

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM COPP 1976
3 ***** COPY LOG7809 ***** ** MAP EC HISTORY **
4 *****
5 *****
6 *****
7 ***** PREREQUISITES *****
8 *****
9 ***** NONE *****
10 *****
11 *****
12 *****
13 ***** MODIFICATIONS *****
14 *****
15 ***** CHANGES MADE TO MEET PROGRAM REQUIREMENTS *****
16 *****
17 *****
18 ***** REA'S INCORPORATED *****
19 *****
20 ***** NONE *****
21 *****
22 *****
23 *****
24 ***** SPECIAL INSTRUCTIONS *****
25 *****
26 ***** NONE *****
27 *****
28 *****
29 *****
30 *****
31 ***** E. C. HISTORY *****
32 *****
33 ***** DATE 17DEC76 DATE 18JAN77 DATE 04MAR77 DATE 10JUN77
34 ***** E.C. 578486 E.C. 578573 E.C. 578638 E.C. 578625
35 *****
36 ***** DATE 01MAR78 DATE DATE DATE
37 ***** E.C. 755285 E.C. E.C. E.C.
38 *****
39 *****
40 ***** START X'2500' START ADDRESS OF ALL 'I' TYPE PROG
41 ***** EQU X'0100' EQUATED VALUE FOR MDI STATEMENT
42 ***** EQU X'0101' EQUATED VALUE FOR MDI STATEMENT
43 ***** EQU X'0102' EQUATED VALUE FOR MDI STATEMENT
44 ***** EQU X'0200' EQUATED VALUE FOR MDI STATEMENT
45 ***** EQU X'0201' EQUATED VALUE FOR MDI STATEMENT
46 ***** EQU X'0300' EQUATED VALUE FOR MDI STATEMENT
47 ***** EQU X'0400' EQUATED VALUE FOR MDI STATEMENT
48 ***** EQU X'0500' EQUATED VALUE FOR MDI STATEMENT
49 ***** EQU X'0600' EQUATED VALUE FOR MDI STATEMENT
50 ***** EQU X'0000' EQUATE FOR EQUAL
51 ***** EQU X'0004' EQUATE FOR NOT EQUAL
52 ***** EQU X'0008' EQUATE FOR HIGH
53 ***** EQU X'000C' EQUATE FOR NOT HIGH
54 ***** EQU X'0010' EQUATE FOR LOW
55 ***** EQU X'0014' EQUATE FOR NOT LOW
56 ***** EQU X'0010' EQUATE FOR LESS THAN
57 ***** EQU X'000C' EQUATE FOR LESS THAN OR EQUAL TO
58 ***** EQU X'0008' EQUATE FOR GREATER THAN
59 ***** EQU X'0014' EQUATE FOR GREATER THAN OR EQUAL TO
60 ***** EQU X'0200' EQUATE FOR ON
61 ***** EQU X'0202' EQUATE FOR OFF
62 ***** EQU X'0204' EQUATE FOR MIXED
63 ***** EQU X'0000' EQUATE FOR EBCDIC DATA TRANSFER
64 ***** EQU X'0001' EQUATE FOR HEX DATA TRANSFER
65 ***** EQU X'0001' EQUATE FOR EXTERNAL REFERENCE
66 ***** EQU X'0000' EQUATE FOR INTERNAL REFERENCE
67 ***** EQU X'0000' EQUATE INDICATING PARAMETER
68 ***** EQU X'0001' EQUATE FOR DEVICE ADDRESS
69 ***** EQU X'0002' EQUATE FOR UNIT ADDRESS
70 ***** EQU X'0000' DUMMY EQUATE
71 ***** EQU *-X'0D00' ADDRESS OF MDI HEADER
72 ***** EQU *-X'22CE' ADDRESS OF PROCESSOR TYPE FIELD
73 ***** EQU PID+X'000C' ADDRESS OF DECIMAL STEP NUMBER
74 ***** EQU PID+X'000E' ADDRESS OF OPTION WORD ONE
75 ***** EQU PID+X'0010' ADDRESS OF OPTION WORD TWO
76 ***** EQU PID+X'0018' ADDRESS OF TU STATUS WORD
77 ***** EQU PID+X'001A' ADDRESS OF TU WORK AREA
78 ***** EQU PID+X'001A' ADDRESS OF PARM 1 POINTER
79 ***** EQU PID+X'009C' ADDRESS OF PARM 2 POINTER
80 ***** EQU PID+X'009E' ADDRESS OF PARM 3 POINTER
81 ***** EQU PID+X'00A0' ADDRESS OF PARM 4 POINTER
82 ***** EQU PID+X'00A2' ADDRESS OF PARM 5 POINTER
83 ***** EQU PID+X'00A4' ADDRESS OF PARM 6 POINTER
84 ***** EQU PID+X'00A6' ADDRESS OF PARM 7 POINTER
85 ***** EQU PID+X'00A8' ADDRESS OF PARM 8 POINTER
86 ***** EQU PID+X'00AA' ADDRESS OF PARM 9 POINTER
87 ***** EQU PID+X'00AC' ADDRESS OF PARM 10 POINTER
88 ***** EQU PID+X'00AE' ADDRESS OF PARM 11 POINTER
89 ***** EQU PID+X'00B0' ADDRESS OF PARM 12 POINTER
90 ***** EQU PID+X'00B2' ADDRESS OF PARM 13 POINTER
91 ***** EQU PID+X'00B4' ADDRESS OF PARM 14 POINTER
92 ***** EQU PID+X'00B6' ADDRESS OF PARM 15 POINTER
93 ***** EQU PID+X'00B8' ADDRESS OF PARM 16 POINTER
94 ***** EQU PID+X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
95 ***** EQU PID+X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
96 ***** EQU PID+X'00C0' ADDRESS OF DEVICE ADDRESS IN EBC
97 ***** EQU PID+X'00C2' ADDRESS OF LAST USED WORD IN MAP
98 ***** EQU PID+X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
99 ***** EQU PID+X'00C6' ADDRESS OF LENGTH OF TU RESULTS
100 ***** EQU PID+X'00C8' ADDRESS OF TU RESULTS FIELD
101 ***** EQU PID+X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
102 ***** EQU PID+X'0148' ADDRESS OF SINPT DATA
103 ***** EQU PID+X'016E' ADDRESS OF SINPT INPUT APEA
104 ***** EQU PID+X'01B8' MDI POINTER
105 ***** EQU PID+X'01BA' MDI POINTER
106 ***** EQU PID+X'01C4' ADDRESS OF MDI STATUS
107 ***** EQU PID+X'01D0' ADDRESS OF DEVICE ADDRESS TABLE 0
108 ***** EQU PID+X'01DA' ADDRESS OF DEVICE ADDRESS TABLE 1
109 ***** EQU PID+X'01E4' ADDRESS OF DEVICE ADDRESS TABLE 2
110 ***** EQU PID+X'01EE' ADDRESS OF DEVICE ADDRESS TABLE 3
111 ***** EQU PID+X'01F8' ADDRESS OF DEVICE ADDRESS TABLE 4
112 ***** EQU PID+X'0202' ADDRESS OF DEVICE ADDRESS TABLE 5
113 ***** EQU PID+X'020C' ADDRESS OF DEVICE ADDRESS TABLE 6
114 ***** EQU PID+X'0216' ADDRESS OF DEVICE ADDRESS TABLE 7
115 *****
116 ***** PRINT OFF

002500
000100
000101
000102
000200
000201
000300
000400
000500
000600
000000
000004
000008
00000C
000010
000014
000018
000000
000008
000014
000200
000202
000204
000000
000001
000001
000000
000000
000001
000002
000000
001800
000232
00180C
00180E
001810
001818
00181A
00181A
00181C
00181E
00181E
00181A
0018A2
0018A4
0018A6
0018A8
0018AA
0018AC
0018AE
0018B0
0018E2
0018B4
0018B6
0018B8
0018BA
0018BE
0018C0
0018C2
0018C4
0018C6
0018C8
0018FC
001848
00196E
0019B8
0019BA
0019C4
0019D0
0019DA
0019E4
0019EE
0019F8
001A02
001A0C
001A16

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM COPP 1976
002500 2A24
201 ***** DC A(ENTPT) POINT TO MAP ENTRY POINT TABLE *****
202 *****
203 *****
204 *****
205 *****
206 ***** THE FOLLOWING TABLES ARE USED BY THE MDI SUPERVISOR (D3C00) *****
207 ***** TO LOCATE THE CORRECT RULE TO INVOKE, TO OBTAIN THE PROPER *****
208 ***** PARAMETERS TO PASS TO THE TU'S AND TO PASS TO THE OPERATOR *****
209 ***** THE INDICATED MESSAGE(S). THERE ARE FOUR TABLES USED FOR THIS *****
210 ***** PURPOSE THEY ARE: *****
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 APEA *****
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 UNDEF 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 *****

Table with columns: LOCTR, OBJECT TEXT, STMT, SOURCE STATEMENT. Contains assembly code for I7809, including EQU, DC, AL2, and XL2 statements.

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I7809 --- 4962 DISK STATUS AND SEEK TEST P/N=1635428 EC=755285 PAGE 04
LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002762 C140 767+ DC CL2'A'
002764 0000 768+ DC AL2(INTRNL)
002766 0100 769+N00019 \$QUES QT=(Q00172),YES=N00035,CT=(C00173),ST=(S00024)
002768 27A6 770+N00019 DC A(@QUES)
771+ DC AL2(N00035)
00276A 0100 772+N00020 \$QUES QT=(Q00177),YES=N00032,CT=(C00178)
00276C 279A 773+N00020 DC A(@QUES)
774+ DC AL2(N00032)
00276E 0100 775+N00021 \$QUES QT=(Q00006),YES=N00023,CT=(C00182)
002770 2776 776+N00021 DC A(@QUES)
777+ DC AL2(N00023)
002772 0101 778+N00022 \$FIXT FT=(F00016),CT=(C00060),ST=(S00008)
002774 2838 779+N00022 DC A(@FIXT)
780+ DC A(F00016)
002776 0100 781+N00023 \$QUES QT=(Q00191),YES=N00027,CT=(C00188)
002778 2786 782+N00023 DC A(@QUES)
783+ DC AL2(N00027)
00277A 0100 784+N00024 \$QUES QT=(Q00196),YES=N00026,CT=(C00193),ST=(S00197)
00277C 2782 785+N00024 DC A(@QUES)
786+ DC AL2(N00026)
00277E 0101 787+N00025 \$FIXT FT=(F00200),ST=(S00203)
002780 2864 788+N00025 DC A(@FIXT)
789+ DC A(F00200)
002782 0101 790+N00026 \$FIXT FT=(F00206),CT=(C00060)
002784 28BA 791+N00026 DC A(@FIXT)
792+ DC A(F00206)
002786 0100 793+N00027 \$QUES QT=(Q00212),YES=N00031,CT=(C00211)
002788 2796 794+N00027 DC A(@QUES)
795+ DC AL2(N00031)
00278A 0100 796+N00028 \$QUES QT=(Q00214),YES=N00030,CT=(C00215),ST=(S00221)
00278C 2792 797+N00028 DC A(@QUES)
798+ DC AL2(N00030)
00278E 0101 799+N00029 \$FIXT FT=(F00224),ST=(S00008)
002790 2C12 800+N00029 DC A(@FIXT)
801+ DC A(F00224)
002792 0101 802+N00030 \$FIXT FT=(F00229),CT=(C00060),ST=(S00008)
002794 2C68 803+N00030 DC A(@FIXT)
804+ DC A(F00229)
002796 0101 805+N00031 \$FIXT FT=(F00236),ST=(S00008)
002798 2CEC 806+N00031 DC A(@FIXT)
807+ DC A(F00236)
00279A 0100 808+N00032 \$QUES QT=(Q00243),YES=N00034,CT=(C00244)
00279C 27A2 809+N00032 DC A(@QUES)
810+ DC AL2(N00034)
00279E 0101 811+N00033 \$FIXT FT=(F00246),GTO=((7871,A))
0027A0 2D9E 812+N00033 DC A(@FIXT)
813+ DC A(F00246)
0027A2 0101 814+N00034 \$FIXT FT=(F00016),CT=(C00060),ST=(S00008)
0027A4 2B38 815+N00034 DC A(@FIXT)
816+ DC A(F00016)
0027A6 0100 817+N00035 \$QUES QT=(Q00255),YES=N00037,CT=(C00253)
0027A8 27AE 818+N00035 DC A(@QUES)
819+ DC AL2(N00037)
0027AA 0101 820+N00036 \$FIXT FT=(F00257),CT=(C00060),ST=(S00008)
0027AC 2DC4 821+N00036 DC A(@FIXT)
822+ DC A(F00257)
0027AE 0101 823+N00037 \$FIXT FT=(F00021),GTO=((7871,A))
0027B0 2AD8 824+N00037 DC A(@FIXT)
825+ DC A(F00021)
0027B2 0500 826+N00038 \$TUXX T7823,2,0080,ON,QT=(Q00264),YES=N00048
0027B4 2812 827+N00038 DC A(@TUXX)
828+ DC AL2(N00048)
0027B6 34AA 829+ DC A(T7823)
0027B8 0200 830+ DC AL2(ON)
0027BA 0002 831+ DC AL2(2)
0027BC 0080 832+ DC X'4000'
833+ ALIGN WORD
0027BE 0000 834+ DC AL2(0)
0027C0 C1C1 835+ DC C'AA'
836+ ALIGN WORD
0027C2 196E 837+ DC AL2(PARMARA)
838+N00039 \$TUXX T7870,2,1000,ON,QT=(Q00266),YES=N00045
0027C4 0500 839+N00039 DC A(@TUXX)
840+ DC AL2(N00045)
0027C6 27F8 841+ DC A(T7870)
0027C8 326E 842+ DC AL2(ON)
0027CA 0200 843+ DC AL2(2)
0027CC 0002 844+ DC X'4000'
0027CE 1000 845+ ALIGN WORD
846+ DC AL2(0)
0027D0 0000 847+ DC C'AA'
0027D2 C1C1 848+ ALIGN WORD
849+ DC AL2(PARMARA)
0027D4 196E 850+N00040 \$TUXX T3C02,2,4000,OF,QT=(Q00268),YES=N00042,ST=(S00065)
0027D6 0500 851+N00040 DC A(@TUXX)
0027D8 27EC 852+ DC AL2(N00042)
0027DA 326E 853+ DC A(T3C02)
0027DC 0202 854+ DC AL2(OF)
0027DE 0002 855+ DC AL2(2)
0027E0 4000 856+ DC X'4000'
857+ ALIGN WORD
0027E2 0000 858+ DC AL2(0)
0027E4 C1C1 859+ DC C'AA'
860+ ALIGN WORD
0027E6 196E 861+ DC AL2(PARMARA)
862+N00041 \$FIXT FT=(F00019),CT=(C00060)
0027E8 0101 863+N00041 DC A(@FIXT)
0027EA 2A60 864+ DC A(F00019)
0027EC 0100 865+N00042 \$QUES QT=(Q00274),YES=N00044,CT=(C00275)
0027EE 27F4 866+N00042 DC A(@QUES)
867+ DC AL2(N00044)
0027F0 0101 868+N00043 \$FIXT FT=(F00277),GTO=((7895,A))
0027F2 2E1C 869+N00043 DC A(@FIXT)
870+ DC A(F00277)
0027F4 0101 871+N00044 \$FIXT FT=(F00019),CT=(C00060)
0027F6 2A60 872+N00044 DC A(@FIXT)
873+ DC A(F00019)
0027F8 0500 874+N00045 \$TUXX T3C02,2,4000,OF,QT=(Q00283),YES=N00047,ST=(S00065)
0027FA 280E 875+N00045 DC A(@TUXX)
876+ DC AL2(N00047)
0027FC 326E 877+ DC A(T3C02)
0027FE 0202 878+ DC AL2(OF)
002800 0002 879+ DC AL2(2)
002802 4000 880+ DC X'4000'

I7809 --- 4962 DISK STATUS AND SEEK TEST P/N=1635428 EC=755285 PAGE 04A
LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002804 0000 881+ ALIGN WORD
002806 C1C1 882+ DC AL2(0)
883+ DC C'AA'
884+ ALIGN WORD
002808 196E 885+ DC AL2(PARMARA)
886+N00046 \$FIXT FT=(F00286),GTO=((7895,A))
00280A 0101 887+N00046 DC A(@FIXT)
00280C 2E40 888+ DC A(F00286)
889+N00047 \$FIXT FT=(F00021),GTO=((7871,A))
00280E 0101 890+N00047 DC A(@FIXT)
002810 2AD8 891+ DC A(F00021)
892+N00048 \$FIXT FT=(F00292)
002812 0101 893+N00048 DC A(@FIXT)
002814 2E64 894+ DC A(F00292)
895+N00049 \$TUXX T3C02,2,4000,OF,QT=(Q00294),YES=N00055,ST=(S00065)
002816 0500 896+N00049 DC A(@TUXX)
002818 283C 897+ DC AL2(N00055)
00281A 326E 898+ DC A(T3C02)
00281C 0202 899+ DC AL2(OF)
00281E 0002 900+ DC AL2(2)
002820 4000 901+ DC X'4000'
902+ ALIGN WORD
002822 0000 903+ DC AL2(0)
002824 C1C1 904+ DC C'AA'
905+ ALIGN WORD
002826 196E 906+ DC AL2(PARMARA)
907+N00050 \$QUES QT=(Q00297),YES=N00052,CT=(C00298),ST=(S00024)
002828 0100 908+N00050 DC A(@QUES)
00282A 2830 909+ DC AL2(N00052)
910+N00051 \$FIXT FT=(F00013),CT=(C00060)
00282C 0101 911+N00051 DC A(@FIXT)
00282E 2E76 912+ DC A(F00013)
913+N00052 \$QUES QT=(Q00006),YES=N00054,CT=(C00306)
002830 0100 914+N00052 DC A(@QUES)
002832 2838 915+ DC AL2(N00054)
002834 0101 916+N00053 \$FIXT FT=(F00309),CT=(C00060)
002836 288E 917+N00053 DC A(@FIXT)
918+ DC A(F00309)
002838 0101 919+N00054 \$FIXT FT=(F00019),CT=(C00060)
00283A 2A60 920+N00054 DC A(@FIXT)
921+ DC A(F00019)
922+N00055 \$TUXX T3C02,2,8000,OF,QT=(Q00316),YES=N00061,ST=(S00065)
00283C 0500 923+N00055 DC A(@TUXX)
00283E 2862 924+ DC AL2(N00061)
002840 326E 925+ DC A(T3C02)
002842 0202 926+ DC AL2(OF)
002844 0002 927+ DC AL2(2)
002846 8000 928+ DC X'8000'
929+ ALIGN WORD
002848 0000 930+ DC AL2(0)
00284A C1C1 931+ DC C'AA'
932+ ALIGN WORD
00284C 196E 933+ DC AL2(PARMARA)
934+N00056 \$QUES QT=(Q00319),YES=N00058,CT=(C00320)
00284E 0100 935+N00056 DC A(@QUES)
002850 2856 936+ DC AL2(N00058)
937+N00057 \$FIXT FT=(F00013),CT=(C00060)
002852 0101 938+N00057 DC A(@FIXT)
002854 2E76 939+ DC A(F00013)
940+N00058 \$QUES QT=(Q00006),YES=N00060,CT=(C00327)
002856 0100 941+N00058 DC A(@QUES)
002858 285E 942+ DC AL2(N00060)
943+N00059 \$FIXT FT=(F00330),CT=(C00060)
00285A 0101 944+N00059 DC A(@FIXT)
00285C 2ED2 945+ DC A(F00330)
946+N00060 \$FIXT FT=(F00019),CT=(C00060)
00285E 0101 947+N00060 DC A(@FIXT)
002860 2A60 948+ DC A(F00019)
949+N00061 \$TUXX T3C02,2,00C1,OF,QT=(Q00337),YES=N00077,ST=(S00065)
002862 0500 950+N00061 DC A(@TUXX)
002864 28DC 951+ DC AL2(N00077)
002866 326E 952+ DC A(T3C02)
002868 0202 953+ DC AL2(OF)
00286A 0002 954+ DC AL2(2)
00286C 00C1 955+ DC X'00C1'
956+ ALIGN WORD
00286E 0000 957+ DC AL2(0)
002870 C1C1 958+ DC C'AA'
959+ ALIGN WORD
002872 196E 960+ DC AL2(PARMARA)
961+N00062 \$TUXX T3C02,2,0080,EC,QT=(Q00340),YES=N00074,ST=(S00065)
002874 0500 962+N00062 DC A(@TUXX)
002876 28C8 963+ DC AL2(N00074)
002878 326E 964+ DC A(T3C02)
00287A 0000 965+ DC AL2(EQ)
00287C 0002 966+ DC AL2(2)
00287E 0080 967+ DC X'0080'
968+ ALIGN WORD
002880 0000 969+ DC AL2(0)
002882 C1C1 970+ DC C'AA'
971+ ALIGN WORD
002884 196E 972+ DC AL2(PARMARA)
973+N00063 \$TUXX T3C02,2,0001,EQ,QT=(Q00343),YES=N00071,ST=(S00065)
002886 0500 974+N00063 DC A(@TUXX)
002888 28BC 975+ DC AL2(N00071)
00288A 326E 976+ DC A(T3C02)
00288C 0000 977+ DC AL2(EQ)
00288E 0002 978+ DC AL2(2)
002890 0001 979+ DC X'0001'
980+ ALIGN WORD
002892 0000 981+ DC AL2(0)
002894 C1C1 982+ DC C'AA'
983+ ALIGN WORD
002896 196E 984+ DC AL2(PARMARA)
985+N00064 \$QUES QT=(Q00346),YES=N00068,CT=(C00347),ST=(S00024)
002898 0100 986+N00064 DC A(@QUES)
00289A 2880 987+ DC AL2(N00068)
988+N00065 \$QUES QT=(Q00351),YES=N00067,CT=(C00352)
00289C 0100 989+N00065 DC A(@QUES)
00289E 28A4 990+ DC AL2(N00067)
991+N00066 \$FIXT FT=(F00019),CT=(C00060)
0028A0 0101 992+N00066 DC A(@FIXT)
0028A2 2A60 993+ DC A(F00019)
994+N00067 \$GOTO TYPE=XTRNL,MAP=7860,EP=A,FT=(F00358),GTO=((7860,A))

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for I7809.

Table with columns: LOCTR, OBJECT TEXT, STMT SOURCE STATEMENT, COPYRIGHT IBM CORP 1976. Contains assembly code for I7809.

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976

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0030FF D9C5D7D3C1C3C5404 1451 DC CL0026'REPLACE (FCU) CARD A-A1D2.'
003118 0003 1452 EQU *
00311A 0014 1453 DC AL2(0003)
00311C D9C5D7D3C1C3C540C 1454 DC A(0020)
003130 0022 1455 DC CL0020'REPLACE CARD A-A1H2.'
003132 D9C5D7D3C1C3C540C 1456 DC A(0034)
003154 001A 1457 DC CL0034'REPLACE CARD A-A1J4. (SEE NOTE 1) '
003156 D9C5D7D3C1C3C5404 1458 DC A(0026)
003170 0002 1459 DC CL0026'REPLACE (FCU) CARD A-A1D2.'
003172 0014 1460 EQU *
003174 D9C5D7D3C1C3C540C 1461 DC AL2(0002)
003178 0026 1462 DC A(0020)
00318A D9C5D7D3C1C3C5404 1463 DC CL0020'REPLACE CARD A-A1H2.'
003190 0001 1464 DC A(0038)
0031B2 0002 1465 DC CL0038'REPLACE (FCU) CARDS A-A1C2 AND A-A1D2.'
0031B4 4040 1466 EQU *
0031B6 0001 1467 DC AL2(0001)
0031B8 0020 1468 DC A(0002)
0031BA C7D640E3D640D7C1D 1469 DC CL0002' '
0031DA 0002 1470 EQU *
0031DC 0026 1471 DC AL2(0001)
0031DE D9C5D7D3C1C3C5404 1472 DC A(0032)
003204 0014 1473 DC CL0032'GO TO PAPER ONLY MAP 7895, EP=A.'
003206 D9C5D7D3C1C3C540C 1474 EQU *
00321A 0001 1475 DC AL2(0002)
00321C 0002 1476 DC A(0038)
00321E 4040 1477 DC CL0038'REPLACE (FCU) CARDS A-A1C2 AND A-A1D2.'
1478 DC A(0020)
1479 DC CL0020'REPLACE CARD A-A1H2.'
1480 EQU *
1481 DC AL2(0001)
1482 DC A(0002)
1483 DC CL0002' '
1484 HDIT 00R2
003220 0000 1486+OPTN1 DC X'0000' PROGRAM OPTION CONTROL WORD 1
003222 0000 1487+* 1488+OPTN2 DC X'0000' PROGRAM OPTION CONTROL WORD 2
1489+* EQU 16 BIT HEX
1490+B48 EQU 17 0
1491+B49 EQU 18 1
1492+B50 EQU 19 2
1493+B51 EQU 20 3
1494+B52 EQU 21 4
1495+B53 EQU 22 5
1496+B54 EQU 23 6
1497+B55 EQU 24 7
1498+B56 EQU 25 8
1499+B57 EQU 26 9
1500+B58 EQU 27 10
1501+B59 EQU 28 11
1502+B60 EQU 29 12
1503+B61 EQU 30 13
1504+B62 EQU 31 14
1505+B63 EQU 31 15
1506+CH EQU 30 14
1507+CMP EQU 31 15
003224 0000 1509+OPTN3 DC X'0000' PROGRAM OPTION CONTROL WORD 3
1510+* EQU 8 CS STATUS IN PROGRESS CS
1511+* 0 MYSTERY INTERRUPT NI 9 CS AVAILABLE CSA
1512+* 1 ERROR INTERRUPT EP 10 CS STATUS INTERRUPT ERR CE
1513+* 2 EXPECTED INTERRUPT XI 11 ISB BITS ON (1-7) ISBON
1514+* 3 INTERRUPT RECEIVED IN
1515+* EQU 12 TEST UNIT RESULTS VOID NG
1516+* 4 EXPECTED ERR/ATTENT XE 13 OIO CC ERROR IOCC
1517+* 5 HARD ERROR FOUND HE 14 NO INTERRUPT NOIN
1518+* 6 WRONG INTF LEVEL $LE 15 INTERRUPT CC ERROR INCC
1519+* 7 NO INTR EXPECTED NI
1520+* EQU 8
1521+NI EQU 32 0 MYSTERY INTERRUPT HAPPENED
1522+ER EQU 33 1 ERROR RECEIVED ON INTERRUPT
1523+XI EQU 34 2 EXPECTED INTERRUPT CONTROL BIT
1524+IN EQU 35 3 INTERRUPT RECEIVED CONTROL BIT
1525+HE EQU 36 4 EXPECTED ERROR RESPONSE
1526+HE EQU 37 4 HARD ERROR & RETRIES
1527+$LE EQU 38 6 INTERRUPT ON WRONG LEVEL ERROR
1528+NI EQU 39 7 NO INTERRUPT EXPECTED E
1529+CS EQU 40 8 CYCLE STATUS IN PROGRESS
1530+CSA EQU 41 9 CYCLE STEAL AVAILABLE
1531+CE EQU 42 10 CYCLE STEAL STATUS INERRRUPT ERROR
1532+ISBON EQU 43 11 ISB BITS ON (1-7)
1533+NG EQU 44 12 TEST UNIT RESULTS NO GOOD
1534+IOCC EQU 45 13 OIO CC ERROR
1535+NOIN EQU 46 14 NO INTERRUPT
1536+INCC EQU 47 15 INTERRUPT CC ERROR
1537+* EQU 1
1538+* COMMON BUFFER FOR PRINTING DATA
1539+* EQU *
1540+* EQU *
1541+STUID DC A(*-*) TEST UNIT IDENTIFICATION
1542+SI0IN DC A(*-*) I/O AND INTR CONDITION CODES
1543+SISB DC A(*-*) R7, INTR STATUS BYTE & DEV ADRS
1544+LSTIO DC A(*-*) ADRS OF LAST I/O + 4 BYTES
1545+DEV1 DC A(*-*) DEVICE DEPENDENT DATA
1546+DEV2 DC A(*-*) *
1547+DEV3 DC A(*-*) *
1548+DEV4 DC A(*-*) *
1549+SCBID EQU DEV1
1550+SCBID EQU *
1551+DCB1 DC A(*-*) READ ID BUFFER FOR IBIS & TERN
1552+DCB2 DC A(*-*) DCB BUFFER FOR LAST DCB USED
1553+DCB3 DC A(*-*) LAST DCB TABLE, CONT DOL WORD
1554+DCB4 DC A(*-*) LAST DCB TABLE, DEV DEP WORD
1555+DCB5 DC A(*-*) LAST DCB TABLE, DEV DEP WORD
1556+DCB6 DC A(*-*) LAST DCB TABLE, CHAIN ADRS
1557+DCB7 DC A(*-*) LAST DCB TABLE, BYTE COUNT
1558+DCB8 DC A(*-*) LAST DCB TABLE, BUFFER ADDRESS
1559+* EQU *
1560+CSBUF EQU *
1561+CSTL1 DC A(*-*) CYCLE STEAL DATA BUFFER
1562+CSTL2 DC A(*-*) CYCLE STEAL BUFFER, RESIDUAL ADRS
1563+CSTL3 DC A(*-*) CYCLE STEAL WD 2, DEVICE DEPEND
1564+CSTL4 DC A(*-*) CYCLE STEAL WD 3, DEVICE DEPEND
1565+CSTL5 DC A(*-*) CYCLE STEAL WD 4, DEVICE DEPEND
1566+CSTL6 DC A(*-*) CYCLE STEAL WD 5, DEVICE DEPEND
1567+CSTL7 DC A(*-*) CYCLE STEAL WD 6, DEVICE DEPEND

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003254 0000 1568+CSTL8 DC A(*-*) CYCLE STEAL WD 8, DEVICE DEPEND
1569+* EQU *
003256 0000 1570+SSUBN DC A(*-*) LAST SUBROUTINE ADDRESS USED
003258 00000000 1571+SDATA DC 2 A(*-*) OPTIONAL DATA
00325C 0021 1572+STNLA DC X'0021' INTERRUPT LEVEL REQUESTED
00325E 0000 1573+TURTN DC A(*-*) TEST UNIT RETURN ADRS TO MDI
003260 00B2 1574+$VID DC X'00B2' DEVICE ID
003262 19D0 1575+SVCAL DC A(DEVADD) ADRS OF DEVICE ADDRESS
003264 0000 1576+ DC A(*-*) IBIS CYLINDER ADDRESS
1577+* EQU *
1578+* THIS TEST UNIT WILL RETURN TO MDI WITHOUT DOING ANY PROGRAM
1579+* FUNCTION. THE RESULTS THAT WERE SET UP IN THE RESULTS AREA ARE
1580+* STILL VALID BUT A DIFFERENT TEST IS TO BE PERFORMED.
1581+* EQU *
003266 4020 3226 3C02 1582+T3C02 NVHI X'3C02',STUID SET UP TEST UNIT ID
00326C 5700 1583+ BXS (R7) RETURN TO MDI SUPVR
1584+ COPY COMEQU
1585+* EQU *
1586+* *****
1587+* EQUATED NAMES FOR SUPPORTED SVC'S
1588+*
1589+* *****
1590+* *****
1591+OUT EQU 0 OUT SVC
1592+OUTIN EQU 1 OUTIN SVC
1593+IDLE EQU 2 IDLE SVC
1594+ASCTI EQU 3 HEX TO ASCII SVC
1595+CHNGE EQU 4 CHANGE LEVEL SVC
1596+PSMCK EQU 5 ALLOW RETURN ON PROGRAM CHECK SVC
1597+EXIT EQU 6 EXIT SVC
1598+TERM EQU 7 TERMINATE SVC
1599+RESET EQU 8 RESET DEVICE SVC
1600+RID EQU 9 READ ID SVC
1601+START EQU 10 START CYCLE STEAL SVC
1602+STCSS EQU 11 START CYCLE STEAL STATUS SVC
1603+PREP EQU 12 PREPARE DEVICE SVC
1604+READ0 EQU 13 READ WITH FUNCTION BIT 3 OFF SVC
1605+READ1 EQU 14 READ WITH FUNCTION BIT 3 ON SVC
1606+RSTAT EQU 15 READ STATUS SVC
1607+WRIT0 EQU 16 WRITE WITH FUNCTION BIT 3 OFF SVC
1608+WRIT1 EQU 17 WRITE WITH FUNCTION BIT 3 ON SVC
1609+CTFL EQU 18 CONTROL SVC
1610+RTCB EQU 19 RELEASE INTERRUPT CONTROL BLOCK SVC
1611+CTCB EQU 20 CONNECT INTERRUPT CONTROL BLOCK SVC
1612+HIO EQU 21 HALT ALL I/O
1613+REQSD EQU 22 REQUEST USE OF DCP DISK SVC
1614+RELSD EQU 23 RELEASE USE OF DCP DISK SVC
1615+HALT EQU 24 HALT SVC
1616+ETOH EQU 25 EBCDIC TO HEX SVC (STRING)
1617+HROE EQU 26 HEX TO EBCDIC SVC (STRING)
1618+ATOH EQU 27 ASCII TO HEX SVC (STRING)
1619+HROA EQU 28 HEX TO ASCII SVC (STRING)
1620+ETOA EQU 29 EBCDIC TO ASCII SVC (STRING)
1621+ATOE EQU 30 ASCII TO EBCDIC SVC (STRING)
1622+READI EQU 31 READ DATA SETS FOR MDI/UTIL
1623+WRITI EQU 32 WRITE DATA SETS FOR UTIL
1624+* *****
1625+* *****
1626+* EQUATES USED BY TU'S AS CONSTANTS
1627+*
1628+* *****
1629+* *****
1630+PLUS EQU C'+1' PLUS CHAR
1631+MINUS EQU C'-1' MINUS CHAR
1632+ZERO EQU 0
1633+ONE EQU 1
1634+TWO EQU 2
1635+THO EQU 3
1636+THREE EQU 4
1637+FOUR EQU 5
1638+FIVE EQU 6
1639+SIX EQU 7
1640+SEVEN EQU 8
1641+EIGHT EQU 9
1642+NINE EQU 10
1643>TEN EQU 11
1644>ELEVN EQU 12
1645>TWELV EQU 13
1646>THRTN EQU 14
1647>FIVTN EQU 15
1648>SIXTN EQU 16
1649>THRY2 EQU 32
1650>SIXT4 EQU 64
1651>ONE28 EQU 128
1652>TWO56 EQU 256
1653>ONEK EQU 1024
1654>TWOK EQU 2048
1655>THREK EQU 3072
1656>FOURK EQU 4096
1657>M1 EQU -1
1658>M2 EQU -2
1659>M3 EQU -3
1660>M4 EQU -4
1661+* *****
1662+* *****
1663+* *****
1664+* THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE
1665+* BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.
1666+* *****
1667+* *****
1668+* *****
1669+BS0 EQU 0
1670>BS1 EQU 1
1671>BS2 EQU 2
1672>BS3 EQU 3
1673>BS4 EQU 4
1674>BS5 EQU 5
1675>BS6 EQU 6
1676>BS7 EQU 7
1677>BS8 EQU 8
1678>BS9 EQU 9
1679>BS10 EQU 10
1680>BS11 EQU 11
1681>BS12 EQU 12
1682>BS13 EQU 13
1683>BS14 EQU 14
1684>BS15 EQU 15
1686> COPY T7870
1687>T7870 TUIT $ERR$

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01DEC76

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
1688*****06FEB76**
1690** TEST UNIT
1692** FILE STATUS TEST 6/13/77
1694** PURPOSE
1696** FUNCTION: INITIAL RESET OF SEEK OPERATIONS.
1697**
1698** PROGRAM INITIALIZES ATTACHMENT.
1699** CHECK STATUS OF LINES IN ATTACHMENT AND 4962 RELATED TO SEEKS
1701** CALLING SEQUENCE
1702**
1703** PROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
1704** TURESUL BIT 0-----FLO OUT OF SYNC CHECK
1705** TURESUL BIT 1-----DATA UNSAFE
1706** TURESUL BIT 2-----INTERRUPT
1707** TURESUL BIT 3-----FILE NOT READY
1708**
1709** TURESUL BIT 4-----RECAL
1710** TURESUL BIT 5-----NOT USED
1711** TURESUL BIT 6-----NOT USED
1712** TURESUL BIT 7-----NOT USED
1713**
1714** TURESUL BIT 8-----BEHIND HOME
1715** TURESUL BIT 9-----ACCESS HEAD NOT HOME
1716** TURESUL BIT 10----- (NOT) EVEN TRACK INDICATED
1717** TURESUL BIT 11-----NOT USED
1718**
1719** TURESUL BIT 12-----RECALIBRATE NOT RESET
1720** TURESUL BIT 13-----NOT USED
1721** TURESUL BIT 14-----SEEK 1 & 2 NOT PESET
1722** TURESUL BIT 15----- (NOT) ON TRACK
1723**
1724** TUPESUL BITS 16-31 CS STATS FOR FAILING OP
1725**
1727** EXITS NORMAL
1728** RETURNS TO MDI SUPERVISOR WHEN DONE.
1729**
1730** EXITS ERROR
1731** RETURNS TO MDI SUPERVISOR.
1732** RETURN CONTROL
1733**
1734** B TURTN* RETURN TO MDI SUPERVISOR
1735**
1736*****
1737**T7870 MVW R7,TURTN SAVE RETURN ADDRESS
1738** MVWI X'1870',STUID SAVE TU ID FOR DISPLAY
1739** MVA OPN1,R4 SET UP POINTER ADRS IN R4
1740** BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
1741** DC A(\$ERR\$) ERROR ADRS FOR INVALID PREP
1742**
1743 MVB DEVADD,IDCB1+1 LOAD DEVICE ADDRESS IN IDCB
1744 MVB DEVADD,IDCB0+1 LOAD DEVICE ADDRESS IN IDCB
1745 MVB CPUID,R0 DETERMINE CPU TYPE
1746 CBI 37,R0 *
1747 JNE TT70 JUMP IF NOT 4955
1748 MVWI X'254C',TT70A+2 LOAD TIME CONSTANT FOR 2 SEC
1749 J TT70B
1750 TT70 MVWI X'0C0E',TT70A+2 LOAD TIME CONSTANT FOR 2 SEC
1751 TT70B MVA IOBLK,R7 SETUP IOBLK
1752 SVC RESET ISSUE TO RESET
1753 TT70A MVWI X'0000',R0 TIME OUT 2 SEC
1754 TT70C SVC IDLE *
1755 JCT TT70C,R0 *
1756 MVWZ TURESUL,P2 CLEAR RESULTS WORD
1757 MVWZ TURESUL+2,R2 CLEAR RESULTS WORD 2
1758 MVA TURESUL,R2 ADDRESS OF RESULTS
1759 T70Z BAL XIOCS,R6 START CYCLE STEAL STATUS
1760 DC A(\$ERR\$) ERROR
1761 TBTR (R4,ER) INTERRUPT ERROR
1762 MVB CPUID,R0 DETERMINE CPU TYPE
1763 MVA CSBUF+2,STATS ADDRESS OF CYCLE STEAL STATUS
1764 MVA STATS,R5 *
1765 TBTP (R5,7) TEST FOP UNSAFE
1766 TBTP T701
1767 TBTS (R2,1) TURN ON DATA UNSAFE
1768 T701 TBTR (R5,15) TEST NOT READY
1769 JOFF T702
1770 TBTS (R2,3) TURN ON NOT READY
1771 T702 TBTR (R5,11) RESET UNSAFE BITS
1772 TBTR (R5,12) *
1773 TBTR (R5,13) *
1774 CBI 0,STATS ANY OTHER ERROR BITS ON?
1775 JE T70B NO
1776 TBTS (R2,4) RECAL ERROR
1777 TBTS (R2,2) INTERRUPT ERROR
1778 MVA CSBUF+2,TURESUL+2 CS STATS
1779 J T70A EXIT
1780 T70B BAL SENS1,R6 GET SENSE WORD ONE
1781 DC A(\$ERR\$) ERROR
1782 MVA RDATA,R1 ADDRESS OF SENSE DATA
1783 TBT (R1,1) TEST PLO OUT OF SYNC
1784 JOFF T703
1785 TBTS (R2,0) SET 'PLO OUT OF SYNC'
1786 T703 TBT (R2,9) TEST NOT BEHIND HOME
1787 JON T704
1788 TBTS (R2,8) SET BEHIND HOME
1789 T704 TBT (R1,5) TEST HOME POSITION
1790 JON T705
1791 TBTS (R2,9) SET ACCESS HEAD NOT HOME
1792 T705 TBT (R1,15) TEST EVEN TRACK
1793 JON T706
1794 TBTS (R2,10) SET NOT EVEN TRACK INDICATED
1795 T706 TBT (R1,13) TEST NOT SEEK 1 AND 2
1796 JON T708
1797 TBTS (R2,14) SET SEEK 1 AND 2 NOT RESET
1798 T708 TBT (R2,10) TEST ON TRACK
1799 JON T709
1800 TBTS (R2,15) SET NOT ON TRACK
1801 T709 BAL SENS0,R6 GET SENSE WORD ZERO

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM COPP 1976
1802 DC A(\$ERR\$) ERROR
1803 MVA RDATA,R1 ADDRESS OF SENSE DATA
1804 TBT (R1,3) TEST RECALIBRATE TRIGGER
1805 JOFF T70A
1806 TBTS (R2,12) SET 'RECALIBRATE NOT RESET'
1807 T70A TXIT
1808**T70A B \$CONX RETURN TO MDI CONTROLLER
1809*****06FEB76**
1810 *
1811 *
1813 COPY T7826 01DEC76
1814 T7826 TUIT \$ERR\$
1815*****06FEB76**
1816**
1817** TEST UNIT
1818**
1819** (TU26) SEEK TEST#1 3/02/77
1820**
1821** PURPOSE
1822**
1823** FUNCTION: TO DETERMINE THE OPERATIONAL STATUS OF SEEK FUNCTION.
1824**
1825** PROGRAM INITIALIZES ATTACHMENT.
1826** RECALIBRATE AND DO A ONE TRACK SEEK (FORWARD-OUT DIRECTION)
1827** CHECK STATUS OF LINES IN ATTACHMENT AND 4962 RELATED TO THE
1828** SEEK OPERATION.
1829**
1830** CALLING SEQUENCE
1831**
1832** PROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
1833** TURESUL BIT 0-----ON TRACK NOT AS EXPECTED(DRIVES OK)
1834** TURESUL BIT 1-----SELECT IN/OUT DRIVES NOT AS EXPTD
1835** TURESUL BIT 2-----UNSAFE
1836** TURESUL BIT 3-----SEEK CHECK (SEEK COMPLETE TIME OUT)
1837**
1838** TURESUL BIT 4-----PLO OUT OF SYNC
1839** TURESUL BIT 5-----BEHIND HOME BIT NOT RESET
1840** TURESUL BIT 6-----HOME BIT NOT RESET
1841** TURESUL BIT 7-----BRAKE FAILURE
1842**
1843** TURESUL BIT 8-----SEEK 1 AND 2 ON WHEN DONE
1844** TURESUL BIT 9----- INTERRUPT ERROR
1845** TURESUL BIT 10-ON TRACK 'ON'-TIMEOUT ERR (FAILED TO TURN ON)
1846** TURESUL BIT 11-ON TRACK 'OFF'-TIMEOUT ERR (FLD TO TURN OFF)
1847**
1848** TURESUL BIT 12-EVEN TRACK NOT RESET
1849** TURESUL BIT 13-SEEK DIRECTION LINE INCORRECT
1850** TURESUL BIT 14-SEEK 1 & 2 NOT ON AFTER COMMAND
1851** TURESUL BIT 15-----NOT READY
1852**
1853** TURESUL BIT 16-----RECALIBRATE FAILURE
1854** TURESUL BIT 17-----SEEK FAILURE
1855** TURESUL BIT 18-31-----NOT USED
1856**
1857** TURESUL BIT 32-47-----CS STATUS FOR FAILING J P
1858**
1859** EXITS NORMAL
1860** RETURNS TO MDI SUPERVISOR WHEN DONE.
1861**
1862** EXITS ERROR
1863** RETURNS TO MDI SUPERVISOR.
1864**
1865** RETURN CONTROL
1866**
1867** B TURTN* RETURN TO MDI SUPERVISOR
1868**
1869*****
1870**T7826 MVW R7,TURTN SAVE RETURN ADDRESS
1871** MVWI X'1826',STUID SAVE TU ID FOR DISPLAY
1872** MVA OPN1,R4 SET UP POINTER ADRS IN R4
1873** BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
1874** DC A(\$ERR\$) ERROR ADRS FOR INVALID PREP
1875**
1876 MVB DEVADD,IDCB1+1 LOAD DEVICE ADDRESS IN IDCB
1877 MVB CPUID,R0 DETERMINE CPU TYPE
1878 CBI 37,R0 *
1879 JNE TT26 JUMP IF NOT 4955
1880 MVWI X'009F',T264+2 LOAD TIME CONSTANT FOR 4-5 MSEC (4.7)
1881 MVWI X'0140',T266+2 LOAD TIME CONSTANT FOR 9-10 MSEC (9.6)
1882 MVWI X'0400',T26C+2 LOAD TIME CONSTANT FOR 15 MSEC
1883 MVWI X'0FFF',T26D+4 LOAD TIME CONSTANT FOR 2 SEC TIMEOUT
1884 MVWI X'254C',T26TC+2 LOAD TIME CONSTANT FOR 2 SEC
1885 J TT261
1886 TT26 MVWI X'0038',T264+2 LOAD TIME CONS FOP 4-5 MSEC (4.5)
1887 MVWI X'0070',T266+2 LOAD TIME CONS FOP 9.5 MSEC (9.5)
1888 MVWI X'0130',T26C+2 LOAD TIME CONSTANT FOR 15 MSEC
1889 MVWI X'FFFF',T26D+4 LOAD CONS FOR 2.9 SEC
1890 MVWI X'0C0E',T26TC+2 LOAD TIME CONSTANT FOR 2 SEC
1891 TT261 MVA IOBLK,R7 SETUP IOBLK
1892 SVC RESET ISSUE TO RESET
1893 T26TC MVWI X'0000',R0 TIME OUT 2 SEC
1894 T726 SVC IDLE *
1895 JCT T726,R0 *
1896 MVWZ TURESUL,R2 CLEAR RESULTS WORD
1897 MVWZ TURESUL+2,P2 CLEAR RESULTS WORD 2
1898 MVWZ TURESUL+4,R2 CLEAR RESULTS WORD 3
1899 MVA TURESUL,R2 ADDRESS OF RESULTS
1900 MVWI X'0005',SKDCB SEEK
1901 MVWI X'SKDCB+2 FORWARD DIRECTION ONE TRACK
1902 TBTS (R4,NI) TURN ON NO INTERRUPT EXPECTED
1903 BAL \$SECK,R6 SEEK
1904 DC A(\$ERR\$) ERROR
1905 BAL SENS1,R6 READ SENSE WORD ONE
1906 DC A(\$ERR\$) ERROR
1907 MVA RDATA,R1 ADDRESS OF SENSE DATA
1908 TBT (R1,13) TST NOT SEEK 1 & 2
1909 JOFF T262
1910 TBTS (R2,14) TURN ON SEEK 1 & 2 NOT ON
1911 T262 TBT (R1,15) TEST EVEN TRACK
1912 JOFF T263
1913 TBTS (R2,12) TURN ON EVEN TRACK NOT RESET
1914 T263 TBT (R1,6) TEST NOT OUT DIRECTION
1915 JOFF T264
1916 TBTS (R2,13) TRN ON SEEK DIRECTION LINE INCORRECT

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
0033EA 4024 0000 1917 T264 MVWI X'0000',R0 SET COUNT FOR 4-5 MSEC TIME OUT (4)
0033EE 6E03 3908 1918 T267 BAL SENS1,R6 READ SENSE WORD ONE
0033F2 3BDE 3944 1919 DC A(\$ERR\$) ADDRESS OF SENSE DATA
0033F4 4124 3944 1920 MVA RDATA,R1 TEST ON TRACK
0033F8 490A 1921 TBT (R1,10)
0033FA 1003 1922 JOFF T266,RO DECREMENT TIME OUT COUNT
0033FC 8BF8 1923 JCT T267,R0 4-5 MSEC TIME HAS EXPIRED
0033FE 6802 3496 1924 B T265 SET COUNT FOR 9-10 MSEC TIME OUT(9.4)
003402 4024 0000 1925 T266 MVWI X'0000',R0 READ SENSE WORD ONE
003406 6E03 3908 1926 T268 BAL SENS1,R6 ADDRESS OF SENSE DATA
00340A 3BDE 1927 DC A(\$ERR\$) ON TRACK?
00340C 4124 3944 1928 MVA RDATA,R1 DECREMENT TIME OUT COUNT
003410 490A 1929 TBT (R1,10) TURN ON 'ON TRACK' ON (TIME EXPIRED)
003412 1202 1930 JON T268,RO NOT SEEK 1 & 2?
003414 8BF8 1931 JCT T268,RO SEEK 1 & 2 ON
003416 484A 1932 T26A TBT (R1,5) HOME POSITION?
003418 490D 1933 T269 TBT (R2,8)
00341A 1201 1934 JON T268,RO HOME BIT NOT RESET
00341C 4A48 1935 TBT (R2,8) TIME OUT 15 MSEC
00341E 4905 1936 T26B TBT (R1,5) READ SENSE WORD ONE
003420 1001 1937 JOFF T26C *
003422 4A46 1938 TBT (R2,6) DATA ADDRESS
003424 4024 0000 1939 T26C MVWI X'0000',R0 NOT BEHIND HOME?
003426 6E03 3908 1940 TI26C BAL SENS1,R6 BEHIND HOME NOT RESET
00342C 3BDE 3944 1941 DC A(\$ERR\$) TIME OUT APPROX 15 MSEC
00342E 4124 3944 1942 MVA RDATA,R1 INTERRUPT WAITING?
003432 4909 1943 JON T26D,RO YES
003434 1201 1944 JCT T26D,RO NO-SET INTERRUPT ERROR
003436 4A45 1945 T26DD JCT TI26C,RO TIME OUT FOR NO INTERRUPT
003438 8BF7 1946 T26DD TBT (R4,IN) HAS INTERRUPT BEEN RECEIVED IN 2.5SEC
00343A 4CA3 1947 TBT (R2,9) DECREMENT TIME OUT COUNT
00343C 120C 1948 JON T26E ERROR
00343E 4A49 1949 TBT (R4,CSA) CS STATS AVAILABLE?
003440 4020 3840 0000 1950 T26D MVWI X'0000',TIMEOUT NO
003442 4CA3 1951 T26F TBT (R4,IN) ANY CS STATS FOR SEEK
003444 1206 1952 JON T26E NO EXIT
003446 482A 3844 3840 1953 AD TONE,TIMEOUT ADDRESS OF CYCLE STEAL STATS
003448 18FA 1954 JN2 T26F UNSAFE?
003450 4A51 1955 TBT (R2,17) SET- UNSAFE
003452 501E 1956 J T26C BRAKE FAILURE?
003454 501E 1957 T26E BAL X'0000',R6 CHECK INTERRUPT CONDITIONS
003456 501E 1958 DC A(\$ERR\$) NO
003458 3BDE 1959 TBT (R4,CSA) CS STATS AVAILABLE?
00345A 4CA9 1960 JOFF T26H NO
00345C 4A49 1961 CWI 0,CSBUF+2 ANY CS STATS FOR SEEK
00345E 1019 1962 JE T26H NO EXIT
003460 402F 3248 0000 1963 MVW CSBUF+2,STATS ADDRESS OF CYCLE STEAL STATS
003462 1015 1964 MVA STATS,R5 *
003464 8828 3248 38CA 1965 TBTR (R5,7) UNSAFE?
003466 452A 38CA 1966 JOFF T26AA NO
003468 4887 1967 TBT (R2,2) SET- UNSAFE
003470 1001 1968 T26AA TBT (R5,10) BRAKE FAILURE?
003472 4A42 1969 JOFF T26BB NO
003474 4A42 1970 TBT (R2,7) SET- BRAKE FAILURE
003476 1001 1971 T26BB TBT (R5,6) PLO OUT OF SYNC CHECK?
003478 4D86 1972 JOFF T26CC NO
003480 1001 1973 TBT (R2,4) SET- PLO OUT OF SYNC
003482 4A44 1974 T26CC TBT (R5,9) SEEK CHECK?
003484 4D89 1975 JOFF T26DD NO
003486 1001 1976 TBT (R2,3) SET SEEK CHECK
003488 4A43 1977 T26DD TBT (R2,1) SEEK FAILURE
00348A 4A51 1978 MVW CSBUF+2,TURESUL+4 CS STATUS FOR SEEK FAILURE
00348C 8828 3248 18CC 1979 TXIT *
003492 6802 3C2E 1980 T26H E RETURN TO MDI CONTROLLER
1981 *****
1982 *
1983 T265 TBT (R2,11) SET ON TRACK OFF
1984 TBT (R1,11) NO SELECT OUT?
1985 JOFF T26K
1986 T26M TBT (R2,1) TURN ON SELECT DRIVES NOT AS EXPECTED
1987 J T26D
1988 T26K TBT (R1,12) TEST SELECT IN DRIVE
1989 JON T26L
1990 J T26M
1991 T26L TBT (R2,0) TURN ON-ON TRACK NOT AS EXPECTED
1992 J T26D
1993 *
1994 *
1996 COPY T7823 01DEC76
1997 T7823 TUIT \$ERR\$
1998 *****06FEB76**
2000** TEST UNIT
2001** (TU23-TU71) RECALIBRATE TEST #1 12/01/76
2002**
2003** PURPOSE
2004**
2005** FUNCTION: TO DETERMINE THE OPEATIONAL STATUS OF RECAL FUNCTION.
2006**
2007**
2008** PROGRAM INITIALIZES ATTACHMENT.
2009** RECALIBRATE
2010** CHECK STATUS OF LINES IN ATTACHMENT AND 4962 RELATED TO THE
2011** RECALIBRATE OPERATION.
2012** CALLING SEQUENCE
2013**
2014** PROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
2015** . TURESUL BIT 0-----INTERRUPT ERROR
2016** . TURESUL BIT 1-----HOME POSITION NOT ON
2017** . TURESUL BIT 2-----NOT USED
2018** . TURESUL BIT 3-----NOT USED
2019** . TURESUL BIT 4-----SEEK CHECK (SEEK COMPLETE TIME OUT
2020**
2021** . TURESUL BIT 5-----NOT USED
2022** . TURESUL BIT 6-----NOT USED
2023** . TURESUL BIT 7-----NOT USED
2024**
2025**
2026** . TURESUL BIT 8-----RESERVED (ALWAYS ZERO)
2027** . TURESUL BIT 9-----NOT USED
2028** . TURESUL BIT 10-----PLO OUT OF SYNC
2029** . TURESUL BIT 11-----BRAKE FAILURE
2030**
2031** . TURESUL BIT 12-----UNSAFE

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2032** . TURESUL BIT 13-----RECALIBRATE FAILURE
2033** . TURESUL BIT 14-----NOT READY
2034** . TURESUL BIT 15-----NOT USED
2035**
2036** . TURESUL BITS 16-31-----CYCLE STEAL STATUS FOR FAILING OP
2037**
2038** EXITS NORMAL
2039** . RETURNS TO MDI SUPERVISOR WHEN DONE.
2040**
2041** EXITS ERROR
2042** . RETURNS TO MDI SUPERVISOR.
2043**
2044** RETURN CONTROL
2045**
2046** B TURTN* RETURN TO MDI SUPERVISOR
2047**
2048*****
2049**T7823 MVW R7,TURTN SAVE RETURN ADDRESS
2050** MVWI X'7823',STUID SAVE TU ID FOR DISPLAY
2051** MVA OPN1,R4 SET UP POINTER ADRS IN R4
2052** BAL \$CONX,R6 CLEAR DEV DEP STG AND CONNECT I/O BL
2053** DC A(\$ERR\$) ERROR ADRS FOR INVALID PREP
2054**
2055** MVB CPUID,R0 DETERMINE TYPE OF PROCESSOR
2056** CBI 37,R0 *
2057** JNE T23T JUMP IF NOT 4955
2058** MVWI X'254C',T23T+2 LOAD TIME CONSTANT FOR 2 SEC
2059** J T23T2
2060**T23T MVWI X'0C0E',T23T+2 (4953) LOAD TIME CONS FOR 2 SEC
2061**T23T2 MVB DEVADD,DCB1+1 LOAD DEVICE ADDRESS IN DCB
2062** MVA IOBLK,R7 SETUP IOBLK
2063** SVC RESET,ISSUE IO RESET
2064**T23T1 MVWI X'0000',R0 TIMEOUT APPROX 2 SEC
2065**T723 SVC IDLE *
2066** JCT T723,RO *
2067** MVWZ TURESUL,R2 CLEAR RESULTS WORD
2068** MVWZ TURESUL+2,R2 CLEAR RESULTS WORD2
2069** MVA TURESUL,R2 ADDRESS OF RESULTS
2070** BAL \$RECL,R6 RECALIBRATE
2071** DC A(\$ERR\$) ERROR
2072** TBTR (R4,ER) INTERRUPT ERROR?
2073** JOFF T710 NO
2074** TBTR (R4,CSA) TST FOR CYCLE STEAL STATS
2075** BOFF \$ERR\$ ERROR
2076** MVW CSBUF+2,STATS ADDRESS OF CYCLE STEAL STATS
2077** MVA STATS,R5 *
2078** TBTR (R5,7) UNSAFE?
2079** JOFF T23SS NO
2080** T23SS TBT (R2,12) SET- UNSAFE
2081** TBTR (R5,10) BRAKE FAILURE?
2082** JOFF T23TT NO
2083** T23TT TBT (R2,11) SET- BRAKE FAILURE
2084** TBTR (R5,6) PLO OUT OF SYNC CHECK?
2085** JOFF T23UU NO
2086** T23UU TBT (R2,10) SET- PLO OUT OF SYNC
2087** TBTR (R5,9) SEEK CHECK?
2088** JOFF T23A NO
2089** T23A TBT (R2,3) SET- SEEK CHECK
2090** TBTR (R5,11) RESET UNSAFE BITS
2091** TBTR (R5,12) *
2092** TBTR (R5,13) *
2093** CWI 0,STATS OTHER EPROR BITS ON?
2094** BE T33U NO-EXIT
2095** T23AA TBT (R2,13) SET RECAL FAILURE
2096** TBT (R2,0) SET INTERRUPT ERROR
2097** MVW CSBUF+2,TURESUL+2 CS STATS
2098** J T23U EXIT
2099**T23YY CWI X'0003',R3 CHECK FOR COMMAND REJECT
2100** BNE \$ERR\$ ERROR-TU NG
2101** BAL XIOCS,R6 START CYCLE STEAL STATS
2102** DC A(\$ERR\$) ERROR
2103** TBTR (R4,ER) INTERRUPT ERROR?
2104** BON \$ERR\$ YES
2105** TWI X'0001',CSBUF+2 NOT READY?
2106** JOFF T23AA NO-ERROR
2107** TBT (R2,14) SET NOT READY
2108** J T23AA EXIT
2109**T710 BAL SENS1,R6 GET SENSE WORD ONE
2110** DC A(\$ERR\$) ERROR
2111** TWI X'0400',RDATA TEST HOME POS
2112** JON T23U HOME IS ON
2113** TBT (R2,1) SET 'HOME OFF'
2114** TXIT *
2115**T23U B \$CONX RETURN TO MDI CONTROLLER
2116*****
2117**
2118** COPY T7872 01DEC76
2119**
2120** *****
2121**T7872
2122** THIS TU INHIBITS INTERRUPT 12/01/76**
2123** CALLING ROUTINE LOOPS ON T72A
2124*****
2125**T7872 MVW R7,TURTN SAVE RETURN ADDRESS
2126** MVWI X'0020',IODCB PREP TO LEVEL 2 WITH THE 'I' BIT OFF
2127** MVA IOBLK,R7 *
2128** SVC PREP *
2129** J T72B
2130**T72A MVW R7,TURTN SAVE RETURN ADDRESS
2131** T72B B \$CONX EXIT
2132**
2133** COPY T7876 01DEC76
2134**
2135**
2136** PROGRAM MONITORS THE FOLLOWING INTERFACE LINES AND PASSES 12/01/76
2137** THE RESULTS BACK TO BE USED BY THE MDI SUPERVISOR.
2138** . +PLO OUT OF SYNC
2139** . -GUARD BAND
2140** . -SELECT OUT DRIVE
2141** . -SELECT IN DRIVE
2142** . -LINEAR REGION
2143** . SECTOR PULSES
2144** . INDEX PULSES
2145**
2146** . INPUT FROM CE FROM PREVIOUS REQUEST
2147** . + IF WRITE CLOCK

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2148 * + TOO FAST
2149 * - VFL
2150 *
2151 * PPROGRAM PASSES STATUS OF ALL LINES IN FOLLOWING FORMAT:
2152 * STEADY STATE OF LINE IS IN 'TURESUL'
2153 * 1 = LINE UP, 0 = LINE DOWN OR LINE PULSING
2154 * NOTE: NORMAL RESULTS=0460 0002 0000'

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
2262 TBTS (R2,21) SET 'GUARD BAND' PULSING
2263 J T769
2264 TBTS (R2,5) SET INDICATION THAT 'LINE IS UP'
2265 TBT (R3,4) TEST 'LINEAR REGION'

003590 6F0D 325E 7876
003594 4020 3226 7876
00359A 8028 19D0 3943
0035A0 8028 19D0 3943D
0035A6 CA25 18C8
0035AA CA25 18CA
0035AE CA25 18CC
0035B2 4224 18C8
0035B6 C020 0232
0035BA F025
0035BC 1807
0035BE 4020 35DA 1A00
0035C4 4020 3742 0329
0035CA 5006
0035CC 4020 35DA 04B0
0035D2 4020 3742 012B
0035D8 4324 0000
0035DC 4024 FFFF
0035E0 4020 3776 FFFF
0035E6 4020 3774 0000
0035EC 6E03 3908
0035F0 3BDE
0035F2 8828 3944 3778
0035F8 C82B 3944
0035FC 882A 3944 3776
003602 8829 3778 3774
003608 BBF1
00360A 4324 3774
00360E 4B01
003610 1005
003612 4B11
003614 1202
003616 4A56
003618 5001
00361A 4A46
00361C 4B0E
00361E 1005
003620 4B15
003622 1202

003624 4A55
003626 5001
003628 4A45
00362A 4B04
00362C 1005
00362E 4B14
003630 1202
003632 4A5D
003634 5001
003636 4A4D
003638 4A6B
00363A 4B07
00363C 1003
00363E 4B17
003640 1201
003642 4AAB
003644 4B08
003646 1005
003648 4B18
00364A 1202
00364C 4A5E
00364E 5001
003650 4A4E
003652 4B0B
003654 1005
003656 4B1B
003658 1202
00365A 4A59
00365C 5001
00365E 4A4C
003660 4B0C
003662 1005
003664 4B1C
003666 1202
003668 4A5A
00366A 5001
00366C 4A4A
00366E 402B 1948 0100
003674 1206
003676 402B 1948 0200
00367C 1003
00367E 4A5F
003680 5001
003682 4A4F
003684 402B 1948 0001
00368A 1206
00368C 402B 1948 0002
003692 1003
003694 5001
003696 5001
003698 4A4B
00369A 402B 194A 0100
0036A0 1206
0036A2 402B 194A 0200
0036A8 1003
0036AA 4A57
0036AC 5001
0036AE 4A47
0036B0 4A1E
0036B2 1203
0036B4 4A6F
0036B6 6802 3C2E
0036BA 4A2B
0036BC 1001
0036BE 50FB
0036C0 6E03 3908
0036C4 3BDE
0036C6 4124 3944
0036CA 4907
0036CC 10F9
0036CE 4908
0036D0 122D
0036D2 4020 377A 003B
0036D8 6E03 3908
0036DC 3BDE
0036DE 4124 3944
0036E2 4908
0036E4 10F9
0036E6 6E03 3908
0036EA 3BDE
0036EC 4124 3944
0036F0 4907
0036F2 6A00 3BDE
0036F6 402E 377A 0001
0036FC 6E03 3908
003700 3BDE
003702 4124 3944
003706 4908
003708 12F9
00370A 4907
00370C 120B
00370E 402E 377A 0001
003714 6E03 3908
003718 4124
00371A 4124 3944
00371E 4908
003720 10F9
003722 50E9
003724 402F 377A 0000
00372A 1003
00372C 4A66
00372E 6802 3C2E
003732 6E03 3908
00373Z BAL SENS1,R6

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003736 3BDE 3944 2376 DC A(\$ERR\$)
003738 4124 3944 2377 MVA RDATA,R1 ADDRESS OF SENSE DATA
00373C 4907 2378 TBT (R1,7) TEST INDEX
00373E 10F9 2379 JOFF (R1,7) LOOP IF INDEX IS DOWN
003740 4024 0000 2380 TT73A MWTI X'0000',R0 LOAD TIME CONSTANT FOR 25 MSEC
003744 6E03 3908 2381 T733Z BAL SENS1,R6 READ SENSE WORD ONE
003748 3BDE 2382 DC A(\$ERR\$)
00374A 4124 3944 2383 MVA RDATA,R1 ADDRESS OF SENSE DATA
00374E B801 2384 JCT TT736,R0 DECREMENT COUNT ****
003750 500E 2385 J T732 ERROR - TIME EXPIRED
003754 4907 2386 TT736 TBT (R1,7) TEST INDEX
003756 6E03 3908 2387 T734 BAL SENS1,R6 LOOP IF INDEX IS UP
00375A 3BDE 2388 DC A(\$ERR\$) READ SENSE WORD ONE
00375C 4124 3944 2389 MVA RDATA,R1 ADDRESS OF SENSE DATA
00375E 7801 FFFF 2390 J AWI X'FFFF',R0 DECREMENT COUNT -1
003764 1004 2391 JZ T732 ERROR - TIME EXPIRED
003766 4907 2392 TBT (R1,7) TEST INDEX
003768 10F6 2393 JOFF (R1,7) LOOP IF INDEX IS DOWN
00376A 6802 3C2E 2394 B \$CONX SPEED IS OK -EXIT
00376E 4A60 2395 T732 TBTS (R2,32) SET SPEED TOO SLOW
003770 6802 3C2E 2396 B \$CONX EXIT
003774 0000 2397 *
003776 0000 2398 *
003778 0000 2399 *
00377A 0000 2400 SEN11 DC A(*-*)
00377C 0000 2401 SEN10 DC A(*-*)
00377E 0000 2402 RSAVE DC A(*-*)
00377A 0000 2403 CTR59 DC A(*-*)
2404 *
2406 COPY T78DCB 01DEC76
2407 ** (T78DCB)
2408 *****12/1/76*****
2409 *
2410 * DCB TABLES AND DC'S
2411 *
2412 *****
2413 *
2414 *
2415 ***** DIAGNOSTIC DCB *****
2416 *
2417 DGDCB DC X'2008' DIAGNOSTIC DCB
2418 DC X'0000' NOT USED
2419 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
2420 DC X'0000' NOT USED
2421 DC A(*-*) CHAINING ADDRESS
2422 DC X'0100' BYTE COUNT
2423 DC A(*-*) DATA ADDRESS
2424 *
2425 ***** RECALIBRATE DCB *****
2426 *
2427 *
2428 CLDCB DC X'0007' RECALIBRATE DCB
2429 DC 7A(*-*)
2430 *
2431 ***** WRITE SECTOR ID **
2432 *
2433 WSDCB DC X'0002' WRITE SECTOR ID CONTROL WORD
2434 DC X'0000' NOT USED
2435 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
2436 DC A(*-*) NOT USED
2437 DC A(*-*) NOT USED
2438 DC A(*-*) CHAIN ADDRESS
2439 DC X'0006' BYTE COUNT
2440 DC A(WRSID) ADDR OF SECTOR ID DATA
2441 ***** READ SECTOR ID DCB *****
2442 *
2443 RSDCB DC X'200A' READ SECTOR ID
2444 DC X'0000' NOT USED
2445 DC X'0000' 0-7 = PHYSICAL SECTOR # MINUS ONE
2446 DC X'0000' NOT USED
2447 DC X'0000' NOT USED
2448 DC X'0000' CHAIN ADDRESS
2449 DC X'0006' BYTE COUNT FOR READ SECTOR ID
2450 DC A(SCTID) SECTOR ID DATA ADDRESS
2451 *
2452 ***** READ SECTOR ID IMMEDIATE DCB *****
2453 *
2454 *
2455 RIDCB DC X'200E' READ SECTOR ID
2456 DC X'0000' NOT USED
2457 DC X'0000' NOT USED
2458 DC X'0000' NOT USED
2459 DC X'0000' CHAIN ADDRESS
2460 DC A(*-*) CHAIN ADDRESS
2461 DC X'0006' BYTE COUNT FOR READ SECTOR ID
2462 DC A(SCTID) SECTOR ID DATA ADDRESS
2463 *
2464 *
2465 ***** SEEK DCB *****
2466 *
2467 SKDCB DC X'0005' SEEK DCB
2468 DC X'0000' BIT 0-3=0;BIT4=DIRECTION;5-15=DIFFER
2469 DC F'0'
2470 DC F'0'
2471 DC X'0000' 0-7 = HEAD;8-15 NOT USED
2472 DC A(*-*) CHAIN ADDRESS
2473 DC F'0' NOT USED
2474 DC F'0' NOT USED
2475 *
2476 ***** CYCLE STEAL STATUS DCB *****
2477 *
2478 CSDCB DC X'2000' CONTROL WORD
2479 DC F'0' NOT USED
2480 DC F'0' NOT USED
2481 DC F'0' NOT USED
2482 DC F'0' NOT USED
2483 DC F'0' NOT USED
2484 DC X'0008' 4 WORDS OF STATS
2485 DC A(CSBUF) ADDRESS OF CYCLE STEAL STATUS DATA
2486 *
2487 ***** WRITE DCB *****
2488 *
2489 WRDCB DC X'0001' WRITE CONTROL WORD
2490 DC F'0' NOT USED

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0037F0 0000 2491 DC X'0000' 0-7=0;8-15 = FLAG BYTE
0037F2 0000 2492 DC X'0000' SEARCH ARGUMENT CYLINDER
0037F4 0000 2493 DC X'0000' SEARCH ARGUMENT HEAD-SECTOR
0037F6 0000 2494 DC A(*-*) CHAIN ADDRESS
0037F8 0000 2495 DC F'0' BYTE COUNT
0037FA 0000 2496 DC A(*-*) WRITE DATA ADDRESS
2497 *
2498 ***** VERIFY DCB *****
2499 *
2500 VRDCB DC X'200C' CONTROL WOPD
2501 DC F'0' NOT USED
2502 DC X'0000' 0-7=0;8-15 = FLAG BYTE
2503 DC X'0000' CYLINDER
2504 DC X'0000' HEAD - SECTOR
2505 DC A(*-*) CHAIN ADDRESS
2506 DC F'0' BYTE COUNT
2507 DC A(*-*) VERIFY DATA ADDRESS
2508 *
2509 ***** READ DCB *****
2510 *
2511 RDDCB DC X'2009' READ DCB CONTROL WOPD
2512 DC F'0' NOT USED
2513 DC X'0000' 0-7=0;8-15 = FLAG BYTE
2514 DC X'0000' SEARCH ARGUMENT CYLINDER
2515 DC X'0101' SEARCH ARGUMENT H-R
2516 DC A(*-*) CHAIN ADDRESS
2517 DC F'0' BYTE COUNT
2518 DC A(*-*) READ DATA ADDRESS
2519 *
2520 ***** WRITE SECTOR ID SKEWED ****
2521 *
2522 WKDCB DC X'0003' CONTROL WORD
2523 DC X'0000' NOT USED
2524 DC A(*-*) 0-7 = PHYSICAL SECTOR # MINUS ONE
2525 DC A(*-*) NOT USED
2526 DC A(*-*) NOT USED
2527 DC A(*-*) CHAIN ADDRESS
2528 DC X'0006' BYTE COUNT
2529 DC A(WRSID) ADDR OF SECTOR ID DATA
2530 *
2531 ***** READ SECTOR ID SKEWED ****
2532 *
2533 RKDCB DC X'200B' CONTROL WORD
2534 DC X'0000' NOT USED
2535 DC X'0000' 0-7 = PHYSICAL SECTOR # MINUS ONE
2536 DC X'0000' NOT USED
2537 DC X'0000' NOT USED
2538 DC A(*-*) CHAIN ADDRESS
2539 DC X'0006' BYTE COUNT FOR READ SECTOR ID
2540 DC A(SCTID) SECTOR ID DATA ADDRESS
2541 *
2542 *
2543 ZER0 DC X'0000' CONSTANTS AND DEFINED STORAGE LOCATIONS
2544 ONE1 DC X'0001' CONSTANT ZERO
2545 TIMEOUT DC 2A(*-*) TIMEOUT COUNTER
2546 TONE DC X'0000' CONSTANT FOR ADD DOUBLE
2547 DC X'0001' *
2548 COUNT DC F'1280' BYTE COUNT (1280)
2549 DIFF DC A(*-*) SEEK DIFFERENCE
2550 XXX DC A(*-*) WORK WORD INT TO ZERO
2551 BCNT DC X'0000' BYTE COUNT
2552 JOFF DC A(*-*) WRITE PARAMETER POINTER
2553 JOB1 DC A(*-*) SAVE LOC FOR PARH LIST ADDRESS
2554 WDATA DC X'DEB6' WRITE DATA
2555 *
2556 TABLE DC A(*-*) ADDR OF WRT PAR LIST FOR FORMAT RTNS
2557 LGSEC DC X'0000' LOGICAL SECTOR #
2558 PHYSC DC X'0000' CONVERTED PHYSICAL SEC #
2559 CB29 DC X'1D00' CONSTANT BYTE 29
2560 FIVE9 DC X'3B00' CONSTANT BYTE 59
2561 WRSID DC X'0000' FLAG,CYLINDER (WRT SECTOR ID DATA)
2562 DC X'0000' CYLINDER HEAD
2563 DC X'0000' LOG SECTOR,NOT USED
2564 CDAT DC X'0000' INVALID DATA CONSTANT
2565 WSIDT DC X'FF34' WRITE SECTOR ID TEST DATA
2566 *
2567 DC X'5678' *
2568 DC X'9A00' *
2569 SCSTST DC X'0000' READ SECTOR ID TEST DATA BUFFER
2570 DC X'0000' *
2571 CTR01 DC X'0000' COUNTER
2572 CTR02 DC X'0000' COUNTER
2573 CTR03 DC X'0000' COUNTER
2574 CTR04 DC X'0000' COUNTER
2575 CTR05 DC X'0000' COUNTER
2576 CTR06 DC X'0000' COUNTER
2577 SAVR3 DC X'0000' SAVE AREA
2578 SAVR5 DC X'0000' SAVE AREA
2579 WR2 DC X'0000' *
2580 SVSEK DC X'0000' *
2581 LCT DC X'0000' *
2582 T56AA DC X'0000' *
2583 T56BB DC X'0000' *
2584 T56CC DC X'0000' *
2585 T56DD DC X'0000' *
2586 T56EE DC X'0000' *
2587 T56FF DC X'0000' *
2588 T56GG DC X'0000' *
2589 T86AA DC X'0000' *
2590 T86BB DC X'0000' *
2591 T86CC DC X'0000' *
2592 T86DD DC X'0000' *
2593 T86EE DC X'0000' *
2594 T86FF DC X'0000' *
2595 T86GG DC X'0000' *
2596 T41D DC X'0000' *
2597 T41P DC X'0000' *
2598 WFLCT DC X'0000' *
2599 WFLCC DC X'0000' *
2600 PASS1 DC A(*-*)
2601 HEAD0 DC A(*-*)
2602 HEAD1 DC A(*-*)
2603 GDSE0 DC A(*-*)
2604 GDSE1 DC A(*-*)

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0038BA 0000 2605 ERO0 DC A(*-*)
0038BC 0000 2606 ERO1 DC A(*-*)
0038BE 0000 2607 HDOSV DC A(*-*)
0038C0 0000 2608 HD1SV DC A(*-*)
0038C2 0000 2609 EROSV DC A(*-*)
0038C4 0000 2610 ER1SV DC A(*-*)
0038C6 0000 2611 PATTR DC A(*-*)
0038C8 0000 2612 CECYL DC A(*-*)
0038CA 0000 2613 STATS DC A(*-*)
2614 *
2616 ** COPY T78DPCIO 01DEC76
2617 ** (T78DPCIO)
2618 *
2619 * EXECUTE DPC INPUT/OUTPUT COMMANDS 2/07/77
2620 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
2621 *
2622 * 1 BAL CEOP1,R6 CE DIAGNOSTIC OP 1 (TURN ON DIAG MODE)
2623 *
2624 * 2 BAL CEOP2,R6 WRITE DIAG CLOCK STEP DATA
2625 *
2626 * 3 BAL SENSO,R6 CE READ SENSE WORD ZERO
2627 *
2628 * 4 BAL SENS1,R6 CE READ SENSE WORD ONE
2629 *
2630 * 5 BAL WRAP,R6 READ DIAGNOSTIC WRAP
2631 *
2632 * BXS (R6,2) RETURN
2633 *
2634 *****
2635 *
2636 * CE DIAGNOSTIC OP2 DATA WORD (CLOCK STEP)
2637 *
2638 * BIT 00 - SET READY
2639 * BIT 01 - RESET READY
2640 * BIT 02 - SET WRITE CLOCK
2641 * BIT 03 - SET READ CLOCK
2642 * BIT 04 - INDEX PULSE
2643 * BIT 05 - SECTOR PULSE
2644 * BIT 06 - STANDARD READ DATA
2645 * BIT 07 - SPEED PULSE
2646 * BIT 08 - BEHIND HOME
2647 * BIT 09 - SET SEEK COMPLETE
2648 * BIT 10 - RESET SEEK COMPLETE
2649 * BIT 11 - PLO OUT OF SYNC
2650 * BIT 12 - RST RD/WRT CLOCK
2651 * BIT 13 -
2652 * BIT 14 -
2653 * BIT 15 - RESET DIAGNOSTIC MODE
2654 *
2655 *****
2656 *
2657 *
2658 WRAP MVW R6,LSTIO SAVE ADDRESS OF LAST IO
2659 MVB DEVADD,IDCBRAP+1 LOAD DEVICE ADDRESS IN IDCB
2660 IO IDCBRAP READ SENSE WORD 1
2661 BNCC 7,CCERR CHECK COND CODE
2662 BXS (R6,2) RETURN TO CALLER
2663 *
2664 CEOP1 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
2665 MVB DEVADD,IDCBCE1+1 LOAD DEVICE ADDRESS IN IDCB
2666 IO IDCBC1 SET DIAGNOSTIC MODE
2667 BNCC 7,CCEFR CHECK COND CODE
2668 BXS (R6,2) RETURN TO CALLER
2669 *
2670 CEOP2 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
2671 MVB DEVADD,IDCBCE2+1 LOAD DEVICE ADDRESS IN IDCB
2672 IO IDCBC2 WRITE DIAG CLOCK STEP
2673 BNCC 7,CCERR CHECK COND CODE
2674 BXS (R6,2) RETURN TO CALLER
2675 *
2676 *
2677 SENS1 MVW R6,LSTIO SAVE ADDRESS OF LAST IO
2678 MVB DEVADD,IDCB1+1 LOAD DEVICE ADDRESS IN IDCB
2679 IO IDCBI READ SENSE WORD 2
2680 BNCC 7,CCERR CHECK COND CODE
2681 BXS (R6,2) RETURN TO CALLER
2682 *
2683 SENSO MVW R6,LSTIO SAVE ADDRESS OF LAST IO
2684 MVB DEVADD,IDCB0+1 LOAD DEVICE ADDRESS IN IDCB
2685 IO IDCBO READ SENSE WORD 1
2686 BNCC 7,CCERR CHECK COND CODE
2687 BXS (R6,2) RETURN TO CALLER
2688 *
2689 CCERR DC X'706E' COPY STATUS ANY LEVEL INTO R3
2690 SRL 13,R3 POSITION CC CODE TO BITS 13-15
2691 MVB R3,\$TOIN * PUT IN LOG AREA
2692 B (R6)* RETURN TO USER
2693 *
2694 IORST DC X'6F05' RESET IO
2695 IDCBO DC X'2205' SENSE WORD ZERO
2696 RDATA0 DC A(*-*) DATA WORD
2697 IDCBI DC X'2105' SENSE WORD ONE
2698 RDATA DC A(*-*)
2699 IDCBC1 DC X'4005' CE DIAG OP1
2700 CEDAT DC A(*-*) SENSE DATA
2701 IDCBC2 DC X'4105' CE DIAG OP2
2702 CEDAT2 DC A(*-*) SENSE DATA
2703 IDCBRAP DC X'2F05' READ DIAG WRAP
2704 RAPDAT DC A(*-*) SENSE DATA
2705 CPUID EQU X'0232' CPU ID
2706 *
2708 ** COPY T78IO 01DEC76
2709 ** (T78IO)
2710 *****12/01/76*****
2711 *
2712 * SUBROUTINE
2713 *
2714 * PURPOSE
2715 *
2716 * COMPARE READ SECTOR ID DATA TO WRITE SECTOR ID DATA
2717 * NORMAL AND TEST DATA.
2718 *
2719 * CALLING SEQUENCE
2720 *

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2721 * BAL CMPRW,R6 (NORMAL)
2722 * BAL CMPRT,R6 (TEST)
2723 *
2724 * RETURN
2725 *
2726 * BXS (R6,2) - NORMAL
2727 *
2728 *
2729 *****
2730 *
2731 CMPRT MVWI 5,R7 BYTE COUNT
2732 MVA SCTST+1,R3 ADDR OF RD SECT ID DATA (TEST)
2733 MVA WSIDT,R5 ADDR OF WR SECT ID DATA (TEST)
2734 J TT4Y
2735 CMPRW MVWI 5,R7 COMPARE BYTE COUNT
2736 MVA SCTID+1,R3 ADDR OF RD SEC ID DATA
2737 MVA WRSID,R5 ADDR OF WR SEC ID DATA
2738 TT4Y CFNEN (R3),(R5) COMPARE ID DATA
2739 BE (R6,2) BCH IF WRITE ID DATA OK
2740 B (R6)* COMPARE ERROR
2741 *
2742 *****
2743 *
2744 * SUBROUTINE
2745 *
2746 * PURPOSE
2747 * CONVERT LOGICAL SECTOR NUMBER TO A PHYSICAL SECTOR MINUS ONE.
2748 * SETUP LOGICAL SECTOR # IN LOCATION 'LGSEC'
2749 * PHYSICAL SECTOR # WILL BE LOADED IN LOCATION 'PHYS'
2750 *
2751 * LOGICAL SECTOR# TO PHYSICAL SECTOR# CONVERSION
2752 * LOGICAL- X 00, 1E, 01, 1F, 02, 20, 03, 21, 04, 22, 05, 23, 06, 24,
2753 * PHYSICAL X 00, 01, 02, 03, 04, 05, 06, 07, 08, 09, 0A, 0B, 0C, 0D,
2754 *
2755 * LOGICAL- 07, 25, 08, 26, 09, 27, 0A, 28, 0B, 29, 0C, 2A, 0D, 2B,
2756 * PHYSICAL 0E, 0F, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 1A, 1B,
2757 *
2758 * LOGICAL- 0E, 2C, 0F, 2D, 10, 2E, 11, 2F, 12, 30, 13, 31, 14, 32,
2759 * PHYSICAL 1C, 1D, 1E, 1F, 20, 21, 22, 23, 24, 25, 26, 27, 28, 29,
2760 *
2761 * LOGICAL- 15, 33, 16, 34, 17, 35, 18, 36, 19, 37, 1A, 38, 1B, 39,
2762 * PHYSICAL 2A, 2B, 2C, 2D, 2E, 2F, 30, 31, 32, 33, 34, 35, 36, 37,
2763 *
2764 * LOGICAL- 1C, 3A, 1D, 3B, X
2765 * PHYSICAL 38, 39, 3A, 3B, X
2766 *
2767 *
2768 * CALLING SEQUENCE
2769 *
2770 *
2771 * BAL CONVT,R6
2772 *
2773 * RETURN
2774 *
2775 * B (TT304+2)
2776 *
2777 *****
2778 *
2779 CONVT MVW R6,TT304+2 SETUP RETURN ADDR
2780 CB ZER00,LGSEC+1 CK FOR LOG # ZERO
2781 JE TT303 BCH IF LOG # IS ZERO
2782 CB LGSEC+1,CB29 COMP LOG TO 29
2783 JGE RTT01 BCH IF LGSEC EQ OR LESS THAN CB29
2784 MVWI 2,R0 SETUP MULTIPLIER
2785 MB LGSEC+1,R0 LOG SECTOR # TIMES 2
2786 SWI 60,R0 LOG SEC TIMES 2 MINUS 60
2787 MVB R0,PHYS+1 PHYSICAL SECTOR NUMBER
2788 J TT304 RETURN TO CALLER
2789 J FIVE9,PHYS+1 PHYSICAL SECTOR # 59
2790 J TT304 RETURN TO CALLER
2791 RTT01 MVWI 2,R0 LOAD MULTIPLIER
2792 MVA LGSEC+1,R0 LOG SECTOR # TIMES 2
2793 SWI 1,R0 SUBTRACT ONE
2794 MVB R0,PHYS+1 LOAD PHYSICAL SECTOR #
2795 TT304 B *-X RETURN TO CALLER
2796 *
2797 *****
2798 *
2799 * SUBROUTINE
2800 *
2801 * PURPOSE
2802 *
2803 * LOAD WRITE SECTOR ID DATA BUFFER FROM RD SEC ID BUFFER
2804 *
2805 * CALLING SEQUENCE
2806 *
2807 * BAL LWSID,R6
2808 *
2809 * RETURN
2810 *
2811 * BXS (R6)
2812 *
2813 *****
2814 *
2815 LWSID MVWI 5,R7 BYTE COUNT
2816 MVA SCTID+1,R3 ADDR OF RD SECT ID DATA BUFFER
2817 MVA WRSID,R5 ADDR OF WR SECT ID DATA BUFFER
2818 MVEN (R3),(R5) MOV DATA FROM RD TO WR BUFFER
2819 BXS (R6) RETURN TO CALLER
2820 *
2821 *
2822 * EXECUTE INPUT & OUTPUT COMMANDS
2823 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
2824 * EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETEP
2825 * LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
2826 * SUPR CALL.
2827 *
2828 * THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
2829 *
2830 * 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
2831 * 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
2832 *
2833 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
2834 *
2835 *

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2836 * BAL \$RKEW,R6 READ SECTOR ID SKEWED
2837 * 1 BAL \$WKST,R6 WRITE SECTOR ID SKEWED (TEST)
2838 * 2 BAL \$RWST,R6 READ SECTOR ID SKEWED (TEST)
2839 * 3 BAL \$RIDS,R6 READ SECTOR ID (TEST)
2840 * 4 BAL \$RKEW,R6 WRITE SECTOR ID SKEWED
2841 * 5 BAL \$WSEC,R6 WRITE SECTOR ID
2842 * 6 BAL \$WSTS,R6 WRITE SECTOR ID (TEST)
2843 * 7 BAL \$DIAG,R6 DIAGNOSTIC
2844 * 8 BAL \$XIOCS,R6 CYCLE STEAL STATUS
2845 * 9 BAL \$SSEEK,R6 SFEK
2846 * 10 BAL \$RECL,R6 RECALIBRATE
2847 * 11 BAL \$RDID,R6 READ SECTOR ID
2848 * 12 BAL \$RD,P6 READ
2849 * 13 BAL \$PDVY,R6 READ VERIFY
2850 * 14 BAL \$WRT,P6 WRITE
2851 * 15 BAL \$WRT,P6 WRITE
0039C8 4020 3B9A 37CC \$SSEEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
0039CE 5064 J XIO RETURN AND RETRY ON ERROR
0039D0 4020 3B9A 378C \$RECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
0039D6 5060 J XIO
0039D8 4020 3B9A 37AC \$RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
0039E0 0BFF MVB X'FF',R3 SET BUFFER TO F'S
0039E4 4524 322E MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADPS
0039E8 4724 0006 MVWI 6,R7 SETUP BUFFER LENGTH
0039E8 2BAC FPN R3,(R5) INIT READ SECTOR ID BUFFER
0039EA 4020 37BA 322E MVA SCTID,RSDCB+14 DATA ADDR
0039F0 5053 J XIO
0039F2 0BFF \$RD MVB X'FF',R3 SETRD BUFFER TO ALL F'S
0039F4 6D08 381A FDDCB,R14,R5 SET UP READ BUFFER ADPS
0039F8 4724 0100 MVB X'0100',R7 SET UP BUFFER LENGTH
0039FC 2BAC FPN R3,(R5) CLEAR READ BUFFER
0039FE 4020 3B9A 380C \$RDS MVA RDCB,IODCB SET UP BLOCK FOR SVC CALL
003A04 5049 J XIO
003A06 4020 3B9A 37FC \$RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A0C 5045 J XIO
003A0E 4020 3B9A 37EC \$WRT MVA WPCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A14 5041 J XIO
003A16 4020 3B9A 382C \$RKEW MVA BKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A1C 0BFF MVB X'FF',R3 SET BUFFER TO F'S
003A1E 4524 322E MVA SCTID,R5 SETUP READ SECTOR ID BUFFER ADPS
003A22 4724 0006 MVWI 6,R7 SETUP BUFFER LENGTH
003A26 2BAC FPN R3,(R5) INIT READ SECTOR ID BUFFER
003A28 4020 383A 322E MVA SCTID,BKDCB+14 DATA ADDR
003A2E 5034 J XIO
003A30 4020 3B9A 381C \$WKST MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A36 4020 382A 386A MVA WSIDT,WKDCB+14 DATA ADDR
003A3C 502D J XIO
003A3E 4020 3B9A 382C \$RWST MVA BKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A44 4020 383A 3870 MVA SCTST,BKDCB+14 DATA ADDR
003A4A 5026 J XIO
003A4C 4020 3B9A 37AC \$RIDS MVA RSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A52 0BFF MVB X'FF',R3 SET BUFFER TO F'S
003A54 4524 3870 MVA SCTST,R5 SETUP READ SECTOR ID BUFFER ADPS
003A58 4724 0006 MVWI 6,R7 SETUP BUFFER LENGTH
003A5C 2BAC FPN R3,(R5) INIT READ SECTOR ID BUFFER
003A5E 4020 37BA 3870 MVA SCTST,RSDCB+14 DATA ADDR
003A64 5019 J XIO
003A66 4020 3B9A 381C \$WKEW MVA WKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A6C 4020 382A 3862 MVA WFSID,WKDCB+14 DATA ADDR
003A72 5012 J XIO
003A74 4020 3B9A 379C \$WSEC MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A7A 4020 37AA 3862 MVA WRSD,WSDCB+14 DATA ADDR
003A80 500B J XIO
003A82 4020 3B9A 379C \$WSTS MVA WSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A88 4020 37AA 386A MVA WSIDT,WSDCB+14 DATA ADDR
003A8E 5004 J XIO
003A90 4020 3B9A 377C \$DIAG MVA DGDCEB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
003A96 5000 J XIO
2932 YEQUIT
2933 *****29JUL76**
2934**
2935** SUB-ROUTINE
2936** EXECUTE INPUT AND OUTPUT COMMANDS
2937**
2938** PURPOSE
2939** TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
2940** THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
2941**
2942** 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
2943** THE I/O COMMAND.
2944**
2945** 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
2946** ISSUED BY THIS SUBROUTINE.
2947**
2948** 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
2949** START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.

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2950** 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
2951** SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
2952** MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
2953** 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
2954** EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'
2955** 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
2956** STARTS TO DETERMINE A LOST INTERRUPT.
2957** 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
2958** WAS AN ERROR OF OKAY AND EXIT OF THE INTERRUPT LEVEL.
2959** 8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
2960** 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
2961** 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
2962** 11. CHECK TO SEE IF THE EXERCISE IS TO BE TERMINATED.
2963** 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
2964** ISSUED BY THIS SUBROUTINE.
2965** 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
2966** CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
2967** COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
2968**
2969** CALLING SEQUENCE
2970**
2971** THIS ROUTINE HAS THE FOLLOWING ENTRIES:
2972**
2973** --> BAL XIO OR XEO ANY CYCLE STEAL COMMAND, MOD=0
2974** --> BAL XIO1 MOD PARM PRELOADED IN 'IOMOD'
2975** --> BAL XIOCS,R6 OR XEC START CYCLE STEAL STATUS, MOD=P
2976** --> BAL XIOCS-4,R6 AUTO CS STATUS (FOLLOWING OTHER XIO
2977** AND DOES NOT POST INTERRUPT STATUS)
2978**
2979** RETURN CONTROL
2980**
2981** BXS (R6,2) RETURN TO USER NO ERROR
2982** OR B (R6,2) RETURN AND RETRY ON ERROR
2983** *****
2984** XIO MVWZ IOMOD,R3 SET MOD OF 0 FOR CYCLE STEAL OP
2985** J XIO1 CS I/O'S ARE NOT RETRIED
2986**
2987**
2988** TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
2989** TBTS (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
2990** XIOCS MVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
2991** MVWI X'000F',IOMOD SET CYCLE STEAL MODIFIER
2992** TBT (R4,CS) IS CS IN PROGRESS, ERROR CONDITION
2993** JON XIO2 * YES, BYPASS SAVING I/O ADPS
2994** XIO1 MVW R6,LSTIO SAVE IAP FOR RETRY IF REQUESTED
2995** MVA DCBUP,R3 SET UP IO ADPS TO MOVE DCB TABLE
2996** MVB IODCB,R5 * AND THE FROM ADPS, ALONG WITH
2997** 16,R7 * THE NUMBER OF MOVES
2998** MVFN (R5),R3 MOVE 1 STATUS WORD AND ADJUST
2999** MVB 255,R3 CLEAR CYCLE STATUS BUFFER
3000** MVA CSBUF,R5 * TO ALL ONES *
3001** MVB 16,R7 *
3002** FPN R3,(R5) *
3003** MVWI X'0708',XIOIN OVERLAY OLD CONDITION CODES
3004** MVWZ 'ISB,R3' ZERO OUT OLD ISB VALUE
3005**
3006** TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
3007** XIO2 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CTRL BIT
3008** MVA IOBL,R7 SET UP CONTROL BLOCK FOR SUPVR
3009** TBT (R4,IE) RESET LEVEL ERROR INDICATOR
3010** TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
3011** SVC START CALL SUPVR FOR I/O COMMAND
3012**
3013** TBTP (R4,NI) IS AN INTR EXPECTED
3014** BN (R6,2) * NO, RETURN TO USER
3015**
3016** THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
3017**
3018** MVB X'00',R5 SET UP WOPK REG FOR 'LOST INTR'
3019** XIO8 TBTR (R4,IN) HAS INTERRUPT BEEN RECEIVED
3020** JON XIOCK * YES, CHECK IF ALL WAS SATISFACTORY
3021** SVC IDLE ALLOW ANOTHER PROGRAM A CHANCE TO RUN
3022**
3023** AWI 1,R5 SUPVR WILL RETURN HERE
3024** JNZ XIO8 ADVANCE TIME OUT COUNT
3025** TBTS (R4,ER) BCH IF TIME OUT NOT REACHED
3026** B (R6)* SET ON ERROR CONTROL BIT
3027** *****
3028** *****03FEB76**
3029**
3030** SUBROUTINE
3031** I/O EXECUTE ERROR HANDLING ROUTINE
3032**
3033** PURPOSE
3034**
3035** THIS ROUTINE WILL COLLECT INFORMATION TO HELP DETERMINE THE
3036** PROBLEM THAT WAS FOUND WHEN THE I/O COMMAND WAS ISSUED BY THE
3037** SUPERVISOR AND IT WAS NOT ACCEPTED.
3038**
3039** CALLING SEQUENCE
3040** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O COMMAND
3041**
3042** RETURN CONTROL
3043**
3044** B (R6)* RETURN TO USERS ERROR HANDLER
3045**
3046** *****
3047** *****
3048**
3049**
3050** CC 0= DEVICE NOT ATTACHED
3051** POF 1= DEVICE BUSY
3052** I/O 2= DEVICE BUSY AFTER RESET
3053** 3= COMMAND REJECT
3054** 4= INTERVENTION REQUIRED
3055** 5= INTERFACE DATA CHECK
3056** 6= CONTROLLER BUSY
3057** 7= I/O COMMAND EXCEPTED
3058**
3059** XIOER DC X'706E' COPY STATUS ANY LEVEL INTO R3
3060** SFL 13,R3 POSITION CC CODE TO BITS 13-15
3061** MVE P3,TOIN * PUT IN LOG OUT AREA
3062** B (R6)* RETURN TO USER ERROR HANDLER
3063** *****
3064** *****14APR76**
3065**
3066** SUB-ROUTINE IL
IL

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3067** ERROR INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
3068** PURPOSE
3070** THIS ROUTINE WILL BE ENTERED WHEN THE SUPVR DETECTS AN ERROR
3071** OR THE INTERRUPTING CONDITION CODE DOES NOT AGREE WITH THE
3072** EXPECTED CODE.
3073** CALLING SEQUENCE
3074** SUPVR WILL ENTER WHEN AN ERROR OCCURS ON AN I/O INTERRUPT
3075** RETURN CONTROL
3076** SVC EXIT RETURN TO USER VIA SUPVR
3077** *****
3078** CC 0= CONTROLLED END ISB 0= ADD STATUS
3079** FOR 1= PROGRAM CONTROL INTERRUPT BITS 1= COMD REJECT
3080** INTR 2= EXCEPTION INTERRUPT FOP 2= INCDP LENGTH
3081** 3= DEVICE END INTERRUPT INTR 3= DCB SPEC CK
3082** 4= ATTENTION INTERRUPT 4= STG DATA CK
3083** 5= ATTENTION / PROGRAM CNTL INTR 5= INV STG ADPS
3084** 6= ATTENTION / EXCEPTION INTR 6= PROTCT CK
3085** 7= ATTENTION / DEVICE END INTR 7= I-FACE DATA
3086** *****
3087** INTR DC X'706E' COPY STATUS ANY LEVEL INTO R3
3088** SRL 13,R3 POSITION INDICATORS IN R3
3089** MVA OPTN1,R4 SET UP BASE ADPS
3090** TBT (R4,CS) IS 'CS IN PROGRESS'
3091** JOFF INTES * NO
3092** TBT (R4,CE) TURN ON CYCLE STEAL INTR ERROR
3093** MVW R7,CSTL8 SAVE CS ERR ISE VALUE, BITS 0-7
3094** MVB R3,CSTL8+1 * AND THE COND CODE
3095** J INTR1
3096** INTR DC X'706E' COPY STATUS ANY LEVEL INTO R3
3097** SRL 13,R3 POSITION INDICATORS IN R3
3098** MVA OPTN1,R4 SET UP BASE ADPS
3099** TBT (R4,CS) IS 'CS IN PROGRESS'
3100** JOFF INTES * NO
3101** TBT (R4,CE) TURN ON CYCLE STEAL INTR ERROR
3102** MVW R7,CSTL8 SAVE CS ERR ISE VALUE, BITS 0-7
3103** MVB R3,CSTL8+1 * AND THE COND CODE
3104** J INTR1
3105** INTR DC X'706E' COPY STATUS ANY LEVEL INTO R3
3106** SRL 13,R3 POSITION INDICATORS IN R3
3107** MVA OPTN1,R4 SET UP BASE ADPS
3108** TBT (R4,CS) IS 'CS IN PROGRESS'
3109** JOFF INTES * NO
3110** TBT (R4,CE) TURN ON CYCLE STEAL INTR ERROR
3111** MVW R7,CSTL8 SAVE CS ERR ISE VALUE, BITS 0-7
3112** MVB R3,CSTL8+1 * AND THE COND CODE
3113** J INTR1
3114** *****
3115** SOUBROUTINE
3116** OKAY INTERRUPT RUNS ON INTERRUPT LEVEL '\$INTL'
3117** PURPOSE
3118** TO CHECK THE INTERRUPT AND CONTINUE THE TEST
3119** CALLING SEQUENCE
3120** SUPERVISOR WILL ENTER HERE IF INTR CC IS AS REQUESTED
3121** THE ERROR INTERRUPT HANDLER WILL BRANCH TO THIS ROUTINE
3122** AFTER THE SPECIAL PART HAS BEEN COMPLETED AND THE
3123** COMMON SECTION IS HANDLED HERE.
3124** RETURN CONTROL
3125** SVC EXIT RETURN TO USER VIA SUPVR
3126** *****
3127** INTR DC X'706E' COPY STATUS ANY LEVEL INTO R3
3128** SRL 13,R3 POSITION INDICATORS IN R3
3129** MVA OPTN1,R4 SET UP BASE ADPS
3130** TBT (R4,IN) SET INTERRUPT RECEIVED
3131** TBT (R4,CS) IS 'CS IN PROGRESS' ON
3132** JON INTR2 * YES, BCH AROUND UPDATE
3133** MVB R3,\$IOIN+1 SAVE INTERRUPTING CC CODE
3134** MVW R7,\$ISB SAVE INTR STATUS AND DEV ADPS
3135** EQU *
3136** CACL R5 CURRENT LEVEL COPIED BY DCP
3137** SLL 4,R5 POSITION INTR LEVEL AND PUT
3138** ABI 4,R5 * IN 'I' BIT
3139** CW \$INTL,P5 IS THIS THE CORRECT INTR LEVEL
3140** JE INTR3 * YES, GO EXIT THIS LEVEL
3141** TBT (R4,SLE) SET INTR LEVEL ERROR CONTROL BIT
3142** TBT (R4,EP) SET ERROR ON I/O COMMAND CNTL BIT
3143** TBT (R4,XI) WAS INTERRUPT EXPECTED
3144** JON INTR3 * YES, EXIT OFF THIS INTR LEVEL
3145** TBT (R4,MI) * NO, SET MYSTERY INTR CONTROL BIT
3146** CBI 4,P3 ATTENTION INTERRUPT?
3147** JE INTR3 YES
3148** TBT (R4,NG) ERROR, UNEXPECTED INTERRUPT
3149** SVC EXIT EXIT THIS LEVEL VIA SUPVR TO PGM
3150** *****
3151** THIS IS THE CONTINUATION OF EXECUTE I/O AFTER THE INTERRUPT
3152** HAS BEEN SERVICED. THE EXERCISER FINDS AN INTERRUPT HAS BEEN
3153** RECEIVED AND BRANCHES HERE TO CHECK FOR ANY ERROR CONDITIONS.
3154** *****
3155** XIOCK TBTR (R4,XE) WAS AN ERROR EXPECTED
3156** BN (R6,2) * YES, EXIT THIS ROUTINE
3157** TBTR (R4,CS) WAS AUTO CS IN PROGRESS
3158** JOFF XIOCV * NO, CONTINUE CHECKING
3159** TBT (R4,CE) IS CS IN AN ERR CONDITION
3160** JOFF XIOCO * NO, BCH
3161** B (R6,*) CS ERROR
3162** XIOCO TBTS (R4,CSA) TURN ON CS STATS AVAIL FLAG
3163** BXS (R6,2) GO TO USER
3164** TBTR (R4,ER) WAS EPROF INTR CONTROL BIT ON
3165** JOFF XIOCV * NO, EXIT THIS ROUTINE
3166** *****
3167** MVB \$IOIN+1,P5 GET LAST INTR CC CODE
3168** CBI 2,R5 IS THIS CC=2
3169** JOFF (R6,*) * NO, BCH TO ERROR HANDLER
3170** MVB \$ISB,R5 GET LAST ISB DATA BYTE AND IF CS
3171** BN XIOCS-4 * AVAILABLE, GO AND GET IT

003B01 706E
003B0C 336A
003B0E 4424 3220
003B12 4C28
003B14 1006
003B16 4C6A
003B18 6F0D 3254
003B1C C328 3255
003B20 500A
003B22 4C24
003B24 1002
003B26 F304
003B28 1006
003B2A 4C64
003B2C 5004

003B2E 706E
003B30 336A
003B32 4424 3220
003B36 4C63
003B38 4C28
003B3A 1204
003B3C C328 3229
003B40 6F0D 322A
003B44

003B44 3521
003B46 0501
003B48 CD24 325C
003B4C 1002
003B4E 4C66
003B50 4C61
003B52 4CA2
003B54 1204
003B56 4C60
003B58 F304
003B5A 1001
003B5C 4C6C
003B5E 6006

003B60 4CA4
003B62 6AC0 0002
003B66 4CAB
003B68 1006
003B6A 4C2A
003B6C 1002
003B6E 68D2 0000
003B72 4C69
003B74 5601
003B76 4C21
003B78 100B
003B7A C520 3229
003B7E F502
003B80 68D1 0000
003B84 C520 322A
003B88 6A00 3A9E

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3183+ B (R6,*) EPROF
3184+ XIOCX MVWZ OPTN3,R3 CLEAR OUT OPTION 3 CNTL BITS
3185+ BXS (R6,2) RETURN TO USER VIA PEG 6
3186+
3187+ I/O PARAMETER LIST
3188+
3189+ IOBLK DC A (DEVADD) ADPS OF DEVICE ADPS
3190+ DC A (XIOER) ERROR ROUTINE ADPS
3191+ IODCB DC A (*,*) DCB ADPS OR LEVEL & INTR
3192+ IOMOD DC A (*,*) MODIFIER
3193+ DC A (*,*) ADPS OF LAST SVC CALL
3194+ IORSP DC A (*,*) SECOND WORD OF LAST IDCB
3195+
3196+ INTERRUPT CONTROL BLOCK FOR I/O COMMANDS
3197+
3198+ INTBL DC A (DEVADD) ADPS OF DEVICE ADPS
3199+ DC A (INTOK) INTERRUPT OK RETURN ADPS
3200+ DC A (INTR) INTERRUPT ERROR ADPS
3201+ INTCC DC X'0003' INTERRUPT CODE EXPECTED
3202+ ***** 11MAY76**
3203+
3204+ SUBROUTINE
3205+ CONNECT INTERRUPT CONTROL BLOCK & PREPARE DEVICE
3206+
3207+ PURPOSE
3208+ TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
3209+ PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
3210+ TO INTERRUPT.
3211+ CALLING SEQUENCE
3212+ THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
3213+
3214+ --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
3215+ --> BAL \$CONP,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
3216+
3217+ RETURN CONTROL
3218+
3219+ OR BXS (R6,2) RETURN TO USER VIA REG 6 IF OKAY
3220+ OR B (R6,*) IF THE DEVICE COULD NOT BE CONNECTED
3221+
3222+ *****
3223+ \$CONC MVB 6,R7 NUMBER OF BYTE TO CLEAR
3224+ MVB 0,R3 * AND THE DATA TO USE
3225+ MVA DEV1,R5 * ALONG WITH THE ADPS TO USE
3226+ R3,(R5) *
3227+ MVWZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
3228+ MVA INTBL,P7 SET R7 TO CONTROL BLOCK AND
3229+ SVC CICB * CONNECT IT TO THIS DEVICE
3230+ BN (R6,*) ERROR RETURN TO USER
3231+
3232+ \$CONP MVW \$INTL,IODCB PUT IN LEVEL & INTR PARAMETER
3233+ MVA IOBLK,R7 SET R7 TO CONTROL BLOCK TO PREPARE
3234+ MVI X'0003',SIOIN INITIALIZE CONDITION CODE STORAGE
3235+ MVWZ \$ISB,R3 * AND CLEAR OLD ISB VALUE
3236+ MVW R6,LSTIO SET UP ADDRESS THAT STARTED LAST I/O
3237+ SVC PREP * AND CALL ON SUPVR
3238+ BXS (R6,2) RETURN TO USER
3239+ ***** 06APR76**
3240+
3241+ SUBROUTINE
3242+ DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
3243+
3244+ PURPOSE
3245+ DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
3246+ SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
3247+ BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
3248+
3249+ CALLING SEQUENCE
3250+ THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
3251+
3252+ --> B \$ERRS SET 'NG' BIT AND CONVERT DATA TO LOG
3253+ --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
3254+
3255+ RETURN CONTROL
3256+
3257+ OR B TURTN* RETURN TO MDI
3258+ OR B (R6,*) IF THE DEVICE COULD NOT BE CONNECTED
3259+
3260+ *****
3261+ \$ERRS MVI X'8000',TUSTATUS SET ON 'NO GOOD' STATUS BIT
3262+ MVA HEBLK,R7 GET ADPS OF CONTROL BLOCK
3263+ SVC HTOE CONVERT HEX TO EBC VIS DCP
3264+ MVB 3,R5
3265+ MVA TWORK,R3 SET UP BUFFER STORAGE
3266+ MVI X'0003',SIOIN
3267+ MVA LINE1,R1
3268+ MVB 4,P7
3269+ MVB 8,R6
3270+ MVFN (R3),(R1)
3271+ MVB 4,R7
3272+ MVB X'40',R2
3273+ MVB R2,(R1)+
3274+ JCT MVBUF,R6
3275+ MVB 8,R6
3276+ MVI 44,R1
3277+ JCT MVBUF,R5
3278+ MVW PIDMS610,PID+2
3279+ MVA FAKETU,ADCADD1
3280+ MVA DC2PT,ADCADD2
3281+ OWI BIT0080,SUBSTAT
3282+ MVA \$TUID,R3 SET UP BUFFER STORAGE
3283+ BAL TUMSGWTR*,R7 GO TO MESSAGE WRITER
3284+
3285+ \$CONX EQU *
3286+ MVB DEVADD,R7 GET DEVICE ADDRESS FROM MDI
3287+ SVC RIBC RELEASE INTERRUPT CONTROL BLOCK
3288+ B TURTN* RETURN TO MDI SUPERVISOR
3289+
003B8C 68D2 0000
003B90 CB25 3224
003B94 5601
003B96 19D0
003B98 3AFE
003B9A 0000
003B9C 0000
003B9E 0000
003BA0 0000
003BA2 19D0
003BA4 3B2E
003BA6 3B0A
003BA8 0003
003BAA 0F06
003BAC 0B00
003BAE 4524 322E
003BB2 2BAC
003BB4 CB25 3224
003BB8 4724 3BA2
003BBC 6014
003BBE 6AD0 0000
003BC2 8828 325C 3B9A
003BC8 4724 3E56
003BCC 4020 3228 0708
003BD2 CB25 322A
003BD6 6E0D 322C
003BDA 600C
003BDC 5601
003BDE 4020 1818 8000
003BE4 4724 3D48
003BE8 6014
003BEA 0D03
003BEC 4324 181A
003BF0 6B0D 3D40
003BF4 4124 3C70
003BF8 0F04
003BFA 0E08
003BFC 2B24
003BFE 0F04
003C00 0A40
003C02 C258
003C04 BEFB
003C06 0E08
003C08 7921 002C
003C0C BDF7
003C0E 4020 1802 F1F0
003C14 4020 1988 3D46
003C1A 4020 198A 3D46
003C20 402C 19C4 0080
003C26 4324 3226
003C2A 6F13 18BA
003C2E 7220 19D0
003C32 6013
003C34 6812 325E

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003C38	0007	3299+	BEGIN DC A(0007)	NUMBER OF LINES TO PRINT
003C3A	0008	3300+	DC A(0008)	LINE LENGTH = 8 CHAR
003C3C	5C5C40C1C2D6D9E3	3301+	DC C'*** ABORT'	
003C44	0028	3302+	DC A(0040)	LINE LENGTH = 40 CHAR
003C46	E3E4C9C440C9D6C9D	3303+	DC C'TUID IOIN ISB INST	DEV1 DEV2 DEV3 DEV4
003C6E	0028	3304+	DC A(0040)	LINE LENGTH = 40 CHAR
003C70	40404040404040404	3305+	LINE1 DC C'	
003C98	0028	3306+	DC A(0040)	LINE LENGTH = 40 CHAR
003C9A	C3D5E3D340C4C3C2F	3307+	DC C'CNTRL DCB2 DCB3 DCB4	DCB5 CHAD BYCT ADRS
003CC2	0028	3308+	DC A(0040)	LINE LENGTH = 40 CHAR
003CC4	40404040404040404	3309+	LINE2 DC C'	
003CEC	0028	3310+	DC A(0040)	LINE LENGTH = 40 CHAR
003CEE	D9E2C9C440C3E260F	3311+	DC C'RSID CS-2 CS-3 CS-4	CS-5 CS-6 CS-7 CS-8
003D16	0028	3312+	DC A(0040)	LINE LENGTH = 40 CHAR
003D18	40404040404040404	3313+	LINE3 DC C'	
003D40	0000	3314+	DC A(*--*)	
003D42	3C38	3315+	DC A(BEGIN)	
003D44	0101	3316+	DC X'0101'	
003D46	0101	3317+	DC X'0101'	
003D48	0030	3318+	DC X'0101'	
003D4A	3226	3319+	EQU X'F1F0'	
003D4C	181A	3320+	EQU X'0080'	
000000		3321+	DC	
		3322+	DC	
		3323+	DC	
		3324+	DC	
		3325+	DC	
		3326+	DC	
		3327	END	

DECLARED	NAME	ATTRIBUTES AND REFERENCES	CROSS-REFERENCE LISTING	COPYRIGHT IBM CORP 1976
0	.P0.	ABSOLUTE. HEX VALUE(00000000)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R1.	ABSOLUTE. HEX VALUE(00000001)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R2.	ABSOLUTE. HEX VALUE(00000002)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R3.	ABSOLUTE. HEX VALUE(00000003)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R4.	ABSOLUTE. HEX VALUE(00000004)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R5.	ABSOLUTE. HEX VALUE(00000005)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R6.	ABSOLUTE. HEX VALUE(00000006)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
0	.R7.	ABSOLUTE. HEX VALUE(00000007)	1745 1746 1753 1755 1877 1878 1893 1895 1917	
3228	\$CONC	ADDRESS. HEX LOCATION(00003BAA) IN CSECT(I7809)	LENGTH(2)	
3294	\$CONX	ADDRESS. HEX LOCATION(00003C2E) IN CSECT(I7809)	LENGTH(1)	
3270	\$ERR\$	ADDRESS. HEX LOCATION(00003BDE) IN CSECT(I7809)	LENGTH(6)	
1572	\$INTEL	ADDRESS. HEX LOCATION(0000325C) IN CSECT(I7809)	LENGTH(2)	
1542	\$IOIN	ADDRESS. HEX LOCATION(00003228) IN CSECT(I7809)	LENGTH(2)	
1543	\$ISB	ADDRESS. HEX LOCATION(0000322A) IN CSECT(I7809)	LENGTH(2)	
1527	\$LE	ABSOLUTE. HEX VALUE(00000026)		
2871	\$RECL	ADDRESS. HEX LOCATION(000039D0) IN CSECT(I7809)	LENGTH(6)	
2868	\$SEEK	ADDRESS. HEX LOCATION(000039C8) IN CSECT(I7809)	LENGTH(6)	
1541	\$TUID	ADDRESS. HEX LOCATION(00003226) IN CSECT(I7809)	LENGTH(2)	
105	@DCADD1	ADDRESS. HEX LOCATION(000019B8) IN CSECT(I7809)	LENGTH(1)	
106	@DCADD2	ADDRESS. HEX LOCATION(000019BA) IN CSECT(I7809)	LENGTH(1)	
42	@FIXT	ABSOLUTE. HEX VALUE(00000101)		
44	@GOTO	ABSOLUTE. HEX VALUE(00000200)		
49	@NVLD	ABSOLUTE. HEX VALUE(00000600)		
41	@QUES	ABSOLUTE. HEX VALUE(00000100)		
47	@QUXX	ABSOLUTE. HEX VALUE(00000400)		
48	@TUXX	ABSOLUTE. HEX VALUE(00000500)		
3299	BEGIN	ADDRESS. HEX LOCATION(00003C38) IN CSECT(I7809)	LENGTH(2)	
3320	BIT0080	ABSOLUTE. HEX VALUE(00000080)		
3315	BUFPT	ADDRESS. HEX LOCATION(00003D40) IN CSECT(I7809)	LENGTH(2)	
2559	CB29	ADDRESS. HEX LOCATION(0000385E) IN CSECT(I7809)	LENGTH(2)	

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2689	CCERR	2782 ADDRESS. HEX LOCATION(00003930) IN CSECT(I7809) LENGTH(2)
1531	CE	2661 2667 2673 2680 2686 ABSOLUTE. HEX VALUE(0000002A)
1611	CICB	2988 3100 3170 ABSOLUTE. HEX VALUE(00000014)
2428	CLDCB	3234 ADDRESS. HEX LOCATION(0000378C) IN CSECT(I7809) LENGTH(2)
2705	CPUID	2871 ABSOLUTE. HEX VALUE(00000232)
1529	CS	1745 1877 2055 2231 ABSOLUTE. HEX VALUE(00000028)
1530	CSA	2989 2992 3098 3139 3168 ABSOLUTE. HEX VALUE(00000029)
1560	CSBUF	1959 2074 3173 ADDRESS. HEX LOCATION(00003246) IN CSECT(I7809) LENGTH(1)
2478	CSDCB	1763 1778 1961 1963 1978 2076 2097 2105 2485 ADDRESS. HEX LOCATION(000037DC) IN CSECT(I7809) LENGTH(2)
1568	CSTL8	2990 ADDRESS. HEX LOCATION(00003254) IN CSECT(I7809) LENGTH(2)
2403	CTR59	3101 3102 ADDRESS. HEX LOCATION(0000377A) IN CSECT(I7809) LENGTH(2)
1550	DCBUF	2342 2353 2361 2368 ADDRESS. HEX LOCATION(00003236) IN CSECT(I7809) LENGTH(1)
3316	DC2PT	2995 ADDRESS. HEX LOCATION(00003D42) IN CSECT(I7809) LENGTH(2)
108	DEVADD	3289 ADDRESS. HEX LOCATION(000019D0) IN CSECT(I7809) LENGTH(1)
1545	DEV1	1575 1743 1744 1876 2061 2225 2226 2659 2665 ADDRESS. HEX LOCATION(0000322E) IN CSECT(I7809) LENGTH(2)
2416	DGDCB	1549 3230 ADDRESS. HEX LOCATION(0000377C) IN CSECT(I7809) LENGTH(2)
70	DUMMY	2930 ABSOLUTE. HEX VALUE(00000000)
1241	ENTPT	651 1240 1258 ADDRESS. HEX LOCATION(00002A24) IN CSECT(I7809) LENGTH(1)
50	EQ	201 ABSOLUTE. HEX VALUE(00000000)
1522	ER	965 977 1112 ABSOLUTE. HEX VALUE(00000021)
1597	EXIT	1761 2072 2103 3006 3025 3108 3150 3175 ABSOLUTE. HEX VALUE(00000006)
3318	FAKETU	3157 ADDRESS. HEX LOCATION(00003D46) IN CSECT(I7809) LENGTH(2)
2560	FIVE9	3288 ADDRESS. HEX LOCATION(00003860) IN CSECT(I7809) LENGTH(2)
1382	F00013	2789 ADDRESS. HEX LOCATION(00002E76) IN CSECT(I7809) LENGTH(1)
1294	F00016	912 939 1008 1053 1074 1149 ADDRESS. HEX LOCATION(00002B38) IN CSECT(I7809) LENGTH(1)
1274	F00019	759 780 816 ADDRESS. HEX LOCATION(00002A60) IN CSECT(I7809) LENGTH(1)
1284	F00021	729 864 873 921 948 993 1005 1017 1029 ADDRESS. HEX LOCATION(00002AD8) IN CSECT(I7809) LENGTH(1)
1270	F00117	741 825 891 ADDRESS. HEX LOCATION(00002A5A) IN CSECT(I7809) LENGTH(1)
1278	F00142	684 ADDRESS. HEX LOCATION(00002A8A) IN CSECT(I7809) LENGTH(1)
1288	F00154	735 ADDRESS. HEX LOCATION(00002AFC) IN CSECT(I7809) LENGTH(1)
1298	F00170	744 ADDRESS. HEX LOCATION(00002B5E) IN CSECT(I7809) LENGTH(1)
1302	F00200	765 ADDRESS. HEX LOCATION(00002B64) IN CSECT(I7809) LENGTH(1)
1310	F00206	789 ADDRESS. HEX LOCATION(00002BBA) IN CSECT(I7809) LENGTH(1)
1318	F00224	792 ADDRESS. HEX LOCATION(00002C12) IN CSECT(I7809) LENGTH(1)
1326	F00229	801 ADDRESS. HEX LOCATION(00002C68) IN CSECT(I7809) LENGTH(1)
1340	F00236	804 ADDRESS. HEX LOCATION(00002CEC) IN CSECT(I7809) LENGTH(1)
1358	F00246	807 ADDRESS. HEX LOCATION(00002D9E) IN CSECT(I7809) LENGTH(1)
1362	F00257	813 ADDRESS. HEX LOCATION(00002DC4) IN CSECT(I7809) LENGTH(1)
1370	F00277	822 ADDRESS. HEX LOCATION(00002E1C) IN CSECT(I7809) LENGTH(1)
1374	F00286	870 ADDRESS. HEX LOCATION(00002E40) IN CSECT(I7809) LENGTH(1)
1378	F00292	888 ADDRESS. HEX LOCATION(00002E64) IN CSECT(I7809) LENGTH(1)
1386	F00309	894 ADDRESS. HEX LOCATION(00002E8E) IN CSECT(I7809) LENGTH(1)
1392	F00330	918 ADDRESS. HEX LOCATION(00002ED2) IN CSECT(I7809) LENGTH(1)
1398	F00358	945 ADDRESS. HEX LOCATION(00002F16) IN CSECT(I7809) LENGTH(1)
1402	F00374	996 ADDRESS. HEX LOCATION(00002F1C) IN CSECT(I7809) LENGTH(1)
1410	F00386	1014 ADDRESS. HEX LOCATION(00002F7C) IN CSECT(I7809) LENGTH(1)
1414	F00398	1023 ADDRESS. HEX LOCATION(00002F82) IN CSECT(I7809) LENGTH(1)
1420	F00428	1047 ADDRESS. HEX LOCATION(00002FBE) IN CSECT(I7809) LENGTH(1)
1426	F00435	1092 ADDRESS. HEX LOCATION(00002FFA) IN CSECT(I7809) LENGTH(1)
1430	F00454	1107 ADDRESS. HEX LOCATION(0000301E) IN CSECT(I7809) LENGTH(1)
1436	F00458	1152 ADDRESS. HEX LOCATION(00003060) IN CSECT(I7809) LENGTH(1)
1444	F00466	1155 ADDRESS. HEX LOCATION(000030C0) IN CSECT(I7809) LENGTH(1)
1452	F00473	1170 ADDRESS. HEX LOCATION(00003118) IN CSECT(I7809) LENGTH(1)
1460	F00480	1185 ADDRESS. HEX LOCATION(00003170) IN CSECT(I7809) LENGTH(1)

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1466	F00486	1200 ADDRESS. HEX LOCATION(000031B0) IN CSECT(I7809) LENGTH(1)
1470	F00497	1215 ADDRESS. HEX LOCATION(000031B6) IN CSECT(I7809) LENGTH(1)
1474	F00503	1222 ADDRESS. HEX LOCATION(000031DA) IN CSECT(I7809) LENGTH(1)
1480	F00506	1233 ADDRESS. HEX LOCATION(0000321A) IN CSECT(I7809) LENGTH(1)
3324	HEBLK	1236 ADDRESS. HEX LOCATION(00003D48) IN CSECT(I7809) LENGTH(2)
1617	HTOE	3271 ABSOLUTE. HEX VALUE(0000001A)
2699	IDCBCE1	3272 ADDRESS. HEX LOCATION(00003946) IN CSECT(I7809) LENGTH(2)
2701	IDCBCE2	2665 2666 ADDRESS. HEX LOCATION(0000394A) IN CSECT(I7809) LENGTH(2)
2703	IDCBRAP	2671 2672 ADDRESS. HEX LOCATION(0000394E) IN CSECT(I7809) LENGTH(2)
2695	IDCB0	2659 2660 ADDRESS. HEX LOCATION(0000393E) IN CSECT(I7809) LENGTH(2)
2697	IDCB1	1744 2684 2685 ADDRESS. HEX LOCATION(00003942) IN CSECT(I7809) LENGTH(2)
1593	IDLE	1743 1876 2061 2225 2678 2679 ABSOLUTE. HEX VALUE(00000002)
1524	IN	1754 1894 2065 3021 ABSOLUTE. HEX VALUE(00000023)
3198	INTBL	1947 1951 3007 3019 3138 ADDRESS. HEX LOCATION(00003BA2) IN CSECT(I7809) LENGTH(2)
3095	INTER	3233 ADDRESS. HEX LOCATION(00003B0A) IN CSECT(I7809) LENGTH(2)
3104	INTES	3200 ADDRESS. HEX LOCATION(00003B22) IN CSECT(I7809) LENGTH(2)
3108	INTET	3099 ADDRESS. HEX LOCATION(00003B2A) IN CSECT(I7809) LENGTH(2)
3135	INTOK	3105 ADDRESS. HEX LOCATION(00003B2E) IN CSECT(I7809) LENGTH(2)
66	INTRNL	3199 ABSOLUTE. HEX VALUE(00000000)
3157	INTRX	687 768 ADDRESS. HEX LOCATION(00003B5E) IN CSECT(I7809) LENGTH(2)
3138	INTR1	3152 3155 ADDRESS. HEX LOCATION(00003B36) IN CSECT(I7809) LENGTH(2)
3143	INTR2	3103 3107 3109 ADDRESS. HEX LOCATION(00003B44) IN CSECT(I7809) LENGTH(1)
3151	INTR3	3140 ADDRESS. HEX LOCATION(00003B52) IN CSECT(I7809) LENGTH(2)
3189	IOBLK	3148 ADDRESS. HEX LOCATION(00003B96) IN CSECT(I7809) LENGTH(2)
3191	IODCB	1751 1891 2062 2127 3008 3238 ADDRESS. HEX LOCATION(00003P9A) IN CSECT(I7809) LENGTH(2)
3192	IOHOD	2126 2868 2871 2874 2886 2889 2892 2895 2903 2907 2911 2919 2923 2926 2930 2990 2996 3237 ADDRESS. HEX LOCATION(00003B9C) IN CSECT(I7809) LENGTH(2)
2694	IORST	2985 2991 ADDRESS. HEX LOCATION(0000393C) IN CSECT(I7809) LENGTH(2)
40	I7809	2226 CSECT. START(00002500) LENGTH(6222) ESDID(0)
2557	LGSEC	40 ADDRESS. HEX LOCATION(0000385A) IN CSECT(I7809) LENGTH(2)
3305	LINE1	2780 2782 2785 2792 ADDRESS. HEX LOCATION(00003C70) IN CSECT(I7809) LENGTH(40)
1544	LSTIO	3276 ADDRESS. HEX LOCATION(0000322C) IN CSECT(I7809) LENGTH(2)
1521	MI	2658 2664 2670 2677 2683 2994 3241 ABSOLUTE. HEX VALUE(00000020)
3279	MVBUF	3123 ADDRESS. HEX LOCATION(00003BFC) IN CSECT(I7809) LENGTH(2)
1533	NG	3283 3286 ABSOLUTE. HEX VALUE(0000002C)
1528	NI	3156 ABSOLUTE. HEX VALUE(00000027)
660	N00001	1902 3013 ADDRESS. HEX LOCATION(000026C0) IN CSECT(I7809) LENGTH(2)
672	N00002	318 1251 ADDRESS. HEX LOCATION(000026D2) IN CSECT(I7809) LENGTH(2)
681	N00003	321 ADDRESS. HEX LOCATION(000026E0) IN CSECT(I7809) LENGTH(2)
683	N00004	324 ADDRESS. HEX LOCATION(000026E2) IN CSECT(I7809) LENGTH(2)
689	N00005	327 673 ADDRESS. HEX LOCATION(000026EE) IN CSECT(I7809) LENGTH(2)
701	N00006	330 661 1254 ADDRESS. HEX LOCATION(00002700) IN CSECT(I7809) LENGTH(2)
713	N00007	333 ADDRESS. HEX LOCATION(00002712) IN CSECT(I7809) LENGTH(2)
725	N00008	336 ADDRESS. HEX LOCATION(00002724) IN CSECT(I7809) LENGTH(2)
728	N00009	339 ADDRESS. HEX LOCATION(00002728) IN CSECT(I7809) LENGTH(2)
731	N00010	342 ADDRESS. HEX LOCATION(0000272C) IN CSECT(I7809) LENGTH(2)
734	N00011	345 726 ADDRESS. HEX LOCATION(00002730) IN CSECT(I7809) LENGTH(2)
737	N00012	348 ADDRESS. HEX LOCATION(00002734) IN CSECT(I7809) LENGTH(2)
740	N00013	351 732 ADDRESS. HEX LOCATION(00002738) IN CSECT(I7809) LENGTH(2)
743	N00014	354 ADDRESS. HEX LOCATION(0000273C) IN CSECT(I7809) LENGTH(2)
746	N00015	357 738 ADDRESS. HEX LOCATION(00002740) IN CSECT(I7809) LENGTH(2)
758	N00016	360 714 ADDRESS. HEX LOCATION(00002752) IN CSECT(I7809) LENGTH(2)
761	N00017	363 ADDRESS. HEX LOCATION(00002756) IN CSECT(I7809) LENGTH(2)
764	N00018	366 747 ADDRESS. HEX LOCATION(0000275A) IN CSECT(I7809) LENGTH(2)
770	N00019	369 ADDRESS. HEX LOCATION(00002766) IN CSECT(I7809) LENGTH(2)
773	N00020	372 752 ADDRESS. HEX LOCATION(0000276A) IN CSECT(I7809) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
776	N00021	375 ADDRESS. HEX LOCATION(0000276E) IN CSECT(I7809) LENGTH(2)
779	N00022	378 ADDRESS. HEX LOCATION(00002772) IN CSECT(I7809) LENGTH(2)
782	N00023	381 ADDRESS. HEX LOCATION(00002776) IN CSECT(I7809) LENGTH(2)
785	N00024	384 777 1257 ADDRESS. HEX LOCATION(0000277A) IN CSECT(I7809) LENGTH(2)
788	N00025	387 ADDRESS. HEX LOCATION(0000277E) IN CSECT(I7809) LENGTH(2)
791	N00026	390 ADDRESS. HEX LOCATION(00002782) IN CSECT(I7809) LENGTH(2)
794	N00027	393 786 ADDRESS. HEX LOCATION(00002786) IN CSECT(I7809) LENGTH(2)
797	N00028	396 783 ADDRESS. HEX LOCATION(0000278A) IN CSECT(I7809) LENGTH(2)
800	N00029	399 ADDRESS. HEX LOCATION(0000278E) IN CSECT(I7809) LENGTH(2)
803	N00030	402 ADDRESS. HEX LOCATION(00002792) IN CSECT(I7809) LENGTH(2)
806	N00031	405 798 ADDRESS. HEX LOCATION(00002796) IN CSECT(I7809) LENGTH(2)
809	N00032	408 795 ADDRESS. HEX LOCATION(0000279A) IN CSECT(I7809) LENGTH(2)
812	N00033	411 774 ADDRESS. HEX LOCATION(0000279E) IN CSECT(I7809) LENGTH(2)
815	N00034	414 ADDRESS. HEX LOCATION(000027A2) IN CSECT(I7809) LENGTH(2)
818	N00035	417 810 ADDRESS. HEX LOCATION(000027A6) IN CSECT(I7809) LENGTH(2)
821	N00036	420 771 ADDRESS. HEX LOCATION(000027AA) IN CSECT(I7809) LENGTH(2)
824	N00037	423 ADDRESS. HEX LOCATION(000027AE) IN CSECT(I7809) LENGTH(2)
827	N00038	426 819 ADDRESS. HEX LOCATION(000027B2) IN CSECT(I7809) LENGTH(2)
839	N00039	429 702 ADDRESS. HEX LOCATION(000027C4) IN CSECT(I7809) LENGTH(2)
851	N00040	432 ADDRESS. HEX LOCATION(000027D6) IN CSECT(I7809) LENGTH(2)
863	N00041	435 ADDRESS. HEX LOCATION(000027E8) IN CSECT(I7809) LENGTH(2)
866	N00042	438 ADDRESS. HEX LOCATION(000027EC) IN CSECT(I7809) LENGTH(2)
869	N00043	441 852 ADDRESS. HEX LOCATION(000027F0) IN CSECT(I7809) LENGTH(2)
872	N00044	444 ADDRESS. HEX LOCATION(000027F4) IN CSECT(I7809) LENGTH(2)
875	N00045	447 867 ADDRESS. HEX LOCATION(000027F8) IN CSECT(I7809) LENGTH(2)
887	N00046	450 840 ADDRESS. HEX LOCATION(0000280A) IN CSECT(I7809) LENGTH(2)
890	N00047	453 ADDRESS. HEX LOCATION(0000280E) IN CSECT(I7809) LENGTH(2)
893	N00048	456 876 ADDRESS. HEX LOCATION(00002812) IN CSECT(I7809) LENGTH(2)
896	N00049	459 828 ADDRESS. HEX LOCATION(00002816) IN CSECT(I7809) LENGTH(2)
908	N00050	462 890 ADDRESS. HEX LOCATION(00002828) IN CSECT(I7809) LENGTH(2)
911	N00051	465 ADDRESS. HEX LOCATION(0000282C) IN CSECT(I7809) LENGTH(2)
914	N00052	468 ADDRESS. HEX LOCATION(00002830) IN CSECT(I7809) LENGTH(2)
917	N00053	471 909 ADDRESS. HEX LOCATION(00002834) IN CSECT(I7809) LENGTH(2)
920	N00054	474 ADDRESS. HEX LOCATION(00002838) IN CSECT(I7809) LENGTH(2)
923	N00055	477 915 ADDRESS. HEX LOCATION(0000283C) IN CSECT(I7809) LENGTH(2)
935	N00056	480 897 ADDRESS. HEX LOCATION(0000284E) IN CSECT(I7809) LENGTH(2)
938	N00057	483 ADDRESS. HEX LOCATION(00002852) IN CSECT(I7809) LENGTH(2)
941	N00058	486 ADDRESS. HEX LOCATION(00002856) IN CSECT(I7809) LENGTH(2)
944	N00059	489 936 ADDRESS. HEX LOCATION(0000285A) IN CSECT(I7809) LENGTH(2)
947	N00060	492 ADDRESS. HEX LOCATION(0000285E) IN CSECT(I7809) LENGTH(2)
950	N00061	495 942 ADDRESS. HEX LOCATION(00002862) IN CSECT(I7809) LENGTH(2)
962	N00062	498 924 ADDRESS. HEX LOCATION(00002874) IN CSECT(I7809) LENGTH(2)
974	N00063	501 ADDRESS. HEX LOCATION(00002886) IN CSECT(I7809) LENGTH(2)
986	N00064	504 ADDRESS. HEX LOCATION(00002898) IN CSECT(I7809) LENGTH(2)
989	N00065	507 ADDRESS. HEX LOCATION(0000289C) IN CSECT(I7809) LENGTH(2)
992	N00066	510 ADDRESS. HEX LOCATION(000028A0) IN CSECT(I7809) LENGTH(2)
995	N00067	513 ADDRESS. HEX LOCATION(000028A4) IN CSECT(I7809) LENGTH(2)
1001	N00068	516 990 ADDRESS. HEX LOCATION(000028B0) IN CSECT(I7809) LENGTH(2)
1004	N00069	519 987 ADDRESS. HEX LOCATION(000028B4) IN CSECT(I7809) LENGTH(2)
1007	N00070	522 ADDRESS. HEX LOCATION(000028B8) IN CSECT(I7809) LENGTH(2)
1010	N00071	525 1002 ADDRESS. HEX LOCATION(000028BC) IN CSECT(I7809) LENGTH(2)
1013	N00072	528 975 ADDRESS. HEX LOCATION(000028C0) IN CSECT(I7809) LENGTH(2)
1016	N00073	531 ADDRESS. HEX LOCATION(000028C4) IN CSECT(I7809) LENGTH(2)
1019	N00074	534 1011 ADDRESS. HEX LOCATION(000028C8) IN CSECT(I7809) LENGTH(2)
1022	N00075	537 963 ADDRESS. HEX LOCATION(000028CC) IN CSECT(I7809) LENGTH(2)
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DECLARED	NAME	ATTRIBUTES AND REFERENCES
1028	N00076	543 1020 ADDRESS. HEX LOCATION(000028D8) IN CSECT(I7809) LENGTH(2)
1031	N00077	546 951 ADDRESS. HEX LOCATION(000028DC) IN CSECT(I7809) LENGTH(2)
1043	N00078	549 ADDRESS. HEX LOCATION(000028E2) IN CSECT(I7809) LENGTH(2)
1046	N00079	552 ADDRESS. HEX LOCATION(000028F6) IN CSECT(I7809) LENGTH(2)
1049	N00080	555 1044 ADDRESS. HEX LOCATION(000028FA) IN CSECT(I7809) LENGTH(2)
1052	N00081	558 ADDRESS. HEX LOCATION(000028FE) IN CSECT(I7809) LENGTH(2)
1055	N00082	561 1050 ADDRESS. HEX LOCATION(00002902) IN CSECT(I7809) LENGTH(2)
1058	N00083	564 1032 ADDRESS. HEX LOCATION(00002906) IN CSECT(I7809) LENGTH(2)
1070	N00084	567 ADDRESS. HEX LOCATION(0000291C) IN CSECT(I7809) LENGTH(2)
1073	N00085	570 ADDRESS. HEX LOCATION(00002920) IN CSECT(I7809) LENGTH(2)
1076	N00086	573 1071 ADDRESS. HEX LOCATION(00002924) IN CSECT(I7809) LENGTH(2)
1079	N00087	576 1059 ADDRESS. HEX LOCATION(00002928) IN CSECT(I7809) LENGTH(2)
1091	N00088	579 ADDRESS. HEX LOCATION(0000293E) IN CSECT(I7809) LENGTH(2)
1094	N00089	582 1080 ADDRESS. HEX LOCATION(00002942) IN CSECT(I7809) LENGTH(2)
1106	N00090	585 ADDRESS. HEX LOCATION(00002958) IN CSECT(I7809) LENGTH(2)
1109	N00091	588 1095 ADDRESS. HEX LOCATION(0000295C) IN CSECT(I7809) LENGTH(2)
1121	N00092	591 ADDRESS. HEX LOCATION(0000296E) IN CSECT(I7809) LENGTH(2)
1133	N00093	594 ADDRESS. HEX LOCATION(00002980) IN CSECT(I7809) LENGTH(2)
1145	N00094	597 ADDRESS. HEX LOCATION(00002992) IN CSECT(I7809) LENGTH(2)
1148	N00095	600 ADDRESS. HEX LOCATION(00002996) IN CSECT(I7809) LENGTH(2)
1151	N00096	603 1146 ADDRESS. HEX LOCATION(0000299A) IN CSECT(I7809) LENGTH(2)
1154	N00097	606 1134 ADDRESS. HEX LOCATION(0000299E) IN CSECT(I7809) LENGTH(2)
1157	N00098	609 1122 ADDRESS. HEX LOCATION(000029A2) IN CSECT(I7809) LENGTH(2)
1169	N00099	612 ADDRESS. HEX LOCATION(000029B4) IN CSECT(I7809) LENGTH(2)
1172	N00100	615 1158 ADDRESS. HEX LOCATION(000029B8) IN CSECT(I7809) LENGTH(2)
1184	N00101	618 ADDRESS. HEX LOCATION(000029CA) IN CSECT(I7809) LENGTH(2)
1187	N00102	621 1173 ADDRESS. HEX LOCATION(000029CE) IN CSECT(I7809) LENGTH(2)
1199	N00103	624 ADDRESS. HEX LOCATION(000029E0) IN CSECT(I7809) LENGTH(2)
1202	N00104	627 1188 ADDRESS. HEX LOCATION(000029E4) IN CSECT(I7809) LENGTH(2)
1214	N00105	630 ADDRESS. HEX LOCATION(000029F6) IN CSECT(I7809) LENGTH(2)
1220	N00106	633 1203 ADDRESS. HEX LOCATION(00002A02) IN CSECT(I7809) LENGTH(2)
1223	N00107	636 ADDRESS. HEX LOCATION(00002A06) IN CSECT(I7809) LENGTH(2)
1226	N00108	639 ADDRESS. HEX LOCATION(00002A0A) IN CSECT(I7809) LENGTH(2)
1229	N00109	642 1224 ADDRESS. HEX LOCATION(00002A0E) IN CSECT(I7809) LENGTH(2)
1232	N00110	645 1221 ADDRESS. HEX LOCATION(00002A12) IN CSECT(I7809) LENGTH(2)
1235	N00111	648 1110 ADDRESS. HEX LOCATION(00002A16) IN CSECT(I7809) LENGTH(2)
61	OF	ABSOLUTE. HEX VALUE(00000202) 663 692 716 749 854 878 899 926 953
60	ON	1034 1061 1082 1097 1124 1136 1160 1175 1190 ABSOLUTE. HEX VALUE(00000200)
1486	OPTN1	704 830 842 1205 ADDRESS. HEX LOCATION(00003220) IN CSECT(I7809) LENGTH(2)
1509	OPTN3	1739 1872 2051 3097 3137 ADDRESS. HEX LOCATION(00003224) IN CSECT(I7809) LENGTH(2)
104	PARMAPA	3184 3232 ADDRESS. HEX LOCATION(0000196E) IN CSECT(I7809) LENGTH(1)
		670 679 699 711 723 756 837 849 861 885 906 933 960 972 984 1041 1068 1089 1104 1119 1131 1143 1167 1182 1197 1212
2558	PHYSC	ADDRESS. HEX LOCATION(0000385C) IN CSECT(I7809) LENGTH(2)
72	PTD	2787 2789 2794 ADDRESS. HEX LOCATION(00001800) IN CSECT(I7809) LENGTH(1)
		74 75 76 77 78 79 80 81 82 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
3319	PIDMSG10	ABSOLUTE. HEX VALUE(0000F1F0)
1603	PREP	3287 ABSOLUTE. HEX VALUE(0000000C)
2698	FDATA	2128 3242 ADDRESS. HEX LOCATION(00003944) IN CSECT(I7809) LENGTH(2)
2696	FDATA0	1782 1907 1920 1928 1942 2111 2245 2246 2247 2337 2345 2350 2356 2364 2377 2383 2390 ADDRESS. HEX LOCATION(00003940) IN CSECT(I7809) LENGTH(2)
2511	PDDCB	1803 ADDRESS. HEX LOCATION(0000380C) IN CSECT(I7809) LENGTH(2)
1599	RESET	2883 2886 ABSOLUTE. HEX VALUE(00000008)
1610	PICB	1752 1892 2063 ABSOLUTE. HEX VALUE(00000013)
2533	RKDCB	3296 ADDRESS. HEX LOCATION(0000382C) IN CSECT(I7809) LENGTH(2)
2402	PSAVE	2895 2900 2907 2908 ADDRESS. HEX LOCATION(00003778) IN CSECT(I7809) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
2443	RSDCB	2245 2248 ADDRESS. HEX LOCATION(000037AC) IN CSECT(I7809) LENGTH(2)
2791	PTT01	2874 2879 2911 2916 ADDRESS. HEX LOCATION(000039A4) IN CSECT(I7809) LENGTH(4)
1549	SCTID	2783 ADDRESS. HEX LOCATION(0000322E) IN CSECT(I7809) LENGTH(2)
2568	SCTST	2450 2462 2540 2736 2817 2876 2879 2897 2900 ADDRESS. HEX LOCATION(00003870) IN CSECT(I7809) LENGTH(2)
2683	SENS0	2732 2908 2913 2916 ADDRESS. HEX LOCATION(0000391C) IN CSECT(I7809) LENGTH(4)
2677	SENS1	1801 ADDRESS. HEX LOCATION(00003908) IN CSECT(I7809) LENGTH(4)
2401	SEN10	1780 1905 1918 1926 1940 2109 2243 2335 2343 2348 2354 2362 2375 2381 2388 ADDRESS. HEX LOCATION(00003776) IN CSECT(I7809) LENGTH(2)
2400	SEN11	2241 2247 ADDRESS. HEX LOCATION(00003774) IN CSECT(I7809) LENGTH(2)
2467	SKDCB	2242 2248 2250 ADDRESS. HEX LOCATION(000037CC) IN CSECT(I7809) LENGTH(2)
1601	START	1900 1901 2868 ABSOLUTE. HEX VALUE(0000000A)
2613	STATS	3011 ADDRESS. HEX LOCATION(000038CA) IN CSECT(I7809) LENGTH(2)
107	SUPSTAT	1763 1764 1774 1963 1964 2076 2077 2093 ADDRESS. HEX LOCATION(000019C4) IN CSECT(I7809) LENGTH(1)
2545	TIMEOUT	3290 ADDRESS. HEX LOCATION(00003840) IN CSECT(I7809) LENGTH(2)
1940	TI26C	1950 1953 ADDRESS. HEX LOCATION(00003428) IN CSECT(I7809) LENGTH(4)
2546	TONE	1946 ADDRESS. HEX LOCATION(00003844) IN CSECT(I7809) LENGTH(2)
1886	TT26	1953 ADDRESS. HEX LOCATION(0000337E) IN CSECT(I7809) LENGTH(6)
1891	TT261	1879 ADDRESS. HEX LOCATION(0000339C) IN CSECT(I7809) LENGTH(4)
2789	TT303	1885 ADDRESS. HEX LOCATION(0000399C) IN CSECT(I7809) LENGTH(6)
2795	TT304	2781 ADDRESS. HEX LOCATION(000039B4) IN CSECT(I7809) LENGTH(4)
2738	TT4Y	2779 2788 2790 ADDRESS. HEX LOCATION(0000396C) IN CSECT(I7809) LENGTH(2)
1750	TT70	2734 ADDRESS. HEX LOCATION(0000329E) IN CSECT(I7809) LENGTH(6)
1753	TT70A	1747 ADDRESS. HEX LOCATION(000032AA) IN CSECT(I7809) LENGTH(4)
1751	TT70B	1748 1750 ADDRESS. HEX LOCATION(000032A4) IN CSECT(I7809) LENGTH(4)
1754	TT70C	1749 ADDRESS. HEX LOCATION(000032AE) IN CSECT(I7809) LENGTH(2)
2380	TT73A	1755 ADDRESS. HEX LOCATION(00003740) IN CSECT(I7809) LENGTH(4)
2386	TT736	2235 2238 ADDRESS. HEX LOCATION(00003752) IN CSECT(I7809) LENGTH(2)
2237	TT76	2384 ADDRESS. HEX LOCATION(000035CC) IN CSECT(I7809) LENGTH(6)
2239	TT76A	2233 ADDRESS. HEX LOCATION(000035D8) IN CSECT(I7809) LENGTH(4)
103	TUINPT	2234 2236 2237 ADDRESS. HEX LOCATION(00001948) IN CSECT(I7809) LENGTH(1)
95	TUMSGWTR	2305 2307 2312 2314 2319 2321 ADDRESS. HEX LOCATION(000018BA) IN CSECT(I7809) LENGTH(1)
101	TURESUL	3292 ADDRESS. HEX LOCATION(000018C8) IN CSECT(I7809) LENGTH(1)
1573	TURTN	1756 1757 1758 1778 1895 1897 1898 1899 1978 2067 2068 2069 2097 2227 2228 2229 2230 ADDRESS. HEX LOCATION(0000325E) IN CSECT(I7809) LENGTH(2)
77	TUSTATUS	1737 1870 2049 2125 2130 2223 3297 ADDRESS. HEX LOCATION(00001818) IN CSECT(I7809) LENGTH(1)
78	TUWORK	3270 ADDRESS. HEX LOCATION(0000181A) IN CSECT(I7809) LENGTH(1)
1977	T2DDD	3274 3326 ADDRESS. HEX LOCATION(0000348A) IN CSECT(I7809) LENGTH(2)
2090	T23A	1975 ADDRESS. HEX LOCATION(00003526) IN CSECT(I7809) LENGTH(2)
2095	T23AA	2088 ADDRESS. HEX LOCATION(00003536) IN CSECT(I7809) LENGTH(2)
2081	T23SS	2106 2108 ADDRESS. HEX LOCATION(00003514) IN CSECT(I7809) LENGTH(2)
2060	T23T	2079 ADDRESS. HEX LOCATION(000034CE) IN CSECT(I7809) LENGTH(6)
2084	T23TT	2057 ADDRESS. HEX LOCATION(0000351A) IN CSECT(I7809) LENGTH(2)
2064	T23T1	2082 ADDRESS. HEX LOCATION(000034E0) IN CSECT(I7809) LENGTH(4)
2061	T23T2	2058 2060 ADDRESS. HEX LOCATION(000034D4) IN CSECT(I7809) LENGTH(6)
2115	T23U	2059 ADDRESS. HEX LOCATION(00003572) IN CSECT(I7809) LENGTH(4)
2087	T23UU	2094 2098 2112 ADDRESS. HEX LOCATION(00003520) IN CSECT(I7809) LENGTH(2)
2099	T23YY	2085 ADDRESS. HEX LOCATION(00003542) IN CSECT(I7809) LENGTH(4)
1968	T26AA	2071 ADDRESS. HEX LOCATION(00003478) IN CSECT(I7809) LENGTH(2)
1936	T26B	1966 ADDRESS. HEX LOCATION(0000341E) IN CSECT(I7809) LENGTH(2)
1971	T26BB	1934 ADDRESS. HEX LOCATION(0000347E) IN CSECT(I7809) LENGTH(2)
1939	T26C	1968 ADDRESS. HEX LOCATION(00003424) IN CSECT(I7809) LENGTH(4)
1974	T26CC	1882 1888 1937 ADDRESS. HEX LOCATION(00003484) IN CSECT(I7809) LENGTH(2)
1950	T26D	1972 ADDRESS. HEX LOCATION(00003440) IN CSECT(I7809) LENGTH(6)
1946	T26DD	1883 1889 1987 1992 ADDRESS. HEX LOCATION(00003438) IN CSECT(I7809) LENGTH(2)
1957	T26E	1944 ADDRESS. HEX LOCATION(00003456) IN CSECT(I7809) LENGTH(4)
1951	T26F	1948 1952 ADDRESS. HEX LOCATION(00003446) IN CSECT(I7809) LENGTH(2)

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1980	T26H	ADDRESS. HEX LOCATION(00003492) IN CSECT(I7809) LENGTH(4)
1988	T26K	1956 1960 1962 ADDRESS. HEX LOCATION(000034A0) IN CSECT(I7809) LENGTH(2)
1991	T26L	1985 ADDRESS. HEX LOCATION(000034A6) IN CSECT(I7809) LENGTH(2)
1986	T26M	1989 ADDRESS. HEX LOCATION(0000349C) IN CSECT(I7809) LENGTH(2)
1893	T26TC	1990 ADDRESS. HEX LOCATION(000033A2) IN CSECT(I7809) LENGTH(4)
1911	T262	1884 1890 ADDRESS. HEX LOCATION(000033DE) IN CSECT(I7809) LENGTH(2)
1914	T263	1909 ADDRESS. HEX LOCATION(000033E4) IN CSECT(I7809) LENGTH(2)
1917	T264	1912 ADDRESS. HEX LOCATION(000033EA) IN CSECT(I7809) LENGTH(4)
1983	T265	1880 1886 1915 ADDRESS. HEX LOCATION(00003496) IN CSECT(I7809) LENGTH(2)
1925	T266	1924 ADDRESS. HEX LOCATION(00003402) IN CSECT(I7809) LENGTH(4)
1918	T267	1881 1887 1922 ADDRESS. HEX LOCATION(000033EE) IN CSECT(I7809) LENGTH(4)
1926	T268	1923 ADDRESS. HEX LOCATION(00003406) IN CSECT(I7809) LENGTH(4)
1933	T269	1931 ADDRESS. HEX LOCATION(00003418) IN CSECT(I7809) LENGTH(2)
1582	T3C02	1930 ADDRESS. HEX LOCATION(00003266) IN CSECT(I7809) LENGTH(6)
1808	T70A	703 715 748 853 877 898 925 952 964 976 1060 1081 1096 1123 1135 1159 1174 1189 1204 ADDRESS. HEX LOCATION(00003338) IN CSECT(I7809) LENGTH(4)
1780	T70B	1779 1805 ADDRESS. HEX LOCATION(000032FA) IN CSECT(I7809) LENGTH(4)
1768	T701	1775 ADDRESS. HEX LOCATION(000032DA) IN CSECT(I7809) LENGTH(2)
1771	T702	1766 ADDRESS. HEX LOCATION(000032E0) IN CSECT(I7809) LENGTH(2)
1786	T703	1769 ADDRESS. HEX LOCATION(0000330A) IN CSECT(I7809) LENGTH(2)
1789	T704	1784 ADDRESS. HEX LOCATION(00003310) IN CSECT(I7809) LENGTH(2)
1792	T705	1787 ADDRESS. HEX LOCATION(00003316) IN CSECT(I7809) LENGTH(2)
1795	T706	1790 ADDRESS. HEX LOCATION(0000331C) IN CSECT(I7809) LENGTH(2)
1798	T708	1793 ADDRESS. HEX LOCATION(00003322) IN CSECT(I7809) LENGTH(2)
1801	T709	1796 ADDRESS. HEX LOCATION(00003328) IN CSECT(I7809) LENGTH(4)
2109	T710	1799 ADDRESS. HEX LOCATION(00003562) IN CSECT(I7809) LENGTH(4)
2130	T72A	2073 ADDRESS. HEX LOCATION(00003588) IN CSECT(I7809) LENGTH(4)
2131	T72B	675 ADDRESS. HEX LOCATION(0000358C) IN CSECT(I7809) LENGTH(4)
2065	T723	2129 ADDRESS. HEX LOCATION(000034E4) IN CSECT(I7809) LENGTH(2)
1894	T726	2066 ADDRESS. HEX LOCATION(000033A6) IN CSECT(I7809) LENGTH(2)
2375	T731Z	1895 ADDRESS. HEX LOCATION(00003732) IN CSECT(I7809) LENGTH(4)
2396	T732	2369 2379 ADDRESS. HEX LOCATION(0000376E) IN CSECT(I7809) LENGTH(2)
2381	T733Z	2385 2392 ADDRESS. HEX LOCATION(00003744) IN CSECT(I7809) LENGTH(4)
2388	T734	2387 ADDRESS. HEX LOCATION(00003756) IN CSECT(I7809) LENGTH(4)
2272	T76B	2394 ADDRESS. HEX LOCATION(00003638) IN CSECT(I7809) LENGTH(2)
2278	T76C	2266 2270 ADDRESS. HEX LOCATION(00003644) IN CSECT(I7809) LENGTH(2)
2285	T76E	2274 2276 ADDRESS. HEX LOCATION(00003652) IN CSECT(I7809) LENGTH(2)
2292	T76G	2279 2283 ADDRESS. HEX LOCATION(00003660) IN CSECT(I7809) LENGTH(2)
2305	T76I	2286 2290 ADDRESS. HEX LOCATION(0000366E) IN CSECT(I7809) LENGTH(6)
2332	T76J	2293 2297 ADDRESS. HEX LOCATION(000036BA) IN CSECT(I7809) LENGTH(2)
2331	T76JJ	2329 ADDRESS. HEX LOCATION(000036B6) IN CSECT(I7809) LENGTH(4)
2325	T76K	2334 ADDRESS. HEX LOCATION(000036AE) IN CSECT(I7809) LENGTH(2)
2319	T76M	2320 ADDRESS. HEX LOCATION(0000369A) IN CSECT(I7809) LENGTH(6)
2311	T76O	2315 2317 ADDRESS. HEX LOCATION(00003682) IN CSECT(I7809) LENGTH(2)
2271	T76OA	2306 ADDRESS. HEX LOCATION(00003636) IN CSECT(I7809) LENGTH(2)
2284	T76OD	2268 ADDRESS. HEX LOCATION(00003650) IN CSECT(I7809) LENGTH(2)
2291	T76OF	2281 ADDRESS. HEX LOCATION(0000365E) IN CSECT(I7809) LENGTH(2)
2298	T76OH	2288 ADDRESS. HEX LOCATION(0000366C) IN CSECT(I7809) LENGTH(2)
2335	T76OK	2295 ADDRESS. HEX LOCATION(000036C0) IN CSECT(I7809) LENGTH(4)
2343	T76OL	2333 2339 ADDRESS. HEX LOCATION(000036D8) IN CSECT(I7809) LENGTH(4)
2362	T76OM	2347 ADDRESS. HEX LOCATION(00003714) IN CSECT(I7809) LENGTH(4)
2368	T76OP	2366 ADDRESS. HEX LOCATION(00003724) IN CSECT(I7809) LENGTH(6)
2370	T76OQ	2360 ADDRESS. HEX LOCATION(0000372C) IN CSECT(I7809) LENGTH(2)
2354	T76OS	2341 ADDRESS. HEX LOCATION(000036FC) IN CSECT(I7809) LENGTH(4)
2353	T76OSS	2358 ADDRESS. HEX LOCATION(000036F6) IN CSECT(I7809) LENGTH(6)
2257	T76O5	2367 ADDRESS. HEX LOCATION(0000361A) IN CSECT(I7809) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
2312	T761	2254 ADDRESS. HEX LOCATION(00003684) IN CSECT(I7809) LENGTH(6)
2318	T762	2308 2310 ADDRESS. HEX LOCATION(00003698) IN CSECT(I7809) LENGTH(2)
2328	T763	2313 ADDRESS. HEX LOCATION(000036B0) IN CSECT(I7809) LENGTH(2)
2243	T764	2322 2324 ADDRESS. HEX LOCATION(000035EC) IN CSECT(I7809) LENGTH(4)
2258	T766	2249 ADDRESS. HEX LOCATION(0000361C) IN CSECT(I7809) LENGTH(2)
2264	T767	2252 2256 ADDRESS. HEX LOCATION(00003628) IN CSECT(I7809) LENGTH(2)
2265	T769	2261 ADDRESS. HEX LOCATION(0000362A) IN CSECT(I7809) LENGTH(2)
2049	T7823	2259 2263 ADDRESS. HEX LOCATION(000034AA) IN CSECT(I7809) LENGTH(4)
1870	T7826	829 ADDRESS. HEX LOCATION(0000333C) IN CSECT(I7809) LENGTH(4)
1737	T7870	1111 ADDRESS. HEX LOCATION(0000326E) IN CSECT(I7809) LENGTH(4)
2125	T7872	662 691 841 ADDRESS. HEX LOCATION(00003576) IN CSECT(I7809) LENGTH(4)
2223	T7876	674 ADDRESS. HEX LOCATION(00003590) IN CSECT(I7809) LENGTH(4)
2500	VRDCB	1033 ADDRESS. HEX LOCATION(000037FC) IN CSECT(I7809) LENGTH(2)
2522	WKDCB	2889 ADDRESS. HEX LOCATION(0000381C) IN CSECT(I7809) LENGTH(2)
2489	WRDCB	2903 2904 2919 2920 ADDRESS. HEX LOCATION(000037EC) IN CSECT(I7809) LENGTH(2)
2561	WRSID	2892 ADDRESS. HEX LOCATION(00003862) IN CSECT(I7809) LENGTH(2)
2433	WSDCB	2440 2529 2737 2818 2920 2924 ADDRESS. HEX LOCATION(0000379C) IN CSECT(I7809) LENGTH(2)
2565	WSIDT	2923 2924 2926 2927 ADDRESS. HEX LOCATION(0000386A) IN CSECT(I7809) LENGTH(2)
1525	XE	2733 2904 2927 ABSOLUTE. HEX VALUE(00000024)
1523	XI	3104 3166 ABSOLUTE. HEX VALUE(00000022)
2985	XIO	3010 3151 ADDRESS. HEX LOCATION(00003A98) IN CSECT(I7809) LENGTH(4)
3166	XIOCK	2869 2872 2880 2887 2890 2893 2901 2905 2909 ADDRESS. HEX LOCATION(00003B60) IN CSECT(I7809) LENGTH(2)
3173	XIOCO	1957 3020 ADDRESS. HEX LOCATION(00003B72) IN CSECT(I7809) LENGTH(2)
2990	XIOCS	3171 ADDRESS. HEX LOCATION(00003AA2) IN CSECT(I7809) LENGTH(6)
3175	XIOCV	1759 2101 3182 ADDRESS. HEX LOCATION(00003B76) IN CSECT(I7809) LENGTH(2)
3184	XIOCX	3169 ADDRESS. HEX LOCATION(00003B90) IN CSECT(I7809) LENGTH(4)
3059	XIOER	3176 ADDRESS. HEX LOCATION(00003AFE) IN CSECT(I7809) LENGTH(2)
2994	XIO1	3190 ADDRESS. HEX LOCATION(00003AB2) IN CSECT(I7809) LENGTH(4)
3007	XIO2	2986 ADDRESS. HEX LOCATION(00003AD8) IN CSECT(I7809) LENGTH(2)
3019	XIO8	2993 ADDRESS. HEX LOCATION(00003AEC) IN CSECT(I7809) LENGTH(2)
65	XTRNL	3024 ABSOLUTE. HEX VALUE(00000001)
2543	ZERO0	999 1026 1218 1239 ADDRESS. HEX LOCATION(0000383C) IN CSECT(I7809) LENGTH(2)
		2780

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