

IDENTIFICATION

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PRODUCT CODE: MAINDEC-8/E-D0AB  
PRODUCT NAME: PDP-8/E INSTRUCTION TEST 1  
DATE CREATED: MAY 10, 1971  
MAINTAINER: DIAGNOSTIC GROUP  
AUTHOR: ED FORTMILLER

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1. ABSTRACT  
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THIS IS A DIAGNOSTIC PROGRAM FOR TESTING THE AND, TAD, OPERATE, AND BASIC MQ, INSTRUCTIONS OF THE PDP-8/E ONLY.

2. REQUIREMENTS  
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2.1 EQUIPMENT  
-----

A PDP-8/E EQUIPPED WITH TELETYPE.

2.2 STORAGE  
-----

THIS PROGRAM USES LOCATIONS 0000-5314. THE BINARY LOADER MUST BE STORED IN THE LAST MEMORY PAGE.

2.3 PRELIMINARY PROGRAMS  
-----

3. LOADING PROCEDURE  
-----

3.1 METHOD  
-----

THE STANDARD BINARY LOADER IS USED.

4. STARTING PROCEDURE  
-----

4.1 CONTROL SWITCH SETTINGS  
-----

SR=7777

4.2 STARTING ADDRESS  
-----

0200

4.3 OPERATOR ACTION  
-----

1. SET SR TO 200 AND PRESS LOAD ADDRESS.
2. SET SR TO 7777 AND PUSH CLEAR AND CONTINUE
3. PROGRAM WILL HALT. MA=147
4. IF AC IS NOT EQUAL TO 0000 AN ERROR HAS OCCURRED.
5. PUSH CONTINUE. PROGRAM WILL RUN UNTIL STOPPED OR UNTIL AN ERROR IS ENCOUNTERED.

5. OPERATING PROCEDURE

-----  
SAME AS SECTION 4.

6. ERRORS

6.1 ERROR HALTS AND DESCRIPTION

-----  
SEE LISTING.

6.2 ERROR RECOVERY

-----  
IF IT IS DESIRED TO LOOP ON THE TEST CAUSING THE ERROR, REPLACE THE OPERATE INSTRUCTION(S) PRECEDING THE HLT WITH A JMP TO THE BEGINNING OF THE TEST.

7. RESTRICTIONS

7.1 STARTING RESTRICTIONS: NONE

7.2 OPERATING RESTRICTIONS: NONE

8. MISCELLANEOUS

8.1 EXECUTION TIME

-----  
THE TELETYPE BELL RINGS AT THE END OF 1440 PROGRAM PASSES WHICH IS APPROXIMATELY EVERY 5 SECONDS.

9.

PROGRAM DESCRIPTION  
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THE PROGRAM CONSISTS OF MANY INDIVIDUAL TESTS. IN MOST CASES EACH TEST CHECKS ONLY ONE FUNCTION AND USES PREVIOUSLY TESTED FUNCTIONS AS A BASIS FOR THE TEST. THE PROGRAM COUNTER ACTION IS STRICTLY SEQUENTIAL EXCEPT FOR SKIPS. THE ONLY JMP INSTRUCTIONS USED ARE AT THE BEGINNING AND END OF THE PROGRAM. THE SEQUENCE OF TESTING IS AS FOLLOWS:

1. TEST ALL OPERATE FUNCTIONS INDIVIDUALLY EXCEPT FOR ROTATES.
2. TEST "TAD" INSTRUCTION.
3. TEST ROTATE FUNCTIONS.
4. TEST "BSW" INSTRUCTION.
5. GROUP 1 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
6. GROUP 2 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
7. MQ INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
8. TEST "AND" INSTRUCTION.

THE TELETYPE BELL RINGS APPROXIMATELY EVERY 5 SECONDS.

10.

LISTING  
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/PDP-8/E INSTRUCTION TEST 1 MAINDEC-8E-D0AB  
 /COPYRIGHT 1970, 1971, DIGITAL EQUIPMENT CORP., MAYNARD, MASS. 01754  
 /TAPE 1

|      |           |                                |
|------|-----------|--------------------------------|
| 7002 | BSW=7002  | /SWAP BYTES IN AC              |
| 7401 | NOPE=7401 | /NOP                           |
| 7601 | CLAE=7601 | /CLEAR AC                      |
| 7421 | MQL=7421  | /LOAD MQ FROM AC THEN CLEAR AC |
| 7501 | MQA=7501  | /INCLUSIVE OR, MQ AND AC       |
| 7621 | CAM=7621  | /CLEAR AC AND MQ               |
| 7521 | SWP=7521  | /SWAP AC AND MQ                |
| 7701 | ACL=7701  | /LOAD AC FROM MQ, CLEAR MQ     |

|      |      |           |
|------|------|-----------|
| 0000 | 0000 | *0        |
| 0001 | 5001 | 0         |
| 0002 | 0002 | JMP 1     |
| 0003 | 0003 | 0002      |
| 0004 | 0000 | 0003      |
| 0005 | 0000 | 0         |
| 0006 | 7402 | 0000      |
| 0007 | 7000 | HALT, HLT |
| 0010 | 0000 | NOOP, NOP |
|      |      | 0         |

/CONSTANTS AND VARIABLES

|      |      |             |
|------|------|-------------|
| 0020 | 0020 | *20         |
| 0021 | 0001 | K0000, 0000 |
| 0022 | 0002 | K0001, 0001 |
| 0023 | 0003 | K0002, 0002 |
| 0024 | 0004 | K3, 3       |
| 0025 | 0006 | K0004, 0004 |
| 0026 | 0010 | K6, 6       |
| 0027 | 0014 | K0010, 0010 |
| 0030 | 0020 | K14, 14     |
| 0031 | 0030 | K0020, 0020 |
| 0032 | 0040 | K30, 30     |
| 0033 | 0060 | K0040, 0040 |
| 0034 | 0100 | K60, 60     |
| 0035 | 0140 | K0100, 0100 |
| 0036 | 0200 | K140, 140   |
| 0037 | 0300 | K0200, 0200 |
| 0040 | 0400 | K300, 300   |
| 0041 | 0600 | K0400, 0400 |
| 0042 | 1000 | K600, 600   |
| 0043 | 1234 | K1000, 1000 |
| 0044 | 1400 | K1234, 1234 |
| 0045 | 2000 | K1400, 1400 |
| 0046 | 3000 | K2000, 2000 |
| 0047 | 3312 | K3000, 3000 |
| 0050 | 4000 | K3312, 3312 |
| 0051 | 7717 | K4000, 4000 |
| 0052 | 7776 | K7717, 7717 |
| 0053 | 7775 | K7776, 7776 |
|      |      | K7775, 7775 |

|      |      |        |      |
|------|------|--------|------|
| 0054 | 7773 | K7773, | 7773 |
| 0055 | 7767 | K7767, | 7767 |
| 0056 | 7757 | K7757, | 7757 |
| 0057 | 7737 | K7737, | 7737 |
| 0060 | 7177 | K7177, | 7177 |
| 0061 | 7677 | K7677, | 7677 |
| 0062 | 7577 | K7577, | 7577 |
| 0063 | 7377 | K7377, | 7377 |
| 0064 | 6777 | K6777, | 6777 |
| 0065 | 5777 | K5777, | 5777 |
| 0066 | 3777 | K3777, | 3777 |
| 0067 | 7777 | K7777, | 7777 |
| 0070 | 5252 | K5252, | 5252 |
| 0071 | 2525 | K2525, | 2525 |
| 0072 | 6000 | K6000, | 6000 |
| 0073 | 7000 | K7000, | 7000 |
| 0074 | 7400 | K7400, | 7400 |
| 0075 | 7600 | K7600, | 7600 |
| 0076 | 7740 | K7740, | 7740 |
| 0077 | 7760 | K7760, | 7760 |
| 0100 | 7770 | K7770, | 7770 |
| 0101 | 7774 | K7774, | 7774 |

|      |      |        |       |
|------|------|--------|-------|
| 0102 | 0007 | K0007, | 0007  |
| 0103 | 0067 | K0067, | 0067  |
| 0104 | 0017 | K0017, | 0017  |
| 0105 | 0037 | K0037, | 0037  |
| 0106 | 0077 | K0077, | 0077  |
| 0107 | 0177 | K0177, | 0177  |
| 0110 | 0377 | K0377, | 0377  |
| 0111 | 0777 | K0777, | 0777  |
| 0112 | 1777 | K1777, | 1777  |
| 0113 | 7700 | K7700, | 7700  |
| 0114 | 5225 | K5225, | 5225  |
| 0115 | 2552 | K2552, | 2552  |
| 0116 | 0770 | K0770, | 0770  |
| 0117 | 7007 | K7007, | 7007  |
| 0120 | 0207 | BEL,   | 0207  |
| 0121 | 5140 | BLCNT, | -2640 |
| 0122 | 5140 | BLCNT, | -2640 |

|      |      |                   |  |
|------|------|-------------------|--|
| 0144 | 1067 | *144              |  |
| 0145 | 7200 | /TAD,CLA,HLT,TEST |  |
| 0146 | 7402 | START, TAD K7777  |  |
|      |      | CLA               |  |
|      |      | HLT               |  |
| 0147 | 7410 | /SKIP TEST        |  |
| 0150 | 7402 | SKP               |  |
|      |      | HLT               |  |
| 0151 | 7200 | /SEA TEST 1       |  |
|      |      | CLA               |  |

/AC SHOULD=0  
 /SET SR TO 7777, CONTINUE  
 /SKP FAILED

|      |      |                  |                                   |
|------|------|------------------|-----------------------------------|
| 0152 | 7440 | SZA              |                                   |
| 0153 | 7402 | HLT              | /SZA SHOULD HAVE SKIPPED          |
|      |      |                  | /AC SHOULD EQUAL ZERO             |
| 0154 | 7450 | SNA              |                                   |
| 0155 | 7410 | SKP              |                                   |
| 0156 | 7402 | HLT              | /SNA SHOULD NOT HAVE SKIPPED      |
|      |      |                  | /AC SHOULD EQUAL ZERO             |
|      |      | /SZA TEST 2      |                                   |
| 0157 | 7200 | CLA              |                                   |
| 0160 | 1050 | TAD              | K4000                             |
| 0161 | 7440 | SZA              |                                   |
| 0162 | 7410 | SKP              |                                   |
| 0163 | 7402 | HLT              | /SZA SHOULD NOT HAVE SKIPPED      |
|      |      |                  | /AC SHOULD EQUAL 4000             |
| 0164 | 7450 | SNA              |                                   |
| 0165 | 7402 | HLT              | /SNA SHOULD HAVE SKIPPED          |
|      |      |                  | /AC SHOULD EQUAL 4000             |
|      |      | /SZA TEST 3      |                                   |
| 0166 | 7200 | CLA              |                                   |
| 0167 | 1045 | TAD              | K2000                             |
| 0170 | 7440 | SZA              |                                   |
| 0171 | 7410 | SKP              |                                   |
| 0172 | 7402 | HLT              | /SZA SHOULD NOT HAVE SKIPPED      |
|      |      |                  | /AC SHOULD EQUAL 2000             |
| 0173 | 7450 | SNA              |                                   |
| 0174 | 7402 | HLT              | /SNA SHOULD HAVE SKIPPED          |
| 0175 | 7000 | NOP              | /AC SHOULD EQUAL 2000             |
| 0176 | 7000 | NOP              |                                   |
| 0177 | 7410 | SKP              | /SKIP OVER JMP START.             |
|      | 0200 | *200             |                                   |
| 0200 | 5144 | BEGIN, JMP START | /BEGINNING OF INSTRUCTION TEST 1. |
|      |      | /SZA TEST 4      |                                   |
| 0201 | 7200 | CLA              |                                   |
| 0202 | 1042 | TAD              | K1000                             |
| 0203 | 7440 | SZA              |                                   |
| 0204 | 7410 | SKP              |                                   |
| 0205 | 7402 | HLT              | /SZA SHOULD NOT HAVE SKIPPED      |
|      |      |                  | /AC SHOULD EQUAL 1000             |
| 0206 | 7450 | SNA              |                                   |
| 0207 | 7402 | HLT              | /SNA SHOULD HAVE SKIPPED          |
|      |      |                  | /AC SHOULD EQUAL 10000            |
|      |      | /SZA TEST 5      |                                   |
| 0210 | 7200 | CLA              |                                   |
| 0211 | 1040 | TAD              | K0400                             |
| 0212 | 7440 | SZA              |                                   |
| 0213 | 7410 | SKP              |                                   |
| 0214 | 7402 | HLT              | /SZA SHOULD NOT HAVE SKIPPED      |
|      |      |                  | /AC SHOULD EQUAL 0400             |
| 0215 | 7450 | SNA              |                                   |
| 0216 | 7402 | HLT              | /SNA SHOULD HAVE SKIPPED          |
|      |      |                  | /AC SHOULD EQUAL 0400             |
|      |      | /SZA TEST 6      |                                   |



0217 7200 CLA  
0220 1036 TAD K0200  
0221 7440 SZA  
0222 7410 SKP  
0223 7402 HLT

/SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0200

0224 7450 SNA  
0225 7402 HLT

/SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0200

/SZA TEST 7

0226 7200 CLA  
0227 1034 TAD K0100  
0230 7440 SZA  
0231 7410 SKP  
0232 7402 HLT

/SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0100

0233 7450 SNA  
0234 7402 HLT

/SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0100

/SZA TEST 8

0235 7200 CLA  
0236 1032 TAD K0040  
0237 7440 SZA  
0240 7410 SKP  
0241 7402 HLT

/SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0040

0242 7450 SNA  
0243 7402 HLT

/SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0040

/SZA TEST 9

0244 7200 CLA  
0245 1030 TAD K0020  
0246 7440 SZA  
0247 7410 SKP  
0250 7402 HLT

/SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0020

0251 7450 SNA  
0252 7402 HLT

/SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0020

/SZA TEST 10

0253 7200 CLA  
0254 1026 TAD K0010  
0255 7440 SZA  
0256 7410 SKP  
0257 7402 HLT

/SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0010

0260 7450 SNA  
0261 7402 HLT

/SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0010

/SZA TEST 11

0262 7200 CLA  
0263 1024 TAD K0004

|      |      |     |   |
|------|------|-----|---|
| 0264 | 7440 | SZA |   |
| 0265 | 7410 | SKP |   |
| 0266 | 7402 | HLT | /SZA SHOULD NOT HAVE SKIPPED<br>/AC SHOULD EQUAL 0004 |
| 0267 | 7450 | SNA |   |
| 0270 | 7402 | HLT | /SNA SHOULD HAVE SKIPPED<br>/AC SHOULD EQUAL 0004     |

/SZA TEST 12

|      |      |           |   |
|------|------|-----------|---|
| 0271 | 7200 | CLA       |   |
| 0272 | 1022 | TAD K0002 |   |
| 0273 | 7440 | SZA       |   |
| 0274 | 7410 | SKP       |   |
| 0275 | 7402 | HLT       | /SZA SHOULD NOT HAVE SKIPPED<br>/AC SHOULD EQUAL 0002 |
| 0276 | 7450 | SNA       |   |
| 0277 | 7402 | HLT       | /SNA SHOULD HAVE SKIPPED<br>/AC SHOULD EQUAL 0002     |

/SZA TEST 13

|      |      |           |   |
|------|------|-----------|---|
| 0300 | 7200 | CLA       |   |
| 0301 | 1021 | TAD K0001 |   |
| 0302 | 7440 | SZA       |   |
| 0303 | 7410 | SKP       |   |
| 0304 | 7402 | HLT       | /SZA SHOULD NOT HAVE SKIPPED<br>/AC SHOULD EQUAL 0001 |
| 0305 | 7450 | SNA       |   |
| 0306 | 7402 | HLT       | /SNA SHOULD HAVE SKIPPED<br>/AC SHOULD EQUAL 0001     |

/SPA TEST 1

|      |      |           |   |
|------|------|-----------|---|
| 0307 | 7200 | CLA       |   |
| 0310 | 1066 | TAD K3777 |   |
| 0311 | 7510 | SPA       |   |
| 0312 | 7402 | HLT       | /SPA SHOULD HAVE SKIPPED<br>/AC SHOULD EQUAL 3777 |

/SPA TEST 2

|      |      |           |   |
|------|------|-----------|---|
| 0313 | 7200 | CLA       |   |
| 0314 | 1050 | TAD K4000 |   |
| 0315 | 7510 | SPA       |   |
| 0316 | 7410 | SKP       |   |
| 0317 | 7402 | HLT       | /SPA SHOULD NOT HAVE SKIPPED<br>/AC SHOULD EQUAL 4000 |

/SMA TEST 1

|      |      |           |   |
|------|------|-----------|---|
| 0320 | 7200 | CLA       |   |
| 0321 | 1066 | TAD K3777 |   |
| 0322 | 7500 | SMA       |   |
| 0323 | 7410 | SKP       |   |
| 0324 | 7402 | HLT       | /SMA SHOULD NOT HAVE SKIPPED<br>/AC SHOULD EQUAL 3777 |

/SMA TEST 2

|      |      |     |  |
|------|------|-----|--|
| 0325 | 7200 | CLA |  |
|------|------|-----|--|

0326 1050 TAD K4000  
0327 7500 SMA  
0330 7402 HLT /SMA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 4000

/CMA TEST 1  
0331 7200 CLA  
0332 1067 TAD K7777  
0333 7040 CMA  
0334 7440 SZA  
0335 7402 HLT /CMA DID NOT COMPLEMENT AC  
/AC SHOULD EQUAL 0000

/CMA - TAD TEST 1  
0336 7200 CLA  
0337 1071 TAD K2525  
0340 7040 CMA  
0341 7450 SNA  
0342 7402 HLT /TAD OR CMA ERROR  
/AC SHOULD EQUAL 5252

0343 1071 TAD K2525  
0344 7040 CMA  
0345 7440 SEA  
0346 7402 HLT /TAD OR CMA ERROR  
/AC SHOULD EQUAL 0000

/CMA - TAD TEST 2  
0347 7200 CLA  
0350 1070 TAD K5252  
0351 7040 CMA  
0352 7450 SNA  
0353 7402 HLT /TAD OR CMA ERROR  
/AC SHOULD EQUAL 2525

0354 1070 TAD K5252  
0355 7040 CMA  
0356 7440 SEA  
0357 7402 HLT /TAD OR CMA ERROR  
/AC SHOULD EQUAL 0000

/CMA - TAD TEST 3  
0360 7200 CLA  
0361 1067 TAD K7777  
0362 7040 CMA  
0363 7440 SEA  
0364 7402 HLT /TAD OR CMA ERROR  
/AC SHOULD EQUAL 0000

/IAC TEST 1  
0365 7200 CLA  
0366 7001 IAC  
0367 7440 SZA  
0370 7410 SKP  
0371 7402 HLT /IAC DID NOT INCREMENT  
/AC SHOULD EQUAL 0001

/IAC TEST 2  
0372 7200 CLA  
0373 1067 TAD K7777  
0374 7001 IAC

|      |      |             |                              |
|------|------|-------------|------------------------------|
| 0375 | 7440 | SZA         |                              |
| 0376 | 7402 | HLT         | /IAC DID NOT INCREMENT       |
|      |      |             | /AC SHOULD EQUAL 0000        |
|      |      | /IAC TEST 3 |                              |
| 0377 | 7200 | CLA         |                              |
| 0400 | 1101 | TAD K7774   |                              |
| 0401 | 7001 | IAC         |                              |
| 0402 | 7001 | IAC         |                              |
| 0403 | 7001 | IAC         |                              |
| 0404 | 7001 | IAC         |                              |
| 0405 | 7440 | SZA         |                              |
| 0406 | 7402 | HLT         | /IAC NOT INCREMENTING        |
|      |      |             | /AC SHOULD EQUAL 0000        |
|      |      | /SZL TEST 1 |                              |
| 0407 | 7200 | CLA         |                              |
| 0410 | 7100 | CLL         | /CLEAR LINK                  |
| 0411 | 7004 | RAL         | /CLEAR LINK SAFETY           |
| 0412 | 7430 | SZL         |                              |
| 0413 | 7402 | HLT         | /SZL SHOULD HAVE SKIPPED     |
|      |      |             | /LINK SHOULD EQUAL ZERO      |
|      |      | /SZL TEST 2 |                              |
| 0414 | 7200 | CLA         |                              |
| 0415 | 7100 | CLL         | /CLEAR LINK                  |
| 0416 | 7020 | CML         | /COMPLEMENT LINK             |
| 0417 | 1050 | TAD K4000   |                              |
| 0420 | 7004 | RAL         | /SET LINK SAFETY             |
| 0421 | 7430 | SZL         |                              |
| 0422 | 7410 | SKP         |                              |
| 0423 | 7402 | HLT         | /SZL SHOULD NOT HAVE SKIPPED |
|      |      |             | /LINK SHOULD EQUAL ONE       |
|      |      | /SNL TEST 1 |                              |
| 0424 | 7200 | CLA         |                              |
| 0425 | 7100 | CLL         | /CLEAR LINK                  |
| 0426 | 7004 | RAL         | /CLEAR LINK SAFETY           |
| 0427 | 7420 | SNL         |                              |
| 0430 | 7410 | SKP         |                              |
| 0431 | 7402 | HLT         | /SNL SHOULD NOT HAVE SKIPPED |
|      |      |             | /LINK SHOULD EQUAL ZERO      |
|      |      | /SNL TEST 2 |                              |
| 0432 | 7200 | CLA         |                              |
| 0433 | 7100 | CLL         | /CLEAR LINK                  |
| 0434 | 7020 | CML         | /COMPLEMENT LINK             |
| 0435 | 1050 | TAD K4000   |                              |
| 0436 | 7004 | RAL         | /SET LINK SAFETY             |
| 0437 | 7420 | SNL         |                              |
| 0440 | 7402 | HLT         | /SNL SHOULD HAVE SKIPPED     |
|      |      |             | /LINK SHOULD EQUAL ONE       |
|      |      | /CLL TEST 1 |                              |
| 0441 | 7200 | CLA         |                              |
| 0442 | 1050 | TAD K4000   |                              |

```

0443 7024          RAL          /SET LINK
0444 7420          SNL
0445 5252          JMP CLL11          /CANNOT SET LINK WITH RAL
                                /TRY A CML
0446 7100          CLL1,  CLL
0447 7430          SZL
0450 7402          HLT          /CLL DID NOT CLEAR LINK
                                /LINK SHOULD EQUAL ONE
0451 5256          JMP ,+5
0452 7020          CLL11, CML          /SET LINK
0453 7420          SNL
0454 7402          HLT          /CANNOT SET LINK WITH
                                /RAL OR CML, CANNOT
                                /PERFORM CLL TEST 1
0455 5246          JMP CLL1

                                /CML TEST 1
0456 7100          CMLT1, CLL
0457 7430          SZL
0460 7402          HLT          /CLL DID NOT CLEAR LINK
0461 7020          CML
0462 7420          SNL
0463 7402          HLT          /CML DID NOT SET LINK
0464 7020          CML
0465 7430          SZL
0466 7402          HLT          /CML DID NOT RESET LINK
                                /CLA TEST 1 (OPERATE GROUP 2)
0467 7200          CLA
0470 1067          TAD K7777
0471 7600          7600
0472 7440          SZA
0473 7402          HLT          /CLA (7600) DID NOT CLEAR AC
                                /AC SHOULD EQUAL 0000

                                /OSR TEST 1
0474 7200          CLA
0475 7404          OSR
0476 7040          CMA
0477 7440          SZA
0500 7402          HLT          /OSR DID NOT SET AC TO 7777
                                /AC SHOULD=0

                                /NOP TEST 1 (OPERATE GROUP 1)
0501 7200          CLA
0502 7100          CLL          /AC AND LINK EQUAL ZERO
0503 7000          7000          /TEST INSTRUCTION
0504 7450          SNA
0505 7430          SZL
0506 7402          HLT          /NOP FAILURE
                                /AC AND LINK SHOULD BE ZERO

                                /NOP TEST 2 (OPERATE GROUP 2)
0507 7200          CLA

```

|      |      |      |                         |
|------|------|------|-------------------------|
| 0510 | 7100 | CLL  | /AC AND LINK EQUAL ZERO |
| 0511 | 7400 | 7400 | /TEST INSTRUCTION       |
| 0512 | 7450 | SNA  |                         |
| 0513 | 7430 | SZL  |                         |
| 0514 | 7402 | HLT  | /NOP FAILURE            |

/AC AND LINK SHOULD BE ZERO

## /TAD TEST 1

|      |      |           |            |
|------|------|-----------|------------|
| 0515 | 7200 | CLA       |            |
| 0516 | 1066 | TAD K3777 | /OPERAND 1 |
| 0517 | 1050 | TAD K4000 | /OPERAND 2 |
| 0520 | 7040 | CMA       |            |
| 0521 | 7440 | SZA       |            |
| 0522 | 7402 | HLT       |            |

/TAD ERROR  
/AC SHOULD EQUAL 0000

## /TAD TEST 2

|      |      |           |            |
|------|------|-----------|------------|
| 0523 | 7200 | CLA       |            |
| 0524 | 1065 | TAD K5777 | /OPERAND 1 |
| 0525 | 1045 | TAD K2000 | /OPERAND 2 |
| 0526 | 7040 | CMA       |            |
| 0527 | 7440 | SZA       |            |
| 0530 | 7402 | HLT       |            |

/TAD ERROR  
/AC SHOULD EQUAL 0000

## /TAD TEST 3

|      |      |           |            |
|------|------|-----------|------------|
| 0531 | 7200 | CLA       |            |
| 0532 | 1064 | TAD K6777 | /OPERAND 1 |
| 0533 | 1042 | TAD K1000 | /OPERAND 2 |
| 0534 | 7040 | CMA       |            |
| 0535 | 7440 | SZA       |            |
| 0536 | 7402 | HLT       |            |

/TAD ERROR  
/AC SHOULD EQUAL 0000

## /TAD TEST 4

|      |      |           |            |
|------|------|-----------|------------|
| 0537 | 7200 | CLA       |            |
| 0540 | 1063 | TAD K7377 | /OPERAND 1 |
| 0541 | 1040 | TAD K0400 | /OPERAND 2 |
| 0542 | 7040 | CMA       |            |
| 0543 | 7440 | SZA       |            |
| 0544 | 7402 | HLT       |            |

/TAD ERROR  
/AC SHOULD EQUAL 0000

## /TAD TEST 5

|      |      |           |            |
|------|------|-----------|------------|
| 0545 | 7200 | CLA       |            |
| 0546 | 1062 | TAD K7577 | /OPERAND 1 |
| 0547 | 1036 | TAD K0200 | /OPERAND 2 |
| 0550 | 7040 | CMA       |            |
| 0551 | 7440 | SZA       |            |
| 0552 | 7402 | HLT       |            |

/TAD ERROR  
/AC SHOULD EQUAL 0000

## /TAD TEST 6

|      |      |           |            |
|------|------|-----------|------------|
| 0553 | 7200 | CLA       |            |
| 0554 | 1061 | TAD K7677 | /OPERAND 1 |
| 0555 | 1034 | TAD K0100 | /OPERAND 2 |
| 0556 | 7040 | CMA       |            |
| 0557 | 7440 | SZA       |            |
| 0560 | 7402 | HLT       |            |

/TAD ERROR

/AC SHOULD EQUAL 0000

/TAD TEST 7

|      |      |           |
|------|------|-----------|
| 0561 | 7200 | CLA       |
| 0562 | 1057 | TAD K7737 |
| 0563 | 1032 | TAD K0040 |
| 0564 | 7040 | CMA       |
| 0565 | 7440 | SZA       |
| 0566 | 7402 | HLT       |

/OPERAND 1  
/OPERAND 2

/TAD ERROR  
/AC SHOULD EQUAL 0000

/TAD TEST 8

|      |      |           |
|------|------|-----------|
| 0567 | 7200 | CLA       |
| 0570 | 1056 | TAD K7757 |
| 0571 | 1030 | TAD K0020 |
| 0572 | 7040 | CMA       |
| 0573 | 7440 | SZA       |

/OPERAND 1  
/OPERAND 2

/TAD ERROR  
/AC SHOULD EQUAL 0000

0574 7402 HLT

/TAD TEST 9

|      |      |           |
|------|------|-----------|
| 0575 | 7200 | CLA       |
| 0576 | 1055 | TAD K7767 |
| 0577 | 1026 | TAD K0010 |
| 0600 | 7040 | CMA       |
| 0601 | 7440 | SZA       |
| 0602 | 7402 | HLT       |

/OPERAND 1  
/OPERAND 2

/TAD ERROR  
/AC SHOULD EQUAL 0000

/TAD TEST 10

|      |      |           |
|------|------|-----------|
| 0603 | 7200 | CLA       |
| 0604 | 1054 | TAD K7773 |
| 0605 | 1024 | TAD K0004 |
| 0606 | 7040 | CMA       |
| 0607 | 7440 | SZA       |
| 0610 | 7402 | HLT       |

/OPERAND 1  
/OPERAND 2

/TAD ERROR  
/AC SHOULD EQUAL 0000

/TAD TEST 11

|      |      |           |
|------|------|-----------|
| 0611 | 7200 | CLA       |
| 0612 | 1053 | TAD K7775 |
| 0613 | 1022 | TAD K0002 |
| 0614 | 7040 | CMA       |
| 0615 | 7440 | SZA       |
| 0616 | 7402 | HLT       |

/OPERAND 1  
/OPERAND 2

/TAD ERROR

/TAD TEST 12

|      |      |           |
|------|------|-----------|
| 0617 | 7200 | CLA       |
| 0620 | 1052 | TAD K7776 |
| 0621 | 1021 | TAD K0001 |
| 0622 | 7040 | CMA       |
| 0623 | 7440 | SZA       |
| 0624 | 7402 | HLT       |

/OPERAND 1  
/OPERAND 2

/TAD ERROR  
/AC SHOULD EQUAL 0000

/TAD TEST 13

|      |      |           |
|------|------|-----------|
| 0625 | 7200 | CLA       |
| 0626 | 7100 | CLL       |
| 0627 | 1050 | TAD K4000 |

/OPERAND 1

0630 1050 TAD K4000 /OPERAND 2  
0631 7430 SZL  
0632 7440 SZA  
0633 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000  
/LINK SHOULD BE EQUAL ONE,

/TAD TEST 14  
0634 7200 CLA  
0635 7100 CLL  
0636 1072 TAD K6000 /OPERAND 1  
0637 1045 TAD K2000 /OPERAND 2  
0640 7430 SZL  
0641 7440 SZA  
0642 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ONE

/TAD TEST 15  
0643 7200 CLA  
0644 7100 CLL  
0645 1073 TAD K7000 /OPERAND 1  
0646 1042 TAD K1000 /OPERAND 2  
0647 7430 SZL  
0650 7440 SZA  
0651 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ONE

/TAD TEST 16  
0652 7200 CLA  
0653 7100 CLL  
0654 1074 TAD K7400 /OPERAND 1  
0655 1040 TAD K0400 /OPERAND 2  
0656 7430 SZL  
0657 7440 SZA  
0660 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ONE

/TAD TEST 17  
0661 7200 CLA  
0662 7100 CLL  
0663 1075 TAD K7600 /OPERAND 1  
0664 1036 TAD K0200 /OPERAND 2  
0665 7430 SZL  
0666 7440 SZA  
0667 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ONE

/TAD TEST 18  
0670 7200 CLA  
0671 7100 CLL  
0672 1113 TAD K7700 /OPERAND 1  
0673 1034 TAD K0100 /OPERAND 2  
0674 7430 SZL  
0675 7440 SZA  
0676 7402 HLT /TAD ERROR, AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ONE

/TAD TEST 19  
0677 7200 CLA  
0700 7100 CLL



|      |      |           |  |
|------|------|-----------|--|
| 0701 | 1076 | TAD K7740 | /OPERAND 1   |
| 0702 | 1032 | TAD K0040 | /OPERAND 2   |
| 0703 | 7430 | SZL       |  |
| 0704 | 7440 | SZA       |  |
| 0705 | 7402 | HLT       | /TAD ERROR. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE |

/TAD TEST 20

|      |      |           |  |
|------|------|-----------|--|
| 0706 | 7200 | CLA       |  |
| 0707 | 7100 | CLL       |  |
| 0710 | 1077 | TAD K7760 | /OPERAND 1   |
| 0711 | 1030 | TAD K0020 | /OPERAND 2   |
| 0712 | 7430 | SZL       |  |
| 0713 | 7440 | SZA       |  |
| 0714 | 7402 | HLT       | /TAD ERROR. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE |

/TAD TEST 21

|      |      |           |   |
|------|------|-----------|---|
| 0715 | 7200 | CLA       |   |
| 0716 | 7100 | CLL       |   |
| 0717 | 1100 | TAD K7770 | /OPERAND 1  |
| 0720 | 1026 | TAD K0010 | /OPERAND 2  |
| 0721 | 7430 | SZL       |   |
| 0722 | 7440 | SZA       | /TAD ERROR AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE |
| 0723 | 7402 | HLT       |   |

/TAD TEST 22

|      |      |           |  |
|------|------|-----------|--|
| 0724 | 7200 | CLA       |  |
| 0725 | 7100 | CLL       |  |
| 0726 | 1101 | TAD K7774 | /OPERAND 1   |
| 0727 | 1024 | TAD K0004 | /OPERAND 2   |
| 0730 | 7430 | SZL       |  |
| 0731 | 7440 | SZA       |  |
| 0732 | 7402 | HLT       | /TAD ERROR. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE |

/TAD TEST 23

|      |      |           |  |
|------|------|-----------|--|
| 0733 | 7200 | CLA       |  |
| 0734 | 7100 | CLL       |  |
| 0735 | 1052 | TAD K7776 | /OPERAND 1   |
| 0736 | 1022 | TAD K0002 | /OPERAND 2   |
| 0737 | 7430 | SZL       |  |
| 0740 | 7440 | SZA       |  |
| 0741 | 7402 | HLT       | /TAD ERROR. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE |

/TAD TEST 24

|      |      |           |  |
|------|------|-----------|--|
| 0742 | 7200 | CLA       |  |
| 0743 | 7100 | CLL       |  |
| 0744 | 1067 | TAD K7777 | /OPERAND 1   |
| 0745 | 1021 | TAD K0001 | /OPERAND 2   |
| 0746 | 7430 | SZL       |  |
| 0747 | 7440 | SZA       |  |
| 0750 | 7402 | HLT       | /TAD ERROR. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE |

```

/TAD TEST 25
0751 7200      CLA
0752 7100      CLL
0753 7020      CML
0754 1050      TAD K4000      /OPERAND 1
0755 1050      TAD K4000      /OPERAND 2
0756 7420      SNL
0757 7440      SZA
0760 7402      HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

```

/TAD TEST 26
0761 7200      CLA
0762 7100      CLL
0763 1066      TAD K3777      /OPERAND 1
0764 1045      TAD K2000      /OPERAND 2
0765 1045      TAD K2000      /OPERAND 3
0766 7040      CMA
0767 7420      SNL
0770 7440      SZA
0771 7402      HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

```

/TAD TEST 27
0772 7200      CLA
0773 7100      CLL
0774 1065      TAD K5777      /OPERAND 1
0775 1042      TAD K1000      /OPERAND 2
0776 1042      TAD K1000      /OPERAND 3
0777 7040      CMA
1000 7420      SNL
1001 7440      SZA      /TAD ERROR AC SHOULD EQUAL 0000
1002 7402      HLT      /LINK SHOULD EQUAL ZERO

```

```

/TAD TEST 28
1003 7200      CLA
1004 7100      CLL
1005 1064      TAD K6777      /OPERAND 1
1006 1040      TAD K0400      /OPERAND 2
1007 1040      TAD K0400      /OPERAND 3
1010 7040      CMA
1011 7420      SNL
1012 7440      SZA
1013 7402      HLT
/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

```

/TAD TEST 29
1014 7200      CLA
1015 7100      CLL
1016 1063      TAD K7377      /OPERAND 1
1017 1036      TAD K0200      /OPERAND 2
1020 1036      TAD K0200      /OPERAND 3
1021 7040      CMA
1022 7420      SNL
1023 7440      SZA
1024 7402      HLT
/TAD ERROR, AC SOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

```
      /TAD TEST 30
1025 7200      CLA
1026 7100      CLL
1027 1062      TAD K7577      /OPERAND 1
1030 1034      TAD K0100      /OPERAND 2
1031 1034      TAD K0100      /OPERAND 3
1032 7040      CMA
1033 7420      SNL
1034 7440      SEA
1035 7402      HLT
                        /TAD ERROR. AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 31
1036 7200      CLA
1037 7100      CLL
1040 1061      TAD K7677      /OPERAND 1
1041 1032      TAD K0040      /OPERAND 2
1042 1032      TAD K0040      /OPERAND 3
1043 7040      CMA
1044 7420      SNL
1045 7440      SEA
1046 7402      HLT
                        /TAD ERROR. AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 32
1047 7200      CLA
1050 7100      CLL
1051 1057      TAD K7737      /OPERAND 1
1052 1030      TAD K0020      /OPERAND 2
1053 1030      TAD K0020      /OPERAND 3
1054 7040      CMA
1055 7420      SNL
1056 7440      SEA
1057 7402      HLT
                        /TAD ERROR. AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 33
1060 7200      CLA
1061 7100      CLL
1062 1056      TAD K7757      /OPERAND 1
1063 1026      TAD K0010      /OPERAND 2
1064 1026      TAD K0010      /OPERAND 3
1065 7040      CMA
1066 7420      SNL
1067 7440      SEA
1070 7402      HLT
                        /TAD ERROR. AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 34
1071 7200      CLA
1072 7100      CLL
1073 1055      TAD K7767      /OPERAND 1
1074 1024      TAD K0004      /OPERAND 2
1075 1024      TAD K0004      /OPERAND 3
1076 7040      CMA
1077 7420      SNL
1100 7440      SEA
```

1101 7402 HLT /TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 35

1102 7200 CLA  
1103 7100 CLL  
1104 1054 TAD K7773 /OPERAND 1  
1105 1022 TAD K0002 /OPERAND 2  
1106 1022 TAD K0002 /OPERAND 3  
1107 7040 CMA  
1110 7420 SNL  
1111 7440 SZA  
1112 7402 HLT

/TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 36

1113 7200 CLA  
1114 7100 CLL  
1115 1053 TAD K7775 /OPERAND 1  
1116 1021 TAD K0001 /OPERAND 2  
1117 1021 TAD K0001 /OPERAND 3  
1120 7040 CMA  
1121 7420 SNL  
1122 7430 SZL  
1123 7402 HLT

/TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 37

/10;MB, CR.

1124 7200 CLA  
1125 7100 CLL  
1126 1021 TAD K0001 /0+1=1  
1127 1023 TAD K3 /1+3=4  
1130 1054 TAD K7773 /4+7773=7777  
1131 7040 CMA /0  
1132 7420 SNL  
1133 7440 SZA  
1134 7402 HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 38.

/9; MB, CR.

1135 7200 CLA  
1136 7100 CLL  
1137 1022 TAD K0002 /0+2=2  
1140 1025 TAD K6 /2+6=10  
1141 1055 TAD K7767 /10+7767=7777  
1142 7040 CMA /0  
1143 7420 SNL  
1144 7440 SZA  
1145 7402 HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 39.

/8; MB, CR.

1146 7200 CLA  
1147 7100 CLL  
1150 1024 TAD K0004 /0+4=4  
1151 1027 TAD K14 /4+14=20

|      |      |           |   |
|------|------|-----------|---|
| 1152 | 1056 | TAD K7757 | /20+7757=7777                           |
| 1153 | 7040 | CMA       | /0                                      |
| 1154 | 7420 | SNL       |   |
| 1155 | 7440 | SZA       |   |
| 1156 | 7402 | HLT       | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 40. | /7: MB, CR.                             |
| 1157 | 7200 | CLA           |   |
| 1160 | 7100 | CLL           |   |
| 1161 | 1026 | TAD K0010     | /0+10=10                                |
| 1162 | 1031 | TAD K30       | /10+30=40                               |
| 1163 | 1057 | TAD K7737     | /40+7737=7777                           |
| 1164 | 7040 | CMA           | /0                                      |
| 1165 | 7420 | SNL           |   |
| 1166 | 7440 | SZA           |   |
| 1167 | 7402 | HLT           | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 41. | /6: MB, CR.                             |
| 1170 | 7200 | CLA           |   |
| 1171 | 7100 | CLL           |   |
| 1172 | 1030 | TAD K0020     | /0+20=20                                |
| 1173 | 1033 | TAD K60       | /20+60=100                              |
| 1174 | 1061 | TAD K7677     | /100+7677=7777                          |
| 1175 | 7040 | CMA           | /0                                      |
| 1176 | 7420 | SNL           |   |
| 1177 | 7440 | SZA           |   |
| 1200 | 7402 | HLT           | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 42. | /5: MB, CR.                             |
| 1201 | 7200 | CLA           |   |
| 1202 | 7100 | CLL           |   |
| 1203 | 1032 | TAD K0040     | /0+40=40                                |
| 1204 | 1035 | TAD K140      | /40+140=200                             |
| 1205 | 1062 | TAD K7577     | /200+7577=7777                          |
| 1206 | 7040 | CMA           | /0                                      |
| 1207 | 7420 | SNL           |   |
| 1210 | 7440 | SZA           | /                                       |
| 1211 | 7402 | HLT           | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 43. | /4: MB, CR.                             |
| 1212 | 7200 | CLA           |   |
| 1213 | 7100 | CLL           |   |
| 1214 | 1034 | TAD K0100     | /0+100=100                              |
| 1215 | 1037 | TAD K300      | /100+300=400                            |
| 1216 | 1063 | TAD K7377     | /400+7377=7777                          |
| 1217 | 7040 | CMA           | /0                                      |
| 1220 | 7420 | SNL           |   |
| 1221 | 7440 | SZA           |   |
| 1222 | 7402 | HLT           | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

|      |      |               |               |
|------|------|---------------|---------------|
|      |      | /TAD TEST 44. | /3: MB, CR.   |
| 1223 | 7200 | CLA           |               |
| 1224 | 7100 | CLL           |               |
| 1225 | 1036 | TAD K0200     | /0+200=200    |
| 1226 | 1041 | TAD K600      | /200+600=1000 |

|      |      |           |   |
|------|------|-----------|---|
| 1227 | 1064 | TAD K6777 | /1000+6777=7777                         |
| 1230 | 7040 | CMA       | /0                                      |
| 1231 | 7420 | SNL       |   |
| 1232 | 7440 | SZA       |   |
| 1233 | 7402 | HLT       | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

/TAD TEST 45. /2; MB, CR.

|      |      |           |   |
|------|------|-----------|---|
| 1234 | 7200 | CLA       |   |
| 1235 | 7100 | CLL       | /                                       |
| 1236 | 1040 | TAD K0400 | /0+400=400                              |
| 1237 | 1044 | TAD K1400 | /400+1400=2000                          |
| 1240 | 1065 | TAD K5777 | /2000+5777=7777                         |
| 1241 | 7040 | CMA       | /0                                      |
| 1242 | 7420 | SNL       |   |
| 1243 | 7440 | SZA       |   |
| 1244 | 7402 | HLT       | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

/TAD TEST 46 /1; MB, CR.

|      |      |           |   |
|------|------|-----------|---|
| 1245 | 7200 | CLA       |   |
| 1246 | 7100 | CLL       |   |
| 1247 | 1042 | TAD K1000 | /0+1000=1000                            |
| 1250 | 1046 | TAD K3000 | /1000+3000=4000                         |
| 1251 | 1066 | TAD K3777 | /4000+3777=7777                         |
| 1252 | 7040 | CMA       | /0                                      |
| 1253 | 7420 | SNL       |   |
| 1254 | 7440 | SZA       |   |
| 1255 | 7402 | HLT       | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

/TAD TEST 47 /0; MB, CR

|      |      |           |  |
|------|------|-----------|--|
| 1256 | 7200 | CLA       |  |
| 1257 | 7100 | CLL       |  |
| 1260 | 1045 | TAD K2000 | /0+2000=2000                                   |
| 1261 | 1072 | TAD K6000 | /2000+6000=1 0000                              |
| 1262 | 7430 | SZL       |  |
| 1263 | 7440 | SZA       |  |
| 1264 | 7402 | HLT       | /TAD ERROR. LINK SHOULD = 1. AC SHOULD = 0000. |

/TAD TEST 48.

|      |      |           |  |
|------|------|-----------|--|
| 1265 | 7200 | CLA       |  |
| 1266 | 7100 | CLL       |  |
| 1267 | 1067 | TAD K7777 | /0+7777=7777                                   |
| 1270 | 1021 | TAD K0001 | /7777+1=1 0000                                 |
| 1271 | 7430 | SZL       | /  |
| 1272 | 7440 | SZA       |  |
| 1273 | 7402 | HLT       | /TAD ERROR. LINK SHOULD = 1. AC SHOULD = 0000. |

/TAD TEST 49. /10; AC, MB, CR.

|      |      |           |              |
|------|------|-----------|--------------|
| 1274 | 7200 | CLA       |              |
| 1275 | 7100 | CLL       |              |
| 1276 | 1023 | TAD K3    | /0+3=3       |
| 1277 | 1023 | TAD K3    | /3+3=6       |
| 1300 | 1100 | TAD K7770 | /6+7770=7776 |
| 1301 | 1021 | TAD K0001 | /7776+1=7777 |
| 1302 | 7040 | CMA       | /0           |

|      |      |     |   |
|------|------|-----|---|
| 1303 | 7420 | SNL |   |
| 1304 | 7440 | SZA |   |
| 1305 | 7402 | HLT | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 50. | /9: AC, MB, CR.                         |
| 1306 | 7200 | CLA           |   |
| 1307 | 7100 | CLL           |   |
| 1310 | 1025 | TAD K6        | /0+6=6                                  |
| 1311 | 1025 | TAD K6        | /6+6=14                                 |
| 1312 | 1077 | TAD K7760     | /14+7760=7774                           |
| 1313 | 1023 | TAD K3        | /7774+3=7777                            |
| 1314 | 7040 | CMA           | /0                                      |
| 1315 | 7420 | SNL           |   |
| 1316 | 7440 | SZA           |   |
| 1317 | 7402 | HLT           | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 51. | /8: AC, MB, CR.                         |
| 1320 | 7200 | CLA           |   |
| 1321 | 7100 | CLL           |   |
| 1322 | 1027 | TAD K14       | /0+14=14                                |
| 1323 | 1027 | TAD K14       | /14+14=30                               |
| 1324 | 1076 | TAD K7740     | /30+7740=7770                           |
| 1325 | 1102 | TAD K0007     | /7770+7=7777                            |
| 1326 | 7040 | CMA           | /0                                      |
| 1327 | 7420 | SNL           |   |
| 1330 | 7440 | SZA           |   |
| 1331 | 7402 | HLT           | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 52. | /7: AC, MB, CR.                         |
| 1332 | 7200 | CLA           |   |
| 1333 | 7100 | CLL           |   |
| 1334 | 1031 | TAD K30       | /0+30=30                                |
| 1335 | 1031 | TAD K30       | /30+30=60                               |
| 1336 | 1051 | TAD K7717     | /60+7717=7777                           |
| 1337 | 7040 | CMA           | /0                                      |
| 1340 | 7420 | SNL           |   |
| 1341 | 7440 | SZA           |   |
| 1342 | 7402 | HLT           | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

|      |      |               |   |
|------|------|---------------|---|
|      |      | /TAD TEST 53. | /6: AC, MB, CR.                         |
| 1343 | 7200 | CLA           |   |
| 1344 | 7100 | CLL           |   |
| 1345 | 1033 | TAD K60       |   |
| 1346 | 1033 | TAD K60       | /60+60=140                              |
| 1347 | 1075 | TAD K7600     | /140+7600=7740                          |
| 1350 | 1105 | TAD K0037     | /7740+37=7777                           |
| 1351 | 7040 | CMA           | /0                                      |
| 1352 | 7420 | SNL           |   |
| 1353 | 7440 | SZA           |   |
| 1354 | 7402 | HLT           | /TAD ERROR. AC AND LINK SHOULD BE ZERO. |

|      |      |               |                |
|------|------|---------------|----------------|
|      |      | /TAD TEST 54. | /5: AC, MB, CR |
| 1355 | 7200 | CLA           |                |
| 1356 | 7100 | CLL           |                |

|      |      |           |   |
|------|------|-----------|---|
| 1357 | 1035 | TAD K140  |   |
| 1360 | 1035 | TAD K140  | /140+140=300                            |
| 1361 | 1074 | TAD K7400 | /300+7400=7700                          |
| 1362 | 1106 | TAD K0077 | /7700+77=7777                           |
| 1363 | 7040 | CMA       | /0                                      |
| 1364 | 7420 | SNL       |   |
| 1365 | 7440 | SEA       |   |
| 1366 | 7402 | HLT       | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

/TAD TEST 55. /4: AC, MB, CR.

|      |      |           |   |
|------|------|-----------|---|
| 1367 | 7200 | CLA       |   |
| 1370 | 7100 | CLL       |   |
| 1371 | 1037 | TAD K300  | /0+300=300                              |
| 1372 | 1037 | TAD K300  | /300+300=600                            |
| 1373 | 1060 | TAD K7177 | /600+7177=7777                          |
| 1374 | 7040 | CMA       | /0                                      |
| 1375 | 7420 | SNL       |   |
| 1376 | 7440 | SEA       |   |
| 1377 | 7402 | HLT       | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

/TAD TEST 56. /3: AC, MB, CR.

|      |      |           |   |
|------|------|-----------|---|
| 1400 | 7200 | CLA       |   |
| 1401 | 7100 | CLL       |   |
| 1402 | 1041 | TAD K600  | /0+600=600                              |
| 1403 | 1041 | TAD K600  | /600+600=1200                           |
| 1404 | 1072 | TAD K6000 | /1200+6000=7200                         |
| 1405 | 1110 | TAD K0377 | /7200+377=7777                          |
| 1406 | 7040 | CMA       |   |
| 1407 | 7420 | SNL       |   |
| 1410 | 7440 | SEA       |   |
| 1411 | 7402 | HLT       | /TAD ERROR, AC AND LINK SHOULD BE ZERO. |

/TAD TEST 57. /2: AC, MB, CR.

|      |      |           |   |
|------|------|-----------|---|
| 1412 | 7200 | CLA       |   |
| 1413 | 7100 | CLL       |   |
| 1414 | 1044 | TAD K1400 | /0+1400=1400                            |
| 1415 | 1044 | TAD K1400 | /1400+1400=3000                         |
| 1416 | 1050 | TAD K4000 | /3000+4000=7000                         |
| 1417 | 1111 | TAD K0777 | /7000+777=7777                          |
| 1420 | 7040 | CMA       | /0                                      |
| 1421 | 7420 | SNL       |   |
| 1422 | 7440 | SEA       |   |
| 1423 | 7402 | HLT       | /TAD ERROR, AC AND LI K SHOULD BE ZERO. |

/TAD TEST 58. /1: AC, MB, CR.

|      |      |           |  |
|------|------|-----------|--|
| 1424 | 7200 | CLA       |  |
| 1425 | 7100 | CLL       |  |
| 1426 | 1046 | TAD K3000 | /0+3000=3000                           |
| 1427 | 1046 | TAD K3000 | /3000+3000=6000                        |
| 1430 | 1112 | TAD K1777 | /6000+1777=7777                        |
| 1431 | 7040 | CMA       | /0                                     |
| 1432 | 7420 | SNL       |  |
| 1433 | 7440 | SEA       |  |
| 1434 | 7402 | HLT       | /TAD ERROR, AC AND LINK SHOULD BE ZERO |



```

1435 7200 /TAD TEST 59. /0: AC, MB, CR.
1436 7100 CLA
1437 1072 CLL
1440 1072 TAD K6000 /0+6000=6000
1441 1066 TAD K6000 /6000+6000=1 4000
1442 7040 TAD K3777 /1 4000+3777=1 7777
1443 7430 CMA /1 0000
1444 7440 SZL
1445 7402 SEA
HLT /TAD ERROR. LINK SHOULD BE 1. AC SHOULD BE ZERO.

```

```

1446 7200 /TAD TEST 60. /
1447 7100 CLA
1449 1067 CLL
1451 1067 TAD K7777 /0+7777=7777
1452 1021 TAD K7777 /7777+7777=1 7776
1453 7040 TAD K0001 /1 7776+1=1 7777
1454 7430 CMA /1 0000
1455 7440 SZL
1456 7402 SEA
HLT /TAD ERROR. LINK SHOULD BE 1. AC SHOULD BE ZERO.

```

```

1457 7200 /RAR TEST 1
1460 7100 CLA
1461 1021 CLL
1462 7010 TAD K0001 /ROTATE PATTERN
1463 7420 RAR
SNL
1464 7402 HLT
/RAR FAILED. LINK DROPPED A BIT
/LINK SHOULD EQUAL A ONE

```

```

1465 7200 /RAR TEST 2
1466 7100 CLA
1467 1020 CLL
1470 7010 TAD K0000 /ROTATE PATTERN
1471 7440 RAR
SEA
1472 7402 HLT
/RAR FAILED. AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP BIT

```

```

1473 7200 /RAR TEST 3
1474 7100 CLA
1475 1020 CLL
1476 7010 TAD K0000 /ROTATE PATTERN
1477 7430 RAR
SZL
1500 7402 HLT
/RAR FAILED. LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

```

```

1501 7200 /RAR TEST 4
1502 7100 CLA
1503 7020 CLL
1504 1020 CML
TAD K0000 /ROTATE PATTERN

```

|             |      |           |   |
|-------------|------|-----------|---|
| 1505        | 7010 | RAR       |   |
| 1506        | 7430 | SZL       |   |
| 1507        | 7402 | HLT       | /RAR LINK PICKED UP A BIT<br>/LINK SHOULD EQUAL ZERO                |
| /RAR TEST 5 |      |           |   |
| 1510        | 7200 | CLA       |   |
| 1511        | 7100 | CLL       |   |
| 1512        | 7020 | CML       |   |
| 1513        | 1067 | TAD K7777 | /ROTATE PATTERN   |
| 1514        | 7010 | RAR       |   |
| 1515        | 7040 | CMA       |   |
| 1516        | 7440 | SZA       |   |
| 1517        | 7402 | HLT       | /RAR FAILED AC DROPPED A BIT<br>/A ONE IN AC EQUALS THE DROPPED BIT |

|             |      |           |   |
|-------------|------|-----------|---|
| /RAR TEST 6 |      |           |   |
| 1520        | 7200 | CLA       |   |
| 1521        | 7100 | CLL       |   |
| 1522        | 7020 | CML       |   |
| 1523        | 1020 | TAD K0000 | /ROTATE PATTERN                               |
| 1524        | 7010 | RAR       |   |
| 1525        | 1066 | TAD K3777 |   |
| 1526        | 7040 | CMA       |   |
| 1527        | 7450 | SNA       |   |
| 1530        | 7430 | SZL       |   |
| 1531        | 7402 | HLT       | /RAR FAILED AC AND LINK<br>/SHOULD EQUAL 0000 |

|             |      |           |   |
|-------------|------|-----------|---|
| /RAR TEST 7 |      |           |   |
| 1532        | 7200 | CLA       |   |
| 1533        | 7100 | CLL       |   |
| 1534        | 1050 | TAD K4000 | /ROTATE PATTERN                               |
| 1535        | 7010 | RAR       |   |
| 1536        | 1065 | TAD K5777 |   |
| 1537        | 7040 | CMA       |   |
| 1540        | 7450 | SNA       |   |
| 1541        | 7430 | SZL       |   |
| 1542        | 7402 | HLT       | /RAR FAILED AC AND LINK SHOULD<br>/EQUAL 0000 |

|             |      |           |   |
|-------------|------|-----------|---|
| /RAR TEST 8 |      |           |   |
| 1543        | 7200 | CLA       |   |
| 1544        | 7100 | CLL       |   |
| 1545        | 1045 | TAD K2000 | /ROTATE PATTERN                               |
| 1546        | 7010 | RAR       |   |
| 1547        | 1064 | TAD K6777 |   |
| 1550        | 7040 | CMA       |   |
| 1551        | 7450 | SNA       |   |
| 1552        | 7430 | SZL       |   |
| 1553        | 7402 | HLT       | /RAR FAILED AC AND LINK SHOULD<br>/EQUAL 0000 |

|             |      |           |                 |
|-------------|------|-----------|-----------------|
| /RAR TEST 9 |      |           |                 |
| 1554        | 7200 | CLA       |                 |
| 1555        | 7100 | CLL       |                 |
| 1556        | 1042 | TAD K1000 | /ROTATE PATTERN |

|      |      |     |       |
|------|------|-----|-------|
| 1557 | 7010 | RAR |       |
| 1560 | 1063 | TAD | K7377 |
| 1561 | 7040 | CMA |       |
| 1562 | 7450 | SNA |       |
| 1563 | 7430 | SZL |       |
| 1564 | 7402 | HLT |       |

/RAR FAILED AC AND LINK SHOULD  
/EQUAL 0000

/RAR TEST 10

|      |      |     |       |
|------|------|-----|-------|
| 1565 | 7200 | CLA |       |
| 1566 | 7100 | CLL |       |
| 1567 | 1040 | TAD | K0400 |
| 1570 | 7010 | RAR |       |
| 1571 | 1062 | TAD | K7577 |
| 1572 | 7040 | CMA |       |
| 1573 | 7450 | SNA |       |
| 1574 | 7430 | SZL |       |
| 1575 | 7402 | HLT |       |

/ROTATE PATTERN

/RAR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RAR TEST 11

|      |      |     |       |
|------|------|-----|-------|
| 1576 | 7200 | CLA |       |
| 1577 | 7100 | CLL |       |
| 1600 | 1036 | TAD | K0200 |
| 1601 | 7010 | RAR |       |
| 1602 | 1061 | TAD | K7677 |
| 1603 | 7040 | CMA |       |
| 1604 | 7450 | SNA |       |
| 1605 | 7430 | SZL |       |
| 1606 | 7402 | HLT |       |

/ROTATE PATTERN

/RAR FAILED AC AND LINK  
/EQUAL 0000

/RAR TEST 12

|      |      |     |       |
|------|------|-----|-------|
| 1607 | 7200 | CLA |       |
| 1610 | 7100 | CLL |       |
| 1611 | 1034 | TAD | K0100 |
| 1612 | 7010 | RAR |       |
| 1613 | 1057 | TAD | K7737 |
| 1614 | 7040 | CMA |       |
| 1615 | 7450 | SNA |       |
| 1616 | 7430 | SZL |       |
| 1617 | 7402 | HLT |       |

/ROTATE PATTERN

/RAR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RAR TEST 13

|      |      |     |       |
|------|------|-----|-------|
| 1620 | 7200 | CLA |       |
| 1621 | 7100 | CLL |       |
| 1622 | 1032 | TAD | K0040 |
| 1623 | 7010 | RAR |       |
| 1624 | 1056 | TAD | K7757 |
| 1625 | 7040 | CMA |       |
| 1626 | 7450 | SNA |       |
| 1627 | 7430 | SZL |       |
| 1630 | 7402 | HLT |       |

/ROTATE PATTERN

/RAR FAILED AC AND LINK

/SHOULD EQUAL 0000

PAUSE

/INSTRUCTION TEST 1

/TAPE 2

/RAR TEST 14

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1631 | 7200 | CLA       |                         |
| 1632 | 7100 | CLL       |                         |
| 1633 | 1030 | TAD K0020 | /ROTATE PATTERN         |
| 1634 | 7010 | RAR       |                         |
| 1635 | 1055 | TAD K7767 |                         |
| 1636 | 7040 | CMA       |                         |
| 1637 | 7450 | SNA       |                         |
| 1640 | 7430 | SZL       |                         |
| 1641 | 7402 | HLT       | /RAR FAILED AC AND LINK |

/SHOULD EQUAL 0000

/RAR TEST 15

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1642 | 7200 | CLA       |                         |
| 1643 | 7100 | CLL       |                         |
| 1644 | 1026 | TAD K0010 | /ROTATE PATTERN         |
| 1645 | 7010 | RAR       |                         |
| 1646 | 1054 | TAD K7773 |                         |
| 1647 | 7040 | CMA       |                         |
| 1650 | 7450 | SNA       |                         |
| 1651 | 7430 | SZL       |                         |
| 1652 | 7402 | HLT       | /RAR FAILED AC AND LINK |

/SHOULD EQUAL 0000

/RAR TEST 16

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1653 | 7200 | CLA       |                         |
| 1654 | 7100 | CLL       |                         |
| 1655 | 1024 | TAD K0004 | /ROTATE PATTERN         |
| 1656 | 7010 | RAR       |                         |
| 1657 | 1053 | TAD K7775 |                         |
| 1660 | 7040 | CMA       |                         |
| 1661 | 7450 | SNA       |                         |
| 1662 | 7430 | SZL       |                         |
| 1663 | 7402 | HLT       | /RAR FAILED AC AND LINK |

/SHOULD EQUAL 0000

/RAR TEST 17

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1664 | 7200 | CLA       |                         |
| 1665 | 7100 | CLL       |                         |
| 1666 | 1022 | TAD K0002 | /ROTATE PATTERN         |
| 1667 | 7010 | RAR       |                         |
| 1670 | 1052 | TAD K7776 |                         |
| 1671 | 7040 | CMA       |                         |
| 1672 | 7450 | SNA       |                         |
| 1673 | 7430 | SZL       |                         |
| 1674 | 7402 | HLT       | /RAR FAILED AC AND LINK |

/SHOULD EQUAL 0000

```

1675 7200 /RAR TEST 18
1676 7100 CLA
1677 1021 CLL
1700 7010 TAD K0001 /ROTATE PATTERN
1701 1067 RAR
1702 7040 TAD K7777
1703 7450 CMA
1704 7420 SNA
1705 7402 SNL
HLT /RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

1706 7200 /RTR TEST 1
1707 7100 CLA
1710 1022 CLL
1711 7012 TAD K0002 /ROTATE PATTERN
1712 7420 RTR
1713 7402 SNL
HLT /RTR FAILED LINK DROPPED
/A BIT LINK SHOULD EQUAL A ONE

1714 7200 /RTR TEST 2
1715 7100 CLA
1716 1020 CLL
1717 7012 TAD K0000 /ROTATE PATTERN
1720 7440 RTR
1721 7402 SZA
HLT /RTR FAILED AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP BIT

1722 7200 /RTR TEST 3
1723 7100 CLA
1724 1020 CLL
1725 7012 TAD K0000 /ROTATE PATTERN
1726 7430 RTR
1727 7402 SEL
HLT /RTR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

1730 7200 /RTR TEST 4
1731 7100 CLA
1732 7020 CLL
1733 1020 CML
1734 7012 TAD K0000 /ROTATE PATTERN
1735 7430 RTR
1736 7402 SEL
HLT /RTR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

1737 7200 /RTR TEST 5
1740 7100 CLA
1741 7020 CLL
1742 1067 CML
1743 7012 TAD K7777 /ROTATE PATTERN
1744 7040 RTR
1745 7440 CMA
SZA
```

|      |      |              |                                |
|------|------|--------------|--------------------------------|
| 1746 | 7402 | HLT          |                                |
|      |      |              | /RTR AC DROPPED A BIT A ONE IN |
|      |      |              | /AC EQUALS THE DROPPED BIT     |
|      |      | /RTR TEST 6  |                                |
| 1747 | 7200 | CLA          |                                |
| 1750 | 7100 | CLL          |                                |
| 1751 | 7020 | CML          |                                |
| 1752 | 1020 | TAD K0000    | /ROTATE PATTERN                |
| 1753 | 7012 | RTR          |                                |
| 1754 | 1065 | TAD K5777    |                                |
| 1755 | 7040 | CMA          |                                |
| 1756 | 7450 | SNA          |                                |
| 1757 | 7430 | SZL          |                                |
| 1760 | 7402 | HLT          |                                |
|      |      |              | /RTR FAILED AC AND LINK        |
|      |      |              | /SHOULD EQUAL 0000             |
|      |      | /RTR TEST 7  |                                |
| 1761 | 7200 | CLA          |                                |
| 1762 | 7100 | CLL          |                                |
| 1763 | 1050 | TAD K4000    | /ROTATE PATTERN                |
| 1764 | 7012 | RTR          |                                |
| 1765 | 1064 | TAD K6777    |                                |
| 1766 | 7040 | CMA          |                                |
| 1767 | 7450 | SNA          |                                |
| 1770 | 7430 | SZL          |                                |
| 1771 | 7402 | HLT          |                                |
|      |      |              | /RTR FAILED AC AND LINK        |
|      |      |              | /SHOULD EQUAL 0000             |
|      |      | /RTR TEST 8  |                                |
| 1772 | 7200 | CLA          |                                |
| 1773 | 7100 | CLL          |                                |
| 1774 | 1045 | TAD K2000    | /ROTATE PATTERN                |
| 1775 | 7012 | RTR          |                                |
| 1776 | 1063 | TAD K7377    |                                |
| 1777 | 7040 | CMA          |                                |
| 2000 | 7450 | SNA          |                                |
| 2001 | 7430 | SZL          |                                |
| 2002 | 7402 | HLT          |                                |
|      |      |              | /RTR FAILED AC AND LINK        |
|      |      |              | /SHOULD EQUAL 0000             |
|      |      | /RTR TEST 9  |                                |
| 2003 | 7200 | CLA          |                                |
| 2004 | 7100 | CLL          |                                |
| 2005 | 1042 | TAD K1000    | /ROTATE PATTERN                |
| 2006 | 7012 | RTR          |                                |
| 2007 | 1062 | TAD K7577    |                                |
| 2010 | 7040 | CMA          |                                |
| 2011 | 7450 | SNA          |                                |
| 2012 | 7430 | SZL          |                                |
| 2013 | 7402 | HLT          |                                |
|      |      |              | /RTR FAILED AC AND LINK        |
|      |      |              | /SHOULD EQUAL 0000             |
|      |      | /RTR TEST 10 |                                |
| 2014 | 7200 | CLA          |                                |
| 2015 | 7100 | CLL          |                                |
| 2016 | 1040 | TAD K0400    | /ROTAATE PATTERN               |
| 2017 | 7012 | RTR          |                                |
| 2020 | 1061 | TAD K7677    |                                |

2021 7040  
2022 7450  
2023 7430  
2024 7402

CMA  
SNA  
SZL  
HLT

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

## /RTR TEST 11

2025 7200  
2026 7100  
2027 1036  
2030 7012  
2031 1057  
2032 7040  
2033 7450  
2034 7430  
2035 7402

CLA  
CLL  
TAD K0200  
RTR  
TAD K7737  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

## /RTR TEST 12

2036 7200  
2037 7100  
2040 1034  
2041 7012  
2042 1056  
2043 7040  
2044 7450  
2045 7430  
2046 7402

CLA  
CLL  
TAD K0100  
RTR  
TAD K7757  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

## /RTR TEST 13

2047 7200  
2050 7100  
2051 1032  
2052 7012  
2053 1055  
2054 7040  
2055 7450  
2056 7430  
2057 7402

CLA  
CLL  
TAD K0040  
RTR  
TAD K7767  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

## /RTR TEST 14

2060 7200  
2061 7100  
2062 1030  
2063 7012  
2064 1054  
2065 7040  
2066 7450  
2067 7430  
2070 7402

CLA  
CLL  
TAD K0020  
RTR  
TAD K7773  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

## /RTR TEST 15

2071 7200  
2072 7100  
2073 1026

CLA  
CLL  
TAD K0010

/ROTATE PATTERN

|      |      |           |   |
|------|------|-----------|---|
| 2074 | 7012 | RTR       |   |
| 2075 | 1053 | TAD K7775 |   |
| 2076 | 7040 | CMA       |   |
| 2077 | 7450 | SNA       |   |
| 2100 | 7430 | SZL       |   |
| 2101 | 7402 | HLT       | /RTR FAILED AC AND LINK<br>/SHOULD EQUAL 0000 |

/RTR TEST 16

|      |      |           |   |
|------|------|-----------|---|
| 2102 | 7300 | CLA CLL   |   |
| 2103 | 1024 | TAD K0004 | /ROTATE PATTERN                               |
| 2104 | 7012 | RTR       |   |
| 2105 | 1052 | TAD K7776 |   |
| 2106 | 7040 | CMA       |   |
| 2107 | 7450 | SNA       |   |
| 2110 | 7430 | SZL       |   |
| 2111 | 7402 | HLT       | /RTR FAILED AC AND LINK<br>/SHOULD EQUAL 0000 |

/RTR TEST 17

|      |      |           |  |
|------|------|-----------|--|
| 2112 | 7200 | CLA       |  |
| 2113 | 7100 | CLL       |  |
| 2114 | 1022 | TAD K0002 | /ROTATE PATTERN  |
| 2115 | 7012 | RTR       |  |
| 2116 | 7450 | SNA       |  |
| 2117 | 7420 | SNL       |  |
| 2120 | 7402 | HLT       | /RTR FAILED. AC SHOULD EQUAL<br>/0000, LINK SHOULD EQUAL ONE |

/RTR TEST 18

|      |      |           |   |
|------|------|-----------|---|
| 2121 | 7200 | CLA       |   |
| 2122 | 7100 | CLL       |   |
| 2123 | 1021 | TAD K0001 | /ROTATE PATTERN                             |
| 2124 | 7012 | RTR       |   |
| 2125 | 1066 | TAD K3777 |   |
| 2126 | 7040 | CMA       |   |
| 2127 | 7450 | SNA       |   |
| 2130 | 7430 | SZL       |   |
| 2131 | 7402 | HLT       | /RTR FAILED. AC AND LINK<br>/SHOULD BE ZERO |

/RAL TEST 1

|      |      |           |  |
|------|------|-----------|--|
| 2132 | 7200 | CLA       |  |
| 2133 | 7100 | CLL       |  |
| 2134 | 1050 | TAD K4000 | /ROTATE PATTERN  |
| 2135 | 7004 | RAL       |  |
| 2136 | 7430 | SZL       |  |
| 2137 | 7440 | SZA       |  |
| 2140 | 7402 | HLT       | /RAL FAILED. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE. |

/RAL TEST 2

|      |      |           |                 |
|------|------|-----------|-----------------|
| 2141 | 7200 | CLA       |                 |
| 2142 | 7100 | CLL       |                 |
| 2143 | 1020 | TAD K0000 | /ROTATE PATTERN |
| 2144 | 7004 | RAL       |                 |
| 2145 | 7420 | SNL       |                 |
| 2146 | 7440 | SZA       |                 |



|             |      |           |   |
|-------------|------|-----------|---|
| 2147        | 7402 | HLT       | /RAL FAILED. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO  |
| /RAL TEST 3 |      |           |   |
| 2150        | 7200 | CLA       |   |
| 2151        | 7100 | CLL       |   |
| 2152        | 7020 | CML       |   |
| 2153        | 1020 | TAD K0000 | /ROTATE PATTERN. LINK=1                                       |
| 2154        | 7004 | RAL       |   |
| 2155        | 7430 | SZL       |   |
| 2156        | 7402 | HLT       | /RAL FAILURE. AC SHOULD EQUAL 0001<br>/LINK SHOULD EQUAL ZERO |
| /RAL TEST 4 |      |           |   |
| 2157        | 7200 | CLA       |   |
| 2160        | 7100 | CLL       |   |
| 2161        | 7020 | CML       |   |
| 2162        | 1067 | TAD K7777 | /ROTATE PATTERN. LINK=1                                       |
| 2163        | 7004 | RAL       |   |
| 2164        | 7040 | CMA       |   |
| 2165        | 7440 | SZA       |   |
| 2166        | 7402 | HLT       | /RAL FAILURE. LINK SHOULD EQUAL ONE<br>/AC SHOULD EQUAL 0000  |
| /RAL TEST 5 |      |           |   |
| 2167        | 7200 | CLA       |   |
| 2170        | 7100 | CLL       |   |
| 2171        | 1045 | TAD K2000 | /ROTATE PATTERN   |
| 2172        | 7004 | RAL       |   |
| 2173        | 1066 | TAD K3777 |   |
| 2174        | 7040 | CMA       |   |
| 2175        | 7450 | SNA       |   |
| 2176        | 7430 | SZL       |   |
| 2177        | 7402 | HLT       | /RAL FAILURE. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ONE  |
| /RAL TEST 6 |      |           |   |
| 2200        | 7200 | CLA       |   |
| 2201        | 7100 | CLL       |   |
| 2202        | 1042 | TAD K1000 | /ROTATE PATTERN   |
| 2203        | 7004 | RAL       |   |
| 2204        | 1065 | TAD K5777 |   |
| 2205        | 7040 | CMA       |   |
| 2206        | 7440 | SZA       |   |
| 2207        | 7402 | HLT       | /RAL FAILURE. AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO |
| /RAL TEST 7 |      |           |   |
| 2210        | 7200 | CLA       |   |
| 2211        | 7100 | CLL       |   |
| 2212        | 1040 | TAD K0400 | /ROTATE PATTERN   |
| 2213        | 7004 | RAL       |   |
| 2214        | 1064 | TAD K6777 |   |
| 2215        | 7040 | CMA       |   |
| 2216        | 7450 | SNA       |   |
| 2217        | 7430 | SZL       |   |

2220 7402 HLT /RAL FAILURE. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/RAL TEST 8

2221 7200 CLA  
2222 7100 CLL  
2223 1036 TAD K0200 /ROTATE PATTERN  
2224 7004 RAL  
2225 1063 TAD K7377

2226 7040 CMA  
2227 7450 SNA  
2230 7430 SZL /RAL FAILURE AC SHOULD EQUAL 0000  
2231 7402 HLT /LINK SHOULD EQUAL ZERO

/RAL TEST 9

2232 7200 CLA  
2233 7100 CLL  
2234 1034 TAD K0100 /ROTATE PATTERN  
2235 7004 RAL  
2236 1062 TAD K7577

2237 7040 CMA  
2240 7450 SNA  
2241 7430 SZL /RAL FAILURE AC SHOULD EQUAL 0000  
2242 7402 HLT /LINK SHOULD EQUAL ZERO

/RAL TEST 10

2243 7200 CLA  
2244 7100 CLL  
2245 1032 TAD K0040 /ROTATE PATTERN  
2246 7004 RAL  
2247 1061 TAD K7677

2250 7040 CMA  
2251 7450 SNA  
2252 7430 SZL /RAL FAILURE AC SHOULD EQUAL 0000  
2253 7402 HLT /LINK SHOULD EQUAL A ZERO

/RAL TEST 11

2254 7200 CLA  
2255 7100 CLL  
2256 1030 TAD K0020 /ROTATE PATTERN  
2257 7004 RAL  
2260 1057 TAD K7737

2261 7040 CMA  
2262 7450 SNA  
2263 7430 SZL /RAL FAILURE AC SHOULD EQUAL 0000  
2264 7402 HLT /LINK SHOULD EQUAL A ZERO

/RAL TEST 12

2265 7200 CLA  
2266 7100 CLL  
2267 1026 TAD K0010 /ROTATE PATTERN  
2270 7004 RAL  
2271 1056 TAD K7757

2272 7040 CMA  
2273 7450 SNA  
2274 7430 SZL /RAL FAILURE AC SHOULD EQUAL 0000  
2275 7402 HLT /LINK SHOULD EQUAL A ZERO

```

2276 7200 /RAL TEST 13
2277 7100          CLA
2300 1024          CLL
2301 7004          TAD K0004          /ROTATE PATTERN
2302 1055          RAL
2303 7040          TAD K7767
2304 7450          CMA
2305 7430          SNA
2306 7402          SEL          /RAL FAILED AC SHOULD EQUAL 0000
          HLT          /LINK SHOULD EQUAL A ZERO

```

```

2307 7200 /RAL TEST 14
2310 7100          CLA
2311 1022          CLL
2312 7004          TAD K0002          /ROTATE PATTERN
2313 1054          RAL
2314 7040          TAD K7773
2315 7450          CMA
2316 7430          SNA
2317 7402          SEL          /RAL FAILED AC SHOULD EQUAL 0000
          HLT          /LINK SHOULD EQUAL A ZERO

```

```

2320 7200 /RAL TEST 15
2321 7100          CLA
2322 1021          CLL
2323 7004          TAD K0001          /ROTATE PATTERN
2324 1053          RAL
2325 7040          TAD K7775
2326 7450          CMA
2327 7430          SNA
2330 7402          SEL          /RAL FAILED AC SHOULD EQUAL 0000
          HLT          /LINK SHOULD EQUAL ZERO

```

```

2331 7200 /RAL TEST 16
2332 7100          CLA
2333 7020          CLL
2334 7004          CML
2335 1052          RAL
2336 7040          TAD K7776
2337 7450          CMA
2340 7430          SNA
2341 7402          SEL          /RAL FAILED AC SHOULD EQUAL 0000
          HLT          /LINK SHOULD EQUAL ZERO

```

```

2342 7200 /RTL TEST 1
2343 7100          CLA
2344 1045          CLL
2345 7006          TAD K2000
2346 7420          RTL
2347 7402          SNL
          HLT          /RTL LINK DROPPED A BIT
          /LINK SHOULD EQUAL A ONE

```

```

2350 7200 /RTL TEST 2
          CLA

```

2351 7100 CLL  
2352 1020 TAD K0000 /ROTATE PATTERN  
2353 7006 RTL  
2354 7440 SZA  
2355 7402 HLT /RTL AC PICKED UP A BIT  
/A ONE IN AC EQUALS THE PICKED UP

/RTL TEST 3  
2356 7200 CLA  
2357 7100 CLL  
2360 1020 TAD K0000 /ROTATE PATTERN  
2361 7006 RTL  
2362 7430 SZL  
2363 7402 HLT /RTL LINK PICKED UP A BIT  
/LINK SHOULD EQUAL ZERO

/RTL TEST 4  
2364 7200 CLA  
2365 7100 CLL  
2366 7020 CML  
2367 1020 TAD K0000 /ROTATE PATTERN  
2370 7006 RTL  
2371 7430 SZL  
2372 7402 HLT /RTL FAILURE. LINK PICKED UP A BIT  
/LINK SHOULD EQUAL A ZERO

/RTL TEST 5  
2373 7200 CLA  
2374 7100 CLL  
2375 7020 CML  
2376 1067 TAD K7777 /ROTATE PATTERN  
2377 7006 RTL  
2400 7040 CMA  
2401 7440 SZA  
2402 7402 HLT /RTL FAILURE. DROPPED A BIT

/RTL TEST 6  
2403 7200 CLA  
2404 7100 CLL  
2405 1050 TAD K4000 /ROTATE PATTERN  
2406 7006 RTL  
2407 1052 TAD K7776  
2410 7040 CMA  
2411 7450 SNA  
2412 7430 SEL  
2413 7402 HLT /RTL FAILED AC AND LINK SHOULD EQUAL 0000

/RTL TEST 7  
2414 7200 CLA  
2415 7100 CLL  
2416 1045 TAD K2000 /ROTATE PATTERN  
2417 7006 RTL  
2420 7450 SNA  
2421 7420 SNL  
2422 7402 HLT /RTL FAILED AC AND LINK SHOULD  
/EQUAL 0000

/RTL TEST 8  
2423 7200 CLA

|      |      |           |   |
|------|------|-----------|---|
| 2424 | 7100 | CLL       |   |
| 2425 | 1042 | TAD K1000 | /ROTATE PATTERN                               |
| 2426 | 7006 | RTL       |   |
| 2427 | 1066 | TAD K3777 |   |
| 2430 | 7040 | CMA       |   |
| 2431 | 7450 | SNA       |   |
| 2432 | 7430 | SZL       |   |
| 2433 | 7402 | HLT       | /RTL FAILED AC AND LINK SHOULD<br>/EQUAL 0000 |

/RTL TEST 9

|      |      |           |   |
|------|------|-----------|---|
| 2434 | 7200 | CLA       |   |
| 2435 | 7100 | CLL       |   |
| 2436 | 1040 | TAD K0400 | /ROTATE PATTERN                               |
| 2437 | 7006 | RTL       |   |
| 2440 | 1065 | TAD K5777 |   |
| 2441 | 7040 | CMA       |   |
| 2442 | 7450 | SNA       |   |
| 2443 | 7430 | SZL       |   |
| 2444 | 7402 | HLT       | /RTL FAILED AC AND LINK SHOULD<br>/EQUAL ZERO |

/RTL TEST 10

|      |      |           |   |
|------|------|-----------|---|
| 2445 | 7200 | CLA       |   |
| 2446 | 7100 | CLL       |   |
| 2447 | 1036 | TAD K0200 | /ROTATE PATTERN                               |
| 2450 | 7006 | RTL       |   |
| 2451 | 1064 | TAD K6777 |   |
| 2452 | 7040 | CMA       |   |
| 2453 | 7450 | SNA       |   |
| 2454 | 7430 | SZL       |   |
| 2455 | 7402 | HLT       | /RTL FAILED AC AND LINK SHOULD<br>/EQUAL 0000 |

/RTL TEST 11

|      |      |           |   |
|------|------|-----------|---|
| 2456 | 7200 | CLA       |   |
| 2457 | 7100 | CLL       |   |
| 2460 | 1034 | TAD K0100 | /ROTATE PATTERN                               |
| 2461 | 7006 | RTL       |   |
| 2462 | 1063 | TAD K7377 |   |
| 2463 | 7040 | CMA       |   |
| 2464 | 7450 | SNA       |   |
| 2465 | 7430 | SZL       |   |
| 2466 | 7402 | HLT       | /RTL FAILED AC AND LINK SHOULD<br>/EQUAL 0000 |

/RTL TEST 12

|      |      |           |   |
|------|------|-----------|---|
| 2467 | 7200 | CLA       |   |
| 2470 | 7100 | CLL       |   |
| 2471 | 1032 | TAD K0040 | /ROTATE PATTERN                               |
| 2472 | 7006 | RTL       |   |
| 2473 | 1062 | TAD K7577 |   |
| 2474 | 7040 | CMA       |   |
| 2475 | 7450 | SNA       |   |
| 2476 | 7430 | SZL       |   |
| 2477 | 7402 | HLT       | /RTL FAILED AC AND LINK SHOULD<br>/EQUAL 0000 |

```

                /RTL TEST 13
2500  7200      CLA
2501  7100      CLL
2502  1030      TAD K0020      /ROTATE PATTERN
2503  7006      RTL
2504  1061      TAD K7677
2505  7040      CMA
2506  7450      SNA
2507  7430      SZL
2510  7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

                /RTL TEST 14
2511  7200      CLA
2512  7100      CLL
2513  1026      TAD K0010      /ROTATE PATTERN
2514  7006      RTL
2515  1057      TAD K7737
2516  7040      CMA
2517  7450      SNA
2520  7430      SZL
2521  7402      HLT      /RTL FAILED AC AND LINK SHOULD

                /RTL TEST 15
2522  7200      CLA
2523  7100      CLL
2524  1024      TAD K0004      /ROTATE PATTERN
2525  7006      RTL
2526  1056      TAD K7757
2527  7040      CMA
2530  7450      SNA
2531  7430      SZL
2532  7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

                /RTL TEST 16
2533  7200      CLA
2534  7100      CLL
2535  1022      TAD K0002      /ROTATE PATTERN
2536  7006      RTL
2537  1055      TAD K7767
2540  7040      CMA
2541  7450      SNA
2542  7430      SZL
2543  7402      HLT      /RTL FAILED AC AND LINK
                        /SHOULD EQUAL 0000

                /RTL TEST 17
2544  7200      CLA
2545  7100      CLL
2546  1021      TAD K0001      /ROTATE PATTERN
2547  7006      RTL
2550  1054      TAD K7773
2551  7040      CMA
2552  7450      SNA
```

2553 7430  
2554 7402

SZL  
HLT

/RTL FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTL TEST 18

2555 7200  
2556 7100  
2557 7020  
2560 7006  
2561 1053  
2562 7040  
2563 7450  
2564 7430  
2565 7402

CLA  
CLL  
CML  
RTL  
TAD K7775  
CMA  
SNA  
SZL  
HLT

/RTL FAILED AC AND LINK  
/SHOULD EQUAL 0000

/BSW TEST 1

2566 7200  
2567 7100  
2570 7040  
2571 7002  
2572 7040  
2573 7420  
2574 7440  
2575 7402

CLA  
CLL  
CMA  
BSW  
CMA  
SNL  
SZA  
HLT

/AC=7777  
/SWAP BYTES AC SHOULD EQUAL 7777

/DID LINK SET?

/BSW FAILED  
/AC AND LINK SHOULD=0000

/BSW TEST 2

2576 7200  
2577 7100  
2600 7020  
2601 7002  
2602 7450  
2603 7420  
2604 7402

CLA  
CLL  
CML  
BSW  
SNA  
SNL  
HLT

/LINK=1  
/SWAP BYTES AC SHOULD EQUAL 0000

/BSW CAUSED THE LINK  
/TO ROTATE

/BSW TEST 3

2605 7200  
2606 7100  
2607 1113  
2610 7002  
2611 1113  
2612 7040  
2613 7420  
2614 7440  
2615 7402

CLA  
CLL  
TAD K7700  
BSW  
TAD K7700  
CMA  
SNL  
SZA  
HLT

/AC=7700  
/SWAP BYTES AC SHOULD EQUAL 0077  
/AC=7777  
/AC=0000

/BSW FAILED AC AND LINK  
/SHOULD=0000

/BSW TEST 4

2616 7200  
2617 7100  
2620 1106  
2621 7002  
2622 1106  
2623 7040  
2624 7420  
2625 7440

CLA  
CLL  
TAD K0077  
BSW  
TAD K0077  
CMA  
SNL  
SZA

/AC=0077  
/SWAP BYTES AC SHOULD EQUAL 7700  
/AC=7777

2626 7402

HLT

/BSW FAILED AC AND LINK  
/SHOULD=0000

/BSW TEST 5

2627 7300  
2630 1116  
2631 7002  
2632 1116  
2633 7040  
2634 7420  
2635 7440  
2636 7402

CLA CLL  
TAD K0770  
BSW  
TAD K0770  
CMA  
SNL  
SZA  
HLT

/SWAP BYTES AC SHOULD EQUAL 7007

/BSW FAILED AC AND LINK  
/SHOULD EQUAL 0000

/BSW TEST 6

2637 7320  
2640 1117  
2641 7002  
2642 1117  
2643 7040  
2644 7430  
2645 7440  
2646 7402

CLA CLL CML  
TAD K7007  
BSW  
TAD K7007  
CMA  
SZL  
SZA  
HLT

/SWAP BYTES AC SHOULD EQUAL 0770

/BSW FAILED AC  
/SHOULD EQUAL 0000 AND LINK=1

/BSW TEST 7

2647 7200  
2650 7100  
2651 1114  
2652 7002  
2653 1114  
2654 7040  
2655 7420  
2656 7440  
2657 7402

CLA  
CLL  
TAD K5225  
BSW  
TAD K5225  
CMA  
SNL  
SZA  
HLT

/AC=5225  
/SWAP BYTES AC SHOULD EQUAL 2552  
/AC=7777

/BSW FAILED AC AND LINK  
/SHOULD=0000

/BSW TEST 8

2660 7200  
2661 7100  
2662 1115  
2663 7002  
2664 1115  
2665 7040  
2666 7420  
2667 7440  
2670 7402

CLA  
CLL  
TAD K2552  
BSW  
TAD K2552  
CMA  
SNL  
SZA  
HLT

/AC=2552  
/SWAP BYTES AC SHOULD EQUAL 5225  
/AC=7777

/BSW FAILED AC AND LINK  
/SHOULD=0000

/GROUP 1 OPERATE TEST 1

2671 7200  
2672 7100  
2673 7040  
2674 7020  
2675 7300  
2676 7420  
2677 7440  
2700 7402

CLA  
CLL  
CMA  
CML  
CLA CLL  
SNL  
SZA  
HLT

/CLEAR AC  
/CLEAR LINK  
/AC EQUALS 7777  
/LINK EQUALS ONE  
/TEST COMBINATION  
  
/CLA CLL FAILED. LINK SHOULD BE 0



```

/AC SHOULD EQUAL 0000
/AC EQUALS 0000
/AC EQUALS 2525
/TEST COMBINATION
/CLA CMA ERROR. AC SHOULD
/BE 0000
/AC=7777 LINK=1
/TEST COMBINATION
/CLL CMA FAILED. AC AND LINK
/SHOULD BE ZERO
/LINK=1
/AC=7777
/TEST COMBINATION
/CLA CMA CLL FAILED. AC AND
/LINK SHOULD BE ZERO
/CLA CML FAILED. AC SHOULD EQUAL
/0000. LINK SHOULD BE A ONE
/CLL CML FAILED
/LINK SHOULD BE A ONE
/CLA CML FAILED. AC SHOULD EQUAL
/0000. LINK SHOULD BE A ONE
/CLL CML FAILED.
/LINK SHOULD BE A ONE
/CLL CML FAILED.
/LINK SHOULD BE A ONE
/LINK=1
```

|                         |      |             |  |
|-------------------------|------|-------------|--|
| 2701                    | 7200 | CLA         |  |
| 2702                    | 1071 | TAD K2525   |  |
| 2703                    | 7240 | CLA CMA     |  |
| 2704                    | 7040 | CMA         |  |
| 2705                    | 7440 | SZA         |  |
| 2706                    | 7402 | HLT         |  |
| /GROUP 1 OPERATE TEST 3 |      |             |  |
| 2707                    | 7200 | CLA         |  |
| 2710                    | 7100 | CLL         |  |
| 2711                    | 7040 | CMA         |  |
| 2712                    | 7140 | CLL CMA     |  |
| 2713                    | 7420 | SNL         |  |
| 2714                    | 7440 | SZA         |  |
| 2715                    | 7402 | HLT         |  |
| /GROUP 1 OPERATE TEST 4 |      |             |  |
| 2716                    | 7100 | CLL         |  |
| 2717                    | 7020 | CML         |  |
| 2720                    | 7200 | CLA         |  |
| 2721                    | 7040 | CMA         |  |
| 2722                    | 7340 | CLA CMA CLL |  |
| 2723                    | 7040 | CMA         |  |
| 2724                    | 7420 | SNL         |  |
| 2725                    | 7440 | SEA         |  |
| 2726                    | 7402 | HLT         |  |
| /GROUP 1 OPERATE TEST 5 |      |             |  |
| 2727                    | 7200 | CLA         |  |
| 2730                    | 7100 | CLL         |  |
| 2731                    | 7040 | CMA         |  |
| 2732                    | 7220 | CLA CML     |  |
| 2733                    | 7430 | SEL         |  |
| 2734                    | 7440 | SEA         |  |
| 2735                    | 7402 | HLT         |  |
| /GROUP 1 OPERATE TEST 6 |      |             |  |
| 2736                    | 7100 | CLL         |  |
| 2737                    | 7020 | CML         |  |
| 2740                    | 7120 | CLL CML     |  |
| 2741                    | 7420 | SNL         |  |
| 2742                    | 7402 | HLT         |  |
| /GROUP 1 OPERATE TEST 7 |      |             |  |
| 2743                    | 7100 | CLL         |  |
| 2744                    | 7120 | CLL CML     |  |
| 2745                    | 7420 | SNL         |  |
| 2746                    | 7402 | HLT         |  |
| /GROUP 1 OPERATE TEST 8 |      |             |  |
| 2747                    | 7120 | CLL CML     |  |

|                          |      |             |  |
|--------------------------|------|-------------|--|
| 2750                     | 7240 | CLA CMA     | /AC=7777   |
| 2751                     | 7320 | CLA CLL CML | /TEST COMBINATION  |
| 2752                     | 7430 | SZL         |  |
| 2753                     | 7440 | SZA         |  |
| 2754                     | 7402 | HLT         | /CLA CLL CML FAILED. LINK SHOULD<br>/BE 1, AC SHOULD BE ZERO       |
| /GROUP 1 OPERATE TEST 9  |      |             |  |
| 2755                     | 7340 | CLA CLL CMA | /LINK=0, AC=7777   |
| 2756                     | 7320 | CLA CLL CML | /TEST COMBINATION  |
| 2757                     | 7430 | SZL         |  |
| 2760                     | 7440 | SZA         |  |
| 2761                     | 7402 | HLT         | /CLA CLL CML FAILED. LINK SHOULD<br>/BE 1, AC SHOULD BE ZERO       |
| /GROUP 1 OPERATE TEST 10 |      |             |  |
| 2762                     | 7340 | CLA CLL CMA | /AC=7777, LINK=0   |
| 2763                     | 7060 | CMA CML     | /TEST COMBINATION  |
| 2764                     | 7430 | SZL         |  |
| 2765                     | 7440 | SZA         |  |
| 2766                     | 7402 | HLT         | /CMA CML FAILED. AC SHOULD BE<br>/0000 LINK SHOULD EQUAL ONE.      |
| /GROUP 1 OPERATE TEST 11 |      |             |  |
| 2767                     | 7300 | CLA CLL     | /AC AND LINK=0   |
| 2770                     | 1071 | TAD K2525   | /AC=2525   |
| 2771                     | 7340 | CLA CMA CLL | /TEST COMBINATION  |
| 2772                     | 7040 | CMA         |  |
| 2773                     | 7420 | SNL         |  |
| 2774                     | 7440 | SZA         |  |
| 2775                     | 7402 | HLT         | /CLA CMA CML FAILED, AC SHOULD BE<br>/0000, LINK SHOULD EQUAL ZERO |
| /GROUP 1 OPERATE TEST 12 |      |             |  |
| 2776                     | 7300 | CLL CLA     | /AC AND LINK=0   |
| 2777                     | 1071 | TAD K2525   | /AC=2525   |
| 3000                     | 7160 | CLL CMA CML | /TEST COMBINATION  |
| 3001                     | 1071 | TAD K2525   |  |
| 3002                     | 7040 | CMA         |  |
| 3003                     | 7430 | SZL         |  |
| 3004                     | 7440 | SZA         |  |
| 3005                     | 7402 | HLT         | /CLL CMA CML FAILED. AC SHOULD BE<br>/0000, LINK SHOULD EQUAL ONE  |
| /GROUP 1 OPERATE TEST 13 |      |             |  |
| 3006                     | 7300 | CLA CLL     |  |
| 3007                     | 7020 | CML         | /AC=0000, LINK=1   |
| 3010                     | 7160 | CLL CMA CML | /TEST COMBINATION  |
| 3011                     | 7040 | CMA         |  |
| 3012                     | 7430 | SZL         |  |
| 3013                     | 7440 | SZA         |  |
| 3014                     | 7402 | HLT         | /CLL CMA CML FAILED. AC SHOULD<br>/BE 0000, LINK SHOULD BE ONE     |
| /GROUP 1 OPERATE TEST 14 |      |             |  |
| 3015                     | 7300 | CLA CLL     |  |
| 3016                     | 1071 | TAD K2525   | /AC=2525, LINK=0   |

3017 7360 CLA CLL CMA CML /TEST COMBINATION  
3020 7040 CMA  
3021 7430 SZL  
3022 7440 SZA  
3023 7402 HLT /CLA CLL CMA CML FAILED. AC SHOULD  
/BE 0000 LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 15

3024 7520 CLA CLL CML  
3025 1070 TAD K5252 /AC=5252, LINK=1  
3026 7360 CLA CLL CMA CML /TEST COMBINATION  
3027 7040 CMA  
3030 7430 SZL  
3031 7440 SZA  
3032 7402 HLT /CLA CLL CMA CML FAILED. AC SHOULD  
/BE 000, LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 16

3033 7200 CLA  
3034 1071 TAD K2525 /AC=2525  
3035 7201 CLA IAC /TEST COMBINATION  
3036 1052 TAD K7776  
3037 7040 CMA  
3040 7440 SZA  
3041 7402 HLT /CLA IAC FAILED  
/AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 17

3042 7320 CLL CML CLA  
3043 1052 TAD K7776 /AC=7776, LINK=1  
3044 7101 CLL IAC /TEST COMBINATION  
3045 7040 CMA  
3046 7420 SNL  
3047 7440 SZA  
3050 7402 HLT /CLL IAC FAILED. AC AND LINK  
/SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 18

3051 7320 CLA CLL CML  
3052 1071 TAD K2525 /AC=2525 LINK=1  
3053 7301 CLA CLL IAC /TEST COMBINATION  
3054 1052 TAD K7776  
3055 7040 CMA  
3056 7420 SNL  
3057 7440 SZA  
3060 7402 HLT /CLA CLL IAC FAILED. AC AND LINK  
/SHOULD BE ZERO

/GROUP 1 OPERATE TEST 19

3061 7300 CLA CLL /AC=0 LINK=0  
3062 7041 CMA IAC /TEST COMBINATION  
3063 7430 SZL  
3064 7440 SZA  
3065 7402 HLT /CMA IAC FAILED. AC SHOULD EQUAL  
/0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 20

3066 7300 CLA CLL  
3067 1071 TAD K2525 /AC=2525 LINK=0

|                          |      |                 |  |
|--------------------------|------|-----------------|--|
| 3070                     | 7241 | CLA CMA IAC     | /TEST COMBINATION  |
| 3071                     | 7430 | SZL             |  |
| 3072                     | 7440 | SZA             |  |
| 3073                     | 7402 | HLT             | /CLA CMA IAC FAILED. AC SHOULD<br>/EQUAL 0000. LINK SHOULD BE ONE. |
| /GROUP 1 OPERATE TEST 21 |      |                 |  |
| 3074                     | 7520 | CLL CLA CML     | /AC=0000 LINK=1  |
| 3075                     | 1021 | TAD K0001       | /AC=0001   |
| 3076                     | 7141 | CLL CMA IAC     | /TEST COMBINATION  |
| 3077                     | 7040 | CMA             |  |
| 3100                     | 7420 | SNL             |  |
| 3101                     | 7440 | SZA             |  |
| 3102                     | 7402 | HLT             | /CLL CMA IAC FAILED. AC SHOULD BE<br>/0000 LINK SHOULD BE 0        |
| /GROUP 1 OPERATE TEST 22 |      |                 |  |
| 3103                     | 7320 | CLA CLL CML     |  |
| 3104                     | 1071 | TAD K2525       | /AC=2525 LINK=1  |
| 3105                     | 7341 | CLA CLL CMA IAC | /TEST COMBINATION  |
| 3106                     | 7430 | SZL             |  |
| 3107                     | 7440 | SZA             |  |
| 3110                     | 7402 | HLT             | /CLA CLL CMA IAC FAILED. AC SHOULD BE<br>/0000. LINK SHOULD BE ONE |
| /GROUP 1 OPERATE TEST 23 |      |                 |  |
| 3111                     | 7300 | CLA CLL         |  |
| 3112                     | 1070 | TAD K5252       | /AC=5252 LINK=0  |
| 3113                     | 7341 | CLA CLL CMA IAC | /TEST COMBINATION  |
| 3114                     | 7430 | SZL             |  |
| 3115                     | 7440 | SZA             |  |
| 3116                     | 7402 | HLT             | /CLA CLL CMA IAC FAILED AC SHOULD<br>/BE 0000. LINK SHOULD BE ONE  |
| /GROUP 1 OPERATE TEST 24 |      |                 |  |
| 3117                     | 7300 | CLA CLL         |  |
| 3120                     | 1052 | TAD K7776       | /AC=7776 LINK=0  |
| 3121                     | 7021 | CML IAC         | /TEST COMBINATION  |
| 3122                     | 7040 | CMA             |  |
| 3123                     | 7430 | SZL             |  |
| 3124                     | 7440 | SZA             |  |
| 3125                     | 7402 | HLT             | /CML IAC FAILED AC SHOULD BE<br>/0000. LINK SHOULD BE ONE          |
| /GROUP 1 OPERATE TEST 25 |      |                 |  |
| 3126                     | 7320 | CLA CLL CML     |  |
| 3127                     | 1052 | TAD K7776       | /AC =7776 LINK=1   |
| 3130                     | 7021 | CML IAC         | /TEST COMBINATION  |
| 3131                     | 7040 | CMA             |  |
| 3132                     | 7420 | SNL             |  |
| 3133                     | 7440 | SZA             |  |
| 3134                     | 7402 | HLT             | /CML IAC FAILED. AC SHOULD BE<br>/0000. LINK SHOULD BE ZERO        |
| /GROUP 1 OPERATE TEST 26 |      |                 |  |
| 3135                     | 7300 | CLA CLL         |  |
| 3136                     | 1071 | TAD K2525       | /AC=2525 LINK=0  |
| 3137                     | 7221 | CLA CML IAC     | /TEST COMBINATION  |
| 3140                     | 1052 | TAD K7776       |  |

|      |      |     |   |
|------|------|-----|---|
| 3141 | 7040 | CMA |   |
| 3142 | 7430 | SZL |   |
| 3143 | 7440 | SEA |   |
| 3144 | 7402 | HLT | /CLA CML IAC FAILED. AC SHOULD BE<br>/0000. LINK SHOULD EQUAL ONE |

/GROUP 1 OPERATE TEST 27

|      |      |             |   |
|------|------|-------------|---|
| 3145 | 7320 | CLA CLL CML | /AC=0000 LINK=1   |
| 3146 | 1052 | TAD K7776   | /AC=7776  |
| 3147 | 7121 | CLL CML IAC | /TEST COMBINATION   |
| 3150 | 7040 | CMA         |   |
| 3151 | 7430 | SZL         |   |
| 3152 | 7440 | SEA         |   |
| 3153 | 7402 | HLT         | /CLL CML IAC FAILURE. AC SHOULD BE<br>/0000. LINK SHOULD EQUAL ONE. |

/GROUP 1 OPERATE TEST 28

|      |      |             |  |
|------|------|-------------|--|
| 3154 | 7300 | CLA CLL     |  |
| 3155 | 1052 | TAD K7776   | /AC=7776 LINK=0  |
| 3156 | 7121 | CLL CML IAC | /TEST COMBINATION  |
| 3157 | 7040 | CMA         |  |
| 3160 | 7430 | SZL         |  |
| 3161 | 7440 | SEA         |  |
| 3162 | 7402 | HLT         | /CLL CML IAC FAILED. AC SHOULD<br>/BE 0000. LINK SHOULD BE ONE |

/GROUP 1 OPERATE TEST 29

|      |      |                 |  |
|------|------|-----------------|--|
| 3163 | 7300 | CLA CLL         |  |
| 3164 | 1071 | TAD K2525       | /AC=2525. LINK=0   |
| 3165 | 7321 | CLA CLL CML IAC | /TEST COMBINATION  |
| 3166 | 1052 | TAD K7776       |  |
| 3167 | 7040 | CMA             |  |
| 3170 | 7430 | SZL             |  |
| 3171 | 7440 | SEA             |  |
| 3172 | 7402 | HLT             | /CLA CLL CML IAC FAILED. AC SHOULD<br>/BE 0000. LINK SHOULD BE ONE |

/GROUP 1 OPERATE TEST 30

|      |      |                 |  |
|------|------|-----------------|--|
| 3173 | 7320 | CLA CLL CML     |  |
| 3174 | 1071 | TAD K2525       | /AC=2525 LINK=1  |
| 3175 | 7321 | CLA CLL CML IAC | /TEST COMBINATION  |
| 3176 | 1052 | TAD K7776       |  |
| 3177 | 7040 | CMA             |  |
| 3200 | 7430 | SZL             |  |
| 3201 | 7440 | SEA             |  |
| 3202 | 7402 | HLT             | /CLA CLL CML IAC FAILED. AC SHOULD<br>/BE 0000. LINK SHOULD BE ONE |

/GROUP 1 OPERATE TEST 31

|      |      |             |                                |
|------|------|-------------|--------------------------------|
| 3203 | 7300 | CLA CLL     |                                |
| 3204 | 1021 | TAD K0001   | /AC=0001 LINK=0                |
| 3205 | 7061 | CMA CML IAC | /TEST COMBINATION              |
| 3206 | 7040 | CMA         |                                |
| 3207 | 7430 | SZL         |                                |
| 3210 | 7440 | SEA         |                                |
| 3211 | 7402 | HLT         | /CMA CML IAC FAILED. AC SHOULD |

/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 32

3212 7320  
3213 1021  
3214 7061  
3215 7040  
3216 7420  
3217 7440  
3220 7402

CLA CLL CML  
TAD K0001 /AC=0001 LINK=1  
CMA CML IAC /TEST COMBINATION

CMA  
SNL  
SZA  
HLT

/CMA CML IAC FAILURE. AC SHOULD BE  
/0000. LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 33

3221 7300  
3222 1071  
3223 7261  
3224 7420  
3225 7430  
3226 7402

CLA CLL /AC=0000 LINK=0  
TAD K2525 /AC=2525  
CLA CMA CML IAC /TEST COMBINATION

SNL  
SZL  
HLT

/CLA CMA CML IAC FAILED. AC SHOULD  
/BE 0000. LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 34

3227 7320  
3230 1071  
3231 7261  
3232 7430  
3233 7440  
3234 7402

CLA CLL CML  
TAD K2525 /AC=2525 LINK=1  
CLA CMA CML IAC /TEST COMBINATION

SZL  
SZA  
HLT

/CLA CMA CML IAC FAILED. AC SHOULD  
/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 35

3235 7300  
3236 1021  
3237 7161  
3240 7040  
3241 7430  
3242 7440  
3243 7402

CLA CLL  
TAD K0001 /AC=0001 LINK=0  
CLL CMA CML IAC /TEST COMBINATION

CMA  
SZL  
SZA  
HLT

/CLL CMA CML IAC FAILED. AC SHOULD BE  
/0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 36

3244 7320  
3245 1021  
3246 7161  
3247 7040  
3250 7430  
3251 7440  
3252 7402

CLA CLL CML  
TAD K0001 /AC=0001 LINK=1  
CLL CMA CML IAC /TEST COMBINATION

CMA  
SZL  
SZA  
HLT

/CLL CMA CML IAC FAILED. AC SHOULD BE  
/0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 37

3253 7300  
3254 1071  
3255 7361  
3256 7420  
3257 7440  
3260 7402

CLA CLL  
TAD K2525 /AC=2525 LINK=0  
CLA CLL CMA CML IAC /TEST COMBINATION

SNL  
SZA  
HLT

/CLA CLL CMA CML IAC FAILURE AC AND  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 38

|      |      |                 |  |
|------|------|-----------------|--|
| 3261 | 7360 | CLA CMA CLL CML | /AC=7777 LINK=1                                    |
| 3262 | 7210 | CLA RAR         | /TEST COMBINATION                                  |
| 3263 | 1066 | TAD K3777       |  |
| 3264 | 7040 | CMA             |  |
| 3265 | 7420 | SNL             |  |
| 3266 | 7440 | SEA             |  |
| 3267 | 7402 | HLT             | /CLA RAR FAILED. LINK AND<br>/AC SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 39

|      |      |                 |   |
|------|------|-----------------|---|
| 3270 | 7360 | CLA CMA CLL CML | /AC=7777 LINK=1                                   |
| 3271 | 7204 | CLA RAL         | /TEST COMBINATION                                 |
| 3272 | 1052 | TAD K7776       |   |
| 3273 | 7040 | CMA             |   |
| 3274 | 7420 | SNL             |   |
| 3275 | 7440 | SEA             |   |
| 3276 | 7402 | HLT             | /CLA RAL FAILED LINK AND<br>/AC SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 40

|      |      |                 |   |
|------|------|-----------------|---|
| 3277 | 7360 | CLA CMA CLL CML | /AC=7777 LINK =1                                |
| 3300 | 7212 | CLA RTR         | /TEST COMBINATION                               |
| 3301 | 1065 | TAD K5777       |   |
| 3302 | 7040 | CMA             |   |
| 3303 | 7420 | SNL             |   |
| 3304 | 7440 | SEA             |   |
| 3305 | 7402 | HLT             | /CLA RTR FAILED. AC AND<br>/LINK SHOULD BE ZERO |

/GROUP 1 OPERATE TEST 41

|      |      |                 |  |
|------|------|-----------------|--|
| 3306 | 7360 | CLA CMA CLL CML | /AC=7777, LINK=1                               |
| 3307 | 7206 | CLA RTL         | /TEST COMBINATION                              |
| 3310 | 1053 | TAD K7775       |  |
| 3311 | 7040 | CMA             |  |
| 3312 | 7420 | SNL             |  |
| 3313 | 7440 | SEA             |  |
| 3314 | 7402 | HLT             | /CLA RTL FAILED. AC AND LINK<br>/SHOULDBE ZERO |

/GROUP 1 OPERATE TEST 42

|      |      |             |   |
|------|------|-------------|---|
| 3315 | 7320 | CLA CLL CML |   |
| 3316 | 1032 | TAD K0040   | /AC=0040 LINK=1                                 |
| 3317 | 7110 | CLL RAR     | /TEST COMBINATION                               |
| 3320 | 1056 | TAD K7757   |   |
| 3321 | 7040 | CMA         |   |
| 3322 | 7420 | SNL         |   |
| 3323 | 7440 | SEA         |   |
| 3324 | 7402 | HLT         | /CLL RAR FAILED. AC AND LINK<br>/SHOULD BE ZERO |

/GROUP 1 OPERATE TEST 43

|      |      |             |                   |
|------|------|-------------|-------------------|
| 3325 | 7320 | CLA CLL CML |                   |
| 3326 | 1032 | TAD K0040   | /AC=0040 LINK=1   |
| 3327 | 7104 | CLL RAL     | /TEST COMBINATION |
| 3330 | 1061 | TAD K7677   |                   |
| 3331 | 7040 | CMA         |                   |

```
3332 7420 SNL
3333 7440 SZA
3334 7402 HLT /CLL RAL FAILED. AC AND LINK
/SHOULD BE ZERO
/GROUP 1 OPERATE TEST 44
3335 7320 CLA CLL CML
3336 1032 TAD K0040 /AC=0040 LINK=1
3337 7112 CLL RTR /TEST COMBINATION
3340 1055 TAD K7767
3341 7040 CMA
3342 7420 SNL
3343 7440 SZA
3344 7402 HLT /CLL RTR FAILED. AC AND LINK
/SHOULD BE ZERO
/GROUP 1 OPERATE TEST 45
3345 7320 CLA CLL CML
3346 1032 TAD K0040 /AC=0040 LINK=1
3347 7106 CLL RTL /TEST COMBINATION
3350 1062 TAD K7577
3351 7040 CMA
3352 7420 SNL
3353 7440 SZA
3354 7402 HLT /CLL RTL FAILED. AC AND LINK
/SHOULD BE ZERO
/GROUP 1 OPERATE TEST 46
3355 7360 CLA CLL CML CMA /AC=7777 LINK=1
3356 7310 CLL CLA RAR /TEST COMBINATION
3357 7420 SNL
3360 7440 SZA
3361 7402 HLT /CLL CLA RAR FAILED AC AND
/LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 47
3362 7360 CLA CMA CLL CML /AC=7777 LINK=1
3363 7304 CLL CLA RAL /TEST COMBINATION
3364 7420 SNL
3365 7430 SXL
3366 7402 HLT /CLL CLA RAL FAILED. AC AND
/LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 48
3367 7360 CLA CMA CLL CML /AC=7777 LINK=1
3370 7312 CLA CLL RTR /TEST COMBINATION
3371 7420 SNL
3372 7440 SZA
3373 7402 HLT /CLA CLL RTL FAILED. AC AND
/LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 49
3374 7360 CLA CMA CLL CML /AC=7777 LINK=1
3375 7306 CLA CLL RTL /TEST COMBINATION
3376 7420 SNL
3377 7440 SZA
3400 7402 HLT /CLA CLL RTL FAILED. AC AND
/LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 50
```



|      |      |           |   |
|------|------|-----------|---|
| 3401 | 7300 | CLA CLL   | /AC=0000 LINK=0                                 |
| 3402 | 7030 | CML RAR   | /TEST COMBINATION                               |
| 3403 | 1066 | TAD K3777 |   |
| 3404 | 7040 | CMA       |   |
| 3405 | 7420 | SNL       |   |
| 3406 | 7440 | SEA       |   |
| 3407 | 7402 | HLT       | /CML RAR FAILED. AC AND LINK<br>/SHOULD BE ZERO |

/GROUP 1 OPERATE TEST 51

|      |      |           |  |
|------|------|-----------|--|
| 3410 | 7300 | CLA CLL   | /AC=0000 LINK =0                                 |
| 3411 | 7024 | CML RAL   | /TEST COMBINATION                                |
| 3412 | 1052 | TAD K7776 |  |
| 3413 | 7040 | CMA       |  |
| 3414 | 7420 | SNL       |  |
| 3415 | 7440 | SEA       |  |
| 3416 | 7402 | HLT       | /CML RAL FAILED. AC AND LINK<br>/SHOULD BE ZERO. |

/GROUP 1 OPERATE TEST 52

|      |      |           |  |
|------|------|-----------|--|
| 3417 | 7300 | CLA CLL   | /AC=0000 LINK=0                                    |
| 3420 | 7032 | CML RTR   | /TEST COMBINATION                                  |
| 3421 | 1065 | TAD K5777 |  |
| 3422 | 7040 | CMA       |  |
| 3423 | 7420 | SNL       |  |
| 3424 | 7440 | SEA       |  |
| 3425 | 7402 | HLT       | /CML RTR FAILED. AC AND LINK<br>/SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 53

|      |      |           |  |
|------|------|-----------|--|
| 3426 | 7300 | CLA CLL   | /AC=0000 LINK=0                                    |
| 3427 | 7026 | CML RTL   | /TEST COMBINATION                                  |
| 3430 | 1053 | TAD K7775 |  |
| 3431 | 7040 | CMA       |  |
| 3432 | 7420 | SNL       |  |
| 3433 | 7440 | SEA       |  |
| 3434 | 7402 | HLT       | /CML RTL FAILED. AC AND LINK<br>/SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 54

|      |      |             |                             |
|------|------|-------------|-----------------------------|
| 3435 | 7300 | CLA CLL     |                             |
| 3436 | 1070 | TAD K5252   | /AC=5252 LINK=0             |
| 3437 | 7230 | CLA CML RAR | /TEST COMBINATION           |
| 3440 | 1066 | TAD K3777   |                             |
| 3441 | 7040 | CMA         |                             |
| 3442 | 7420 | SNL         |                             |
| 3443 | 7440 | SEA         |                             |
| 3444 | 7402 | HLT         | /CLA CML RAR FAILED. AC AND |

PAUSE

/INSTRUCTION TEST - 1  
/GROUP 1 OPERATE TEST 55  
/TAPE 3

|      |      |             |                   |
|------|------|-------------|-------------------|
| 3445 | 7300 | CLA CLL     |                   |
| 3446 | 1070 | TAD K5252   | /AC=5252 LINK=0   |
| 3447 | 7224 | CLA CML RAL | /TEST COMBINATION |

3450 1052 TAD K7776  
3451 7040 CMA  
3452 7420 SNL  
3453 7440 SZA  
3454 7402 HLT /CLA CML RAL FAILED. AC AND  
/LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 56

3455 7300 CLA CLL  
3456 1070 TAD K5252 /AC=5252 LINK=0  
3457 7232 CLA CML RTR /TEST COMBINATION  
3460 1065 TAD K5777  
3461 7040 CMA  
3462 7420 SNL  
3463 7440 SZA  
3464 7402 HLT /CLA CML RTR FAILED. AC AND  
/LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 57

3465 7300 CLA CLL  
3466 1070 TAD K5252 /AC=5252 LINK=0  
3467 7226 CLA CML RTL /TEST COMBINATION  
3470 1053 TAD K7775  
3471 7040 CMA  
3472 7420 SNL  
3473 7440 SZA  
3474 7402 HLT /CLA CML RTL FAILED. AC AND  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 58

3475 7300 CLA CLL /AC=0000 LINK=0  
3476 7130 CLL CML RAR /TEST COMBINATION  
3477 7004 RAL  
3500 7430 SZL  
3501 7440 SZA  
3502 7402 HLT /CLL CML RAR FAILED. AC SHOULD  
/BE 0000 LINK SHOULD BE 1

/GROUP 1 OPERATE TEST 59

3503 7320 CLA CLL CML /AC=0000 LINK=1  
3504 7130 CLL CML RAR /TEST COMBINATION  
3505 7004 RAL  
3506 7430 SZL  
3507 7440 SZA  
3510 7402 HLT /CLL CML RAR FAILED. AC SHOULD BE  
/0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 60

3511 7300 CLA CLL /AC=0000 LINK=0  
3512 7124 CLL CML RAL /TEST COMBINATION  
3513 7010 RAR  
3514 7430 SZL  
3515 7440 SZA  
3516 7402 HLT /CLL CML RAL FAILED. AC SHOULD  
/EQUAL 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 61

3517 7320 CLA CLL CML /AC=0000 LINK=1  
3520 7124 CLL CML RAL /TEST COMBINATION

```

3521 7010          RAR
3522 7430          SZL
3523 7440          SZA
3524 7402          HLT
                        /CLL CML RAL FAILED. AC SHOULD
                        /EQUAL 0000. LINK SHOULD BE ONE

```

/GROUP 1 OPERATE TEST 62

```

3525 7300          CLA CLL          /AC=0000 LINK=0
3526 7132          CLL CML RTR      /TEST COMBINATION
3527 7006          RTL
3530 7430          SZL
3531 7440          SZA
3532 7402          HLT
                        /CLL CML RTR FAILED. AC SHOULD
                        /BE 0000. LINK SHOULD BE ONE

```

/GROUP 1 OPERATE TEST 63

```

3533 7320          CLA CLL CML      /AC=0000 LINK=1
3534 7132          CLL CML RTR      /TEST COMBINATION
3535 7006          RTL
3536 7430          SZL
3537 7440          SZA
3540 7402          HLT
                        /CLL CML RTR FAILED. AC SHOULD
                        /BE 0000 LINK SHOULD BE ONE.

```

/GROUP 1 OPERATE TEST 64

```

3541 7300          CLA CLL          /AC=0000 LINK=0
3542 7126          CLL CML RTL      /TEST COMBINATION
3543 7012          RTR
3544 7430          SZL
3545 7440          SZA
3546 7402          HLT
                        /CLL CML RTL FAILED. AC SHOULD
                        /BE 0000. LINK SHOULD BE A ONE

```

/GROUP 1 OPERATE TEST 65

```

3547 7320          CLA CLL CML      /AC=0000 LINK=1
3550 7126          CLL CML RTL      /TEST COMBINATION
3551 7012          RTR
3552 7430          SZL
3553 7440          SZA
3554 7402          HLT
                        /CLL CML RTL FAILED. AC SHOULD
                        /BE 0000. LINK SHOULD BE A ONE.

```

/GROUP 1 OPERATE TEST 66

```

3555 7300          CLA CLL
3556 1070          TAD K5252          /AC=5252 LINK=0
3557 7330          CLA CLL CML RAR  /TEST COMBINATION
3560 7004          RAL
3561 7430          SZL
3562 7440          SZA
3563 7402          HLT
                        /CLA CLL CML RAR FAILED. AC SHOULD
                        /BE 0000. LINK SHOULD BE ONE

```

/GROUP 1 OPERATE TEST 67

```

3564 7320          CLA CLL CML
3565 1071          TAD K2525          /AC=2525 LINK=1
3566 7330          CLA CLL CML RAR  /TEST COMBINATION
3567 7004          RAL
3570 7430          SZL
3571 7440          SZA

```

3572 7402 HLT /CLA CLL CML RAR FAILED. AC SHOULD /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 68

3573 7300 CLA CLL  
3574 1071 TAD K2525 /AC=2525 LINK=0  
3575 7324 CLA CLL CML RAL /TEST COMBINATION  
3576 7010 RAR  
3577 7430 SZL  
3600 7440 SZA  
3601 7402 HLT /CLA CLL CML RAL FAILED. AC SHOULD /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 69

3602 7320 CLA CLL CML  
3603 1070 TAD K5252 /AC=5252 LINK=1  
3604 7324 CLA CLL CML RAL /TEST COMBINATION  
3605 7010 RAR  
3606 7430 SZL  
3607 7440 SZA  
3610 7402 HLT /CLA CLL CML RAL FAILED. AC SHOULD /BE 0000 LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 70

3611 7300 CLA CLL  
3612 1071 TAD K2525 /AC=2525 LINK=0  
3613 7332 CLA CLL CML RTR /TEST COMBINATION  
3614 7006 RTL  
3615 7430 SZL  
3616 7440 SZA  
3617 7402 HLT /CLA CLL CML RTR FAILED. AC SHOULD /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 71

3620 7320 CLA CLL CML  
3621 1070 TAD K5252 /AC=5252 LINK=1  
3622 7332 CLA CLL CML RTR /TEST COMBINATION  
3623 7006 RTL  
3624 7430 SZL  
3625 7440 SZA  
3626 7402 HLT /CLA CLL CML RTR FAILED. AC SHOULD /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 72

3627 7300 CLL CLA  
3630 1071 TAD K2525 /AC=2525 LINK=0  
3631 7326 CLA CLL CML RTL /TEST COMBINATION  
3632 7012 RTR  
3633 7430 SZL  
3634 7440 SZA  
3635 7402 HLT /CLA CLL CML RTL FAILED. AC SHOULD /BE 0000, LINK SHOULD BE A ZERO

/GROUP 1 OPERATE TEST 73

3636 7320 CLL CLA CML  
3637 1070 TAD K5252 /AC=5252 LINK=1  
3640 7326 CLA CLL CML RTL /TEST COMBINATION

3641 7012 RTR  
3642 7430 SZL  
3643 7440 SEA  
3644 7402 HLT /CLA CLL CML RTL FAILED. AC SHOULD  
/BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 74

3645 7300 CLA CLL  
3646 1067 TAD K7777 /TEST PATTERN  
3647 7041 CIA /AC EQUALS 0001  
3650 1052 TAD K7776  
3651 7040 CMA  
3652 7420 SNL  
3653 7440 SEA /CIA FAILED AC SHOULD EQUAL 0000  
3654 7402 HLT /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 75

3655 7300 CLA CLL  
3656 1052 TAD K7776 /TEST PATTERN  
3657 7041 CIA /AC EQUALS 0002  
3660 1053 TAD K7775  
3661 7040 CMA  
3662 7420 SNL  
3663 7440 SEA /CIA FAILED AC SHOULD EQUAL 0000  
3664 7402 HLT /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 76

3665 7300 CLA CLL  
3666 1101 TAD K7774 /TEST PATTERN  
3667 7041 CIA /AC EQUALS 0004  
3670 1054 TAD K7773  
3671 7040 CMA  
3672 7420 SNL  
3673 7440 SEA /CIA FAILED AC SHOULD EQUAL 0000  
3674 7402 HLT /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 77

3675 7300 CLA CLL  
3676 1100 TAD K7770 /TEST PATTERN  
3677 7041 CIA /AC EQUALS 0010  
3700 1055 TAD K7767  
3701 7040 CMA  
3702 7420 SNL  
3703 7440 SEA  
3704 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 78

3705 7300 CLA CLL  
3706 1077 TAD K7760 /TEST PATTERN  
3707 7041 CIA /AC EQUALS 0020  
3710 1056 TAD K7757  
3711 7040 CMA  
3712 7420 SNL  
3713 7440 SEA  
3714 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 79

3715 7300 CLA CLL

|      |      |           |   |
|------|------|-----------|---|
| 3716 | 1076 | TAD K7740 | /TEST PATTERN   |
| 3717 | 7041 | CIA       |   |
| 3720 | 1057 | TAD K7737 | /AC EQUALS 0040   |
| 3721 | 7040 | CMA       |   |
| 3722 | 7420 | SNL       |   |
| 3723 | 7440 | SZA       |   |
| 3724 | 7402 | HLT       | /CIA FAILED AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 80

|      |      |           |  |
|------|------|-----------|--|
| 3725 | 7300 | CLA CLL   |  |
| 3726 | 1113 | TAD K7700 | /TEST PATTERN  |
| 3727 | 7041 | CIA       | /AC EQUALS 0100  |
| 3730 | 1061 | TAD K7677 |  |
| 3731 | 7040 | CMA       |  |
| 3732 | 7420 | SNL       |  |
| 3733 | 7440 | SZA       |  |
| 3734 | 7402 | HLT       | /CIA FAILED A SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 81

|      |      |           |   |
|------|------|-----------|---|
| 3735 | 7300 | CLA CLL   |   |
| 3736 | 1075 | TAD K7600 | /TEST PATTERN   |
| 3737 | 7041 | CIA       | /AC EQUALS 0200   |
| 3740 | 1062 | TAD K7577 |   |
| 3741 | 7040 | CMA       |   |
| 3742 | 7420 | SNL       |   |
| 3743 | 7440 | SZA       |   |
| 3744 | 7402 | HLT       | /CIA FAILED AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 82

|      |      |           |   |
|------|------|-----------|---|
| 3745 | 7300 | CLA CLL   |   |
| 3746 | 1074 | TAD K7400 | /TEST PATTERN   |
| 3747 | 7041 | CIA       | /AC EQUALS 0400   |
| 3750 | 1063 | TAD K7377 |   |
| 3751 | 7040 | CMA       |   |
| 3752 | 7420 | SNL       |   |
| 3753 | 7440 | SZA       |   |
| 3754 | 7402 | HLT       | /CIA FAILED AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 83

|      |      |           |   |
|------|------|-----------|---|
| 3755 | 7300 | CLA CLL   |   |
| 3756 | 1073 | TAD K7000 | /TEST PATTERN   |
| 3757 | 7041 | CIA       | /AC EQUALS 1000   |
| 3760 | 1064 | TAD K6777 |   |
| 3761 | 7040 | CMA       |   |
| 3762 | 7420 | SNL       |   |
| 3763 | 7440 | SZA       |   |
| 3764 | 7402 | HLT       | /CIA FAILED AC SHOULD EQUAL 0000<br>/LINK SHOULD EQUAL ZERO |

/GROUP 1 OPERATE TEST 84

|      |      |           |               |
|------|------|-----------|---------------|
| 3765 | 7300 | CLA CLL   |               |
| 3766 | 1072 | TAD K6000 | /TEST PATTERN |

```

3767 7041      CIA      /AC EQUALS 2000
3770 1065      TAD K5777
3771 7040      CMA
3772 7420      SNL
3773 7440      SZA
3774 7402      HLT      /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL ZERO
    
```

/GROUP 1 OPERATE TEST 85

```

3775 7300      CLA CLL
3776 1050      TAD K4000      /TEST PATTERN
3777 7041      CIA      /AC EQUALS 4000
4000 1066      TAD K3777
4001 7040      CMA
4002 7420      SNL
4003 7440      SZA
4004 7402      HLT      /CIA FALED AC SHOULD EQUUA 000
                                   /LINK SHOULD EQUALL ZERO
    
```

/GROUP 1 OPERATE TEST 86

```

4005 7300      CLA CLL
4006 1020      TAD K0000      /TEST PATTERN
4007 7041      CIA      /AC EQUALS 0000, LINK EQUALS A ONE
4010 7450      SNA
4011 7420      SNL
4012 7402      HLT      /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL A ONE
    
```

/GROUP OPERATE TEST 87

```

4013 7340      CLA CMA CLL      /AC=7777,L=0
4014 7311      CLA CLL IAC RAR /AC=0,L=1
4015 7430      SZL
4016 7440      SZA
4017 7402      HLT      /ERROR; LINC NOT SET OR
                                   /AC NOT 0
    
```

/GROUP 1 OPERATE TEST 88

```

4020 7360      CLA CMA CLL CML /AC=7777,L=1
4021 7305      CLA CLL IAC RAL /AC=2,L=0
4022 7430      SZL
4023 7402      HLT      /ERROR; LINC NOT 0
4024 7041      CMA IAC
4025 1022      TAD K0002
4026 7440      SZA
4027 7402      HLT      /ERROR AC NOT=2
    
```

/GROUP 1 OPERATE TEST 89

```

4030 7320      CLA CLL CML      /AC=0,L=1
4031 7313      CLA CLL IAC RTR /AC=4000,L=0
4032 7430      SZL
4033 7402      HLT      /ERROR; LINC NOT 0
4034 7500      SMA
4035 7402      HLT      /ERROR; AC NOT 4000
    
```

/GROUP 1 OPERATE TEST 90

```

4036 7360      CLA CMA CLL CML      /AC=7777,L=1
    
```

|      |      |                 |                    |
|------|------|-----------------|--------------------|
| 4037 | 7307 | CLA CLL IAC RTL | /AC=4,LINC=0       |
| 4040 | 7430 | SZL             |                    |
| 4041 | 7402 | HLT             | /ERROR: LINC NOT 0 |
| 4042 | 7041 | CMA IAC         |                    |
| 4043 | 1024 | TAD K0004       |                    |
| 4044 | 7440 | SZA             |                    |
| 4045 | 7402 | HLT             | /ERROR: AC NOT 4   |

## /GROUP 1 OPERATE TEST 91

|      |      |                     |                                       |
|------|------|---------------------|---------------------------------------|
| 4046 | 7300 | CLA CLL             | /AC=0, L=0                            |
| 4047 | 7331 | CLA CLL CML IAC RAR | /AC=4000, L=1                         |
| 4050 | 7520 | SMA SNL             |                                       |
| 4051 | 7402 | HLT                 | /ERROR: AC NOT 4000 OR<br>/LINC NOT 1 |

## /GROUP 1 OPERATE TEST 92

|      |      |                     |              |
|------|------|---------------------|--------------|
| 4052 | 7300 | CLA CLL             | /AC=0,L=0    |
| 4053 | 7345 | CLA CMA CLL IAC RAL | /AC=0001,L=0 |
| 4054 | 7430 | SZL                 |              |
| 4055 | 7402 | HLT                 | /LINC NOT=0  |
| 4056 | 7041 | CMA IAC             |              |
| 4057 | 1021 | TAD K0001           |              |
| 4060 | 7440 | SZA                 |              |
| 4061 | 7402 | HLT                 | /AC NOT 0001 |

## /GROUP 1 OPERATE TEST 93

|      |      |                         |              |
|------|------|-------------------------|--------------|
| 4062 | 7360 | CLA CMA CLL CML         | /AC=7777,L=1 |
| 4063 | 7373 | CLA CMA CLL CML IAC RTR | /AC=0,L=0    |
| 4064 | 7440 | SZA                     |              |
| 4065 | 7402 | HLT                     | /ERROR:      |
| 4066 | 7430 | SZL                     |              |
| 4067 | 7402 | HLT                     | /ERROR:      |

## /GROUP 1 OPERATE TEST 94

|      |      |                 |                                |
|------|------|-----------------|--------------------------------|
| 4070 | 7332 | CLA CLL CML RTR | /L=0 AC=2000                   |
| 4071 | 7006 | RTL             | /L=1 AC=0000                   |
| 4072 | 7430 | SZL             |                                |
| 4073 | 7440 | SZA             |                                |
| 4074 | 7402 | HLT             | /CLA CLL CML RTR OR RTL FAILED |

## /GROUP 1 OPERATE TEST 95

|      |      |                 |                 |
|------|------|-----------------|-----------------|
| 4075 | 7360 | CLA CMA CLL CML |                 |
| 4076 | 7342 | CLA CLL CMA BSW | /AC=7777 LINK=0 |
| 4077 | 7040 | CMA             |                 |
| 4100 | 7420 | SNL             |                 |
| 4101 | 7440 | SZA             |                 |
| 4102 | 7402 | HLT             | /7742 FAILED    |

## /GROUP 1 OPERATE TEST 96

|      |      |                 |                 |
|------|------|-----------------|-----------------|
| 4103 | 7360 | CLA CMA CLL CML |                 |
| 4104 | 7303 | CLA CLL IAC BSW | /AC=0100 LINK=0 |
| 4105 | 1061 | TAD K7677       | /AC=7777        |
| 4106 | 7040 | CMA             | /AC=0000        |



4107 7420 SNL  
4110 7440 SZA  
4111 7402 HLT /7703 FAILED

/GROUP 1 OPERATE TEST 97  
4112 7360 CLA CMA CLL CML  
4113 7343 CLA CLL CMA IAC BSW /AC=0000 LINK=1  
4114 7430 SZL  
4115 7440 SZA  
4116 7402 HLT /7743 FAILED

/GROUP 1 OPERATE TEST 98  
4117 7360 CLA CMA CLL CML  
4120 7363 CLA CLL CMA CML IAC BSW /AC=0000 LINK=0  
4121 7420 SNL  
4122 7440 SZA  
4123 7402 HLT /7763 FAILED

/GROUP 1 OPERATE TEST 99  
4124 7300 CLA CLL  
4125 1043 TAD K1234  
4126 7063 CMA CML IAC BSW /AC=4465 L=1  
4127 1047 TAD K3312  
4130 7040 CMA  
4131 7430 SZL  
4132 7440 SZA  
4133 7402 HLT /7063 FAILED

/GROUP 1 OPERATE TEST 100  
4134 7332 CLA CLL CML RTR /AC=2000 L=1  
4135 7063 CMA CML IAC BSW /AC=0060 L=1  
4136 1051 TAD K7717 /AC=7777 L=1  
4137 7040 CMA  
4140 7430 SZL  
4141 7440 SZA  
4142 7402 HLT /7063 FAILED

/GROUP 2 OPERATE TEST 1  
4143 7240 CLA CMA /AC=7777  
4144 7700 CLA SMA /TEST COMBINATION  
4145 7402 HLT /CLA SMA DID NOT SKIP  
/AC SHOULD BE 0000  
4146 7440 SZA  
4147 7402 HLT /CLA SMA DID NOT CLEAR AC  
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 2  
4150 7240 CLA CMA /AC=7777  
4151 7640 CLA SZA /TEST COMBINATION  
4152 7440 SZA  
4153 7402 HLT /CLA SZA SKIPPED OR AC NOT  
/CLEARED TO 0000

/GROUP 2 OPERATE TEST 3  
4154 7240 CLA CMA /AC=7777

```

4155 7540          SMA SZA          /TEST COMBINATION
4156 7402          HLT              /SMA SZA SHOULD HAVE SKIPPED
                                   /AC SHOULD EQUAL 7777

/GROUP 2 OPERATE TEST 4
4157 7200          CLA              /AC=0000
4160 7540          SMA SZA          /TEST COMBINATION
4161 7402          HLT              /SMA SZA SHOULD HAVE SKIPPED
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 5
4162 7200          CLA              /AC=3777
4163 1066          TAD K3777        /TEST COMBINATION
4164 7540          SMA SZA          /SMA SZA SHOULD NOT HAVE SKPPED
4165 7450          SNA              /AC SHOULD EQUAL 3777
4166 7402          HLT

/GROUP 2 OPERATE TEST 6
4167 7240          CLA CMA          /AC=7777
4170 7740          CLA SMA SZA      /TEST COMBINATION
4171 7402          HLT              /CLA SMA SZA SHOULD HAVE SKIPPED
                                   /AC SHOULD BE 0000

4172 7440          SZA
4173 7402          HLT              /AC WAS NOT CLEARED
                                   /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 7
4174 7200          CLA              /AC=0000
4175 7740          CLA SMA SZA      /TEST COMBINATION
4176 7402          HLT              /CLA SMA SZA SHOULD HAVE SKIPPED
                                   /AC SHOULD BE 0000

4177 7440          SZA
4200 7402          HLT              /AC WAS NOT CLEARED
                                   /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 8
4201 7200          CLA              /AC=3777
4202 1066          TAD K3777        /TEST COMBINATION
4203 7740          CLA SMA SZA
4204 7440          SZA
4205 7402          HLT              /SMA SZA DID NOT SKIP OR AC
                                   /NOT CLEARED TO 0000

/GROUP 2 OPERATE TEST 9
4206 7300          CLL CLA          /LINK=0
4207 1070          TAD K5252        /AC=5252
4210 7620          CLA SNL          /TEST COMBINATION
4211 7440          SZA
4212 7402          HLT              /SNL SKIPPED OR AC NOT CLEARED
                                   /AC AND LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 10
4213 7320          CLA CLL CML
4214 1071          TAD K2525        /AC=2525 LINK=1
4215 7620          CLA SNL          /TEST COMBINATION
4216 7402          HLT              /SNL DID NOT SKIP

```

```

4217 7440          SZA          /LINK SHOULD EQUAL ONE
4220 7402          HLT          /CLA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 11
4221 7300          CLA CLL          /AC=0000 LINK=0
4222 7520          SMA SNL          /TEST COMBINATION
4223 7440          SZA
4224 7402          HLT          /SMA SNL SKIPPED. AC AND LINK
                                   /SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 12
4225 7320          CLA CLL CML        /AC=0000 LINK=1
4226 7520          SMA SNL          /TEST COMBINATION
4227 7402          HLT          /SNL SHOULD HAVE SKIPPED. LINK = 1

/GROUP 2 OPERATE TEST 13
4230 7300          CLA CLL
4231 1050          TAD K4000          /AC=4000 LINK=0
4232 7520          SMA SNL          /TEST COMBINATION
4233 7402          HLT          /SMA SHOULD HAVE SKIPPED
                                   /AC=4000

/GROUP 2 OPERATE TEST 14
4234 7320          CLA CLL CML        /AC=4000 LINK=1
4235 1050          TAD K4000
4236 7520          SMA SNL          /TEST COMBINATION
4237 7402          HLT          /SMA SNL SHOULD HAVE SKIPPED
                                   /AC=4000 LINK=1

/GROUP 2 OPERATE TEST 15
4240 7300          CLA CLL          /AC=0000 LINK=0
4241 7720          CLA SMA SNL        /TEST COMBINATION
4242 7440          SZA
4243 7402          HLT          /SMA SNL SKIPPED. AC AND LINK
                                   /SHOULD BE ZERO

/GROUP 2 OPERATE TEST 16
4244 7320          CLA CLL CML        /AC=0000 LINK=1
4245 7720          CLA SMA SNL        /TEST COMBINATION
4246 7402          HLT          /SNL SHOULD HAVE SKIPPED
                                   /LINK=1

4247 7440          SZA
4250 7402          HLT          /CLA SMA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 17
4251 7300          CLA CLL
4252 1050          TAD K4000          /AC=4000 LINK=0
4253 7720          CLA SMA SNL        /TEST COMBINATION
4254 7402          HLT          /SMA SHOULD HAVE SKIPPED
                                   /AC SHOULD EQUAL 0000 LINK=0

4255 7440          SZA
4256 7402          HLT          /CLA SMA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 18
4257 7320          CLA CLL CML
4260 1050          TAD K4000          /AC=4000 LINK=1

```

```

4261 7720          CLA SMA SNL      /TEST COMBINATION
4262 7402          HLT              /CLA SMA SNL SHOULD HAVE SKIPPED
                                   /AC SHOULD BE 0000 LINK=1

4263 7440          SZA
4264 7402          HLT              /CLA SMA SNL DID NOT CLEAR AC
                                   /AC SHOULD BE 0000 LINK=1

/GROUP 2 OPERATE TEST 19
4265 7300          CLA CLL          /AC=0000 LINK=0
4266 7460          SZA SNL         /TEST COMBINATION
4267 7402          HLT              /SZA SNL DID NOT SKIP
                                   /AC=0000

/GROUP 2 OPERATE TEST 20
4270 7320          CLL CLA CML     /AC=0000 LINK=1
4271 7460          SZA SNL         /TEST COMBINATION
4272 7402          HLT              /SZA SNL DID NOT SKIP
                                   /AC=0000 LINK=1

/GROUP 2 OPERATE TEST 21
4273 7300          CLA CLL
4274 1040          TAD K0400        /AC=0400 LINK=0
4275 7460          SZA SNL         /TEST COMBINATION
4276 7450          SNA
4277 7402          HLT              /SZA SNL SKIPPED
                                   /AC=0400 LINK=0

/GROUP 2 OPERATE TEST 22
4300 7320          CLA CLL CML     /AC=0040 LINK=1
4301 1032          TAD K0040
4302 7460          SZA SNL         /TEST COMBINATION
4303 7402          HLT              /SZA SNL SHOULD HAVE SKIPPED
                                   /LINK=1

/GROUP 2 OPERATE TEST 23
4304 7300          CLA CLL         /AC=0000 LINK=0
4305 7660          CLA SZA SNL     /TEST COMBINATION
4306 7402          HLT              /CLA SZA SNL SHOULD HAVE SKIPPED
                                   /AC AND LINK SHOULD EQUAL ZERO

4307 7440          SZA
4310 7402          HLT              /CLA SZA SNL DID NOT CLEAR AC
                                   /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 24
4311 7320          CLA CLL CML     /AC=0000 LINK=1
4312 7660          CLA SZA SNL     /TEST COMBINATION
4313 7402          HLT              /CLA SZA SNL SHOULD HAVE SKIPPED
                                   /AC=0000 LINK=1

4314 7440          SZA
4315 7402          HLT              /CLA SZA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 25
4316 7320          CLA CLL CML     /AC=0200 LINK=1
4317 1036          TAD K0200
4320 7660          CLA SZA SNL     /TEST COMBINATION OR
4321 7402          HLT              /CLA SZA SNL SHOULD HAVE SKIPPED
                                   /LINK=1

4322 7440          SZA
4323 7402          HLT              /CLA SZA SNL DID NOT CLEAR AC

```

```

/AC SHOULD EQUAL 0000
/GROUP 2 OPERATE TEST 26
4324 7300   CLA CLL
4325 1045   TAD K2000   /AC=2000 LINK=0
4326 7660   CLA SZA SNL /TEST COMBINATION
4327 7440   SZA
4330 7402   HLT           /CLA SZA SNL FAILED. AC AND
                               /LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 27
4331 7300   CLA CLL   /AC=0000 LINK=0
4332 7560   SMA SZA SNL /TEST COMBINATION
4333 7402   HLT           /SMA SZA SNL SHOULD HAVE SKIPPED
                               /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 28
4334 7320   CLA CLL CML
4335 1066   TAD K3777   /AC=3777 LINK=1
4336 7560   SMA SZA SNL /TEST COMBINATION
4337 7402   HLT           /SMA SZA SNL SHOULD HAVE SKIPPED
                               /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 29
4340 7300   CLA CLL
4341 1050   TAD K4000   /AC=4000 LINK=0
4342 7560   SMA SZA SNL /TEST COMBINATION
4343 7402   HLT           /SMA SZA SNL SHOULD HAVE SKIPPED
                               /AC=4000 LINK=0

/GROUP 2 OPERATE TEST 30
4344 7300   CLA CLL
4345 1066   TAD K3777   /AC=3777 LINK=0
4346 7560   SMA SZA SNL /TEST COMBINATION
4347 7450   SNA
4350 7402   HLT           /SMA SZA SNL SHOULD NOT HAVE
                               /SKIPPED. AC=3777 LINK=0

/GROUP 2 OPERATE TEST 31
4351 7300   CLA CLL   /AC=0000 LINK=0
4352 7760   CLA SMA SZA SNL /TEST COMBINATION
4353 7402   HLT           /CLA SMA SZA SNL SHOULD HAVE SKIPPED
                               /AC SHOULD EQUAL 0000
4354 7440   SZA
4355 7402   HLT           /AC NOT ZERO AFTER CLA SMA SZA SNL
                               /AC SHOULD BE 0000 LINK=0

/GROUP 2 OPERATE TEST 32
4356 7320   CLA CLL CML
4357 1066   TAD K3777   /AC=3777 LINK=1
4360 7760   CLA SMA SZA SNL /TEST COMBINATION
4361 7402   HLT           /CLA SMA SZA SNL DID NOT SKIP
                               /AC SHOULD BE 0000 LINK=1
4362 7440   SZA
4363 7402   HLT           /CLA SMA SZA SNL DID NOT CLEAR AC
                               /AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 33
4364 7300   CLA CLL

```

4365 1050 TAD K4000 /AC=4000 LINK=0  
 4366 7760 CLA SMA SZA SNL /TEST COMBINATION  
 4367 7402 HLT /CLA SMA SZA SNL SHOULD HAVE SKIPPED  
 /AC SHOULD BE 0000. LINK=0  
 4370 7440 SZA  
 4371 7402 HLT /CLA SMA SZA SNL DID NOT CLEAR AC  
 /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 34

4372 7300 CLA CLL  
 4373 1066 TAD K3777 /AC=3777 LINK=0  
 4374 7760 CLA SMA SZA SNL /TEST COMBINATION  
 4375 7440 SZA  
 4376 7402 HLT /CLA SMA SZA SNL FAILED. AC  
 /SHOULD BE ZERO. LINK=0

/GROUP 2 OPERATE TEST 35

4377 7300 CLA CLL /AC=0000 LINK=0  
 4400 7410 SKP /TEST INSTRUCTION  
 4401 7402 HLT /SKIP FAILED  
 /AC AND LINK EQUAL ZERO

/GROUP 2 OPERATE TEST 36

4402 7320 CLA CLL CML /AC=0000 LINK=1  
 4403 7410 SKP /TEST INSTRUCTION  
 4404 7402 HLT /SKIP FAILED  
 /AC=0000 LINK=1

/GROUP 2 OPERATE TEST 37

4405 7320 CLA CLL CML  
 4406 1066 TAD K3777 /AC=3777 LINK=1  
 4407 7410 SKP /TEST INSTRUCTION  
 4410 7402 HLT /SKIP FAILED  
 /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 38

4411 7300 CLA CLL  
 4412 1066 TAD K3777 /AC=3777 LINK=0  
 4413 7410 SKP /TEST INSTRUCTION  
 4414 7402 HLT /SKIP FAILED  
 /AC=3777 LINK=0

/GROUP 2 OPERATE TEST 39

4415 7200 CLA  
 4416 1066 TAD K3777 /AC=3777  
 4417 7710 CLA SPA /TEST COMBINATION  
 4420 7402 HLT /CLA SPA DID NOT SKIP. AC  
 /SHOULD BE ZERO  
 4421 7440 SZA  
 4422 7402 HLT /CLA SPA DID NOT CLEAR AC  
 /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 40

4423 7200 CLA  
 4424 1050 TAD K4000 /AC=4000  
 4425 7710 CLA SPA /TEST COMBINATION  
 4426 7440 SZA  
 4427 7402 HLT /CLA SPA FAILED. AC SHOULD  
 /EQUAL 0000

/GROUP 2 OPERATE TEST 41



PAUSE

/INSTRUCTION TEST - TAPE 4  
/GROUP 2 OPERATE TEST 49

|      |      |           |                            |
|------|------|-----------|----------------------------|
| 4473 | 7300 | CLA CLL   |                            |
| 4474 | 1070 | TAD K5252 | /AC=5252 LINK=0            |
| 4475 | 7630 | CLA SZL   | /TEST COMBINATION          |
| 4476 | 7402 | HLT       | /CLA SZL DID NOT SKIP      |
|      |      |           | /AC AND LINK SHOULD BE 0   |
| 4477 | 7440 | SZA       |                            |
| 4500 | 7402 | HLT       | /CLA SZL DID NOT CLEAR AC  |
|      |      |           | /AC SHOULD BE ZERO. LINK=0 |

/GROUP 2 OPERATE TEST 50

|      |      |                 |                            |
|------|------|-----------------|----------------------------|
| 4501 | 7360 | CLA CLL CML CMA | /AC=7777 LINK=1            |
| 4502 | 7630 | CLA SZL         | /TEST COMBINATION (AND)    |
| 4503 | 7440 | SZA             |                            |
| 4504 | 7402 | HLT             | /CLA SZL FAILED, AC SHOULD |
|      |      |                 | /BE 0000. LINK=1           |

/GROUP 2 OPERATE TEST 51

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 4505 | 7300 | CLA CLL   |                         |
| 4506 | 1066 | TAD K3777 | /AC=3777 LINK=0         |
| 4507 | 7530 | SPA SZL   | /TEST COMBINATION (AND) |
| 4510 | 7402 | HLT       | /SPA SZL DID NOT SKIP   |
|      |      |           | /AC=3777 LINK=0         |

/GROUP 2 OPERATE TEST 52

|      |      |             |                         |
|------|------|-------------|-------------------------|
| 4511 | 7320 | CLA CLL CML |                         |
| 4512 | 1066 | TAD K3777   | /AC=3777 LINK=1         |
| 4513 | 7530 | SPA SZL     | /TEST COMBINATION (AND) |
| 4514 | 7450 | SNA         |                         |
| 4515 | 7402 | HLT         | /SPA SZL SKIPPED        |
|      |      |             | /AC=3777 LINK=1         |

/GROUP 2 OPERATE TEST 53

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 4516 | 7300 | CLA CLL   |                         |
| 4517 | 1050 | TAD K4000 | /AC=4000 LINK=0         |
| 4520 | 7530 | SPA SZL   | /TEST COMBINATION (AND) |
| 4521 | 7500 | SMA       |                         |
| 4522 | 7402 | HLT       | /SPA SZL SKIPPED        |
|      |      |           | /AC=4000 LINK=0         |

/GROUP 2 OPERATE TEST 54

|      |      |             |                                   |
|------|------|-------------|-----------------------------------|
| 4523 | 7300 | CLA CLL     |                                   |
| 4524 | 1066 | TAD K3777   | /AC=3777 LINK=0                   |
| 4525 | 7730 | CLA SPA SZL | /TEST COMBINATION (AND)           |
| 4526 | 7402 | HLT         | /CLA SPA SZL SHOULD HAVE SKIPPED  |
|      |      |             | /AC SHOULD BE 0000. LINK=0        |
| 4527 | 7440 | SZA         |                                   |
| 4530 | 7402 | HLT         | /CLA SPA SZL DID NOT CLEAR THE AC |
|      |      |             | /AC SHOULD BE 0000                |

/GROUP 2 OPERATE TEST 55

|      |      |             |                         |
|------|------|-------------|-------------------------|
| 4531 | 7320 | CLA CLL CML |                         |
| 4532 | 1066 | TAD K3777   | /AC=3777 LINK=1         |
| 4533 | 7730 | CLA SPA SZL | /TEST COMBINATION (AND) |



```

4534 7440      SZA
4535 7402      HLT                /CLA SPA SZL FAILED
                                   /AC SHOULD EQUAL 0000 LINK=1
/GROUP 2 OPERATE TEST 56
4536 7300      CLA CLL
4537 1050      TAD K4000                /AC=4000 LINK=0
4540 7730      CLA SPA SZL    /TEST COMBINATION (AND)
4541 7440      SZA
4542 7402      HLT                /CLA SPA SZL FAILED
                                   /AC SHOULD EQUAL 0000 LINK=0
/GROUP 2 OPERATE TEST 57
4543 7300      CLA CLL
4544 1050      TAD K4000                /AC=4000 LINK=0
4545 7470      SNA SZL        /TEST COMBINATION (AND)
4546 7402      HLT                /SNA SZL DID NOT SKIP
                                   /AC = 4000 LINK=0
/GROUP 2 OPERATE TEST 58
4547 7320      CLA CLL CML
4550 1050      TAD K4000                /AC=4000 LINK=1
4551 7470      SNA SZL        /TEST COMBINATION (AND)
4552 7420      SNL
4553 7402      HLT                /SNA SZL SKIPPED
                                   /AC=4000 LINK=1
/GROUP 2 OPERATE TEST 59
4554 7300      CLA CLL        /AC=0000 LINK=0
4555 7470      SNA SZL        /TEST COMBINATION (AND)
4556 7430      SZL
4557 7402      HLT                /SNA SZL SKIPPED
                                   /AC=0000 LINK=0
/GROUP 2 OPERATE TEST 60
4560 7320      CLA CLL CML
4561 1050      TAD K4000                /AC=4000 LINK=1
4562 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4563 7440      SZA
4564 7402      HLT                /CLA SNA SZL FAILED. AC SHOULD
                                   /BE 0000, LINK=1
/GROUP 2 OPERATE TEST 61
4565 7300      CLA CLL
4566 1050      TAD K4000                /AC=4000 LINK=0
4567 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4570 7402      HLT                /CLA SNA SZL DID NOT SKIP
                                   /AC SHOULD BE 0000. LINK=0
4571 7440      SZA
4572 7402      HLT                /CLA SNA SZL DID NOT CLEAR AC
                                   /AC AND LINK SHOULD BE ZERO
/GROUP 2 OPERATE TEST 62
4573 7300      CLA CLL        /AC=0000 LINK=0
4574 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4575 7440      SZA
4576 7402      HLT                /CLA SNA SZL FAILED. AC SHOULD
                                   /BE 0000, LINK=0
/GROUP 2 OPERATE TEST 63
4577 7300      CLA CLL

```

|                          |      |                 |  |
|--------------------------|------|-----------------|--|
| 4600                     | 1066 | TAD K3777       | /AC=3777 LINK=0  |
| 4601                     | 7570 | SPA SNA SZL     | /TEST COMBINATION (AND)  |
| 4602                     | 7422 | HLT             | /SPA SNA SZL DID NOT SKIP<br>/AC=3777 LINK=0                           |
| /GROUP 2 OPERATE TEST 64 |      |                 |  |
| 4603                     | 7520 | CLA CLL CML     |  |
| 4604                     | 1066 | TAD K3777       | /AC=3777 LINK=1  |
| 4605                     | 7570 | SPA SNA SZL     | /TEST COMBINATION (AND)  |
| 4606                     | 7420 | SNL             |  |
| 4607                     | 7402 | HLT             | /SPA SNA SZL SKIPPED<br>/AC=3777 LINK=1                                |
| /GROUP 2 OPERATE TEST 65 |      |                 |  |
| 4610                     | 7300 | CLA CLL         | /AC=0000 LINK=0  |
| 4611                     | 7570 | SPA SNA SZL     | /TEST COMBINATION (AND)  |
| 4612                     | 7430 | SZL             |  |
| 4613                     | 7402 | HLT             | /SPA SNA SZL SKIPPED<br>/AC=0000 LINK=0                                |
| /GROUP 2 OPERATE TEST 66 |      |                 |  |
| 4614                     | 7300 | CLA CLL         |  |
| 4615                     | 1050 | TAD K4000       | /AC=4000 LINK=0  |
| 4616                     | 7570 | SPA SNA SZL     | /TEST COMBINATION (AND)  |
| 4617                     | 7430 | SZL             |  |
| 4620                     | 7402 | HLT             | /SPA SNA SZL SKIPPED<br>/AC=4000 LINK=0                                |
| /GROUP 2 OPERATE TEST 67 |      |                 |  |
| 4621                     | 7300 | CLA CLL         |  |
| 4622                     | 1066 | TAD K3777       | /AC=3777 LINK=0  |
| 4623                     | 7770 | CLA SPA SNA SZL | /TEST COMBINATION (AND)  |
| 4624                     | 7402 | HLT             | /CLA SPA SNA SZL DID NOT SKIP<br>/AC AND LINK SHOULD BE ZERO           |
| 4625                     | 7440 | SZA             |  |
| 4626                     | 7402 | HLT             | /CLA SPA SNA SZL DID NOT CLEAR AC<br>/AC AND LINK SHOULD BE ZERO       |
| /GROUP 2 OPERATE TEST 68 |      |                 |  |
| 4627                     | 7320 | CLA CLL CML     |  |
| 4630                     | 1066 | TAD K3777       | /AC=3777 LINK=1  |
| 4631                     | 7770 | CLA SPA SNA SZL | /TEST COMBINATION (AND)  |
| 4632                     | 7440 | SZA             |  |
| 4633                     | 7402 | HLT             | /CLA SPA SNA SZL FAILED. AC SHOULD<br>/BE 0000, LINK SHOULD EQUAL ONE  |
| /GROUP 2 OPERATE TEST 69 |      |                 |  |
| 4634                     | 7300 | CLA CLL         |  |
| 4635                     | 1050 | TAD K4000       | /AC=4000 LINK=0  |
| 4636                     | 7770 | CLA SPA SNA SZL | /TEST COMBINATION (AND)  |
| 4637                     | 7440 | SZA             |  |
| 4640                     | 7402 | HLT             | /CLA SPA SNA SZL FAILED. AC SHOULD<br>/BE 0000, LINK SHOULD EQUAL ZERO |
| /GROUP 2 OPERATE TEST 70 |      |                 |  |
| 4641                     | 7300 | CLA CLL         | /AC=0000 LINK=0  |
| 4642                     | 7770 | CLA SPA SNA SZL | /TEST COMBINATION (AND)  |
| 4643                     | 7440 | SZA             |  |
| 4644                     | 7402 | HLT             | /CLA SPA SNA SZL FAILED. AC AND  |

/LINK SHOULD BE ZERO.

/GROUP 2 OPERATE TEST 71

|      |      |           |                                       |
|------|------|-----------|---------------------------------------|
| 4645 | 7200 | CLA       |                                       |
| 4646 | 1070 | TAD K5252 | /AC=5252                              |
| 4647 | 7604 | CLA OSR   | /TEST COMBINATION                     |
| 4650 | 7040 | CMA       |                                       |
| 4651 | 7440 | SZA       |                                       |
| 4652 | 7402 | HLT       | /CLA OSR FAILED<br>/AC SHOULD BE 0000 |

/GROUP 2 OPERATE TEST 72

|      |      |           |   |
|------|------|-----------|---|
| 4653 | 7200 | CLA       |   |
| 4654 | 1050 | TAD K4000 | /AC=4000                                      |
| 4655 | 7504 | SMA OSR   | /TEST COMBINATION                             |
| 4656 | 7402 | HLT       | /SMA OSR FAILED TO SKIP<br>/AC SHOULD BE 7777 |
| 4657 | 7040 | CMA       |   |
| 4660 | 7440 | SZA       |   |
| 4661 | 7402 | HLT       | /SMA OSR FAILED<br>/AC SHOULD BE 0000         |

/GROUP 2 OPERATE TEST 73

|      |      |         |   |
|------|------|---------|---|
| 4662 | 7200 | CLA     | /AC=0000                                      |
| 4663 | 7444 | SZA OSR | /TEST COMBINATION                             |
| 4664 | 7402 | HLT     | /SZA OSR FAILED TO SKIP<br>/AC SHOULD BE 0000 |
| 4665 | 7040 | CMA     |   |
| 4666 | 7440 | SZA     |   |
| 4667 | 7402 | HLT     | /SZA OSR FAILED.<br>/AC SHOULD BE 0000        |

/GROUP 2 OPERATE TEST 74

|      |      |             |   |
|------|------|-------------|---|
| 4670 | 7320 | CLL CML CLA | /LINK=1                                       |
| 4671 | 7424 | SNL OSR     | /TEST COMBINATION                             |
| 4672 | 7402 | HLT         | /SNL OSR FAILED TO SKIP<br>/AC SHOULD BE 7777 |
| 4673 | 7040 | CMA         |   |
| 4674 | 7440 | SZA         |   |
| 4675 | 7402 | HLT         | /SNL OSR FAILED.<br>/AC SHOULD BE 0000        |

/GROUP 2 OPERATE TEST 75

|      |      |                     |  |
|------|------|---------------------|--|
| 4676 | 7300 | CLA CLL             |  |
| 4677 | 1066 | TAD K3777           | /AC=3777 LINK=0  |
| 4700 | 7764 | CLA SMA SZA SNL OSR | /TEST COMBINATION  |
| 4701 | 7450 | SNA                 |  |
| 4702 | 7402 | HLT                 | /CLA SMA SZA SNL OSR FAILED.<br>/AC SHOULD BE 7777. LINK=0 |
| 4703 | 7040 | CMA                 |  |
| 4704 | 7440 | SZA                 |  |
| 4705 | 7402 | HLT                 | /CLA SMA SZA SNL OSR FAILED<br>/AC SHOULD EQUAL ZERO       |

/GROUP 2 OPERATE TEST 76

|      |      |         |   |
|------|------|---------|---|
| 4706 | 7200 | CLA     | /AC=0000                                    |
| 4707 | 7414 | SKP OSR | /TEST COMBINATION                           |
| 4710 | 7402 | HLT     | /SKP OSR DID NOT SKIP<br>/AC SHOULD BE 7777 |

4711 7040 CMA  
4712 7440 SZA  
4713 7402 HLT  
/SKP OSR FAILED  
/AC SHOUD EQUAL ZERO

/GROUP 2 OPERATE TEST 77  
4714 7200 CLA /AC=0000  
4715 7514 SPA OSR /TEST COMBINATION  
4716 7402 HLT /SPA OSR DID NOT SKIP  
/AC SHOULD EQUAL 7777  
4717 7040 CMA  
4720 7440 SZA  
4721 7402 HLT /SPA OSR FAILED.  
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 78  
4722 7200 CLA  
4723 1040 TAD K0400 /AC=0400  
4724 7454 SNA OSR /TEST COMBINATION  
4725 7402 HLT /SNA OSR DID NOT SKIP  
/AC SHOULD BE 7777

4726 7040 CMA  
4727 7440 SZA  
4730 7402 HLT /SNA OSR FAILED  
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 79  
4731 7300 CLA CLL /LINK=0 AC=0000  
4732 7434 SZL OSR /TEST COMBINATION  
4733 7402 HLT /SZL OSR DID NOT SKIP  
/AC SHOULD BE 7777

4734 7040 CMA  
4735 7440 SZA  
4736 7402 HLT /SZL OSR FAILED  
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 80  
4737 7300 CLA CLL  
4740 1066 TAD K3777 /AC=3777 LINK=0  
4741 7774 CLA SPA SNA SZL OSR /TEST COMBINATION (AND)  
4742 7402 HLT /ABOVE MESS DID NOT SKIP  
/AC SHOULD BE 7777

4743 7040 CMA  
4744 7440 SZA  
4745 7402 HLT /CLA SPA SNA SZL OSR FAILED  
/AC SHOULD BE 0000

/MQ OPERATE TEST 1  
4746 7360 CLA CMA CLL CML /AC=7777 LINK=1  
4747 7601 CLAE /AC=0000 LINK=1  
4750 7430 SZL  
4751 7440 SZA  
4752 7402 HLT /7601 FAILED

/MQ OPERATE TEST 2  
4753 7360 CLA CLL CMA CML /AC=7777 L=1

|      |      |      |                    |
|------|------|------|--------------------|
| 4754 | 7401 | NOPE | /AC=7777 L=1 (NOP) |
| 4755 | 7040 | CMA  |                    |
| 4756 | 7430 | SZL  |                    |
| 4757 | 7440 | SZA  |                    |
| 4760 | 7402 | HLT  | /7401 FAILED       |

/MQ OPERATE TEST 3

|      |      |                 |                       |
|------|------|-----------------|-----------------------|
| 4761 | 7360 | CLA CMA CLL CML | /AC=7777 LINK=1       |
| 4762 | 7421 | MQL             | /AC=0000 LINK=1       |
| 4763 | 7430 | SZL             |                       |
| 4764 | 7440 | SZA             |                       |
| 4765 | 7402 | HLT             | /MQL DID NOT CLEAR AC |

/MQ OPERATE TEST 4

|      |      |         |                                      |
|------|------|---------|--------------------------------------|
| 4766 | 7300 | CLA CLL |                                      |
| 4767 | 7421 | MQL     | /MQ=0000, AC=0000                    |
| 4770 | 7040 | CMA     | /AC=7777                             |
| 4771 | 7501 | MQA     | /AC=7777, MQ=0000                    |
| 4772 | 7040 | CMA     | /AC=0000                             |
| 4773 | 7420 | SNL     |                                      |
| 4774 | 7440 | SZA     |                                      |
| 4775 | 7402 | HLT     | /MQ DID NOT EQUAL 0000 OR MQA FAILED |

/MQ OPERATE TEST 5

|      |      |             |                                      |
|------|------|-------------|--------------------------------------|
| 4776 | 7340 | CLA CMA CLL |                                      |
| 4777 | 7421 | MQL         | /MQ=7777, AC=0000                    |
| 5000 | 7501 | MQA         | /AC=7777, MQ=7777                    |
| 5001 | 7040 | CMA         |                                      |
| 5002 | 7420 | SNL         |                                      |
| 5003 | 7440 | SZA         |                                      |
| 5004 | 7402 | HLT         | /MQ DID NOT EQUAL 7777 OR MQA FAILED |

/MQ OPERATE TEST 6

|      |      |           |                                      |
|------|------|-----------|--------------------------------------|
| 5005 | 7601 | CLAE      | /CLEAR AC                            |
| 5006 | 1070 | TAD K5252 |                                      |
| 5007 | 7421 | MQL       | /MQ=5252, AC=0000                    |
| 5010 | 1071 | TAD K2525 |                                      |
| 5011 | 7501 | MQA       | /AC=7777, MQ=5252                    |
| 5012 | 7040 | CMA       |                                      |
| 5013 | 7440 | SZA       |                                      |
| 5014 | 7402 | HLT       | /MQ DID NOT EQUAL 5252 OR MQA FAILED |

/MQ OPERATE TEST 7

|      |      |                 |   |
|------|------|-----------------|---|
| 5015 | 7360 | CLA CMA CLL CML |   |
| 5016 | 7421 | MQL             | /MQ=7777, AC=0000                             |
| 5017 | 7040 | CMA             | /AC=7777                                      |
| 5020 | 7621 | CAM             | /AC AND MQ.=0000                              |
| 5021 | 7440 | SZA             |   |
| 5022 | 7402 | HLT             | /AC SHOULD EQUAL 0000                         |
| 5023 | 7501 | MQA             | /AC=0000, MQ=0000                             |
| 5024 | 7430 | SZL             |   |
| 5025 | 7440 | SZA             |   |
| 5026 | 7402 | HLT             | /CAM DID NOT CLEAR MQ<br>/OR LINK WAS CLEARED |

```
      /MQ OPERATE TEST 8
5027 7601      CLAE      /CLEAR AC
5030 7421      MQL      /MQ=0000 AC=0000
5031 7040      CMA
5032 7701      ACL      /AC=0000 MQ=0000
5033 7440      SZA
5034 7402      HLT      /ACL FAILED
5035 7501      MQA      /AC=0000 MQ=0000
5036 7440      SZA
5037 7402      HLT      /MQ SHOULD EQUAL 0000
```

```
      /MQ OPERATE TEST 9
5040 7240      CLA CMA
5041 7421      MQL      /MQ=7777 AC=0000
5042 7701      ACL      /AC=7777 MQ=7777
5043 7040      CMA
5044 7440      SZA
5045 7402      HLT      /ACL FAILED
5046 7501      MQA      /AC=7777, MQ=7777
5047 7040      CMA
5050 7440      SZA
5051 7402      HLT      /MQ SHOULD EQUAL 7777
```

```
      /MQ OPERATE TEST 10
5052 7601      CLAE      /CLEAR AC
5053 1070      TAD K5252
5054 7421      MQL      /MQ=5252 AC=0000
5055 1071      TAD K2525
5056 7701      ACL      /AC=5252 MQ=5252
5057 1071      TAD K2525
5060 7040      CMA
5061 7440      SZA
5062 7402      HLT      /ACL FAILED
5063 7501      MQA      /AC=5252 MQ=5252
5064 1071      TAD K2525
5065 7040      CMA
5066 7440      SZA
5067 7402      HLT      /MQ SHOULD EQUAL 5252
```

```
      /MQ OPERATE TEST 11
5070 7601      CLAE      /CLEAR AC
5071 1071      TAD K2525
5072 7421      MQL      /MQ=2525 AC=0000
5073 1070      TAD K5252
5074 7701      ACL      /AC=2525 MQ=2525
5075 1070      TAD K5252
5076 7040      CMA
5077 7440      SZA
5100 7402      HLT      /ACL FAILED
5101 7501      MQA      /AC=2525 MQ=2525
5102 1070      TAD K5252
5103 7040      CMA
5104 7440      SZA
5105 7402      HLT      /MQ SHOULD EQUAL 2525
```

```

/MQ OPERATE TEST 12
5106 7621 CAM /MQ=0000 AC=0000
5107 7040 CMA /AC=7777
5110 7521 SWP /MQ=7777 AC=0000
5111 7440 SZA
5112 7402 HLT /AC SHOULD EQUAL 0000
5113 7701 ACL /AC=7777 MQ=7777
5114 7040 CMA
5115 7440 SZA
5116 7402 HLT /MQ SHOULD EQUAL 7777

```

```

/MQ OPERATE TEST 13
5117 7621 CAM /MQ=0000 AC=0000
5120 7040 CMA
5121 7421 MQL /MQ=7777 AC=0000
5122 7521 SWP /MQ=0000 AC=7777
5123 7040 CMA
5124 7440 SZA
5125 7402 HLT
5126 7701 ACL /AC=0000 MQ=0000
5127 7440 SZA
5130 7402 HLT /MQ SHOULD EQUAL 0000

```

```

/MQ OPERATE TEST 14
5131 7621 CAM /MQ=0000 AC=0000
5132 1070 TAD K5252
5133 7421 MQL /MQ=5252 AC=0000
5134 1071 TAD K2525
5135 7521 SWP /MQ=2525 AC=5252
5136 1071 TAD K2525
5137 7040 CMA
5140 7440 SZA
5141 7402 HLT /SWP FAILED
5142 7701 ACL /AC=2525 MQ=2525
5143 1070 TAD K5252
5144 7040 CMA
5145 7440 SZA
5146 7402 HLT /SWP FAILED MQ SHOULD EQUAL 2525

```

```

/MQ OPERATE TEST 15
5147 7621 CAM /MQ=0000 AC=0000
5150 1071 TAD K2525
5151 7421 MQL /MQ=2525 AC=0000
5152 1070 TAD K5252 /AC=5252
5153 7521 SWP /MQ=5252 AC=2525
5154 1070 TAD K5252
5155 7040 CMA
5156 7440 SZA
5157 7402 HLT /SWP FAILED
5160 7701 ACL /AC=5252 MQ=5252
5161 1071 TAD K2525
5162 7040 CMA
5163 7440 SZA

```

5164 7402 HLT /SWP FAILED MQ SHOULD EQUAL 5252

/MQ OPERATE TEST 16

|      |      |          |                                       |
|------|------|----------|---------------------------------------|
| 5165 | 7621 | CAM      | /MQ=0000 AC=0000                      |
| 5166 | 7040 | CMA      | /AC=7777                              |
| 5167 | 7721 | CLAE SWP | /AC=0000 MQ=0000                      |
| 5170 | 7440 | SZA      |                                       |
| 5171 | 7402 | HLT      | /CLAE SWP FAILED AC SHOULD EQUAL 0000 |
| 5172 | 7701 | ACL      | /AC=0000 MQ=0000                      |
| 5173 | 7440 | SZA      |                                       |
| 5174 | 7402 | HLT      | /CLAE SWP FAILED MQ SHOULD EQUAL 0000 |

/MQ OPERATE TEST 17

|      |      |          |                                       |
|------|------|----------|---------------------------------------|
| 5175 | 7621 | CAM      | /MQ=0000 AC=0000                      |
| 5176 | 7040 | CMA      |                                       |
| 5177 | 7421 | MQL      | /MQ=7777 AC=0000                      |
| 5200 | 7721 | CLAE SWP | /AC=7777 MQ=0000                      |
| 5201 | 7040 | CMA      |                                       |
| 5202 | 7440 | SZA      |                                       |
| 5203 | 7402 | HLT      | /CLAE SWP FAILED                      |
| 5204 | 7701 | ACL      | /AC=0000 MQ=0000                      |
| 5205 | 7440 | SZA      |                                       |
| 5206 | 7402 | HLT      | /CLAE SWP FAILED MQ SHOULD EQUAL 0000 |

/MQ OPERATE TEST 18

|      |      |           |                                   |
|------|------|-----------|-----------------------------------|
| 5207 | 7621 | CAM       | /MQ=0000 AC=0000                  |
| 5210 | 1071 | TAD K2525 |                                   |
| 5211 | 7421 | MQL       | /MQ=2525 MQ=0000                  |
| 5212 | 1070 | TAD K5252 | /AC=5252                          |
| 5213 | 7721 | CLAE SWP  | /AC=2525 MQ=0000                  |
| 5214 | 1070 | TAD K5252 |                                   |
| 5215 | 7040 | CMA       |                                   |
| 5216 | 7440 | SZA       |                                   |
| 5217 | 7402 | HLT       | /CLAE FAILED                      |
| 5220 | 7701 | ACL       | /AC=0000 MQ=0000                  |
| 5221 | 7440 | SZA       |                                   |
| 5222 | 7402 | HLT       | /CLAE FAILED MQ SHOULD EQUAL 0000 |

/AND TEST 1

|      |      |           |                                   |
|------|------|-----------|-----------------------------------|
| 5223 | 7200 | CLA       |                                   |
| 5224 | 0067 | AND K7777 |                                   |
| 5225 | 7440 | SZA       |                                   |
| 5226 | 7402 | HLT       | /AND FAILED AC SHOULD<br>/BE 0000 |

/AND TEST 2

|      |      |           |                                      |
|------|------|-----------|--------------------------------------|
| 5227 | 7240 | CLA CMA   |                                      |
| 5230 | 0020 | AND K0000 |                                      |
| 5231 | 7440 | SZA       |                                      |
| 5232 | 7402 | HLT       | /AND FAILED<br>/AC SHOULD EQUAL 0000 |

/AND TEST 3

|      |      |             |  |
|------|------|-------------|--|
| 5233 | 7520 | CLA CLL CML |  |
|------|------|-------------|--|



|      |      |     |       |          |        |
|------|------|-----|-------|----------|--------|
| 5234 | 1067 | TAD | K7777 | /AC=7777 | LINK=1 |
| 5235 | 0067 | AND | K7777 |          |        |
| 5236 | 7040 | CMA |       |          |        |
| 5237 | 7430 | SZL |       |          |        |
| 5240 | 7440 | SZA |       |          |        |
| 5241 | 7402 | HLT |       |          |        |

/AND FAILED. AC SHOULD BE  
/0000. LINK SHOULD EQUAL ONE

/AND TEST 4

|      |      |     |       |          |        |
|------|------|-----|-------|----------|--------|
| 5242 | 7300 | CLA | CLL   |          |        |
| 5243 | 1071 | TAD | K2525 | /AC=2525 | LINK=0 |
| 5244 | 0070 | AND | K5252 |          |        |
| 5245 | 7420 | SNL |       |          |        |
| 5246 | 7440 | SZA |       |          |        |
| 5247 | 7402 | HLT |       |          |        |

/AND FAILED. AC SHOULD BE  
/0000. LINK SHOULD BE 0

/AND TEST 5

|      |      |     |       |          |        |
|------|------|-----|-------|----------|--------|
| 5250 | 7300 | CLA | CLL   |          |        |
| 5251 | 1070 | TAD | K5252 | /AC=5252 | LINK=0 |
| 5252 | 0071 | AND | K2525 |          |        |
| 5253 | 7420 | SNL |       |          |        |
| 5254 | 7440 | SZA |       |          |        |
| 5255 | 7402 | HLT |       |          |        |

/AND FAILED. AC SHOULD BE  
/0000. LINK SHOULD BE 0

/AND TEST 6

|      |      |     |       |                   |        |
|------|------|-----|-------|-------------------|--------|
| 5256 | 7300 | CLA | CLL   |                   |        |
| 5257 | 1052 | TAD | K7776 | /AC=7776          | LINK=0 |
| 5260 | 0070 | AND | K5252 | /TEST INSTRUCTION |        |
| 5261 | 7041 | CIA |       | /AC=2526          |        |
| 5262 | 1070 | TAD | K5252 | /AC=0000          | LINK=1 |
| 5263 | 7430 | SZL |       |                   |        |
| 5264 | 7440 | SZA |       |                   |        |
| 5265 | 7402 | HLT |       |                   |        |

/AND FAILURE. AC SHOULD BE  
/0000. LINK SHOULD BE ONE

/AND TEST 7

|      |      |     |       |                   |          |
|------|------|-----|-------|-------------------|----------|
| 5266 | 7300 | CLA | CLL   |                   |          |
| 5267 | 1071 | TAD | K2525 | /AC=2525          | LINK=0   |
| 5270 | 0071 | AND | K2525 | /TEST INSTRUCTION |          |
| 5271 | 7041 | CIA |       | /AC=5253          |          |
| 5272 | 1071 | TAD | K2525 | /AC=0000          | LINK = 1 |
| 5273 | 7430 | SZL |       |                   |          |
| 5274 | 7440 | SZA |       |                   |          |
| 5275 | 7402 | HLT |       |                   |          |

/AND FAILED. AC SHOULD BE  
/0000. LINK SHOULD BE ONE.

/CHECK FOR BELL

|      |      |     |         |  |  |
|------|------|-----|---------|--|--|
| 5276 | 7200 | CLA |         |  |  |
| 5277 | 1121 | TAD | BLCNT   |  |  |
| 5300 | 7001 | IAC |         |  |  |
| 5301 | 3121 | DCA | BLCNT   |  |  |
| 5302 | 1121 | TAD | BLCNT   |  |  |
| 5303 | 7640 | SZA | CLA     |  |  |
| 5304 | 5147 | JMP | START+3 |  |  |
| 5305 | 1122 | TAD | BLCNT   |  |  |

5306 3121 DCA BLCNT

5307 1120 /RING BELL TAD BEL  
5310 6046 TLS  
5311 6041 TSF  
5312 5311 JMP .-1  
5313 6042 TCF  
5314 5147 JMP START+3

S





|       |      |       |      |
|-------|------|-------|------|
| ACL   | 7701 | K600  | 0041 |
| BEGIN | 0200 | K6000 | 0072 |
| BEL   | 0120 | K6777 | 0064 |
| BLCNT | 0121 | K7000 | 0073 |
| BLCON | 0122 | K7007 | 0117 |
| BSW   | 7002 | K7177 | 0060 |
| CAM   | 7621 | K7377 | 0063 |
| CLAE  | 7601 | K7400 | 0074 |
| CLL1  | 0446 | K7577 | 0062 |
| CLL11 | 0452 | K7600 | 0075 |
| CMLT1 | 0456 | K7677 | 0061 |
| HALT  | 0006 | K7700 | 0113 |
| K0000 | 0020 | K7717 | 0051 |
| K0001 | 0021 | K7737 | 0057 |
| K0002 | 0022 | K7740 | 0076 |
| K0004 | 0024 | K7757 | 0056 |
| K0007 | 0102 | K7760 | 0077 |
| K0010 | 0026 | K7767 | 0055 |
| K0017 | 0104 | K7770 | 0100 |
| K0020 | 0030 | K7773 | 0054 |
| K0037 | 0105 | K7774 | 0101 |
| K0040 | 0032 | K7775 | 0053 |
| K0067 | 0103 | K7776 | 0052 |
| K0077 | 0106 | K7777 | 0067 |
| K0100 | 0034 | MQA   | 7501 |
| K0177 | 0107 | MQL   | 7421 |
| K0200 | 0036 | NOOP  | 0007 |
| K0377 | 0110 | NOPE  | 7401 |
| K0400 | 0040 | START | 0144 |
| K0770 | 0116 | SWP   | 7521 |
| K0777 | 0111 |       |      |
| K1000 | 0042 |       |      |
| K1234 | 0043 |       |      |
| K14   | 0027 |       |      |
| K140  | 0035 |       |      |
| K1400 | 0044 |       |      |
| K1777 | 0112 |       |      |
| K2000 | 0045 |       |      |
| K2525 | 0071 |       |      |
| K2552 | 0115 |       |      |
| K3    | 0023 |       |      |
| K30   | 0031 |       |      |
| K300  | 0037 |       |      |
| K3000 | 0046 |       |      |
| K3312 | 0047 |       |      |
| K3777 | 0066 |       |      |
| K4000 | 0050 |       |      |
| K5225 | 0114 |       |      |
| K5252 | 0070 |       |      |
| K5777 | 0065 |       |      |
| K6    | 0025 |       |      |
| K60   | 0033 |       |      |

ERRORS DETECTED: 0

LINKS GENERATED: 2

RUN-TIME: 30 SECONDS

2K CORE USED