

```
3 COPY LOG4850 ** MAP EC HISTORY **
4 *****
5 *
6 * ** PREREQUISITES **
7 *
8 * NONE
9 *
10 *****
11 *
12 * ** MODIFICATIONS **
13 *
14 * MODIFICATION'S MADE TO CORRECT PROBLEMS ENCOUNTERED DURING TESTING *
15 *
16 *****
17 *
18 * ** REA'S INCORPORATED **
19 *
20 * NONE
21 *
22 *****
23 *
24 * ** SPECIAL INSTRUCTIONS **
25 *
26 * NONE
27 *
28 *****
29 *
30 * ** E. C. HISTORY **
31 *
32 * DATE 01OCT76 DATE 15MAR77 DATE 10JUN77 DATE 22JUL77
33 * E.C. 578468 E.C. 578714 E.C. 578625 E.C. 578757
34 *
35 *****
37 I4850 START X'2500' START ADDRESS OF ALL 'I' TYPE PROG
38 @QUES EQU X'0100' EQUATED VALUE FOR MDI STATEMENT
39 @FIXT EQU X'0101' EQUATED VALUE FOR MDI STATEMENT
40 @STCF EQU X'0102' EQUATED VALUE FOR MDI STATEMENT
41 @GOTO EQU X'0200' EQUATED VALUE FOR MDI STATEMENT
42 @CALL EQU X'0201' EQUATED VALUE FOR MDI STATEMENT
43 @INPT EQU X'0300' EQUATED VALUE FOR MDI STATEMENT
44 @QUXX EQU X'0400' EQUATED VALUE FOR MDI STATEMENT
45 @TUXX EQU X'0500' EQUATED VALUE FOR MDI STATEMENT
46 @NVLD EQU X'0600' EQUATED VALUE FOR MDI STATEMENT
47 EQ EQU X'0000' EQUATE FOR EQUAL
48 NE EQU X'0004' EQUATE FOR NOT EQUAL
49 HI EQU X'0008' EQUATE FOR HIGH
50 NH EQU X'000C' EQUATE FOR NOT HIGH
51 LO EQU X'0010' EQUATE FOR LOW
52 NL EQU X'0014' EQUATE FOR NOT LOW
53 LT EQU X'0018' EQUATE FOR LESS THAN
54 LE EQU X'000C' EQUATE FOR LESS THAN OR EQUAL TO
55 GT EQU X'0008' EQUATE FOR GREATER THAN
56 GE EQU X'0014' EQUATE FOR GREATER THAN OR EQUAL TO
57 CN EQU X'0200' EQUATE FOR ON
58 OF EQU X'0202' EQUATE FOR OFF
59 MX EQU X'0204' EQUATE FOR MIXED
60 EBC EQU X'0000' EQUATE FOR EBCDIC DATA TRANSFER
61 HEX EQU X'0001' EQUATE FOR HEX DATA TRANSFER
62 XTRNL EQU X'0001' EQUATE FOR EXTERNAL REFERENCE
63 INTRNL EQU X'0000' EQUATE FOR INTERNAL REFERENCE
64 PARM EQU X'0000' EQUATE FOR PARAMETER
65 DA EQU X'0001' EQUATE INDICATING PARAMETER
66 UA EQU X'0002' EQUATE FOR UNIT ADDRESS
67 DUMMY EQU X'0000' DUMMY EQUATE
69 PID EQU *-X'0000' ADDRESS OF MDI HEADER
70 PTYPT EQU *-X'22CE' ADDRESS OF PROCESSOR TYPE FIELD
71 STEPNUM EQU PID+X'000C' ADDRESS OF DECIMAL STEP NUMBER
72 OPWD1 EQU PID+X'000E' ADDRESS OF OPTION WORD ONE
73 CPWD2 EQU PID+X'0010' ADDRESS OF OPTION WORD TWO
74 TUSTATUS EQU PID+X'0018' ADDRESS OF TU STATUS WORD
75 TUNWORK EQU PID+X'001A' ADDRESS OF TU WORK AREA
76 TUPARM1 EQU PID+X'009A' ADDRESS OF PARM 1 POINTER
77 TUPARM2 EQU PID+X'009C' ADDRESS OF PARM 2 POINTER
78 TUPARM3 EQU PID+X'009E' ADDRESS OF PARM 3 POINTER
79 TUPARM4 EQU PID+X'00A0' ADDRESS OF PARM 4 POINTER
80 TUPARM5 EQU PID+X'00A2' ADDRESS OF PARM 5 POINTER
81 TUPARM6 EQU PID+X'00A4' ADDRESS OF PARM 6 POINTER
82 TUPARM7 EQU PID+X'00A6' ADDRESS OF PARM 7 POINTER
83 TUPARM8 EQU PID+X'00A8' ADDRESS OF PARM 8 POINTER
84 TUPARM9 EQU PID+X'00AA' ADDRESS OF PARM 9 POINTER
85 TUPARM10 EQU PID+X'00AC' ADDRESS OF PARM 10 POINTER
86 TUPARM11 EQU PID+X'00AE' ADDRESS OF PARM 11 POINTER
87 TUPARM12 EQU PID+X'00B0' ADDRESS OF PARM 12 POINTER
88 TUPARM13 EQU PID+X'00B2' ADDRESS OF PARM 13 POINTER
89 TUPARM14 EQU PID+X'00B4' ADDRESS OF PARM 14 POINTER
90 TUPARM15 EQU PID+X'00B6' ADDRESS OF PARM 15 POINTER
91 TUPARM16 EQU PID+X'00B8' ADDRESS OF PARM 16 POINTER
92 TUMSGWTR EQU PID+X'00BA' ADDRESS OF -> TO COMMON MSG WRITER
93 TUA EQU PID+X'00BE' ADDRESS OF UNIT ADDRESS IN EBC
94 TUDA EQU PID+X'00C0' ADDRESS OF DEVICE ADDRESS IN EBC
95 TUBUFF EQU PID+X'00C2' ADDRESS OF LAST USED WORD IN MAP
96 TULAST EQU PID+X'00C4' ADDRESS OF LAST ADDRESSABLE WORD
97 TURESULN EQU PID+X'00C6' ADDRESS OF LENGTH OF TU RESULTS
98 TURESUL EQU PID+X'00C8' ADDRESS OF TU RESULTS FIELD
99 MAPNAME EQU PID+X'00FC' ADDRESS OF MAP NAME FIELD IN HEX
100 TUNPT EQU PID+X'0148' ADDRESS OF SINPT DATA
101 PARMARA EQU PID+X'016E' ADDRESS OF SINPT INPUT AREA
102 @DCADD1 EQU PID+X'01B8' MDI POINTER
103 @DCADD2 EQU PID+X'01BA' MDI POINTER
104 SUPSTAT EQU PID+X'01C4' ADDRESS OF MDI STATUS
105 DEVADD EQU PID+X'01D0' ADDRESS OF DEVICE ADDRESS TABLE 0
106 DEVADD1 EQU PID+X'01DA' ADDRESS OF DEVICE ADDRESS TABLE 1
107 DEVADD2 EQU PID+X'01E4' ADDRESS OF DEVICE ADDRESS TABLE 2
108 DEVADD3 EQU PID+X'01EE' ADDRESS OF DEVICE ADDRESS TABLE 3
109 DEVADD4 EQU PID+X'01F8' ADDRESS OF DEVICE ADDRESS TABLE 4
110 DEVADD5 EQU PID+X'0202' ADDRESS OF DEVICE ADDRESS TABLE 5
111 DEVADD6 EQU PID+X'020C' ADDRESS OF DEVICE ADDRESS TABLE 6
112 DEVADD7 EQU PID+X'0216' ADDRESS OF DEVICE ADDRESS TABLE 7
113 PRINT OFF
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198 DC A(ENTPT) POINT TO MAP ENTRY POINT TABLE
199 *****
200 *****
201 *****
202 ** THE FOLLOWING TABLES ARE USED BY THE MDI SUPERVISOR (D3C00)
203 ** TO LOCATE THE CORRECT RULE TO INVOKE TO OBTAIN THE PROPER
204 ** PARAMETERS TO PASS TO THE TU'S AND TO PASS TO THE OPERATOR
205 ** THE INDICATED MESSAGE(S). THERE ARE FOUR TABLES USED FOR THIS
206 ** PURPOSE THEY ARE:
207 **
208 ** STEP AND RULE ADDRESS TABLE
209 ** THIS TABLE GIVES THE ADDRESS OF THE RULE TO INVOKE AND
210 ** THE ASSOCIATED STEP DECIMAL STEP NUMBER OF THAT RULE.
211 ** ENTRIES ARE AS FOLLOWS
212 ** A) AN ADDRESS OF THE RULE DC START AREA
213 ** B) THE STEP NUMBER IN DECIMAL
214 ** C) AN EQUATE FOR THE STEP NUMBER
215 **
216 ** RULE INFORMATION TABLE
217 ** THIS TABLE CONTAINS THE REQUIRED INFORMATION TO EXECUTE
218 ** THE APPROPRIATE RULE UNDER MDI. EACH RULE HAS ITS OWN
219 ** UNIQUELY DEFINED AREA INDICATED BELOW. END OF TABLE IS
220 ** INDICATED WITH A X'0000' FOR THE RULE EQUATE.
221 **
222 ** $QUES
223 ** A) RULE EQUATE X'0100'
224 ** B) ADDRESS OF THE YES LEG RULE
225 **
226 ** $FIXT
227 ** A) RULE EQUATE X'0101'
228 ** B) ADDRESS OF MESSAGE TO PRINT
229 **
230 ** $STOP
231 ** A) RULE EQUATE X'0102'
232 ** B) ADDRESS OF MESSAGE
233 **
234 ** $GOTO
235 ** A) RULE EQUATE X'0200'
236 ** B) ADDRESS OF MESSAGE
237 ** C) NAME OF MAP TO GO TO
238 ** D) ENTRY POINT WITHIN GO TO MAP TO USE
239 ** E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
240 **
241 ** $CALL
242 ** A) RULE EQUATE X'0201'
243 ** B) ADDRESS OF MESSAGE
244 ** C) NAME OF MAP TO CALL
245 ** D) ENTRY POINT WITHIN CALLED MAP TO USE
246 ** E) INDICATOR FOR EXTERNAL OR INTERNAL REFERENCE
247 **
248 ** $INPT
249 ** A) RULE EQUATE X'0300'
250 ** B) INPUT TYPE (EBCDIC OR HEX)
251 ** C) ADDRESS OF YES LEG RULE
252 ** D) DESTINATION LOCATION OF INPUT DATA
253 ** E) LENGTH OF INPUT DATA
254 ** F) LOWER LIMIT OF GOOD DATA
255 ** G) HIGHER LIMIT OF GOOD DATA
256 **
257 ** $QUXX
258 ** A) RULE EQUATE X'0400'
259 ** B) ADDRESS OF YES LEG RULE
260 ** C) TU BRANCH TO ADDRESS (INITIAL)
261 ** D) TU BRANCH TO ADDRESS (SECONDARY)
262 ** E) LENGTH OF PARAMETER IN BYTES
263 ** F) PARAMETER TO PASS TO TU
264 ** G) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
265 **
266 ** $TUXX
267 ** A) RULE EQUATE X'0500'
268 ** B) ADDRESS OF YES LEG RULE
269 ** C) TU BRANCH TO ADDRESS
270 ** D) TYPE OF COMPARE TO MAKE ON RESULTS
271 ** E) LENGTH OF COMPARED RESULTS
272 ** F) MASK FIELD FOR CCMFARE
273 ** G) LENGTH OF PARAMETER IN BYTES
274 ** H) PARAMETER TO PASS TO THE TU
275 ** I) STORE ADDRESS FOR FIRST 8 WORDS OF PARAMETER
276 **
277 ** $NVLD
278 ** A) RULE EQUATE X'0600'
279 **
280 ** ENTRY POINT TABLE
281 ** THIS TABLE CONTAINS THE ENTRY POINTS WITHIN THE MAP THAT
282 ** THE MAP CAN BE ENTERED FROM THESE ENTRY POINTS ARE
283 ** REFERENCED BY NAME AND ADDRESS. ENTRIES ARE AS FOLLOWS:
284 **
285 ** A) NAME OF ENTRY POINT
286 ** B) ADDRESS OF ENTRY POINT RULE TABLE
287 **
288 ** THE ENTRY POINT TABLE END IS INDICATED BY A X'0000'
289 **
290 ** MESSAGE TABLE
291 ** THIS TABLE CONTAINS THE MESSAGE PASSED TO THE OPERATOR
292 ** VIA THE MDI SUPERVISOR. THE TABLE IS AS FOLLOWS:
293 **
294 ** A) EQUATE FOR START OF MESSAGE BLOCK
295 ** B) NUMBER OF LINES OF MESSAGE
296 ** C) LENGTH OF FOLLOWING LINE
297 ** D) FIRST LINE OF MESSAGE
298 ** E) LENGTH OF FOLLOWING LINE
299 ** F) SECOND LINE OF MESSAGE
300 ** G) ETC.
301 **
302 **
303 **
304 *****
305 *****
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LOCTR OBJECT TEXT      STMT SOURCE STATEMENT      COPYRIGHT IBM CORP 1976
308 *****
309 *****
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314 *****
002502 2558          315 DC AL2(N00001)
002504 0001          316 DC XL2'0001'
000001          317 EQU N00001 EQU 0001
002506 256A          318 DC AL2(N00002)
002508 0002          319 DC XL2'0002'
000002          320 EQU N00002 EQU 0002
00250A 256C          321 DC AL2(N00003)
00250C 0003          322 DC XL2'0003'
000003          323 EQU N00003 EQU 0003
00250E 257E          324 DC AL2(N00004)
002510 0004          325 DC XL2'0004'
000004          326 EQU N00004 EQU 0004
002512 2582          327 DC AL2(N00005)
002514 0005          328 DC XL2'0005'
000005          329 EQU N00005 EQU 0005
002516 2586          330 DC AL2(N00006)
002518 0006          331 DC XL2'0006'
000006          332 EQU N00006 EQU 0006
00251A 258A          333 DC AL2(N00007)
00251C 0007          334 DC XL2'0007'
000007          335 EQU N00007 EQU 0007
00251E 259C          336 DC AL2(N00008)
002520 0008          337 DC XL2'0008'
000008          338 EQU N00008 EQU 0008
002522 25A0          339 DC AL2(N00009)
002524 0009          340 DC XL2'0009'
000009          341 EQU N00009 EQU 0009
002526 25A4          342 DC AL2(N00010)
002528 0010          343 DC XL2'0010'
000010          344 EQU N00010 EQU 0010
00252A 25A8          345 DC AL2(N00011)
00252C 0011          346 DC XL2'0011'
000011          347 EQU N00011 EQU 0011
00252E 25AC          348 DC AL2(N00012)
002530 0012          349 DC XL2'0012'
000012          350 EQU N00012 EQU 0012
002532 25B0          351 DC AL2(N00013)
002534 0013          352 DC XL2'0013'
000013          353 EQU N00013 EQU 0013
002536 25B4          354 DC AL2(N00014)
002538 0014          355 DC XL2'0014'
000014          356 EQU N00014 EQU 0014
00253A 25B8          357 DC AL2(N00015)
00253C 0015          358 DC XL2'0015'
000015          359 EQU N00015 EQU 0015
00253E 25BC          360 DC AL2(N00016)
002540 0016          361 DC XL2'0016'
000016          362 EQU N00016 EQU 0016
002542 25C0          363 DC AL2(N00017)
002544 0017          364 DC XL2'0017'
000017          365 EQU N00017 EQU 0017
002546 25D2          366 DC AL2(N00018)
002548 0018          367 DC XL2'0018'
000018          368 EQU N00018 EQU 0018
00254A 25D6          369 DC AL2(N00019)
00254C 0019          370 DC XL2'0019'
000019          371 EQU N00019 EQU 0019
00254E 25DA          372 DC AL2(N00020)
002550 0020          373 DC XL2'0020'
000020          374 EQU N00020 EQU 0020
002552 25DE          375 DC AL2(N00021)
002554 0021          376 DC XL2'0021'
000021          377 EQU N00021 EQU 0021
002556 0000          378 DC AL2(DUMMY)
379 *****
380 *****
381 **
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002558 0500          387 DC A(@TUX)
00255A 256C          388 DC AL2(N00003)
00255C 2902          389 DC A(T4852)
00255E 0000          390 DC AL2(E0)
002560 0001          391 DC AL2(01)
002562 00          392 DC X'00'
002563 00          393 ALIGN WORD
002564 0002          394 DC AL2(2)
002566 F4C3          395 DC C'4C'
002568 196E          396 ALIGN WORD
00256A 0600          397 DC AL2(PARMARA)
00256C 0400          398 SNVLD FT=(F00051)
00256E 2582          399 DC A(@NVLD)
002570 2956          400 $QUXX T4855,PLNG=5,PARM=00/00,QT=(Q00071),YES=N00005, X
002572 0000          401 DC A(@QJXX)
002574 0005          402 DC AL2(N00005)
002576 F0F061F0F0      403 DC A(T4855)
002578 00          404 DC AL2(DUMMY)
00257C 196E          405 DC AL2(5)
00257E 0161          406 DC C'00/00'
002580 2612          407 ALIGN WORD
002582 0100          408 DC AL2(PARMARA)
002584 256A          409 $FIXT FT=(F00075),CT=(C00020)
002586 0101          410 DC A(@FIXT)
002588 265A          411 DC A(F00075)
00258A 0400          412 $QUES QT=(Q00080),YES=N00007,CT=(C00019)
00258C 25C0          413 DC A(@QUES)
00258E 0000          414 DC AL2(N00007)
002592 0005          415 $FIXT FT=(F00084),CT=(C00020)
002594 0000          416 DC A(@FIXT)
002596 0000          417 DC A(F00084)
002598 0000          418 $QUXX T4855,PLNG=5,PARM=11/00,QT=(Q00095),YES=N00017, X
00259A 25C0          419 DC A(@QUXX)
00259C 0000          420 DC AL2(N00017)
00259E 0000          421 DC A(T4855)
002592 0005          422 DC AL2(DUMMY)
002594 0005          423 DC AL2(5)

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LOCTR OBJECT TEXT      STMT SOURCE STATEMENT      COPYRIGHT IBM CORP 1976
002594 F1F161F0F0      424+ DC C'11/00'
002599 00          425+ ALIGN WORD
00259A 196E          426+ DC AL2(PARMARA)
00259C 0100          427 N00008 $QUES QT=(Q0101),YES=N00014,CT=(C00019)
00259E 25B4          428+ N00008 DC A(@QUES)
0025A0 0100          429+ DC AL2(N00014)
0025A2 25A8          430 N00009 $QUES QT=(Q00105),YES=N00011,CT=(C00019)
0025A4 0101          431+ N00009 DC A(@QUES)
0025A6 26A2          432+ DC AL2(N00011)
0025A8 0100          433 N00010 $FIXT FT=(F00110),CT=(C00020)
0025AA 25B0          434+ N00010 DC A(@FIXT)
0025AC 0101          435+ DC A(F00110)
0025AE 26FE          436 N00011 $QUES QT=(Q00117),YES=N00013,CT=(C00115)
0025B0 0101          437+ N00011 DC A(@QUES)
0025B2 2726          438+ DC AL2(N00013)
0025B4 0100          439 N00012 $FIXT FT=(F00119),CT=(C00020)
0025B6 25BC          440+ N00012 DC A(@FIXT)
0025B8 0101          441+ DC A(F00119)
0025BA 276C          442 N00013 $FIXT FT=(F00123),CT=(C00020)
0025BC 0101          443+ N00013 DC A(@FIXT)
0025BE 27C8          444+ DC A(F00123)
0025C0 0400          445 N00014 $QUES QT=(Q00128),YES=N00016,CT=(C00019)
0025C2 25DE          446+ N00014 DC A(@QUES)
0025C4 29EC          447+ DC AL2(N00016)
0025C6 0000          448 N00015 $FIXT FT=(F00133),CT=(C0002Q)
0025C8 0005          449+ N00015 DC A(@FIXT)
0025CA F0F061F0F0      450+ DC A(F00133)
0025CC 00          451 N00016 $FIXT FT=(F00138),CT=(C00020)
0025CE 196E          452+ N00016 DC A(@FIXT)
0025D0 0100          453+ DC A(F00138)
0025D2 25DA          454 N00017 $QUXX T4856,PLNG=5,PARM=00/00,QT=(Q00151),YES=N00021, X
0025D4 25DA          455+ N00017 DC A(@QUXX)
0025D6 0101          456+ DC AL2(N00021)
0025D8 2806          457+ DC A(T4856)
0025DA 0101          458+ DC AL2(DUMMY)
0025DC 2862          459+ DC AL2(5)
0025DE 0101          460+ DC C'00/00'
0025E0 28A0          461+ ALIGN WORD
0025E2 0000          462+ DC AL2(PARMARA)
0025E4 C140          463 N00018 $QUES QT=(Q00154),YES=N00020,CT=(C00019)
0025E6 2558          464+ N00018 DC A(@QUES)
0025E8 0000          465+ DC AL2(N00020)
0025EA 0001          466 N00019 $FIXT FT=(F00159),CT=(C00020)
0025EC 0024          467+ N00019 DC A(@FIXT)
0025EE 6060D5D6606040C9E 468+ DC A(F00159)
0025F0 0002          469 N00020 $FIXT FT=(F00164),CT=(C00020)
0025F2 002A          470+ N00020 DC A(@FIXT)
0025F4 C3C8C5C3D240C3C1C 502 DC A(F00164)
0025F6 0018          471+ DC A(F00169)
0025F8 E3C8C540C4D9C9E5C 503 DC A(@FIXT)
0025FA 0002          472+ N00021 DC A(F00169)
0025FC 002A          473+ N00021 DC A(@FIXT)
0025FE C3C8C5C3D240C3C1C 508 DC A(F00169)
002600 0018          474+ DC A(F00169)
002602 E3C8C540C4D9C9E5C 509 DC AL2(DUMMY)
002604 0002          475+ EQU *
002606 002A          476 ENTPT
002608 C3C8C5C3D240C3C1C 502 DC *
00260A 0018          477 *****
00260C E3C8C540C4D9C9E5C 503 DC *
00260E 0002          478 *****
002610 002A          479 **
002612 C3C8C5C3D240C3C1C 502 DC *
002614 0018          480 **
002616 E3C8C540C4D9C9E5C 503 DC *
002618 0002          481 **
00261A 002A          482 *****
00261C C3C8C5C3D240C3C1C 502 DC *
00261E 0018          483 *****
002620 E3C8C540C4D9C9E5C 503 DC *
002622 0002          484 ENTPT EP=A,STEP=00001
002624 002A          485+ DC CL2'A'
002626 C3C8C5C3D240C3C1C 502 DC A(N00001)
002628 0018          486+ DC AL2(DUMMY)
00262A E3C8C540C4D9C9E5C 503 DC *
00262C 0002          487 *****
00262E 002A          488 *****
002630 C3C8C5C3D240C3C1C 508 DC *
002632 0018          489 *****
002634 E3C8C540C4D9C9E5C 509 DC *
002636 0002          490 **
002638 002A          491 **
00263A C3C8C5C3D240C3C1C 508 DC *
00263C 0018          492 **
00263E E3C8C540C4D9C9E5C 509 DC *
002640 0002          493 *****
002642 002A          494 *****
002644 C3C8C5C3D240C3C1C 502 DC *
002646 0018          495 F00051 EQU *
002648 E3C8C540C4D9C9E5C 503 DC AL2(0001)
00264A 0002          496 DC A(0036)
00264C 002A          497 DC CLO036'--NO-- IS INVALID. GO TO NEXT STEP. '
00264E C3C8C5C3D240C3C1C 502 DC *
002648 0018          498 F00075 EQU *
00264A E3C8C540C4D9C9E5C 503 DC AL2(0002)
00264C 0002          499 DC A(0042)
00264E 0018          500 DC CLO042'CHECK CABLE ASSEMBLY. IF NO REPAIR REPLACE'
002648 E3C8C540C4D9C9E5C 503 DC A(0024)
00264A 0002          504 DC CLO024'THE DRIVE CONTROL CARD. '
00264C 0018          505 F00084 EQU *
00264E E3C8C540C4D9C9E5C 506 DC AL2(0002)
002648 0002          507 DC A(0042)
00264A 002A          508 DC CLO042'CHECK CABLE ASSEMBLY. IF NO REPAIR REPLACE'
00264C C3C8C5C3D240C3C1C 508 DC A(0024)
00264E 0018          509 DC CLO024'THE DRIVE CONTROL CARD. '
002648 E3C8C540C4D9C9E5C 510 DC *
00264A 0002          511 F00110 EQU *
00264C 002A          512 DC AL2(0002)
00264E C3C8C5C3D240C3C1C 508 DC A(0044)
002648 0018          513 DC CLO044'CHECK DISKETTE UNIT ATTACHMENT CABLE. IF OK '
00264A E3C8C540C4D9C9E5C 514 DC A(0042)
00264C 0002          515 DC CLO042'REPLACE THE DISKETTE UNIT ATTACHMENT CARD.'
00264E 0018          516 F00119 EQU *
002648 E3C8C540C4D9C9E5C 517 DC AL2(0001)
00264A 0002          518 DC A(0036)
00264C 0018          519 DC CLO036'DISKETTE DRIVE CONTROL CARD WAS BAD. '
00264E E3C8C540C4D9C9E5C 520 DC *
002648 0002          521 F00123 EQU *
00264A 002A          522 DC AL2(0002)
00264C C3C8C5C3D240C3C1C 508 DC A(0032)
00264E 0018          523 DC CLO032'REPLACE HEAD/CARRIAGE ASSEMBLY. '
002648 E3C8C540C4D9C9E5C 524 DC A(0032)
00264A 0002          525 DC CLO032'SEE NIM PARA A3.9.3 AND A3.9.4. '
00264C E2C5C540D4C9D440D 526 F00133 EQU *
00264E 0002          527 DC AL2(0002)
002648 0018          528 DC A(0044)
00264A E2C5C540D4C9D440D 527 DC CLO044'CHECK DISKETTE UNIT ATTACHMENT CABLE. IF OK '
00264C 0002          529 DC A(0042)
00264E 0018          530 DC CLO042'REPLACE THE DISKETTE UNIT ATTACHMENT CARD.'
002648 E2C5C540D4C9D440D 527 DC *
00264A 0002          531 F00138 EQU *
00264C 002A          532 DC AL2(0002)
00264E C3C8C5C3D240C3C1C 508 DC A(0036)
002648 0018          533 DC CLO036'REPLACE DISKETTE DRIVE CONTROL CARD.'
00264A E2C5C540D4C9D440D 527 DC A(0020)
00264C 0002          534 DC A(0020)
00264E 0018          535 DC CLO020'SEE NIM PARA A3.14. '
002648 E2C5C540D4C9D440D 527 DC *
00264A 0002          536 F00159 EQU *
00264C 002A          537 DC *
00264E C3C8C5C3D240C3C1C 508 DC *
002648 0018          538 DC *
00264A E2C5C540D4C9D440D 527 DC *
00264C 0002          539 DC *
00264E 0018          539 F00159 EQU *

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002806 0002 540 DC AL2(0002)
002808 002C 541 DC A(0044)
00280A C3C8C5C3D240C4C9E 542 DC CLO044 CHECK DISKETTE UNIT ATTACHMENT CABLE. IF OK
002836 002A 543 DC A(0042)
002838 D9C5D7D3C1C3C540E 544 DC CLO042 REPLACE THE DISKETTE UNIT ATTACHMENT CARD.
002862 0002 545 EQU F00164
002864 0024 546 DC AL2(0002)
002866 D9C5D7D3C1C3C540C 547 DC A(0036)
00288A 0014 548 DC CLO036 REPLACE DISKETTE DRIVE CONTROL CARD.
00288C E2C5C540D4C9D440D 549 DC A(0020)
0028A0 0001 550 DC CLO020 SEE MIM PARA A3.14.
0028A2 0010 551 EQU F00169
0028A4 D5D640C5D9D9D6D94 552 DC AL2(0001)
553 DC A(0016)
554 DC CLO016 NO ERROR FOUND.
0028B4 0000 555 HDIT 0106
557+OPTN1 DC X'0000 PROGRAM OPTION CONTROL WORD 1
0028B6 0000 558+*
559+OPTN2 DC X'0000 PROGRAM OPTION CONTROL WORD 2
560+* BIT HEX
561+B48 EQU 16 8
562+B49 EQU 17 4
563+B50 EQU 18 2
564+B51 EQU 19 1
565+B52 EQU 20 8
566+B53 EQU 21 5
567+B54 EQU 22 6
568+B55 EQU 23 7
569+B56 EQU 24 8
570+B57 EQU 25 9
571+B58 EQU 26 10
572+B59 EQU 27 11
573+B60 EQU 28 12
574+B61 EQU 29 13
575+B62 EQU 30 14
576+B63 EQU 31 15
577+CH EQU 30 14
578+CMF EQU 31 15
580+OPTN3 DC X'0000 PROGRAM OPTION CONTROL WORD 3
81+* 0 MYSTERY INTERRUPT MI 8 CS STATUS IN PROGRESS CS
83+* 1 ERROR INTERRUPT ER 9 CS AVAILABLE CSA
84+* 2 EXPECTED INTERRUPT XI 10 CS STATUS INTERRUPT ERR CE
85+* 3 INTERRUPT RECEIVED IN 11 ISB BITS ON (1-7) ISBON
86+* 4 EXPECTED ERR/ATTENT XE 12 TEST UNIT RESULTS VOID NG
87+* 5 HARD ERROR FOUND HE 13 OIO CC ERROR IOCC
88+* 6 WRONG INTR LEVEL \$LE 14 NO INTERRUPT NOIN
89+* 7 NO INTR EXPECTED NI 15 INTERRUPT CC ERROR INCC
91+* BIT HEX
92+MI EQU 32 0
93+ER EQU 33 4
94+XI EQU 34 2
95+IN EQU 35 3
96+XE EQU 36 4
97+HE EQU 37 5
98+\$LE EQU 38 7
99+NI EQU 39 1
0002B 0000 400+* 8 CS STATUS IN PROGRESS CS
0002C 0000 601+CSA EQU 40 8
0002D 0000 602+CE EQU 41 9
0002E 0000 603+ISBON EQU 42 10
0002F 0000 604+NG EQU 43 11
00030 0000 605+IOCC EQU 44 12
00031 0000 606+NCIN EQU 45 13
00032 0000 607+INCC EQU 46 14
608+* COMMON BUFFER FOR PRINTING DATA
609+*
610+*
611+*
612+\$TUID DC A(*-*) TEST UNIT IDENTIFICATION
613+\$IOIN DC A(*-*) I/O AND INTR CONDITION CODES
614+\$ISEB DC A(*-*) R7 INTR STATUS BYTE & DEV ADRS
615+\$ISTIO DC A(*-*) ADRS OF LAST I/O + 4 BYTES
616+\$DEV1 DC A(*-*) DEVICE DEPENDENT DATA
617+\$DEV2 DC A(*-*)
618+\$DEV3 DC A(*-*)
619+\$DEV4 DC A(*-*)
620+\$SCTID EQU DEV1 READ ID BUFFER FOR IBIS & TERN
621+\$DCBUF EQU * DCB BUFFER FOR LAST DCB USED
622+\$DCB1 DC A(*-*) LAST DCB TABLE, CONTROL WORD
623+\$DCB2 DC A(*-*) LAST DCB TABLE, DEV DEP WORD
624+\$DCB3 DC A(*-*) LAST DCB TABLE, DEV DEP WORD
625+\$DCB4 DC A(*-*) LAST DCB TABLE, DEV DEP WORD
626+\$DCB5 DC A(*-*) LAST DCB TABLE, DEV DEP WORD
627+\$DCB6 DC A(*-*) LAST DCB TABLE, CHAIN ADRS
628+\$DCB7 DC A(*-*) LAST DCB TABLE, BYTE COUNT
629+\$DCB8 DC A(*-*) LAST DCB TABLE, BUFFER ADDRESS
630+*
631+\$CSBUF EQU * CYCLE STEAL DATA BUFFER
632+\$CSTL1 DC A(*-*) CYCLE STEAL BUFFER, RESIDUAL ADRS
633+\$CSTL2 DC A(*-*) CYCLE STEAL WD 2, DEVICE DEPEND
634+\$CSTL3 DC A(*-*) CYCLE STEAL WD 3, DEVICE DEPEND
635+\$CSTL4 DC A(*-*) CYCLE STEAL WD 4, DEVICE DEPEND
636+\$CSTL5 DC A(*-*) CYCLE STEAL WD 5, DEVICE DEPEND
637+\$CSTL6 DC A(*-*) CYCLE STEAL WD 6, DEVICE DEPEND
638+\$CSTL7 DC A(*-*) CYCLE STEAL WD 7, DEVICE DEPEND
639+\$CSTL8 DC A(*-*) CYCLE STEAL WD 8, DEVICE DEPEND
640+*
641+\$SUBN DC A(*-*) LAST SUBROUTINE ADDRESS USED
642+\$DATA DC 2A(*-*) OPTIONAL DATA
643+\$INTL DC X'0021 INTERRUPT LEVEL REQUESTED
644+\$TURTN DC A(*-*) TEST UNIT RETURN ADRS TO MDI
645+\$DVID DC X'0106 DEVICE ID
646+\$SVCAL DC A(DEVADD) ADRS OF LEVICE ADDRESS
647+* DC A(*-*) IBIS CYLINDER ADDRESS
648+*
649+* THIS TEST UNIT WILL RETURN TO MDI WITHOUT DOING ANY PROGRAM
650+* FUNCTION. THE RESULTS THAT WERE SET UP IN THE RESULTS AREA ARE
651+* STILL VALID BUT A DIFFERENT TEST IS TO BE PERFORMED.
652+*
653+\$I3C02 MVI X'3C02,\$TUID SET UP TEST UNIT ID
654+ BXS (R7) RETURN TO MDI SUPR
655+ COPY COMEQU
656+
657+*****
658+*
659+* EQUATED NAMES FOR SUPPORTED SVC'S

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660 *
661 *****
662 OUT EQU 0 OUT SVC
663 OUTIN EQU 1 OUTIN SVC
664 IDLE EQU 2 IDLE SVC
665 ASCII EQU 3 HEX TO ASCII SVC
666 CHNGE EQU 4 CHANGE LEVEL SVC
667 PGMCK EQU 5 ALLOW RETURN ON PROGRAM CHECK SVC
668 EXIT EQU 6 EXIT SVC
669 TERM EQU 7 TERMINATE SVC
670 RESET EQU 8 RESET DEVICE SVC
671 RID EQU 9 READ ID SVC
672 START EQU 10 START CYCLE STEAL SVC
673 STCSS EQU 11 START CYCLE STEAL STATUS SVC
674 BREP EQU 12 PREPARE DEVICE SVC
675 READO EQU 13 READ WITH FUNCTION BIT 3 OFF SVC
676 READ1 EQU 14 READ WITH FUNCTION BIT 3 ON SVC
677 RSTAT EQU 15 READ STATUS SVC
678 WRITO EQU 16 WRITE WITH FUNCTION BIT 3 OFF SVC
679 WRIT1 EQU 17 WRITE WITH FUNCTION BIT 3 ON SVC
680 CTRL EQU 18 CONTROL SVC
681 RICE EQU 19 RELEASE INTERRUPT CONTROL BLOCK SVC
682 CIBC EQU 20 CONNECT INTERRUPT CONTROL BLOCK SVC
683 HIO EQU 21 HALT ALL I/O
684 REQSD EQU 22 REQUEST USE OF DCP DISK SVC
685 RELSD EQU 23 RELEASE USE OF DCP DISK SVC
686 HALT EQU 24 HALT SVC
687 ETOH EQU 25 EBCDIC TO HEX SVC (STRING)
688 HTOE EQU 26 HEX TO EBCDIC SVC (STRING)
689 ATOH EQU 27 ASCII TO HEX SVC (STRING)
690 HTOA EQU 28 HEX TO ASCII SVC (STRING)
691 ETOA EQU 29 EBCDIC TO ASCII SVC (STRING)
692 ATOE EQU 30 ASCII TO EBCDIC SVC (STRING)
693 READI EQU 31 READ DATA SETS FOR MDI/UTIL
694 WRITI EQU 32 WRITE DATA SETS FOR UTIL
695 *****
696 *
697 *
698 * EQUATES USED BY TU'S AS CONSTANTS
699 *
700 *****
701 PLUS EQU C'+* PLUS CHAR
702 MINUS EQU C'-* MINUS CHAR
703 ZERO EQU 0
704 ONE EQU 1
705 TWO EQU 2
706 THREE EQU 3
707 FOUR EQU 4
708 FIVE EQU 5
709 SIX EQU 6
710 SEVEN EQU 7
711 EIGHT EQU 8
712 NINE EQU 9
713 TEN EQU 10
714 ELEVN EQU 11
715 TWELV EQU 12
716 THRTN EQU 13
717 FIVIN EQU 14
718 SIXTN EQU 15
719 SEVNTN EQU 16
720 EIGHTN EQU 17
721 NINTN EQU 18
722 ONE28 EQU 128
723 TWO56 EQU 256
724 ONEK EQU 1024
725 TWOK EQU 2048
726 THREEK EQU 3072
727 FOURK EQU 4096
729 M1 EQU -1
730 M2 EQU -2
731 M3 EQU -3
732 M4 EQU -4
733 *****
734 *
735 *
736 * THE FOLLOWING ARE EQUATES FOR BIT DISPLACEMENTS FROM THE
737 * BEGINNING OF THE BYTE TO EACH BIT IN THE WORD OF SWITCHES.
738 *
739 *****
740 BS0 EQU 0
741 BS1 EQU 1
742 BS2 EQU 2
743 BS3 EQU 3
744 BS4 EQU 4
745 BS5 EQU 5
746 BS6 EQU 6
747 BS7 EQU 7
748 BS8 EQU 8
749 BS9 EQU 9
750 BS10 EQU 10
751 BS11 EQU 11
752 BS12 EQU 12
753 BS13 EQU 13
754 BS14 EQU 14
755 BS15 EQU 15
757 *
758 I4852 \$UII \$ERR\$ COPY T4852
759 *****06FEB76**
760+*
761+* TEST UNIT
762+*
763+* FILE SEEK SETUP TEST #1. 3/11/76
764+*
765+* PURPOSE
766+*
767+* DETERMINE THE FOLLOWING:
768+* 1. MOVE HEADS TO CORRECT CYLINDER PRIOR TO DATA ACCESS
769+* COMMAND.
770+*
771+* CALLING SEQUENCE
772+*
773+* PERFORM THE FOLLOWING:
774+* 1. RECALIBRATE.
775+* 2. ISSUE SEEK FORWARD.
776+* 3. SELECT HEAD ZERO.
777+*
778+*
779+* PARAMETER IS PASSED TO PROGRAM IN THE FOLLOWING FORMAT.
780+* PARM1=SEEK DIFFERENCE FOR SEEK FORWARD CMMAND.

LOCTR OBJECT TEXT STMT SOURCE STATEMENT
781** .
782** .
783** RETURN CONTROL
784** .
785** B TURTN* RETURN TO MDI SUPERVISOR
786** .
787** *****
788** T4852 MVW R7,TURTN SAVE RETURN ADDRESS
789** MVWI X'4852', \$TUID SAVE TU ID FOR DISPLAY
790** MVA OPTN1, R4 SET UP POINTER ADRS IN R4
791** BAL \$CONC, R6 CLEAR DEV DEP STG AND CONNECT I/O BL
792** DC A(\$ERR\$) ERROR ADRS FOR INVALID PREP
793** .
794** MVWI X'5000', R0 DELAY TO GET BY BUSY AFTER RESET
795** JCT * R0 *
796** BAL \$RECL, R6 RECALIBRATE
797** DC A(\$ERR\$) ERROR
798** TBTR (R4, ER) CHECK FOR CC ERROR
799** BON \$ERR\$ ERROR
800** MVWI X'0005', SKDCB SEEK CONTROL WORD
801** MVWI X'0000', SKDCB+2 SELECT HEAD ZERO, FORWARD
802** MVWI X'0000', SKDCB+8 SELECT HEAD ZERO (NEW ARCH)
803** MVB TUPARM1*, SKDCB+3 DIFFERENCE FROM MDI
804** BAL \$SEEK, R6 SEEK SELECT HEAD ZERO
805** DC A(\$ERR\$) ERROR
806** TBTR (R4, ER) INTERRUPT ERROR?
807** BON \$ERR\$ YES-ERROR
808** BAL \$RDID, R6 READ ID TO ESTABLISH HEAD POSITION
809** DC A(\$ERR\$) TO BE PASSED BACK TO SUPERVISOR
810** TXIT EXIT
811** B \$CONX RETURN TO MDI CONTROLLER
812** *****
813** .
814** COPY T4855
815** T4855 TUIT T55E
816** *****06FEB76**
817** .
818** TEST UNIT
819** .
820** FILE SCOPE WRITE TEST #2. 3/11/76
821** .
822** PURPOSE
823** .
824** DETERMINE THE FOLLOWING:
825** 1. PROVIDE SCOPE TEST TO PROBE WRITE SIGNALS DURING WRITE
826** COMMANDS TO HEAD 0 OR HEAD 1 OR BOTH HEADS 0 & 1.
827** .
828** .
829** CALLING SEQUENCE
830** .
831** PERFORM-THE FOLLOWING:
832** 1. ASSUME SEEK TO CYLINDER 76 ALREADY PERFORMED.
833** 2. NO TRACK CROSSING SEEKS. (SEEK DIFFERENCE =0)
834** 3. SELECT HEAD FROM PARM.
835** 4. ISSUE FORMAT COMMAND N=1, C=76.
836** 5. SELECT HEAD ONE.
837** 6. ISSUE FORMAT COMMAND N=1, C=76.
838** .
839** PARAMETERS PASSED TO PROGRAM IN FOLLOWING FORMAT:
840** PARM1---BIT0---NOT USED
841** BIT1---NOT USED
842** BIT2---NOT USED
843** BIT3---HEAD SELECTION. (0=HEAD 0/1=HEAD 1)
844** BIT4---NOT USED
845** BIT5---NOT USED
846** BIT6---NOT USED
847** BIT7---HEAD SELECTION. (0=HEAD 0/1=HEAD 1)
848** PARM2---BIT8---NOT USED
849** BIT9---NOT USED
850** BIT10---NOT USED
851** BIT11---NOT USED
852** BIT12---NOT USED
853** BIT13---NOT USED
854** BIT14---NOT USED
855** BIT15---ONLY WRITE ON ONE HEAD.
856** .
857** RETURN CONTROL
858** .
859** B TURTN* RETURN TO MDI SUPERVISOR
860** .
861** *****
862** T4855 MVW R7,TURTN SAVE RETURN ADDRESS
863** MVWI X'4855', \$TUID SAVE TU ID FOR DISPLAY
864** MVA OPTN1, R4 SET UP POINTER ADRS IN R4
865** BAL \$CONC, R6 CLEAR DEV DEP STG AND CONNECT I/O BL
866** DC A(T55E) ERROR ADRS FOR INVALID PREP
867** .
868** MVWI X'5000', R0 DELAY TO GET BY BUSY AFTER RESET
869** JCT * R0 *
870** MVWI X'0005', SKDCB SEEK CONTROL WORD - NO CHAINING
871** MVWI X'0000', SKDCB+2 SELECT HEAD NOOP
872** MVB TUPARM1*, SKDCB+2 HEAD SELECT FROM MDI
873** MVB TUPARM1*, SKDCB+8 HEAD SELECT (NEW ARCH)
874** BAL \$SEEK, R6 SEEK
875** DC A(T55E) ERROR
876** TBTR (R4, ER) CHECK FOR CC ERROR
877** JON T55E ERROR
878** MVWI X'0002', FRDCB FORMAT CONTROL WORD
879** MVWI X'0008', FRDCB+4 FORMAT DATA WORD
880** MVWI X'104C', FRDCB+6 FROMAT N-C
881** MVWI X'0001', FRDCB+8 H-R
882** MVB TUPARM1*, FRDCB+8 HEAD FROM MDI
883** BAL \$FMT, R6 FORMAT
884** DC A(T55E) ERROR
885** TBTR (R4, ER) CHECK FOR CC ERROR
886** JON T55E ERROR
887** MVB TUPARM2*, R0 GET PARM2
888** JNZ T55E BYPASS BIT ON
889** MVWI X'1000', SKDCB+2 SELECT HEAD ONE-NOOP
890** MVWI X'0100', SKDCB+8 HEAD SELECT (NEW ARCH)
891** BAL \$SEEK, R6 SEEK
892** DC A(T55E) ERROR
893** TBTR (R4, ER) CHECK FOR CC ERROR
894** JON T55E ERROR
895** MVWI X'0101', FRDCB+8 H-R
896** BAL \$FMT, R6 FORMAT

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0029E0 29E2 897 DC A(T55E)
0029E2 6E03 2B7E 898 T55E BAL \$RDID, R6 ERROR
0029E6 29E8 899 DC A(T55F) READ ID TO ESTABLISH HEAD POSITION
TO BE PASSED BACK TO SUPERVISOR
0029E8 6802 2D6E 900 T55F TXIT EXIT
901+T55F B \$CONX RETURN TO MDI CONTROLLER
902+*****
903+
904+
905+
906+ COPY T4856
907 T4856 TUIT T56E
908+*****06FEB76**
909+
910+ TEST UNIT
911+
912+ FILE SCCPE READ TEST #2. 3/11/76
913+
914+ PURPOSE
915+
916+ DETERMINE THE FOLLOWING:
917+ 1. PROVIDE SCOPE TEST TO PROBE READ SIGNALS DURING READ
918+ COMMANDS TO HEAD 0 OR HEAD 1 OR BOTH HEADS 0 & 1.
919+ .
920+ .
921+ CALLING SEQUENCE
922+ .
923+ PERFORM-THE FOLLOWING:
924+ 1. ASSUME RECALIBRATE ALREADY PERFORMED.
925+ 2. NO TRACK CROSSING SEEKS. (SEEK DIFFERENCE =0)
926+ 3. SELECT HEAD FROM PARM.
927+ 4. ISSUE READ VERIFY COMMAND.
928+ 5. SELECT HEAD ONE.
929+ 6. ISSUE READ VERIFY COMMAND.
930+ .
931+ PARAMETERS PASSED TO PROGRAM IN FOLLOWING FORMAT:
932+ PARM1---BIT0---NOT USED
933+ BIT1---NOT USED
934+ BIT2---NOT USED
935+ BIT3---HEAD SELECTION. (0=HEAD 0/1=HEAD 1)
936+ BIT4---NOT USED
937+ BIT5---NOT USED
938+ BIT6---NOT USED
939+ BIT7---HEAD SELECTION. (0=HEAD 0/1=HEAD 1)
940+ PARM2---BIT8---NOT USED
941+ BIT9---NOT USED
942+ BIT10---NOT USED
943+ BIT11---NOT USED
944+ BIT12---NOT USED
945+ BIT13---NOT USED
946+ BIT14---NOT USED
947+ BIT15---ONLY READ ONE HEAD.
948+
949+ RETURN CONTROL
950+
951+ B TURTN* RETURN TO MDI SUPERVISOR
952+
953+ *****
954+ T4856 MVW R7,TURTN SAVE RETURN ADDRESS
955+ MVWI X'4856', \$TUID SAVE TU ID FOR DISPLAY
956+ MVA OPTN1, R4 SET UP POINTER ADRS IN R4
957+ BAL \$CONC, R6 CLEAR DEV DEP STG AND CONNECT I/O BL
958+ DC A(T56E) ERROR ADRS FOR INVALID PREP
959+
960+ MVWI X'5000', R0 DELAY TO GET BY BUSY AFTER RESET
961+ JCT * R0 *
962+ MVWI X'0005', SKDCB SEEK CONTROL WORD - NO CHAINING
963+ MVWI X'0000', SKDCB+2 SELECT HEAD NOOP
964+ MVB TUPARM1*, SKDCB+2 HEAD SELECT FROM MDI
965+ MVB TUPARM1*, SKDCB+8 HEAD SELECT (NEW ARCH)
966+ BAL \$SEEK, R6 SEEK
967+ DC A(T56E) ERROR
968+ TBTR (R4, ER) CHECK FOR CC ERROR
969+ JON T56E ERROR
970+ MVWI X'0000', VRDCB VERIFY CONTROL WORD
971+ MVWI X'0000', VRDCB+6 N-C
972+ MVWI X'0001', VRDCB+8 H-R
973+ MVB TUPARM1*, VRDCB+8 HEAD FROM MDI
974+ MVWI X'0000', VRDCB+12 BYTE COUNT
975+ BAL \$RDVY, R6 READ VERIFY
976+ DC A(T56E) ERROR
977+ TBTR (R4, ER) CHECK FOR CC ERROR
978+ JON T56E ERROR
979+ MVB TUPARM2*, R0 GET PARM2
980+ JNZ T56E BYPASS BIT ON
981+ MVWI X'1000', SKDCB+2 SELECT HEAD ONE-NOOP
982+ MVWI X'0100', SKDCB+8 HEAD SELECT (NEW ARCH)
983+ BAL \$SEEK, R6 SEEK
984+ DC A(T56E) ERROR
985+ TBTR (R4, ER) CHECK FOR CC ERROR
986+ JON T56E ERROR
987+ MVWI X'0101', VRDCB+8 H-R
988+ BAL \$RDVY, R6 READ VERIFY
989+ DC A(T56E) ERROR
990 T56E BAL \$RDID, R6 READ ID TO ESTABLISH HEAD POSITION
TO PASS BACK TO SUPERVISOR
991 DC A(T56E)
992 T56F TXIT EXIT
993+T56F B \$CCNX RETURN TO MDI CONTROLLER
994+*****
995+
996+
997+
998+
999+ COPY T48DCB
1000+
1001+ *****2/17/76*****
1002+
1003+ DCB TABLES
1004+
1005+ *****
1006+
1007+ ***** DIAGNOSTIC DCB *****
1008+
1009+ DGDCB DC X'2000' DIAGNOSTIC DCB
1010+ DC X'0000' NOT USED
1011+ DC X'0000' NOT USED
1012+ DC X'0000' NOT USED
1013+ DC X'0000' NOT USED
1014+ DC X'0000' CHAIN ADDRESS

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002A8E 000E 1015 DC X'000E' BYTE COUNT FOR READ DIAG
002A90 2B44 1016 DC A(DIAGW) DATA ADDRESS
1017 *
1018 *
1019 *
1020 ***** RECALIBRATE DCB *****
002A92 0007 1021 CLDCB EC X'0007' RECALIBRATE DCB
002A94 0000000000000000 1022 DC 7A(*-*)
1023 *
1024 ***** FORMAT DCB *****
002AA2 0002 1025 *
002AA4 0000 1026 FRDCB DC X'0002' FORMAT CCNTROL WORD
002AA6 0000 1027 DC X'0000' NOT USED
002AA8 0000 1028 DC A(*-*) FORMAT DATA WORD
002AAA 0001 1029 DC A(*-*) N - C BYTES
002AAC 0000 1030 DC X'0001' H - R BYTES
002AAE 0000 1031 DC A(*-*) CHAIN ADDRESS
002AB0 0000 1032 DC F'0' NOT USED
1033 *
1034 *
1035 ***** READ SECTOR ID DCB *****
002AB2 200A 1036 *
002AB4 0000 1037 RSECB DC X'200A' READ SECTOR ID
002AB6 0000 1038 DC X'0000' NOT USED
002AB8 0000 1039 DC X'0000' NOT USED
002ABA 0000 1040 DC X'0000' NOT USED
002ABE 0000 1041 DC X'0000' NOT USED
002ABC 0000 1042 DC X'0000' CHAIN ADDRESS
002ABE 0004 1043 DC X'0004' BYTE COUNT FOR READ SECTOR ID
002AC0 28C2 1044 DC A(SCTID) SECTOR ID DATA ADDRESS
1045 *
1046 ***** SEEK DCB *****
002AC2 0005 1047 *
002AC4 0000 1048 SKDCB DC X'0005' SEEK DCB
002AC6 0000 1049 DC X'0000' BIT 3=HEAD;BIT 4=DIRECTION;8-15=DIFF
002AC8 0000 1050 DC F'0'
002ACA 0000 1051 DC F'0' 0-7 HEAD SELECT (NEW ARCH)
002ACC 0000 1052 DC F'0'
002ACE 0000 1053 DC F'0'
002AD0 0000 1054 DC F'0'
1055 *
1056 *
1057 *
1058 ***** CYCLE STEAL STATUS DCB *****
002AD2 2000 1059 *
002AD4 0000 1060 CSDCB DC X'2000' CONTROL WORD
002AD6 0000 1061 DC F'0' NOT USED
002AD8 0000 1062 DC F'0' NOT USED
002ADA 0000 1063 DC F'0' NOT USED
002ADC 0000 1064 DC F'0' NOT USED
002ADE 0004 1065 DC X'0004' 2 WORDS OF STATS
002AD0 28DA 1066 DC A(CSEBF) ADDRESS OF CYCLE STEAL STATUS DATA
1067 *
1068 *
1069 ***** WRITE DCB *****
002AE2 0001 1070 *
002AE4 0000 1071 WRDCB DC X'0001' 8-15=1- ATA AM;8-15=2-CONTROL AM
002AE6 0000 1072 DC F'0' NOT USED
002AE8 0000 1073 DC F'0'
002AEA 0000 1074 DC X'0000' SERCH ARGUMENT N-C
002AEC 0000 1075 DC X'0000' SEARCH ARGUMENT H-R
002AE0 0000 1076 DC A(*-*) CHAIN ADDRESS
002AF0 0000 1077 DC F'0' BYTE COU T
1078 DC A(*-*) WRITE DATA ADDRESS
1079 *
1080 ***** VERIFY DCB *****
002AF2 000C 1081 *
002AF4 0000 1082 VRDCB DC X'000C' CONTROL WORD
002AF6 0000 1083 DC F'0' NOT USED
002AF8 0000 1084 DC F'0' NOT USED
002AFA 0000 1085 DC A(*-*) N-C
002AFC 0000 1086 DC A(*-*) H-R
002AFE 0000 1087 DC A(*-*) CHAIN ADDRESS
002B00 0000 1088 DC F'0' BYTE COUNT
1089 DC A(*-*) VERIFY DATA ADDRESS
1090 *
1091 ***** READ DCB *****
002B02 2009 1092 *
002B04 0000 1093 RDDCB DC X'2009' READ DCB CONTROL WORD
002B06 0000 1094 DC F'0' NOT USED
002B08 0000 1095 DC F'0' NOT USED
002B0A 0101 1096 DC X'0000' SEARCH ARGUMENT N-C
002B0C 0000 1097 DC X'0101' SEARCH ARGUMENT H-R
002B0E 0D00 1098 DC A(*-*) CHAIN ADDRESS
002B10 0000 1099 DC F'3328' BYTE COUNT
1100 DC A(*-*) READ DATA ADDRESS
1101 *
1102 *
1103 *
1104 *
002B12 1000 1105 COUNT DC F'4096' BYTE COUNT (4096)
002B14 0C80 1106 CTN32 DC F'3200' BYTE COUNT (3200)
002B16 0000 1107 SAVE DC X'0000' SCTID INFO
002B18 0000 1108 DC X'0000' *
002B1A 0000 1109 DIFF DC X'0000' SEEK DIFFERENCE
002B1C 00C8 1110 PDATA DC X'00C8' FORMAT DATA BYTE FOR COMPARE
002B1E 0000 1111 IXX DC X'0000' WORK WORD INT TO ZERO
002B20 0046 1112 ENDEX DC X'0046' TERMINATING SEEK DIFFERENCE
002B22 0000 1113 ZER00 DC X'0000' CONSTANT ZERO
002B24 0001 1114 ONE1 DC X'0001' CONSTANT ONE
002B26 0800 1115 REVR DC X'0800' SEEK REVERSE
002B28 0000 1116 HHR DC X'0000' H-R
002B2A 0000 1117 BCNT DC X'0000' BYTE COUNT
002B2C 0000 1118 JOE DC X'0000' WRITE PARAMETER POINTER
002B2E 0000 1119 JOE1 DC X'0000' SAVE LOC FOR PARM LIST ADDRESS
002B30 7AE5 1120 WDATA DC X'7AE5' WRITE DATA
002B32 69BD 1121 DC X'69BD' *
002B34 0000 1122 CYLND DC X'0000' TEMP SAVE AREA FOR CYLINDER #
002B36 0000 1123 DC X'0000' *
002B38 0000 1124 FORMT DC X'0000' FROMAT BIT FROM OPERATOR
002B3A 004C 1125 CYLIN DC X'004C' CYLINDER NUM SELECTED FROM OPERATOR
002B3C 0000 1126 HEAD DC F'0000' HEAD NUM SELECTED FROM OPERATOR
002B3E 0001 1127 SECT DC F'0001' SECTOR # SELECT BY OPERATOR
002B40 0D00 1128 BYCNO DC F'3328' BYTE COUNT SELECTED BY OPER
002B42 0000 1129 TABLE DC A(*-*) ADDR OF WRT PAR LIST FOR FORMAT RTNS
002B44 0000000000000000 1130 DIAG DC 7A(*-*) DIAGNOSTIC BUFFER

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LOCTR OBJECT TEXT STMT SCURCE STATEMENT COPYRIGHT IBM CORP 1976

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002B52 0000 1131 CONST DC X'0000' SECTOR # PLUS ONE FOR N='X'
002B54 0000 1132 SBYT DC X'0000' FULL BYTE COUNT FOR N='X'
002B56 00FF 1133 CDAT DC X'00FF' CONSTANT '00' & 'FF'
002B58 0000 1134 CTR01 DC X'0000' COUNTER 1
002B5A 0000 1135 CTR02 DC X'0000' COUNTER 2
002B5C 0000 1136 CTR03 DC X'0000' COUNTER 3
002B5E 0000 1137 CTR04 DC X'0000' COUNTER 4
002B60 0000 1138 CTR05 DC X'0000' COUNTER 5
002B62 0000 1139 SAVR3 DC X'0000' SAVE AREA
002B64 0000 1140 SAVR5 DC X'0000' SAVE AREA
002B66 0000 1141 SIDE DC X'0000' SIDE BEING TESTED
002B68 0000 1142 TRK DC X'0000' CURRENT CYLINDER NUMBER
002B6A 0000 1143 WTDAT DC X'0000' WORK AREA
002B6C 4C00 1144 SVSIX DC X'4C00' CYLINDER NUMBER 76
1145 *
1146 * COPY T4810
1147 *
1148 * EXECUTE INPUT & OUTPUT COMMANDS
1149 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1150 * EACH OF THESE ENTRIES SET R7 WITH THE ADRS OF ITS PARAMETER
1151 * LIST AND ANY SPECIAL SWITCHES BEFORE BRANCHING TO THE
1152 * SUPVR CALL.
1153 *
1154 * THIS SUBROUTINE WILL CHECK FOR THE FOLLOWING:
1155 *
1156 * 1. LOST INTERRUPTS BY TIMING OUT A COUNTING LOOP
1157 * 2. ERROR INTERRUPTS RECEIVED FROM SUPVR
1158 * 3. LOOP ON ERROR, THE CALL MUST HAVE A 'DC' STATEMENT AFTER
1159 * THE CALL WITH THE ADDRESS OF THE RETRY STATEMENT
1160 * 4. CYCLE STEAL IN PROGRESS WITH AN ERROR
1161 * 5. SOMETHING ELSE
1162 *
1163 * THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1164 *
1165 * 1 BAL $SEK,R6 SEEK
1166 *
1167 * 2 BAL $RECL,R6 RECALIBRATE
1168 *
1169 * 3 BAL $RDID,R6 READ SECTOR ID
1170 *
1171 * 4 BAL $RD,R6 READ
1172 *
1173 * 5 BAL $RDVY,R6 READ VERIFY
1174 *
1175 * 6 BAL $WRT,R6 WRITE
1176 *
1177 * 7 BAL $FMT,R6 FORMAT
1178 *
1179 * 8 BAL $XIOCS,R6 CYCLE STEAL STATUSB
1180 *
1181 * 9 BAL $DIAG,R6 READ DIAGNOSTICS
1182 *
1183 *
1184 * $SEK MVA SKDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1185 J XIO
1186 *
002B76 4020 2CD0 2A92 1187 $RECL MVA CLDCB,IODCB SET UP BLOCK FOR SVC CALL
002B7C 5028 XIO
1188 *
002B7E 4020 2CD0 2AB2 1189 $RDID MVA RSDCB,IODCB SET UP BLOCK FOR SVC CALL
002B84 4020 28C2 9999 1190 MVWI X'9999',SCTID INVALIDATE SECTOR ID BUFFER AREA
002B8A 4020 28C4 9999 1191 MVWI X'9999',SCTID+2 *
002B90 501E J XIO
1192 *
002B92 0BFF 1193 *
002B94 6D08 2B10 1194 $RD MVEI 255,R3 INIT READ BUFFER TO FF'S
002B98 4724 0400 1195 MVW R0B*14,R5 *
1197 MVWI X'0400',R7 *
1198 FFN R3,(R5) *
002B9C 2BAC 1198 *
002B9E 4020 2CD0 2B02 1199 $RDS MVA RDDCB,IODCB SET UP BLOCK FOR SVC CALL
002BA4 5014 J XIO
1200 *
002BA6 4020 2CD0 2AF2 1201 *
002BAC 5010 J XIO
1202 $RDVY MVA VRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1203 *
002BAE 4020 2CD0 2AE2 1204 *
002BB4 500C J XIO
1205 $WRT MVA WRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1206 *
002BB6 4020 2CD0 2AA2 1207 *
002BBC 5008 J XIO
1208 $FMT MVA FRDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
002BBE 4020 2CD0 2A82 1209 *
002BC4 4020 2CD2 000D 1210 $DIAG MVA DGDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
002BCA 500E 1211 MVWI X'000D',IOMOD MODIFIER FOR DIAG OP
002BCC 5601 J XIO1
1212 *
1213 CEOP2 BXS (R6,2) DUMMY RETURN TO USER
1214 *
1215 * XEQIT 1
1216 *****29JUL76**
1217 *
1218 * SUB-ROUTINE
1219 *
1220 * EXECUTE INPUT AND OUTPUT COMMANDS
1221 *
1222 * PURPOSE
1223 *
1224 * TO EXECUTE ALL I/O COMMANDS FROM A COMMON PLACE.
1225 * THIS SUBROUTINE WILL DO THE FOLLOWING FUNCTIONS:
1226 *
1227 * 1. SAVE THE ADDRESS THAT POINTS TO THE INSTRUCTION THAT STARTED
1228 * THE I/O COMMAND.
1229 *
1230 * 2. SAVES THE DCB BLOCK USED UNLESS IT IS A START CYCLE STATUS
1231 * ISSUED BY THIS SUBROUTINE.
1232 *
1233 * 3. CLEAR OUT THE CYCLE STEAL STATUS STORAGE UNLESS THE
1234 * START CYCLE STATUS WAS ISSUED BY THIS SUBROUTINE.
1235 *
1236 * 4. RESETS THE INTERRUPT INDICATOR AND CHECKS FOR ANY INTERRUPT
1237 * SINCE THE LAST EXPECTED INTERRUPT. IF AN INTERRUPT IS FOUND,
1238 * MYSTERY INTERRUPT (MI) CONTROL BIT IS SET.
1239 *
1240 * 5. MOVES THE ADDRESS OF THE I/O CONTROL BLOCK IN R7, SET THE
1241 * EXPECTED INTERRUPT CONTROL BIT AND ISSUE THE 'SVC START'.
1242 *
1243 * 6. WHEN THE SUPVR RETURNS AFTER ISSUING THE I/O COMMAND, TIMING
1244 * STARTS TO DETERMINE A LOST INTERRUPT.
1245 *
1246 * 7. EXCEPT THE INTERRUPT AND GATHER INFORMATION TO DETERMINE IF IT
1247 * WAS AN ERROR OR OKAY AND EXIT OFF THE INTERRUPT LEVEL.
1248 *
1249 * 8. CHECK IF THERE WAS A WRONG INTERRUPT LEVEL.
1250 *
1251 * 9. CHECK IF AN ERROR WAS EXPECTED AND IF THERE WAS RETURN.
1252 *
1253 * 10. CHECK IF THERE WAS AN ERROR CONDITION, IF NOT RETURN.
1254 *
1255 * 11. CHECK TO SEE IF THE EXERCISE IS TO BE TERMINATED.
1256 *
1257 * 12. CHECK IF A CYCLE STEAL OPERATION WAS IN PROGRESS THAT WAS
1258 * ISSUED BY THIS SUBROUTINE.

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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
1248** 13. CHECK THE ISB BITS THAT ARE ON. IF BIT 0 IS ON, ISSUE A
1249** CYCLE STEAL STATUS COMMAND. CHECK FOR ANY OTHER BIT BEING ON,
1250** COUNT IT AND SET UP THE PROPER ERROR MESSAGE TO BE PRINTED.
1251**
1252** CALLING SEQUENCE
1253**
1254** THIS ROUTINE HAS THE FOLLOWING ENTRIES:
1255**
1256** --> BAL XIO OR XEQ ANY CYCLE STEAL COMMAND, MOD=0
1257** --> BAL XIO1 MOD PARM PRELOADED IN 'IOMOD'
1258** --> BAL XIOCS,R6 OR XEQ START CYCLE STEAL STATUS, MOD=F
1259** --> BAL XIOCS-4,R6 AUTO CS STATUS (FOLLOWING OTHER XIO
1260** AND DOES NOT POST INTERRUPT STATUS)
1261**
1262** RETURN CQNTROL
1263**
1264** BXS (R6,2) RETURN TO USER NO ERROR
1265** OR B (R6) RETURN AND RETRY ON ERROR
1266** *****
1268** XIO MVWZ IOMOD,R3 SET MOP OF 0 FOR CYCLE STEAL OP
1269** J XIO1 CS I/O'S ARE NOT RETRIED
1270**
1271** TBTR (R4,CE) RESET CS STATUS INTER ERROR INDICAT.
1272** (R4,CS) SET 'CYCLE STEAL STATUS' IN PROGRESS
1273** XIOCS MVA CSDCB,IODCB SET UP CONTROL BLOCK FOR SVC CALL
1274** MVWI X'000F',IOMOD SET CYCLE STEAL MODIFIER
1275** TBTR (R4,CS) IS CS IN PROGRESS, ERROR CONDITION
1276** JON XIO2 * YES, BYPASS SAVING I/O ADRS
1277** XIO1 MVW R6,LSTIO SAVE IAR FOR RETRY IF REQUESTED
1278** MVA DCBUF,R3 SET UP TO ADRS TO MOVE DCB TABLE
1279** MVW IOD,R5 * INTO THE FROM ADRS. ALONG WITH
1280** MVBI 16,R7 * THE NUMBER OF MOVES
1281** MVFN (R5),(R3) MOVE 1 STATUS WORD AND ADJUST
1282** MVBI 255,R3 CLEAR CYCLE STATUS BUFFER
1283** MVA CSBUF,R5 * TO ALL ONES *
1284** MVBI 16,R7 *
1285** FFN R3,(R5) *
1286** MVWI X'0708',XIOIN OVERLAY OLD CONDITION CODES
1287** MVWZ \$ISB,R3 ZERO OUT OLD ISB VALUE
1288**
1289** TBTR (R4,ER) RESET ANY ERROR BEFORE I/O COMMAND
1290** XIO2 TBTR (R4,IN) CLEAR INTERRUPT RECEIVED CNTL BIT
1291** MVA IOBLK,R7 SET UP CONTROL BLOCK FOR SUPVR
1292** TBTR (R4,\$LE) RESET LEVEL ERROR INDICATOR
1293** TBTS (R4,XI) SET EXPECTED INTR CONTROL BIT
1294** SVC START CALL SUPVR FOR I/O COMMAND
1295**
1296** TBTR (R4,NI) IS AN INTR EXPECTED
1297** BN (R6,2) * NO, RETURN TO USER
1298**
1299** THE INTR SHOULD OCCUR WHILE SPINNING IN THE NEXT SECTION
1300**
1301** MVBI X'00',R5 SET UP WCRK REG FOR 'LOST INTR'
1302** XIO8 TBTR (R4,IN) HAS INTERRUPT BEEN RECEIVED
1303** JON XIOCK * YES, CHECK IF ALL WAS SATISFACTORY
1304** SVC IDLE * ALLOW ANOTHER PROGRAM A CHANCE TO RUN
1305**
1306** AWI 1,R5 SUPVR WILL RETURN HERE
1307** JNZ XIO8 ADVANCE TIME OUT COUNT
1308** TBTS (R4,ER) BCH IF TIME OUT NOT REACHED
1309** B (R6)* SET ON ERROR CONTROL BIT
1310** *****
1311** *****
1312** *****
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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
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LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
1486*****11MAY76**
1487**
1488** SUBROUTINE
1489**
1490** CONNECT INTERRUPT CONTROL BLCK & PREPARE DEVICE
1491**
1492** PURPOSE
1493**
1494** TO CONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
1495** PREPARE ON THE DESIRED INTERRUPT LEVEL AND TO ALLOW THE DEVICE
1496** TO INTERRUPT.
1497**
1498** CALLING SEQUENCE
1499**
1500** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
1501**
1502** --> BAL \$CONC,R6 CLEAR DEV DEP STG AND CONNECT I/O BLK
1503** --> BAL \$CONP,R6 PREPARE DEVICE ONLY, ALREADY CONNECT
1504**
1505** RETURN CONTROL
1506**
1507** OR BXS (R6,2) RETURN TO USER VIA REG 6 IF OKAY
1508** OR B (R6)* IF THE DEVICE COULD NOT BE CONNECTED
1509**
1510*****
1511**\$CONC MVBI 6,R7 NUMBER OF BYTE TO CLEAR
1512** MVBI 0,R3 * AND THE DATA TO USE
1513** MVA DEV1,R5 * ALONG WITH THE ADRS TO USE
1514** FPN R3,(R5) *
1515** MVWZ OPTN3,R3 CLEAR OLD CONTROLS FOR NEW ROUTINE
1516** MVA SVCAL,R7 SET UP TO REQUEST DCP SUPR DISK
1517** SVC REQSD *
1518** MVBI -1,R7 SET UP DELAY FOR IBIS
1519** JCT *R7 * AND DECREMENT IT DOWN
1520** MVA INTBL,R7 SET R7 TO CONTROL BLOCK AND
1521** SVC CICB * CONNECT IT TO THIS DEVICE
1522** BN (R6)* ERROR RETURN TO USER
1523**
1524**\$CONP MVW \$INTL,IODCB PUT IN LEVEL & INTR PARAMETER
1525** MVA IOBLK,R7 SET R7 TO CONTROL BLOCK TO PREPARE
1526** MVWI X'0708', \$IOIN INITIALIZE CONDITION CODE STORAGE
1527** MVWZ \$ISB,R3 * AND CLEAR OLD ISB VALUE
1528** MVW R6,ISTIO SET UP ADDRESS THAT STARTED LAST I/O
1529** SVC PREP * AND CALL ON SUPVR
1530** BXS (R6,2) RETURN TO USER
1531**
1532*****06APR76**
1533**
1534** SUBROUTINE
1535**
1536** DISCONNECT THE INTERRUPT CONTROL BLOCK AND LOG ERRORS
1537**
1538** PURPOSE
1539**
1540** DISCONNECT THE INTERRUPT CONTROL BLOCK TO THIS DEVICE AND
1541** SET THE 'NO GOOD' CONTROL BIT, THEN LOG THE DATA THAT HAS
1542** BEEN FOUND TO HELP THE OPERATOR DEFINE THE ERROR CONDITION.
1543**
1544** CALLING SEQUENCE
1545**
1546** THIS SUBROUTINE HAS THE FOLLOWING ENTRIES:
1547**
1548** --> B \$ERR\$ SET 'NG' BIT AND CONVERT DATA TO LOG
1549** --> B \$CONX RETURN TO MDI SUPERVISOR TO TEST STS
1550**
1551** RETURN CONTROL
1552**
1553** B TURTN* RETURN TO MDI
1554** OR B (R6)* IF THE DEVICE COULD NOT BE CONNECTED
1555**
1556*****
1557**\$ERR\$ MVWI X'8000',TUSTATUS SET ON 'NO GOOD' STATUS BIT
1558** MVA HEBLK,R7 GET ADRS OF CONTROL BLOCK
1559** SVC HTOE CONVERT HEX TO EBC VIS DCP
1560**\$PRNT MVBI 3,R5
1561** MVA TOWCRK,R3 SET UP BUFFER STORAGE
1562** MVW R3,BUFPT
1563** MVA LINE1,R1
1564** MVBI 4,R7
1565** MVBI 8,R6
1566** MVFN (R3),(R1)
1567** MVBI 4,R7
1568** MVBI X'40',R2
1569** MVB R2,(R1)*
1570** JCT MVBUF,R6
1571** MVBI 8,R6
1572** AWI 4,R1
1573** JCT MVBUF,R5
1574** MVWI PIDMSG10,PID+2
1575** MVA FAKETU,@DCADD1
1576** MVA DC2PT,@DCADD2
1577** OWI BIT0080,SUPSTAT
1578** MVA \$TUID,R3 SET UP BUFFER STORAGE
1579** BAL TUMSG#TR*,R7 GO TO MESSAGE WRITER
1580**
1581**\$CONX EQU *
1582** MVB SCTID+1,SVCAL+3 SETUP CURRENT CYLINDER NUM
1583** MVA SVCAL,R7 ADDR OF RELEASE PARM LIST
1584** SVC RELSD RELEASE CONTROL
1585** MVB DEVADD,R7 GET DEVICE ADDRESS FROM MDI
1586** SVC RICB RELEASE INTERRUPT CONTROL BLOCK
1587** B TURTN* RETURN TO MDI SUPERVISOR
1588**
1589**\$BEGIN DC A(0007) NUMBER OF LINES TO PRINT
1590** DC A(0008) LINE LENGTH = 8 CHAR
1591** DC C'*** ABORT'
1592** DC A(0040) LINE LENGTH = 40 CHAR
1593** DC C'TUID IOIN ISB INST DEV1 DEV2 DEV3 DEV4 '
1594** DC A(0040) LINE LENGTH = 40 CHAR
1595**\$LINE1 DC C'
1596** DC A(0040) LINE LENGTH = 40 CHAR
1597** DC C'CNTRL DCB2 DCB3 DCB4 DCB5 CHAD BYCT ADRS '
1598** DC A(0,40) LINE LENGTH = 40 CHAR
1599**\$LINE2 DC C'
1600** DC A(0040) LINE LENGTH = 40 CHAR
1601** DC C'RSID CS-2 CS-3 CS-4 CS-5 CS-6 CS-7 CS-8 '
1602** DC A(0040) LINE LENGTH = 40 CHAR

LOCTR OBJECT TEXT STMT SOURCE STATEMENT COPYRIGHT IBM CORP 1976
002E64 4040404040404040 1603+LINE3 DC C'
1604**
002E8C 0000 1605+BUFPT DC A(*-*)
002E8E 2D84 1606+DC2PT DC A(BEGIN)
002E90 0101 1607+FIXTU DC X'0101'
002E92 0101 1608+FAKETU DC X'0101'
00F1F0 1609+PIDMSG10 EQU X'F1F0'
000080 1610+BIT0080 EQU X'0080'
1611**
1612** DATA CONTROL BLOCK FOR CONVERTING HEX TO EBCDIC
1613**
002E94 0030 1614+HEBLK DC A(48) NUMBER OF BYTES TO CONVERT
002E96 28BA 1615+ DC A(\$TUID) FROM ADRS
002E98 181A 1616+ DC A(TUMWRK) AND THE TO ADRS
1617 *
1619 END

CROSS-REFERENCE LISTING

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
0	.R0.	ABSOLUTE. HEX VALUE(00000000) 960 961 979
0	.R1.	ABSOLUTE. HEX VALUE(00000001)
0	.R2.	ABSOLUTE. HEX VALUE(00000002)
0	.R3.	ABSOLUTE. HEX VALUE(00000003) 1195 1198 1268 1278 1281 1282 1285 1287 1343 1344 1379 1385 1389 1419 1424 1437 1467 1512 1514 1515 1527 1561 1562 1566 1578
0	.R4.	ABSOLUTE. HEX VALUE(00000004) 790 798 806 864 876 885 893 956 968 977 985 1271 1272 1275 1289 1290 1292 1293 1296 1302 1308 1380 1381 1383 1387 1391 1420 1421 1422 1432 1433 1434 1436 1439 1449 1451 1453 1456 1458
0	.R5.	ABSOLUTE. HEX VALUE(00000005) 1196 1198 1279 1281 1283 1285 1301 1306 1428 1429 1430 1461 1462 1464 1513 1514 1560 1573
0	.R6.	ABSOLUTE. HEX VALUE(00000006) 791 796 804 808 865 874 883 891 896 898 957 966 975 983 988 990 1213 1277 1297 1309 1345 1450 1455 1457 1463 1466 1468 1522 1528 1530 1565 1570 1571
0	.R7.	ABSOLUTE. HEX VALUE(00000007) 654 788 862 954 1197 1280 1284 1291 1384 1525 1511 1516 1518 1519 1520 1525 1558 1564 1567 1579 1583 1585
1511	\$CONC	ADDRESS. HEX LOCATION(00002CE0) IN CSECT(I4850) LENGTH(2)
1581	\$CONX	ADDRESS. HEX LOCATION(00002D6E) IN CSECT(I4850) LENGTH(1)
1557	\$ERR\$	ADDRESS. HEX LOCATION(00002D1E) IN CSECT(I4850) LENGTH(6)
1208	\$FMT	ADDRESS. HEX LOCATION(00002EB6) IN CSECT(I4850) LENGTH(6)
643	\$INTL	ADDRESS. HEX LOCATION(000028F0) IN CSECT(I4850) LENGTH(2)
613	\$IOIN	ADDRESS. HEX LOCATION(000028BC) IN CSECT(I4850) LENGTH(2)
614	\$ISB	ADDRESS. HEX LOCATION(000028BE) IN CSECT(I4850) LENGTH(2)
598	\$LE	ABSOLUTE. HEX VALUE(00000026) 1292 1432
1190	\$RDID	ADDRESS. HEX LOCATION(00002B7E) IN CSECT(I4850) LENGTH(6)
1202	\$RDVY	ADDRESS. HEX LOCATION(00002BA6) IN CSECT(I4850) LENGTH(6)
1187	\$RECL	ADDRESS. HEX LOCATION(00002B76) IN CSECT(I4850) LENGTH(6)
1184	\$SEEK	ADDRESS. HEX LOCATION(00002B6E) IN CSECT(I4850) LENGTH(2)
612	\$TUID	ADDRESS. HEX LOCATION(000028BA) IN CSECT(I4850) LENGTH(2)
102	@DCADD1	ADDRESS. HEX LOCATION(000019B8) IN CSECT(I4850) LENGTH(1)
103	@DCADD2	ADDRESS. HEX LOCATION(000019BA) IN CSECT(I4850) LENGTH(1)
39	@FIXT	ABSOLUTE. HEX VALUE(00000101) 410 416 434 440 443 449 452 467 470 473
46	@NVLD	ABSOLUTE. HEX VALUE(00000600) 399
38	@QUES	ABSOLUTE. HEX VALUE(00000100) 413 428 431 437 446 464
44	@QUXX	ABSOLUTE. HEX VALUE(00000400) 401 419 455
45	@TUXX	ABSOLUTE. HEX VALUE(00000500) 387
1589	BEGIN	ADDRESS. HEX LOCATION(00002D84) IN CSECT(I4850) LENGTH(2)
1610	BIT0080	ABSOLUTE. HEX VALUE(00000080) 1577
1605	BUFPT	ADDRESS. HEX LOCATION(00002E8C) IN CSECT(I4850) LENGTH(2)
602	CE	ABSOLUTE. HEX VALUE(0000002A) 1271 1383 1453
682	CICB	ABSOLUTE. HEX VALUE(00000014) 1521
1021	CLDCB	ADDRESS. HEX LOCATION(00002A92) IN CSECT(I4850) LENGTH(2)
600	CS	ABSOLUTE. HEX VALUE(00000028) 1272 1275 1381 1422 1451
601	CSA	ABSOLUTE. HEX VALUE(00000029) 1456
631	CSBUF	ADDRESS. HEX LOCATION(000028DA) IN CSECT(I4850) LENGTH(1)
1060	CSDCB	ADDRESS. HEX LOCATION(00002AD2) IN CSECT(I4850) LENGTH(2)
639	CSTL8	ADDRESS. HEX LOCATION(000028E8) IN CSECT(I4850) LENGTH(2)
621	DCBUF	ADDRESS. HEX LOCATION(000028CA) IN CSECT(I4850) LENGTH(1)
1606	DC2PT	ADDRESS. HEX LOCATION(00002E8E) IN CSECT(I4850) LENGTH(2)
105	DEVADD	ADDRESS. HEX LOCATION(000019D0) IN CSECT(I4850) LENGTH(1)
616	DEV1	ADDRESS. HEX LOCATION(000028C2) IN CSECT(I4850) LENGTH(2)
1009	DGDCB	ADDRESS. HEX LOCATION(00002A82) IN CSECT(I4850) LENGTH(2)
1130	DIAGW	ADDRESS. HEX LOCATION(00002E44) IN CSECT(I4850) LENGTH(2)
67	DUMMY	ABSOLUTE. HEX VALUE(00000000) 378 404 422 458 475 487
476	ENTPT	ADDRESS. HEX LOCATION(000025E4) IN CSECT(I4850) LENGTH(1)
47	EQ	ABSOLUTE. HEX VALUE(00000000) 198
593	ER	ABSOLUTE. HEX VALUE(00000021) 798 806 876 885 893 968 977 985 1289 1308 1391 1433 1458
668	EXIT	ABSOLUTE. HEX VALUE(00000006)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
1608	FAKETU	ADDRESS. HEX LOCATION(00002E92) IN CSECT(I4850) LENGTH(2)
1026	FRDCB	ADDRESS. HEX LOCATION(00002AA2) IN CSECT(I4850) LENGTH(2)
499	F00075	ADDRESS. HEX LOCATION(00002612) IN CSECT(I4850) LENGTH(1)
505	F00084	ADDRESS. HEX LOCATION(0000265A) IN CSECT(I4850) LENGTH(1)
511	F00110	ADDRESS. HEX LOCATION(000026A2) IN CSECT(I4850) LENGTH(1)
517	F00119	ADDRESS. HEX LOCATION(000026FE) IN CSECT(I4850) LENGTH(1)
521	F00123	ADDRESS. HEX LOCATION(00002726) IN CSECT(I4850) LENGTH(1)
527	F00133	ADDRESS. HEX LOCATION(0000276C) IN CSECT(I4850) LENGTH(1)
533	F00138	ADDRESS. HEX LOCATION(000027C8) IN CSECT(I4850) LENGTH(1)
539	F00159	ADDRESS. HEX LOCATION(00002806) IN CSECT(I4850) LENGTH(1)
545	F00164	ADDRESS. HEX LOCATION(00002862) IN CSECT(I4850) LENGTH(1)
551	F00169	ADDRESS. HEX LOCATION(000028A0) IN CSECT(I4850) LENGTH(1)
1614	HEBLK	ADDRESS. HEX LOCATION(00002E94) IN CSECT(I4850) LENGTH(2)
688	H7OE	ABSOLUTE. HEX VALUE(0000001A) 1558
664	IDLE	ABSOLUTE. HEX VALUE(00000002) 1304
595	IN	ABSOLUTE. HEX VALUE(00000023) 1290 1302 1421
1481	INTBL	ADDRESS. HEX LOCATION(00002CD8) IN CSECT(I4850) LENGTH(2)
1378	INTER	ADDRESS. HEX LOCATION(00002C40) IN CSECT(I4850) LENGTH(2)
1387	INTES	ADDRESS. HEX LOCATION(00002C58) IN CSECT(I4850) LENGTH(2)
1391	INTET	ADDRESS. HEX LOCATION(00002C60) IN CSECT(I4850) LENGTH(2)
1418	INTOK	ADDRESS. HEX LOCATION(00002C64) IN CSECT(I4850) LENGTH(2)
1440	INTRX	ADDRESS. HEX LOCATION(00002C94) IN CSECT(I4850) LENGTH(2)
1421	INTR1	ADDRESS. HEX LOCATION(00002C6C) IN CSECT(I4850) LENGTH(2)
1426	INTR2	ADDRESS. HEX LOCATION(00002C7A) IN CSECT(I4850) LENGTH(1)
1434	INTR3	ADDRESS. HEX LOCATION(00002C88) IN CSECT(I4850) LENGTH(2)
1472	IOBLK	ADDRESS. HEX LOCATION(00002CCC) IN CSECT(I4850) LENGTH(2)
1474	IODCB	ADDRESS. HEX LOCATION(00002CD0) IN CSECT(I4850) LENGTH(2)
1475	IOMOD	ADDRESS. HEX LOCATION(00002CD2) IN CSECT(I4850) LENGTH(2)
37	I4850	CSECT. START(00002500) LENGTH(2458) ESDID(0) 1211 1268 1274
1595	LINE1	ADDRESS. HEX LOCATION(00002DBC) IN CSECT(I4850) LENGTH(40)
615	LSTIO	ADDRESS. HEX LOCATION(000028C0) IN CSECT(I4850) LENGTH(2)
592	MI	ABSOLUTE. HEX VALUE(00000020) 1436
1566	MVBUF	ADDRESS. HEX LOCATION(00002D3C) IN CSECT(I4850) LENGTH(2)
604	NG	ABSOLUTE. HEX VALUE(0000002C) 1570 1573
599	NI	ABSOLUTE. HEX VALUE(00000027) 1439
387	N00001	ADDRESS. HEX LOCATION(00002558) IN CSECT(I4850) LENGTH(2)
399	N00002	ADDRESS. HEX LOCATION(0000256A) IN CSECT(I4850) LENGTH(2)
401	N00003	ADDRESS. HEX LOCATION(0000256C) IN CSECT(I4850) LENGTH(2)
410	N00004	ADDRESS. HEX LOCATION(0000257E) IN CSECT(I4850) LENGTH(2)
413	N00005	ADDRESS. HEX LOCATION(00002582) IN CSECT(I4850) LENGTH(2)
416	N00006	ADDRESS. HEX LOCATION(00002586) IN CSECT(I4850) LENGTH(2)
419	N00007	ADDRESS. HEX LOCATION(0000258A) IN CSECT(I4850) LENGTH(2)
428	N00008	ADDRESS. HEX LOCATION(0000259C) IN CSECT(I4850) LENGTH(2)
431	N00009	ADDRESS. HEX LOCATION(000025A0) IN CSECT(I4850) LENGTH(2)
434	N00010	ADDRESS. HEX LOCATION(000025A4) IN CSECT(I4850) LENGTH(2)
437	N00011	ADDRESS. HEX LOCATION(000025A8) IN CSECT(I4850) LENGTH(2)
440	N00012	ADDRESS. HEX LOCATION(000025AC) IN CSECT(I4850) LENGTH(2)
443	N00013	ADDRESS. HEX LOCATION(000025B0) IN CSECT(I4850) LENGTH(2)
446	N00014	ADDRESS. HEX LOCATION(000025B4) IN CSECT(I4850) LENGTH(2)
449	N00015	ADDRESS. HEX LOCATION(000025B8) IN CSECT(I4850) LENGTH(2)
452	N00016	ADDRESS. HEX LOCATION(000025BC) IN CSECT(I4850) LENGTH(2)
455	N00017	ADDRESS. HEX LOCATION(000025C0) IN CSECT(I4850) LENGTH(2)
464	N00018	ADDRESS. HEX LOCATION(000025D2) IN CSECT(I4850) LENGTH(2)
467	N00019	ADDRESS. HEX LOCATION(000025D6) IN CSECT(I4850) LENGTH(2)
470	N00020	ADDRESS. HEX LOCATION(000025DA) IN CSECT(I4850) LENGTH(2)
473	N00021	ADDRESS. HEX LOCATION(000025DE) IN CSECT(I4850) LENGTH(2)

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DECLARED	NAME	ATTRIBUTES AND REFERENCES
557	OPTN1	375 456 ADDRESS. HEX LOCATION(000028E4) IN CSECT(I4850) LENGTH(2)
580	OPTN3	790 864 956 1380 1420 ADDRESS. HEX LOCATION(000028E8) IN CSECT(I4850) LENGTH(2)
101	PARMARA	1467 1515 ADDRESS. HEX LOCATION(0000196E) IN CSECT(I4850) LENGTH(1)
69	PID	397 408 426 462 ADDRESS. HEX LOCATION(00001800) IN CSECT(I4850) LENGTH(1)
1609	PIDMSG10	71 72 73 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 1574 ABSOLUTE. HEX VALUE(0000F1F0)
674	PREP	1574 ABSOLUTE. HEX VALUE(0000000C)
1093	RDDCB	1529 ADDRESS. HEX LOCATION(00002B02) IN CSECT(I4850) LENGTH(2)
685	RELSA	1196 1199 ABSOLUTE. HEX VALUE(00000017)
684	REQSD	1584 ABSOLUTE. HEX VALUE(00000016)
681	RICB	1517 ABSOLUTE. HEX VALUE(00000013)
1037	RSDCB	1586 ADDRESS. HEX LOCATION(00002AB2) IN CSECT(I4850) LENGTH(2)
620	SCTID	1190 ADDRESS. HEX LOCATION(000028C2) IN CSECT(I4850) LENGTH(2)
1048	SKDCB	1044 1191 1192 1582 ADDRESS. HEX LOCATION(00002AC2) IN CSECT(I4850) LENGTH(2)
672	START	800 801 802 803 870 871 872 873 889 890 962 963 964 965 981 982 1184 ABSOLUTE. HEX VALUE(0000000A)
104	SUPSTAT	1294 ADDRESS. HEX LOCATION(000019C4) IN CSECT(I4850) LENGTH(1)
646	SVCAL	1577 ADDRESS. HEX LOCATION(000028F6) IN CSECT(I4850) LENGTH(2)
92	TUMSGWTR	1516 1582 1583 ADDRESS. HEX LOCATION(000018BA) IN CSECT(I4850) LENGTH(1)
76	TUPARM1	1579 ADDRESS. HEX LOCATION(0000189A) IN CSECT(I4850) LENGTH(1)
77	TUPARM2	803 872 873 882 964 965 973 ADDRESS. HEX LOCATION(0000189C) IN CSECT(I4850) LENGTH(1)
644	TURIN	887 979 ADDRESS. HEX LOCATION(000028F2) IN CSECT(I4850) LENGTH(2)
74	TUSTATUS	788 862 954 1587 ADDRESS. HEX LOCATION(00001818) IN CSECT(I4850) LENGTH(1)
75	TUWORK	1557 ADDRESS. HEX LOCATION(0000181A) IN CSECT(I4850) LENGTH(1)
788	T4852	1561 1616 ADDRESS. HEX LOCATION(00002902) IN CSECT(I4850) LENGTH(4)
862	T4855	389 ADDRESS. HEX LOCATION(00002956) IN CSECT(I4850) LENGTH(4)
954	T4856	403 421 ADDRESS. HEX LOCATION(000029EC) IN CSECT(I4850) LENGTH(4)
898	T55E	457 ADDRESS. HEX LOCATION(000029E2) IN CSECT(I4850) LENGTH(4)
901	T55F	866 875 877 884 886 888 892 894 897 ADDRESS. HEX LOCATION(000029E8) IN CSECT(I4850) LENGTH(4)
990	T56E	899 ADDRESS. HEX LOCATION(00002A78) IN CSECT(I4850) LENGTH(4)
993	T56F	958 967 969 976 978 980 984 986 989 ADDRESS. HEX LOCATION(00002A7E) IN CSECT(I4850) LENGTH(4)
1082	VRDCB	991 ADDRESS. HEX LOCATION(00002AF2) IN CSECT(I4850) LENGTH(2)
1071	WRDCB	970 971 972 973 974 987 1202 ADDRESS. HEX LOCATION(00002AE2) IN CSECT(I4850) LENGTH(2)
596	XE	1205 ABSOLUTE. HEX VALUE(00000024)
594	XI	1387 1449 ABSOLUTE. HEX VALUE(00000022)
1268	XIO	1293 1434 ADDRESS. HEX LOCATION(00002BCE) IN CSECT(I4850) LENGTH(4)
1449	XIOCK	1185 1188 1193 1200 1203 1206 1209 ADDRESS. HEX LOCATION(00002C96) IN CSECT(I4850) LENGTH(2)
1456	XIOCO	1303 ADDRESS. HEX LOCATION(00002CA8) IN CSECT(I4850) LENGTH(2)
1273	XIOCS	1454 ADDRESS. HEX LOCATION(00002BD8) IN CSECT(I4850) LENGTH(6)
1458	XIOCV	1465 ADDRESS. HEX LOCATION(00002CAC) IN CSECT(I4850) LENGTH(2)
1467	XIOCX	1452 ADDRESS. HEX LOCATION(00002CC6) IN CSECT(I4850) LENGTH(4)
1342	XIOER	1459 ADDRESS. HEX LOCATION(00002C34) IN CSECT(I4850) LENGTH(2)
1277	XIO1	1473 ADDRESS. HEX LOCATION(00002BE8) IN CSECT(I4850) LENGTH(4)
1290	XIO2	1212 1269 ADDRESS. HEX LOCATION(00002C0E) IN CSECT(I4850) LENGTH(2)
1302	XIO8	1276 ADDRESS. HEX LOCATION(00002C22) IN CSECT(I4850) LENGTH(2)
		1307