1192 * NORMAL AND TEST DATA.
1193 *
1194 * CALLING SEQUENCE
1195 * BAL CMPRW,R6 (NORMAL)
1196 * BAL CMPRT,R6 (TEST)
1197 *
1198 * RETURN
1199 *
1200 * BXS (R6,2) - NORMAL
1201 *
1202 *
1203 *
1204 *****
1205 *
1206 CMPRT MVWI 5,R7 BYTE COUNT
1207 MVA SCTST+1,R3 ADDR OF RD SECT ID DATA (TEST)
1208 MVA WSIDT,P5 ADDR OF WR SECT ID DATA (TEST)
1209 J TT4Y
1210 CMERW MVWI 5,R7
1211 MVA SCTID+1,R3 COMPARE BYTE COUNT
1212 MVA WRSID,R5 ADDR OF WR SEC ID DATA
1213 TT4Y CFNEN (R3),(R5) COMPARE ID DATA
1214 BE (R6,2) BCH IF WRITE ID DATA OK
1215 B (R6)* COMPARE ERROR
1216 *
1217 *****
1218 *
1219 * SUBROUTINE
1220 *
1221 * PURPOSE
1222 * CONVERT LOGICAL SECTOR NUMBER TO A PHYSICAL SECTOR MINUS
1223 * ONE.
1224 * SETUP LOGICAL SECTOR # IN LOCATION 'LGSEC'
1225 * PHYSICAL SECTOR # WILL BE LOADED IN LOCATION 'PHYS'
1226 *
1227 * LOGICAL SECTOR# TO PHYSICAL SECTOR# CONVERSION
1228 * LOGICAL- X 00, 1E, 01, 1F, 02, 20, 03, 21, 04, 22, 05, 23, 06, 24,
1229 * PHYSICAL X 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B, 0C, 0D,
1230 *
1231 * LOGICAL- 07, 25, 08, 26, 09, 27, 0A, 28, 0B, 29, 0C, 2A, 0D, 2B,
1232 * PHYSICAL 0E, 0F, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 1A, 1B,
1233 *
1234 * LOGICAL- 0E, 2C, 0F, 2D, 10, 2E, 11, 2F, 12, 30, 13, 31, 14, 32,
1235 * PHYSICAL 1C, 1D, 1E, 1F, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29,

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1236 * LOGICAL- 15, 33, 16, 34, 17, 35, 18, 36, 19, 37, 1A, 38, 1B, 39,
1238 * PHYSICAL 2A, 2B, 2C, 2D, 2E, 2F, 30, 31, 32, 33, 34, 35, 36, 37,
1239 *
1240 * LOGICAL- 1C, 3A, 1D, 3B, X
1241 * PHYSICAL 38, 39, 3A, 3B, X
1242 *
1243 *
1244 * CALLING SEQUENCE
1245 *
1246 * BAL CONV1,R6
1247 *
1248 * RETURN
1249 *
1250 * B (TT304+2)
1251 *
1252 *
1253 *
1254 * CONV1 MVW R6,TT304+2 SETUP RETURN ADDR
1255 * CB ZER00,LGSEC+1 CK FOR LOG # ZERO
1256 * JE TT303 BCH IF LOG # IS ZERO
1257 * CB LGSEC+1,CB29 COMP LOG TO 29
1258 * JGE RTT01 BCH IF LGSEC 20 OR LESS THAN CB29
1259 * MVWI 2,R0 SERUP MULTIPLIER
1260 * MB LGSEC+1,R0 LOG SECTOR # TIMES 2
1261 * SWI 60,R0 LOG SEC TIMES 2 MINUS 60
1262 * MVB R0,PHYS+1 PHYSICAL SECTOR NUMBER
1263 * J TT304 RETURN TO CALLER
1264 * MVB FIVE9,PHYS+1 PHYSICAL SECTOR # 59
1265 * J TT304 RETURN TO CALLER
1266 * MVWI 2,R0 LOAD MULTIPLIER
1267 * MB LGSEC+1,R0 LOG SECTOR # TIMES 2
1268 * SWI 1,R0 SUBTRACT ONE
1269 * MVB R0,PHYS+1 LOAD PHYSICAL SECTOR #
1270 * B *-+ RETURN TO CALLER
1271 *
1272 *
1273 *
1274 * SUBROUTINE
1275 *
1276 * PURPOSE
1277 *
1278 * LOAD WRITE SECTOR ID DATA BUFFER FROM RD SEC ID BUFFER
1279 *
1280 * CALLING SEQUENCE
1281 *
1282 * BAL LWSID,R6
1283 *
1284 * RETURN
1285 *
1286 * BXS (R6)
1287 *
1288 *
1289 *
1290 *
1291 * LWSID MVWI 5,R7 BYTE COUNT
1292 * MVA SCTID+1,R3 ADDR OF RD SECT ID DATA BUFFER
1293 * MVA WRSID,R5 ADDR OF WR SECT ID DATA BUFFER
1294 * MVFN (R3),(R5) MOV DATA FROM RD TO WR BUFFER
1295 * BXS (R6) RETURN TO CALLER
1296 *
1297 *
1298 *
1299 * EXECUTE INPUT & OUTPUT COMMANDS
1300 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1301 * EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
1302 * LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
1303 * SUPVR CALL.
1304 *
1305 * THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
1306 *
1307 * 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
1308 * 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
1309 *
1310 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1311 *
1312 * 1 BAL \$RKEW,R6 READ SECTOR ID SKEWED
1313 *
1314 * 2 BAL \$WKST,R6 WRITE SECTOR ID SKEWED (TEST)
1315 *
1316 * 3 BAL \$RWST,R6 READ SECTOR ID SKEWED (TEST)
1317 *
1318 * 4 BAL \$RIDS,R6 READ SECTOR ID (TEST)
1319 *
1320 * 5 BAL \$WKEW,R6 WRITE SECTOR ID SKEWED
1321 *
1322 * 6 BAL \$WSEC,R6 WRITE SECTOR ID
1323 *
1324 * 7 BAL \$WSTS,R6 WRITE SECTOR ID (TEST)
1325 *
1326 * 8 BAL \$DIAG,R6 DIAGNOSTIC
1327 *
1328 * 9 BAL XIOCS,R6 CYCLE STEAL STATUS
1329 *
1330 * 10 BAL \$SEK,R6 SEEK
1331 *
1332 * 11 BAL \$RECL,R6 RECALIBRATE
1333 *
1334 * 12 BAL \$RDID,R6 READ SECTOR ID
1335 *
1336 * 13 BAL \$RD,R6 READ
1337 *
1338 * 14 BAL \$RDVY,R6 READ VERIFY
1339 *
1340 * 15 BAL \$WRT,R6 WRITE
1341 *
1342 *
1343 * \$SEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1344 * J XIO XIO
1345 *
1346 * \$PECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
1347 * J XIO XIO
1348 *
1349 * \$RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
1350 * MVBI X'FF',R3 SET BUFFER TO F'S

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1351 * MVA SCTID,R5 SETUP SECTOR ID BUFFER ADRS
1352 * MVWI 6,R7 SETUP BUFFER LENGTH
1353 * PFN R3,(R5) INIT READ SECTOR ID BUFFER
1354 * MVA SCTID,RSDCB+14 DATA ADDR
1355 * J XIO
1356 *
1357 * \$RD MVBI X'FF',R3 SETRD BUFFER TO ALL F'S
1358 * MVWI RDCB+14,R5 SET UP READ BUFFER ADRS
1359 * MVWI X'0100',R7 SET UP BUFFER LENGTH
1360 * PFN R3,(R5) CLEAR READ BUFFER
1361 * \$RDS MVA RDCB,IODCB SET UP BLOCK FOR SVC CALL
1362 * J XIO
1363 *
1364 * \$RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1365 * J XIO
1366 *
1367 * \$WRT MVA WRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1368 * J XIO
1369 *
1370 * \$RKEW MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1371 * MVBI X'FF',R3 SET BUFFER TO F'S
1372 * MVWI SCTID,R5 SETUP SECTOR ID BUFFER ADRS
1373 * MVWI 6,R7 SETUP BUFFER LENGTH
1374 * PFN R3,(R5) INIT READ SECTOR ID BUFFER
1375 * MVA SCTID,RKDCB+14 DATA ADDR
1376 * J XIO
1377 *
1378 * \$WKST MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1379 * MVA WSIDT,WKDCB+14 DATA ADDR
1380 * J XIO
1381 *
1382 * \$RWST MVA RKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1383 * MVA SCTST,RKDCB+14 DATA ADDR
1384 * J XIO
1385 *
1386 * \$RIDS MVA RSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1387 * MVBI X'FF',R3 SET BUFFER TO F'S
1388 * MVA SCTST,R5 SETUP SECTOR ID BUFFER ADRS
1389 * MVWI 6,R7 SETUP BUFFER LENGTH
1390 * PFN R3,(R5) INIT READ SECTOR ID BUFFER
1391 * MVA SCTST,RSDCB+14 DATA ADDR
1392 * J XIO
1393 *
1394 * \$WKEW MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1395 * MVA WRSID,WKDCB+14 DATA ADDR
1396 * J XIO
1397 *
1398 * \$WSEC MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1399 * MVA WRSID,WSDCB+14 DATA ADDR
1400 * J XIO
1401 * \$WSTS MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1402 * MVA WSIDT,WSDCB+14 DATA ADDR
1403 * J XIO
1404 *
1405 * \$DIAG MVA DGDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1406 * J XIO
1407 * XEQIT
1408 *
1409 *
1410 * SUB-ROUTINE
1411 *
1412 * EXECUTE INPUT AND OUTPUT COMMANDS
1413 *
1414 * PURPOSE
1415 *
1416 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1417 * THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
1418 *
1419 * 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
1420 * THE I/O COMMAND.
1421 * 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
1422 * ISSUED BY THIS SUBROUTINE.
1423 * 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
1424 * START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
1425 * 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
1426 * SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
1427 * MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
1428 * 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
1429 * EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'.
1430 * 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
1431 * STARTS TO DETERMINE A LOST INTERRUPT.
1432 * 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
1433 * WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
1434 * 8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
1435 * 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
1436 * 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
1437 * 11. CHECK TO SEE IF THE EXERCISER IS TO BE TERMINATED.
1438 * 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
1439 * ISSUED BY THIS SUBROUTINE.
1440 * 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
1441 * CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
1442 * COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
1443 *
1444 * CALLING SEQUENCE
1445 *
1446 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1447 *
1448 * --> BAL XIO OR XEQ ANY CYCLE STEAL COMMAND, MOD=0
1449 * --> BAL XIO1 MOD PARM PRELOADED IN 'IOMOD'
1450 * --> BAL XIOCS,R6 OR XEQ START CYCLE STEAL STATUS, MOD=F
1451 * --> BAL XIOCS-4,R6 AUTO CS STATUS (FOLLOWING OTHER XIO
1452 * AND DOES NOT POST INTERRUPT STATUS)
1453 *
1454 * RETURN CONTROL
1455 *
1456 * BXS (R6,2) RETURN TO USER NO ERROR
1457 * OR B (R6)* RETURN AND RETRY ON ERROR
1458 *
1459 *
1460 * XIO MVWZ IOMOD,R3 SET MOF OF 0 FOR CYCLE STEAL OP
1461 * J XIO1 CS I/O'S ARE NOT RETRIED
1462 *
1463 * TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
1464 * TBTS (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
1465 * XIOCS MVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002C28 4020 2D1C 000F 1466+ MVWI X'000F',IOMOD SET CYCLE STEAL MODIFIER
1467+ TBT (R4,CS) IS CS IN PROGRESS, ERROR CONDITION
1468+ JON XIO2 * YES, BYPASS SAVING I/O ADRS
1469+XIO1 MVW R6,ISTIO SAVE IAR FOR RETRY IF REQUESTED
1470+ MVA DCBUP,R3 SET UP TO ADRS TO MOVE DCB TABLE
1471+ MVW IODCB,R5 * AND THE FROM ADRS, ALONG WITH
1472+ MVBI 16,P7 * THE NUMBER OF MOVES
1473+ MVFN (R5),R3 MOVE 1 STATUS WORD AND ADJUST
1474+ MVBI 255,R3 CLEAR CYCLE STATUS BUFFER
1475+ MVA CSBUE,R5 * TO ALL ONES *
1476+ MVBI 16,R7 *
1477+ FFW X'0708',SIOIN OVERLAY OLD CONDITION CODES
1478+ MVWI X'0708',SIOIN ZERO OUT OLD ISB VALUE
1479+ MVWZ \$ISB,R3
1480+
1481+ TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
1482+XIO2 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
1483+ MVA IOBLK,R7 SET UP CONTROL BLOCK FOR SUPVR
1484+ TBTR (R4,SLE) RESET LEVEL ERROR INDICATOR
1485+ TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
1486+ SVC STAPT CALL SUPVR FOR I/O COMMAND
1487+
1488+ TBTR (R4,NI) IS AN INTR EXPECTED
1489+ BN (R6,2) * NO, RETURN TO USER
1490+
1491+ THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
1492+
1493+ MVBI X'00',R5 SET UP WORK REG FOR 'LOST INTR'
1494+XIO8 TBTR (R4,IN) HAS INTERRUPT BEEN RECEIVED
1495+ JON XIOCK * YES, CHECK IF ALL WAS SATISFACTORY
1496+ SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
1497+ SUPVR WILL RETURN HERE
1498+ AWI 1,R5 ADVANCE TIME OUT COUNT
1499+ JNZ XIO8 BCH IF TIME OUT NOT REACHED
1500+ TBTS (R4,ER) SET ON ERROR CONTROL BIT
1501+ B (R6) ERR NO INTERRUPT
1502+ *****03FEB76**
1503+
1504+
1505+ SUBROUTINE
1506+
1507+ I/O EXECUTE ERROR HANDLING ROUTINE
1508+
1509+ PURPOSE
1510+
1511+ THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
1512+ PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
1513+ SUPERVISOR AND IT WAS NOT ACCEPTED.
1514+
1515+ CALLING SEQUENCE
1516+
1517+ SUPVR WILL ENTER WHEN AN ERPOR OCCURS ON AN I/O COMMAND
1518+
1519+ RETURN CONTROL
1520+
1521+ B (R6) * RETURN TO USERS ERROR HANDLER
1522+
1523+ *****14APR76**
1524+
1525+ CC 0= DEVICE NOT ATTACHED
1526+ FOR 1= DEVICE BUSY
2= DEVICE BUSY AFTER RESET
1527+ I/O 3= COMMAND REJECT
1528+ 4= INTERVENTION REQUIRED
1529+ 5= INTERFACE DATA CHECK
1530+ 6= CONTROLLER BUSY
1531+ 7= I/O COMMAND EXCEPTED
1532+
1533+
1534+XIOER DC X'706E' COPY STATUS ANY LEVEL INTO R3
1535+ SRL 13,R3 POSITION CC CODE TO BITS 13-15
1536+ MVB R3,SIOIN * PUT IN LOG OUT AREA
1537+ B (R6) RETURN TO USER ERROR HANDLER
1538+ *****14APR76**
1539+
1540+
1541+ SUB-ROUTINE
1542+
1543+ EPROR INTERRUPT RUNS ON INTEPRUPT LEVEL '\$INTL'
1544+
1545+ PURPOSE
1546+
1547+ THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN EPROR
1548+ OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE
1549+ EXPECTED CODE.
1550+
1551+ CALLING SEQUENCE
1552+
1553+ SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTEPRUPT
1554+
1555+ RETURN CONTROL
1556+
1557+ SVC EXIT RETURN TO USER VIA SUPVR
1558+
1559+ *****11MAY76**
1560+
1561+ CC 0= ADD STATUS
1562+ FOR 1= PROGRAM CONTROL INTERRUPT ISB 0= COMD REJECT
1563+ INTP 3= EXCEPTION INTERRUPT FOR 2= INCOR LENGTH
1564+ 4= DEVICE END INTERRUPT INTP 3= DCB SPEC CK
1565+ 4= ATTENTION INTERRUPT 4= STG DATA CK
1566+ 5= ATTENTION / PROGRAM CNTL INTR 5= INV STG ADRS
1567+ 6= ATTENTION / EXCEPTION INTR 6= PROTCT CK
1568+ 7= ATTENTION / DEVICE END INTP 7= I-FACE DATA
1569+
1570+XINTER DC X'706E' COPY STATUS ANY LEVEL INTO P3
1571+ SRL 13,R3 POSITION INDICATORS IN R3
1572+ MVA OPTN1,R4 SET UP BASE ADRS
1573+ TBT (R4,CS) IS CS IN PROGRESS
1574+ JOFF INTES * NO
1575+ TBTS (R4,CSTL8) TURN ON CYCLE STEAL INTER EPROR
1576+ MVB R3,CSTL8+1 SAVE CS ERR ISB VALUE, BITS 0-7
1577+ J INTR1 * AND THE COND CODE
1578+
1579+INTES TBT (R4,XE) TEST EXPECTED ATEN / EPROR IND
1580+ JOFF INTET BCH IF NOT EXPECTED
1581+ CBI 4,R3 IS THIS AN 'ATTENTION' INTR

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002CA8 1006 1582+ JE INTR1 * YES, BCH TO END INTR SEQUENCE IL
002CAA 4C61 1583+INTET TBTS (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT IL
002CAC 5004 1584+ J INTR1 IL
1585+ THE ERROR INTERRUPT USES THE SAME IL
1586+ ENDING SEQUENCE AS THE NORMAL INTR IL
1588+ *****14APR76**
1589+
1590+ SUBROUTINE
1591+
1592+ OKAY INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
1593+
1594+ PURPOSE
1595+
1596+ TO CHECK THE INTERRUPT AND CONTINUE THE TEST
1597+
1598+ CALLING SEQUENCE
1599+
1600+ SUPERVISOR WILL ENTER HERE IF INTR CC IS AS REQUESTED
1601+ THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE
1602+ AFTER THE SPECIAL PART HAS BEEN COMPLETED AND THE
1603+ COMMON SECTION IS HANDLED HERE.
1604+
1605+ RETURN CONTROL
1606+
1607+ SVC EXIT RETURN TO USER VIA SUPVR
1608+
1609+ *****03FEB76**
1610+INTOK DC X'706E' COPY STATUS ANY LEVEL INTO R3
1611+ SRL 13,R3 POSITION INDICATORS IN R3
1612+ MVA OPTN1,R4 SET UP BASE ADRS
1613+XINTR1 TBTS (R4,IN) SET INTERRUPT RECEIVED
1614+ TBT (R4,CS) IS 'CS IN PROGRESS' ON
1615+ JON INTR2 * YES, BCH AROUND UPDATE
1616+ MVB R3,SIOIN+1 SAVE INTERRUPTING CC CODE
1617+ HVW R7,\$ISB SAVE INTR STATUS AND DEV ADRS
1618+XINTR2 DC *
1619+ CFCPL R5 CURRENT LEVEL COPIED BY DCP
1620+ SLL 4,R5 POSITION INTR LEVEL AND PUT
1621+ ABI 1,R5 * IN 'I' BIT
1622+ CW \$INTL,R5 IS THIS THE COPRECT INTR LEVEL
1623+ JE INTR3 * YES, GO EXIT THIS LEVEL
1624+ TBTS (R4,SLE) SET INTR LEVEL ERROR CONTROL BIT
1625+ TBTS (R4,ER) SET ERROR ON I/O COMMAND CNTL BIT
1626+XINTR3 TBTR (R4,XI) WAS INTERRUPT EXPECTED
1627+ JON INTRFX * YES, EXIT OFF THIS INTR LEVEL
1628+ TBTS (R4,MI) * NO, SET MYSTERY INTR CONTROL BIT
1629+ CBI 4,R3 ATTENTION INTERRUPT?
1630+ JE INTRX YES
1631+ TBTS (R4,NG) ERROR UNEXPECTED INTERRUPT
1632+XINTRX SVC EXIT EXIT THIS LEVEL VIA SUPVR TO PGM
1633+ *****03FEB76**
1634+
1635+
1636+ THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
1637+ HAS BEEN SERVICED. THE EXERCISER FINDS AN INTEPRUPT BEEN
1638+ RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
1639+
1640+
1641+XIOCK TBTR (R4,XE) WAS AN ERROF EXPECTED
1642+ BN (R6,2) * YES, EXIT THIS ROUTINE
1643+ TBTR (R4,CS) WAS AUTO CS IN PROGRESS
1644+ JOFF XIOCV * NO, CONTINUE CHECKING
1645+ TBT (R4,CE) IS CS IN AN EFR CONDITION
1646+ JOFF XIOCO * NO, BCH
1647+ B (R6) * CS ERROR
1648+XIOCO TBTS (R4,CSA) TURN ON CS STATS AVAIL FLAG
1649+ BXS (R6,2) GO TO USEP
1650+XIOCV TBT (R4,ER) WAS ERROF INTR CONTROL BIT ON
1651+ JOFF XIOCX * NO, EXIT THIS ROUTINE
1652+
1653+ MVB SIOIN+1,R5 GET LAST INTR CC CODE
1654+ CBI 2,R5 IS THIS CC=2
1655+ BNE (R5) * * NO, BCH TO ERROR HANDLER
1656+XIOCQ MVB \$ISB,R5 GET LAST ISB DATA BYTE AND IF CS
1657+ BN XIOCS-4 * AVAILABLE, GO AND GET IT
1658+ B (R6) * ERROR
1659+XIOCX MVWZ OPTN3,R3 CLEAR OUT OPTION 3 CNTL BITS
1660+ BXS (R6,2) RETURN TO USEP VIA REG 6
1661+
1662+ I/O PARAMETER LIST
1663+
1664+IOBLK DC A(DEVADD) ADRS OF DEVICE ADRS
1665+ DC A(XIOER) ERROR ROUTINE ADRS
1666+IODCB DC A(*-*) DCB ADRS OR LEVEL & INTP
1667+IOHOD DC A(*-*) MODIFIER
1668+ DC A(*-*) ADRS OF LAST SVC CALL
1669+IORSF DC A(*-*) SECOND WORD OF LAST IDCB
1670+
1671+ INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
1672+
1673+INTBL DC A(DEVADD) ADRS OF DEVICE ADRS
1674+ DC A(INTOK) INTERRUPT OK RETURN ADRS
1675+ DC A(INTRER) INTERRUPT ERROR ADRS
1676+INTCC DC X'0003' INTERRUPT CODE EXPECTED
1678+ *****11MAY76**
1679+
1680+ SUBROUTINE
1681+
1682+ CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
1683+
1684+ PURPOSE
1685+
1686+ TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
1687+ PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
1688+ TO INTERRUPT.
1689+
1690+ CALLING SEQUENCE
1691+
1692+ THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
1693+
1694+ --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
1695+ --> BAL \$CONP,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
1696+
1697+ RETURN CONTROL
1698+

LOCTR OBJECT TEXT STMT SOURCE STATEMENT
1699** BXS (R6,2) RETURN TO USER VIA REG 6 IF OKAY
1700** OR B (R6)* IF THE DEVICE COULD NOT BE CONNECTED
1701**
1702** *****
1703+\$CONC MVBI 6,R7 NUMBER OF BYTE TO CLEAR
1704+ MVI 0,R3 * AND THE DATA TO USE
1705+ MVA DEV1,R5 * ALONG WITH THE ADRS TO USE
1706+ FPN R3,R5 *
1707+ MVWZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
1708+ MVA INTR,R7 SET R7 TO CONTROL BLOCK AND
1709+ SVC CTRB * CONNECT IT TO THIS DEVICE
1710+ BN (R6)* ERROR RETURN TO USEP
1711**
1712+\$CONP MVW \$INFL,IQDCB PUT IN LEVEL & INTR PARAMETER
1713+ MVA IOBLK,R7 SET P7 TO CONTROL BLOCK TO PREPARE
1714+ MVWI X'0708',SIOIN INITIALIZE CONDITION CODE STORAGE
1715+ MVWZ \$ISE,R3 * AND CLEAR OLD ISE VALUE
1716+ MVW R6,I\$TIO SET UP ADDRESS THAT STARTED LAST I/O
1717+ SVC PREP * AND CALL ON SUPVP
1718+ BXS (R6,2) RETURN TO USER
1719+ *****06APR76**
1720** SUBROUTINE
1721**
1722** SUBROUTINE
1723**
1724** DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
1725**
1726** PURPOSE
1727**
1728** DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
1729** SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
1730** BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
1731**
1732** CALLING SEQUENCE
1733**
1734** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
1735**
1736** --> B \$ERR\$ SET 'NG' BIT AND CONVERT DATA TO LOG
1737** --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
1738**
1739** RETURN CONTROL
1740**
1741** OR B TURTN* RETURN TO MDI
1742** OR B (R6)* IF THE DEVICE COULD NOT BE CONNECTED
1743**
1744** *****
1745+\$ERR\$ MVWI X'1800',TUSTATUS SET ON 'NO GOOD' STATUS BIT
1746+ MVA HEBLK,P7 GET ADRS OF CONTROL BLOCK
1747+ SVC HFOE CONVERT HEX TO EBC VIS DCP
1748+\$PRNT MVBI 3,R5
1749+ MVA TUNORK,R3 SET UP BUFFER STORAGE
1750+ MVW R3,BUFPT
1751+ MVA LINE1,R1
1752+ MVBI 4,P7
1753+ MVBI 8,P6
1754+MVBUF MVFN (R3),(R1)
1755+ MVBI 4,R7
1756+ MVBI X'10',R2
1757+ MVB P2,(R1)+
1758+ JCT MVBUF,R6
1759+ MVBI 8,P6
1760+ AWT 44,R1
1761+ JCT MVBUF,R5
1762+ MVWI PIDMSG10,PID+2
1763+ MVA FAKETU,@DCADD1
1764+ MVA DC2PT,@DCADD2
1765+ OWI BIT0080,SUPSTAT SET UP BUFFER STORAGE
1766+ MVA \$TUID,R3 GO TO MESSAGE WRITER
1767+ BAL TUMSGWTR*,R7
1768**
1769+\$CONX EQU *
1770+ MVB DEVADD,R7 GET DEVICE ADDRESS FROM MDI
1771+ SVC RICB RELEASE INTERRUPT CONTROL BLOCK
1772+ B TURTN* RETURN TO MDI SUPERVISOR
1773**
1774+BEGIN DC A(0007) NUMBER OF LINES TO PRINT
1775+ DC A(0008) LINE LENGTH = 8 CHAP
1776+ DC C' * * ABORT '
1777+ DC A(0040) LINE LENGTH = 40 CHAR
1778+ DC C'\$TUID IOIN ISB INST DEV1 DEV2 DEV3 DEV4 '
1779+ DC A(0040) LINE LENGTH = 40 CHAR
1780+LINE1 DC C'
1781+ DC A(0040) LINE LENGTH = 40 CHAR
1782+ DC C'CNTRL DCB2 DCB3 DCB4 DCB5 CHAD BYCT ADRS '
1783+ DC A(0040) LINE LENGTH = 40 CHAP
1784+LINE2 DC C'
1785+ DC A(0040) LINE LENGTH = 40 CHAR
1786+ DC C'\$PSID CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 CS-8 '
1787+ DC A(0040) LINE LENGTH = 40 CHAP
1788+LINE3 DC C'
1789**
1790+BUFPT DC A(*-*)
1791+DC2PT DC A(BEGIN)
1792+FIXTU DC X'0101'
1793+FAKETU DC X'0101'
1794+PIDMSG10 EQU X'F1F0'
1795+BIT0080 EQU X'0080'
1796**
1797** DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
1798**
1799+HEBLK DC A(48) NUMBER OF BYTES TO CONVERT
1800+ DC A(\$TUID) FROM ADRS
1801+ DC A(TUWORK) AND THE TO ADRS
1802 END

CROSS-REFERENCE LISTING
DECLARED NAME ATTRIBUTES AND REFERENCES
0 .R0. ABSOLUTE. HEX VALUE(00000000)
798 799 806 808 1259 1260 1261 1262 1266
1267 1268 1269
0 .R1. ABSOLUTE. HEX VALUE(00000001)
835 836 839 842 845 848 851 856 857
1751 1754 1757 1760
0 .R2. ABSOLUTE. HEX VALUE(00000002)
809 810 811 820 823 829 830 838 841
844 847 850 853 859 1756 1757
0 .R3. ABSOLUTE. HEX VALUE(00000003)
1165 1166 1207 1211 1213 1292 1294 1350 1353
1357 1360 1371 1374 1387 1390 1460 1470 1473
1474 1477 1479 1535 1536 1571 1577 1581 1611
1616 1629 1659 1704 1706 1707 1715 1749 1750
1754 1766
0 .R4. ABSOLUTE. HEX VALUE(00000004)
792 814 1463 1464 1467 1481 1482 1484 1485
1488 1494 1500 1572 1573 1575 1579 1583 1612
1613 1614 1624 1625 1626 1628 1631 1641 1643
1645 1648 1650
0 .R5. ABSOLUTE. HEX VALUE(00000005)
817 818 821 824 825 826 1208 1212 1213
1293 1294 1351 1353 1358 1360 1372 1374 1388
1390 1471 1473 1475 1477 1493 1498 1620 1621
1622 1653 1654 1656 1705 1706 1748 1761
0 .R6. ABSOLUTE. HEX VALUE(00000006)
793 812 833 854 1133 1137 1139 1143 1145
1149 1152 1156 1158 1162 1167 1214 1215 1254
1295 1469 1489 1501 1537 1642 1647 1649 1655
1658 1660 1710 1716 1718 1753 1758 1759
0 .R7. ABSOLUTE. HEX VALUE(00000007)
636 780 804 872 876 877 1206 1210 1291
1352 1359 1373 1389 1472 1476 1483 1576 1617
1703 1708 1713 1746 1752 1755 1767 1770
1703 \$CONC ADDRESS. HEX LOCATION(00002D2A) IN CSECT(I7860) LENGTH(2)
793
1769 \$CONX ADDRESS. HEX LOCATION(00002DAE) IN CSECT(I7860) LENGTH(1)
861 878
1745 \$ERR\$ ADDRESS. HEX LOCATION(00002D5E) IN CSECT(I7860) LENGTH(6)
794 813 815 834 855
625 \$INTL ADDRESS. HEX LOCATION(00002802) IN CSECT(I7860) LENGTH(2)
1622 1712
595 \$IOIN ADDRESS. HEX LOCATION(000027CE) IN CSECT(I7860) LENGTH(2)
1166 1478 1536 1616 1653 1714
596 \$ISB ADDRESS. HEX LOCATION(000027D0) IN CSECT(I7860) LENGTH(2)
1479 1617 1656 1715
580 \$LE ABSOLUTE. HEX VALUE(00000026)
1484 1624
594 \$TUID ADDRESS. HEX LOCATION(000027CC) IN CSECT(I7860) LENGTH(2)
635 791 1766 1800
105 @DCADD1 ADDRESS. HEX LOCATION(000019B8) IN CSECT(I7860) LENGTH(1)
1763
106 @DCADD2 ADDRESS. HEX LOCATION(000019BA) IN CSECT(I7860) LENGTH(1)
1764
42 @FIXT ABSOLUTE. HEX VALUE(00000101)
396 420 423 426 432 435 452
44 @GOTO ABSOLUTE. HEX VALUE(00000200)
466
49 @NVLD ABSOLUTE. HEX VALUE(00000600)
447 464
41 @QUES ABSOLUTE. HEX VALUE(00000100)
411 414 417 429 449
47 @QUXX ABSOLUTE. HEX VALUE(00000400)
438 455
48 @TUXX ABSOLUTE. HEX VALUE(00000500)
384 399
1774 BEGIN ADDRESS. HEX LOCATION(00002DB8) IN CSECT(I7860) LENGTH(2)
1791
1795 BIT0080 ABSOLUTE. HEX VALUE(00000080)
1765
1790 BUFPT ADDRESS. HEX LOCATION(00002EC0) IN CSECT(I7860) LENGTH(2)
1750
1034 CB29 ADDRESS. HEX LOCATION(000029DE) IN CSECT(I7860) LENGTH(2)
1257
1164 CCERR ADDRESS. HEX LOCATION(00002AB0) IN CSECT(I7860) LENGTH(2)
1136 1142 1148 1155 1161
584 CE ABSOLUTE. HEX VALUE(0000002A)
1463 1575 1645
664 CTCB ABSOLUTE. HEX VALUE(00000014)
1709
903 CLDCB ADDRESS. HEX LOCATION(0000290C) IN CSECT(I7860) LENGTH(2)
1346
1180 CPUID ABSOLUTE. HEX VALUE(00000232)
798
582 CS ABSOLUTE. HEX VALUE(00000028)
1464 1467 1573 1614 1643
583 CSA ABSOLUTE. HEX VALUE(00000029)
1648
613 CSBUF ADDRESS. HEX LOCATION(000027EC) IN CSECT(I7860) LENGTH(1)
816 831 950 1475
953 CSDCB ADDRESS. HEX LOCATION(0000295C) IN CSECT(I7860) LENGTH(2)
1465
621 CSTLB ADDRESS. HEX LOCATION(000027FA) IN CSECT(I7860) LENGTH(2)
1576 1577
603 DCBUF ADDRESS. HEX LOCATION(000027DC) IN CSECT(I7860) LENGTH(1)
1470
1791 DC2PT ADDRESS. HEX LOCATION(00002EC2) IN CSECT(I7860) LENGTH(2)
1764
108 DEVADD ADDRESS. HEX LOCATION(000019D0) IN CSECT(I7860) LENGTH(1)
628 796 797 1134 1140 1146 1153 1159 1664
598 DEV1 ADDRESS. HEX LOCATION(000027D4) IN CSECT(I7860) LENGTH(2)
802 1705
891 DGDCB ADDRESS. HEX LOCATION(000028FC) IN CSECT(I7860) LENGTH(2)
1405
70 DUMMY ABSOLUTE. HEX VALUE(00000000)
375 471 483
472 ENTPT ADDRESS. HEX LOCATION(000025D2) IN CSECT(I7860) LENGTH(1)
201
575 ER ABSOLUTE. HEX VALUE(00000021)
814 1481 1500 1583 1625 1650

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
650	EXIT	ABSOLUTE. HEX VALUE(00000006)
1793	FAKETU	1632 ADDRESS. HEX LOCATION(00002EC6) IN CSECT(I7860) LENGTH(2)
1035	FIVE9	1763 ADDRESS. HEX LOCATION(000029E0) IN CSECT(I7860) LENGTH(2)
513	F00006	1264 ADDRESS. HEX LOCATION(000026B8) IN CSECT(I7860) LENGTH(1)
505	F00009	436 ADDRESS. HEX LOCATION(0000267E) IN CSECT(I7860) LENGTH(1)
491	F00039	424 427 ADDRESS. HEX LOCATION(000025D8) IN CSECT(I7860) LENGTH(1)
495	F00056	397 ADDRESS. HEX LOCATION(000025DE) IN CSECT(I7860) LENGTH(1)
509	F00067	421 ADDRESS. HEX LOCATION(00002696) IN CSECT(I7860) LENGTH(1)
523	F00084	433 ADDRESS. HEX LOCATION(00002720) IN CSECT(I7860) LENGTH(1)
533	F00096	453 ADDRESS. HEX LOCATION(000027C0) IN CSECT(I7860) LENGTH(1)
1799	HEBLK	467 ADDRESS. HEX LOCATION(00002EC8) IN CSECT(I7860) LENGTH(2)
670	HTOE	1746 ABSOLUTE. HEX VALUE(0000001A)
1174	IDCBCE1	1747 ADDRESS. HEX LOCATION(00002AC6) IN CSECT(I7860) LENGTH(2)
1176	IDCBCE2	1140 1141 ADDRESS. HEX LOCATION(00002ACA) IN CSECT(I7860) LENGTH(2)
1178	IDCBRAP	1146 1147 ADDRESS. HEX LOCATION(00002ACE) IN CSECT(I7860) LENGTH(2)
1170	IDCBO	1134 1135 ADDRESS. HEX LOCATION(00002ABE) IN CSECT(I7860) LENGTH(2)
1172	IDCB1	797 1159 1160 ADDRESS. HEX LOCATION(00002AC2) IN CSECT(I7860) LENGTH(2)
646	IDLE	796 1153 1154 ABSOLUTE. HEX VALUE(00000002)
577	IN	807 1496 ABSOLUTE. HEX VALUE(00000023)
1673	INTBL	1482 1494 1613 ADDRESS. HEX LOCATION(00002D22) IN CSECT(I7860) LENGTH(2)
1570	INTER	1708 ADDRESS. HEX LOCATION(00002C8A) IN CSECT(I7860) LENGTH(2)
1579	INTES	1675 ADDRESS. HEX LOCATION(00002CA2) IN CSECT(I7860) LENGTH(2)
1583	INTET	1574 ADDRESS. HEX LOCATION(00002CAA) IN CSECT(I7860) LENGTH(2)
1610	INTOK	1580 ADDRESS. HEX LOCATION(00002CAE) IN CSECT(I7860) LENGTH(2)
1632	INTRX	1674 ADDRESS. HEX LOCATION(00002CDE) IN CSECT(I7860) LENGTH(2)
1613	INTR1	1627 1630 ADDRESS. HEX LOCATION(00002CB6) IN CSECT(I7860) LENGTH(2)
1618	INTR2	1578 1582 1584 ADDRESS. HEX LOCATION(00002CC4) IN CSECT(I7860) LENGTH(1)
1626	INTR3	1615 ADDRESS. HEX LOCATION(00002CD2) IN CSECT(I7860) LENGTH(2)
1664	IOBLK	1623 ADDRESS. HEX LOCATION(00002D16) IN CSECT(I7860) LENGTH(2)
1666	IODCB	804 874 1483 1713 ADDRESS. HEX LOCATION(00002D1A) IN CSECT(I7860) LENGTH(2)
1667	IOMOD	873 1342 1346 1349 1361 1364 1367 1370 1392 1388 1394 1398 1401 1405 1465 1471 1378 1712 ADDRESS. HEX LOCATION(00002D1C) IN CSECT(I7860) LENGTH(2)
40	I7860	1460 1466 CSECT. START(00002500) LENGTH(2510) ESDID(0)
1032	LGSEC	40 ADDRESS. HEX LOCATION(000029DA) IN CSECT(I7860) LENGTH(2)
1780	LINE1	1255 1257 1260 1267 ADDRESS. HEX LOCATION(00002DF0) IN CSECT(I7860) LENGTH(40)
597	LSTIO	1751 ADDRESS. HEX LOCATION(000027D2) IN CSECT(I7860) LENGTH(2)
574	MI	1133 1139 1145 1152 1158 1469 1716 ABSOLUTE. HEX VALUE(00000020)
1754	MVBUF	1628 ADDRESS. HEX LOCATION(00002D7C) IN CSECT(I7860) LENGTH(2)
586	NG	1758 1761 ABSOLUTE. HEX VALUE(0000002C)
581	NI	1631 ABSOLUTE. HEX VALUE(00000027)
384	N00001	1488 ADDRESS. HEX LOCATION(00002550) IN CSECT(I7860) LENGTH(2)
396	N00002	318 482 ADDRESS. HEX LOCATION(00002562) IN CSECT(I7860) LENGTH(2)
399	N00003	321 ADDRESS. HEX LOCATION(00002566) IN CSECT(I7860) LENGTH(2)
411	N00004	324 385 ADDRESS. HEX LOCATION(00002578) IN CSECT(I7860) LENGTH(2)
414	N00005	327 ADDRESS. HEX LOCATION(0000257C) IN CSECT(I7860) LENGTH(2)
417	N00006	330 ADDRESS. HEX LOCATION(00002580) IN CSECT(I7860) LENGTH(2)
420	N00007	333 ADDRESS. HEX LOCATION(00002584) IN CSECT(I7860) LENGTH(2)
423	N00008	336 ADDRESS. HEX LOCATION(00002588) IN CSECT(I7860) LENGTH(2)
426	N00009	339 418 ADDRESS. HEX LOCATION(0000258C) IN CSECT(I7860) LENGTH(2)
429	N00010	342 415 ADDRESS. HEX LOCATION(00002590) IN CSECT(I7860) LENGTH(2)
432	N00011	345 412 ADDRESS. HEX LOCATION(00002594) IN CSECT(I7860) LENGTH(2)
435	N00012	348 ADDRESS. HEX LOCATION(00002598) IN CSECT(I7860) LENGTH(2)
438	N00013	351 430 ADDRESS. HEX LOCATION(0000259C) IN CSECT(I7860) LENGTH(2)
447	N00014	354 400 ADDRESS. HEX LOCATION(000025AA) IN CSECT(I7860) LENGTH(2)
449	N00015	357 ADDRESS. HEX LOCATION(000025AC) IN CSECT(I7860) LENGTH(2)
452	N00016	360 439 ADDRESS. HEX LOCATION(000025B0) IN CSECT(I7860) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
455	N00017	366 450 ADDRESS. HEX LOCATION(000025B4) IN CSECT(I7860) LENGTH(2)
464	N00018	369 ADDRESS. HEX LOCATION(000025C2) IN CSECT(I7860) LENGTH(2)
466	N00019	372 456 ADDRESS. HEX LOCATION(000025C4) IN CSECT(I7860) LENGTH(2)
61	OF	387 402 ABSOLUTE. HEX VALUE(00000202)
539	OPTN1	792 1572 1612 ADDRESS. HEX LOCATION(000027C6) IN CSECT(I7860) LENGTH(2)
562	OPTN3	1659 1707 ADDRESS. HEX LOCATION(000027CA) IN CSECT(I7860) LENGTH(2)
104	PARMARA	394 409 445 462 ADDRESS. HEX LOCATION(0000196E) IN CSECT(I7860) LENGTH(1)
1033	PHYSC	1262 1264 1269 ADDRESS. HEX LOCATION(000029DC) IN CSECT(I7860) LENGTH(2)
72	PID	74 75 76 77 78 79 80 81 82 ADDRESS. HEX LOCATION(00001800) IN CSECT(I7860) LENGTH(1)
1794	PIDMSG10	83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 1762 ABSOLUTE. HEX VALUE(0000F1F0)
656	PREP	1762 ABSOLUTE. HEX VALUE(0000000C)
1173	RDATA	875 1717 ADDRESS. HEX LOCATION(00002AC4) IN CSECT(I7860) LENGTH(2)
1171	RDATA0	835 ADDRESS. HEX LOCATION(00002AC0) IN CSECT(I7860) LENGTH(2)
986	RDDCB	856 ADDRESS. HEX LOCATION(0000298C) IN CSECT(I7860) LENGTH(2)
652	RESET	1358 1361 ABSOLUTE. HEX VALUE(00000008)
663	PICB	805 ABSOLUTE. HEX VALUE(00000013)
1008	RKDCB	1771 ADDRESS. HEX LOCATION(000029AC) IN CSECT(I7860) LENGTH(2)
918	PSDCB	1370 1375 1382 1383 ADDRESS. HEX LOCATION(0000292C) IN CSECT(I7860) LENGTH(2)
1266	RTT01	1349 1354 1386 1391 ADDRESS. HEX LOCATION(00002B24) IN CSECT(I7860) LENGTH(4)
602	SCTID	1258 ADDRESS. HEX LOCATION(000027D4) IN CSECT(I7860) LENGTH(2)
1043	SCTST	925 937 1015 1211 1292 1351 1354 1372 1375 ADDRESS. HEX LOCATION(000029F0) IN CSECT(I7860) LENGTH(2)
1158	SENS0	1207 1383 1388 1391 ADDRESS. HEX LOCATION(00002A9C) IN CSECT(I7860) LENGTH(4)
1152	SENS1	854 ADDRESS. HEX LOCATION(00002A88) IN CSECT(I7860) LENGTH(4)
942	SKDCB	833 ADDRESS. HEX LOCATION(0000294C) IN CSECT(I7860) LENGTH(2)
654	START	1343 ABSOLUTE. HEX VALUE(0000000A)
1088	STATS	1486 ADDRESS. HEX LOCATION(00002A4A) IN CSECT(I7860) LENGTH(2)
107	SUPSTAT	816 817 827 ADDRESS. HEX LOCATION(000019C4) IN CSECT(I7860) LENGTH(1)
1264	TT303	1765 ADDRESS. HEX LOCATION(00002B1C) IN CSECT(I7860) LENGTH(6)
1270	TT304	1256 ADDRESS. HEX LOCATION(00002B34) IN CSECT(I7860) LENGTH(4)
1213	TT4Y	1254 1263 1265 ADDRESS. HEX LOCATION(00002AEC) IN CSECT(I7860) LENGTH(2)
803	TT70	1209 ADDRESS. HEX LOCATION(00002844) IN CSECT(I7860) LENGTH(6)
806	TT70A	800 ADDRESS. HEX LOCATION(00002850) IN CSECT(I7860) LENGTH(4)
804	TT70B	801 803 ADDRESS. HEX LOCATION(0000284A) IN CSECT(I7860) LENGTH(4)
807	TT70C	802 ADDRESS. HEX LOCATION(00002854) IN CSECT(I7860) LENGTH(2)
95	TUMSGWTR	808 ADDRESS. HEX LOCATION(000018BA) IN CSECT(I7860) LENGTH(1)
101	TURESUL	1767 ADDRESS. HEX LOCATION(000018C8) IN CSECT(I7860) LENGTH(1)
626	TURTN	809 810 811 831 ADDRESS. HEX LOCATION(00002804) IN CSECT(I7860) LENGTH(2)
77	TUSTATUS	790 872 877 1772 ADDRESS. HEX LOCATION(00001818) IN CSECT(I7860) LENGTH(1)
78	TUWORK	1745 ADDRESS. HEX LOCATION(0000181A) IN CSECT(I7860) LENGTH(1)
861	T70A	1749 1801 ADDRESS. HEX LOCATION(000028DE) IN CSECT(I7860) LENGTH(4)
833	T70B	832 858 ADDRESS. HEX LOCATION(000028A0) IN CSECT(I7860) LENGTH(4)
821	T701	828 ADDRESS. HEX LOCATION(00002880) IN CSECT(I7860) LENGTH(2)
824	T702	819 ADDRESS. HEX LOCATION(00002886) IN CSECT(I7860) LENGTH(2)
839	T703	822 ADDRESS. HEX LOCATION(000028B0) IN CSECT(I7860) LENGTH(2)
842	T704	837 ADDRESS. HEX LOCATION(000028B6) IN CSECT(I7860) LENGTH(2)
845	T705	840 ADDRESS. HEX LOCATION(000028BC) IN CSECT(I7860) LENGTH(2)
848	T706	843 ADDRESS. HEX LOCATION(000028C2) IN CSECT(I7860) LENGTH(2)
851	T708	846 ADDRESS. HEX LOCATION(000028C8) IN CSECT(I7860) LENGTH(2)
854	T709	849 ADDRESS. HEX LOCATION(000028CE) IN CSECT(I7860) LENGTH(4)
877	T72A	852 ADDRESS. HEX LOCATION(000028F4) IN CSECT(I7860) LENGTH(4)
878	T72B	441 458 ADDRESS. HEX LOCATION(000028F8) IN CSECT(I7860) LENGTH(4)
790	T7870	876 ADDRESS. HEX LOCATION(00002814) IN CSECT(I7860) LENGTH(4)
872	T7872	386 401 ADDRESS. HEX LOCATION(000028E2) IN CSECT(I7860) LENGTH(4)
975	VRDCB	440 457 ADDRESS. HEX LOCATION(0000297C) IN CSECT(I7860) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
997	WKDCB	1364 ADDRESS. HEX LOCATION(0000299C) IN CSECT(I7860) LENGTH(2)
964	WRDCB	1378 1379 1394 1395 ADDRESS. HEX LOCATION(0000296C) IN CSECT(I7860) LENGTH(2)
1036	WRSID	1367 ADDRESS. HEX LOCATION(000029E2) IN CSECT(I7860) LENGTH(2)
908	WSDCB	915 1004 1212 1293 1395 1399 ADDRESS. HEX LOCATION(0000291C) IN CSECT(I7860) LENGTH(2)
1040	WSIDT	1398 1399 1401 1402 ADDRESS. HEX LOCATION(000029EA) IN CSECT(I7860) LENGTH(2)
578	XE	1208 1379 1402 ABSOLUTE. HEX VALUE(00000024)
576	XI	1579 1641 ABSOLUTE. HEX VALUE(00000022)
1460	XIO	1485 1626 ADDRESS. HEX LOCATION(00002C18) IN CSECT(I7860) LENGTH(4)
1641	XIOCK	1344 1347 1355 1362 1365 1368 1376 1380 1384 1392 1396 1400 1403 1406 ADDRESS. HEX LOCATION(00002CE0) IN CSECT(I7860) LENGTH(2)
1648	XIOCO	1495 ADDRESS. HEX LOCATION(00002CF2) IN CSECT(I7860) LENGTH(2)
1465	XIOCS	1646 ADDRESS. HEX LOCATION(00002C22) IN CSECT(I7860) LENGTH(6)
1650	XIOCV	812 1657 ADDRESS. HEX LOCATION(00002CF6) IN CSECT(I7860) LENGTH(2)
1659	XIOCX	1644 ADDRESS. HEX LOCATION(00002D10) IN CSECT(I7860) LENGTH(4)
1534	XIOER	1651 ADDRESS. HEX LOCATION(00002C7E) IN CSECT(I7860) LENGTH(2)
1469	XIO1	1665 ADDRESS. HEX LOCATION(00002C32) IN CSECT(I7860) LENGTH(4)
1482	XIO2	1461 ADDRESS. HEX LOCATION(00002C58) IN CSECT(I7860) LENGTH(2)
1494	XIO8	1468 ADDRESS. HEX LOCATION(00002C6C) IN CSECT(I7860) LENGTH(2)
65	XTRNL	1499 ABSOLUTE. HEX VALUE(00000001)
1018	ZERO0	470 ADDRESS. HEX LOCATION(000029BC) IN CSECT(I7860) LENGTH(2)
		1255

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