

IDENTIFICATION

|               |                            |
|---------------|----------------------------|
| PRODUCT CODE: | MAINDEC-8E-0888            |
| PRODUCT NAME: | PDP-8/E INSTRUCTION TEST 2 |
| DATE CREATED: | JUNE 18, 1971              |
| MAINTAINER:   | DIAGNOSTIC GROUP           |
| AUTHOR:       | ED FORTMILLER              |

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1. ABSTRACT

THIS PROGRAM IS AN EXTENSIVE TEST OF AUTOINDEXING, INDIRECT ADDRESSING, AND THE DCA INSTRUCTION FOR THE PDP-8/E. IT ALSO OFFERS MINIMAL TESTING FOR INTERRUPT AND THE AND, TAD, ISZ, JMS, JMP, AND PROCESSOR IOT INSTRUCTIONS.

2. REQUIREMENTS

2.1 EQUIPMENT

PDP-8/E EQUIPPED WITH TELETYPE

2.2 STORAGE

THE PROGRAM OCCUPIES MEMORY LOCATIONS 0000-4416. THE BINARY LOADER MUST BE STORED IN THE LAST MEMORY PAGE.

2.3 PRELIMINARY PROGRAMS

IT IS ASSUMED THAT MAINDEC-8E-D0A(N) HAS BEEN RUN SUCCESSFULLY.

3. LOADING PROCEDURE

3.1 METHOD

THE STANDARD BINARY LOADER IS USED.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS (NONE)

4.2 STARTING ADDRESS

200

4.3 OPERATOR ACTION

- A. SET THE SWITCH REGISTER TO 200. PRESS LOAD ADDRESS.
- B. PUSH CLEAR AND THEN CONTINUE. A PROGRAMMED HALT OCCURS WHEN 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 PRECEDING THE HLT WITH A  
JMP TO THE BEGINNING OF THE TEST.

7. RESTRICTIONS

ALL PERIPHERAL DEVICES MUST BE FUNCTIONING TO A DEGREE THAT  
THE PROCESSOR CLEAR BUTTON WILL CLEAR THEIR FLAGS AND NO  
FLAGS WILL TURN ON UNLESS AUTHORIZED.

8. MISCELLANEOUS

8.1 EXECUTION TIME

THE TELETYPE BELL RINGS AT THE END OF 1550 PROGRAM PASSES  
WHICH IS APPROXIMATELY EVERY 5 SECONDS.

9. PROGRAM DESCRIPTION

THE PROGRAM IS A SERIES OF MANY SMALL INDIVIDUAL TEST. EACH TEST IS PERFORMED USING PREVIOUSLY CHECK FUNCTINS TO VALIDATE THE TEST, WHEN AN ERROR IS ENCOUNTERED, THE OPERATOR SHOULD INSERT A JUMP INSTRUCTION INTO MEMORY TO CAUSE THE PROGRAM TO LOOP ON THE FAILING TEST, THE PROBLEM CAN THEN BE FOUND BY USING THE OSCILLOSCOPE,

THE INDIVIDUAL PROGRAM TESTS ARE GROUPED INTO THE FOLLOWING CLASSIFICATIONS AND ARE PERFORMED IN THE ORDER SHOWN:

1. DCA TEST
2. INDIRECT ADDRESSING TEST

- A. USING TAD
  - B. USING AND

3. AUTOINDEX TEST

- A. USING AND
  - B. USING DCA
  - C. USING TAD

4. PROCESSOR IOT TEST

- A. USING CAF
  - B. USING SRQ
  - C. USING SPF
  - D. USING KIE
  - E. USING SKON
  - F. USING ION
  - G. USING IOF
  - H. USING GTF
  - I. USING RTF

5. INTERRUPT TEST

- A. FOLLOWING NOP
  - B. FOLLOWING TAD
  - C. FOLLOWING AND
  - D. FOLLOWING DCA
  - E. FOLLOWING ISZ
  - F. FOLLOWING JMP
  - G. FOLLOWING JMS
  - H. FOLLOWING CLA
  - I. FOLLOWING TSF
  - J. FOLLOWING SKP
  - K. FOLLOWING JMP I

6. CHECK FOR UNAUTHORIZED AUTOINDEXING

THE TELETYPE BELL RINGS APPROXIMATELY EVERY 5 SECONDS TO ASSURE THE OPERATOR THAT THE PROGRAM IS FUNCTIONING PROPERLY.

10. LISTING

/PDP-8/E INSTRUCTION TEST 2 MAINDEC-8E-D0BB  
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|      |           |   |
|------|-----------|---|
| 6000 | SKON=6000 | /SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF              |
| 6003 | SRD=6003  | /SKIP IF INTERRUPT REQUEST                                |
| 6004 | GTF=6004  | /GET INTERRUPT FLAGS                                      |
| 6005 | RTF=6005  | /RESTORE INTERRUPT FLAGS AND TURN INTERRUPT ON            |
| 6007 | CAF=6007  | /CLEAR ALL FLAGS, AC, LINK, AND ENABLE TTY INTERRUPT F.F. |
| 6040 | SPF=6040  | /SET PRINTER FLAG   |
| 6035 | KIE=6035  | /ENABLE TTY INTERRUPT F.F. WHEN AC 11 EQUALS A 1          |
| 7002 | BSW=7002  | /SWAP BYTES IN AC   |

|      |      |       |        |
|------|------|-------|--------|
| 0000 | 0000 | *0    |        |
| 0000 | 0000 | 0     | /LOC 0 |
| 0001 | 0001 | JMP 1 | /LOC 1 |
| 0002 | 0002 | 2     | /LOC 2 |
| 0003 | 0003 | 3     | /LOC 3 |

|      |      |    |                          |
|------|------|----|--------------------------|
| 0007 | 0007 | *7 |                          |
| 0007 | 0000 | 0  | /CONSTANTS AND VARIABLES |

|      |      |        |      |
|------|------|--------|------|
| 0020 | 0020 | *20    |      |
| 0020 | 7777 | K7777, | 7777 |
| 0021 | 3777 | K3777, | 3777 |
| 0022 | 5777 | K5777, | 5777 |
| 0023 | 6777 | K6777, | 6777 |
| 0024 | 7377 | K7377, | 7377 |
| 0025 | 7577 | K7577, | 7577 |
| 0026 | 7677 | K7677, | 7677 |
| 0027 | 7737 | K7737, | 7737 |
| 0030 | 0000 | 0      |      |
| 0031 | 7757 | K7757, | 7757 |
| 0032 | 7767 | K7767, | 7767 |
| 0033 | 7773 | K7773, | 7773 |
| 0034 | 7775 | K7775, | 7775 |
| 0035 | 7776 | K7776, | 7776 |
| 0036 | 0000 | K0,    | 0    |
| 0037 | 1777 | K1777, | 1777 |
| 0040 | 0777 | K0777, | 0777 |
| 0041 | 0377 | K0377, | 0377 |
| 0042 | 0177 | K0177, | 0177 |
| 0043 | 0077 | K0077, | 0077 |
| 0044 | 0037 | K0037, | 0037 |
| 0045 | 0017 | K0017, | 0017 |
| 0046 | 0007 | K0007, | 0007 |
| 0047 | 0003 | K0003, | 0003 |
| 0050 | 0000 | 0      |      |
| 0051 | 0001 | K0001, | 0001 |
| 0052 | 4400 | K4400, | 4400 |
| 0053 | 4577 | K4577, | 4577 |
| 0054 | 2525 | K2525, | 2525 |

|      |      |        |      |
|------|------|--------|------|
| 0055 | 6666 | K6666, | 6666 |
| 0056 | 4444 | K4444, | 4444 |
| 0057 | 7070 | K7070, | 7070 |
| 0060 | 0707 | K0707, | 0707 |
| 0061 | 5252 | K5252, | 5252 |
| 0062 | 1111 | K1111, | 1111 |
| 0063 | 5555 | K5555, | 5555 |
| 0064 | 5200 | K5200, | 5200 |
| 0065 | 0004 | K4,    | 4    |

|      |      |      |   |
|------|------|------|---|
| 0110 | 0110 | *110 | 0 |
|------|------|------|---|

|      |      |
|------|------|
| 0172 | *172 |
|------|------|

|      |      |        |      |          |
|------|------|--------|------|----------|
| 0172 | 0176 | K176,  | 176  | /LOC 172 |
| 0173 | 0172 | K172,  | 172  | /173     |
| 0174 | 0173 | K173,  | 173  | /174     |
| 0175 | 0174 | K174,  | 174  | /175     |
| 0176 | 0175 | K175,  | 175  | /176     |
| 0177 | 1234 | K1234, | 1234 | /177     |

|      |      |
|------|------|
| 0200 | *200 |
|------|------|

|      |      |             |           |
|------|------|-------------|-----------|
| 0200 | 7200 | /DCA TEST 1 | CLA       |
| 0201 | 7410 |             | SKP       |
| 0202 | 0000 | TP0,        | 0         |
| 0203 | 1052 |             | TAD K4400 |
| 0204 | 3377 |             | DCA TP177 |
| 0205 | 7440 |             | SEA       |
| 0206 | 7402 |             | HLT       |
| 0207 | 7410 |             | SKP       |
| 0210 | 0000 |             | 0         |
| 0211 | 1052 |             | TAD K4400 |
| 0212 | 7041 |             | CIA       |
| 0213 | 1377 |             | TAD TP177 |
| 0214 | 7440 |             | SEA       |
| 0215 | 7402 |             | HLT       |

/DCA DID NOT CLEAR AC

/AC=-(4400)

/DCA FAILED  
/AC SHOULD EQUAL ZERO

/DCA TEST 2

|      |      |           |
|------|------|-----------|
| 0216 | 7200 | CLA       |
| 0217 | 1053 | TAD K4577 |
| 0220 | 3202 | DCA TP0   |
| 0221 | 7440 | SEA       |
| 0222 | 7402 | HLT       |
| 0223 | 1053 | TAD K4577 |
| 0224 | 7041 | CIA       |
| 0225 | 1202 | TAD TP0   |
| 0226 | 7440 | SEA       |
| 0227 | 7402 | HLT       |

/DCA DID NOT CLEAR AC

/DCA FAILED

/AC SHOULD EQUAL ZERO

## /DCA TEST 3

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0230 | 7200 | CLA |                                   |
| 0231 | 1020 | TAD | K7777                             |
| 0232 | 3202 | DCA | TP0                               |
| 0233 | 7440 | SZA |                                   |
| 0234 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0235 | 1202 | TAD | TP0                               |
| 0236 | 7040 | CMA |                                   |
| 0237 | 7440 | SZA |                                   |
| 0240 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |

## /DCA TEST 4

|      |      |     |                       |
|------|------|-----|-----------------------|
| 0241 | 7200 | CLA |                       |
| 0242 | 1036 | TAD | K0                    |
| 0243 | 3202 | DCA | TP0                   |
| 0244 | 7440 | SZA | /DCA DID NOT CLEAR AC |
| 0245 | 7402 | HLT |                       |
| 0246 | 1202 | TAD | TP0                   |
| 0247 | 7440 | SZA | /DCA FAILED           |
| 0250 | 7402 | HLT | /AC SHOULD BE ZERO    |

## /DCA TEST 5

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0251 | 7200 | CLA |                                   |
| 0252 | 1054 | TAD | K2525                             |
| 0253 | 3202 | DCA | TP0                               |
| 0254 | 7440 | SZA |                                   |
| 0255 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0256 | 1054 | TAD | K2525                             |
| 0257 | 7041 | CIA |                                   |
| 0260 | 1202 | TAD | TP0                               |
| 0261 | 7440 | SZA |                                   |
| 0262 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |

## /DCA TEST 6

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0263 | 7200 | CLA |                                   |
| 0264 | 1055 | TAD | K6666                             |
| 0265 | 3202 | DCA | TP0                               |
| 0266 | 7440 | SZA |                                   |
| 0267 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0270 | 1055 | TAD | K6666                             |
| 0271 | 7041 | CIA |                                   |
| 0272 | 1202 | TAD | TP0                               |
| 0273 | 7440 | SZA |                                   |
| 0274 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |

/P(

/DCA TEST 7

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0275 | 7200 | CLA |                                   |
| 0276 | 1056 | TAD | K4444                             |
| 0277 | 3377 | DCA | TP177                             |
| 0300 | 7440 | SZA |                                   |
| 0301 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0302 | 1056 | TAD | K4444                             |
| 0303 | 7041 | CIA |                                   |
| 0304 | 1377 | TAD | TP177                             |
| 0305 | 7440 | SZA |                                   |
| 0306 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |

/DCA TEST 8

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0307 | 7200 | CLA |                                   |
| 0310 | 1057 | TAD | K7070                             |
| 0311 | 3377 | DCA | TP177                             |
| 0312 | 7440 | SZA |                                   |
| 0313 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0314 | 1057 | TAD | K7070                             |
| 0315 | 7041 | CIA |                                   |
| 0316 | 1377 | TAD | TP177                             |
| 0317 | 7440 | SZA |                                   |
| 0320 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |

/DCA TEST 9

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0321 | 7200 | CLA |                                   |
| 0322 | 1060 | TAD | K0707                             |
| 0323 | 3000 | DCA | 0                                 |
| 0324 | 7440 | SZA |                                   |
| 0325 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0326 | 1060 | TAD | K0707                             |
| 0327 | 7041 | CIA |                                   |
| 0330 | 1000 | TAD | 0                                 |
| 0331 | 7440 | SZA |                                   |
| 0332 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |

/DCA TEST 10

|      |      |     |                                   |
|------|------|-----|-----------------------------------|
| 0333 | 7200 | CLA |                                   |
| 0334 | 1061 | TAD | K5252                             |
| 0335 | 3000 | DCA | 0                                 |
| 0336 | 7440 | SZA |                                   |
| 0337 | 7402 | HLT | /DCA DID NOT CLEAR AC             |
| 0340 | 1061 | TAD | K5252                             |
| 0341 | 7041 | CIA |                                   |
| 0342 | 1000 | TAD | 0                                 |
| 0343 | 7440 | SZA |                                   |
| 0344 | 7402 | HLT | /DCA FAILED<br>/AC SHOULD BE ZERO |



## /DCA TEST 11

|      |      |           |                                   |
|------|------|-----------|-----------------------------------|
| 0345 | 7200 | CLA       |                                   |
| 0346 | 1062 | TAD K1111 |                                   |
| 0347 | 3000 | DCA 0     |                                   |
| 0350 | 7440 | SZA       |                                   |
| 0351 | 7402 | HLT       | /DCA DID NOT CLEAR AC             |
| 0352 | 1062 | TAD K1111 |                                   |
| 0353 | 7041 | CIA       |                                   |
| 0354 | 1000 | TAD 0     |                                   |
| 0355 | 7440 | SZA       |                                   |
| 0356 | 7402 | HLT       | /DCA FAILED<br>/AC SHOULD BE ZERO |

## /DCA TEST 12

|      |      |           |                                   |
|------|------|-----------|-----------------------------------|
| 0357 | 7200 | CLA       |                                   |
| 0360 | 1063 | TAD K5555 |                                   |
| 0361 | 3000 | DCA 0     |                                   |
| 0362 | 7440 | SZA       |                                   |
| 0363 | 7402 | HLT       | /DCA DID NOT CLEAR AC             |
| 0364 | 1063 | TAD K5555 |                                   |
| 0365 | 7041 | CIA       |                                   |
| 0366 | 1000 | TAD 0     |                                   |
| 0367 | 7440 | SZA       |                                   |
| 0370 | 7402 | HLT       | /DCA FAILED<br>/AC SHOULD BE ZERO |

|      |      |          |  |
|------|------|----------|--|
| 0371 | 7000 | NOP      |  |
| 0372 | 7000 | NOP      |  |
| 0373 | 7000 | NOP      |  |
| 0374 | 7000 | NOP      |  |
| 0375 | 7000 | NOP      |  |
| 0376 | 7410 | SKP      |  |
| 0377 | 0000 | TP177, 0 |  |

0400 \*400

## /INDIRECT ADDRESSING TEST 1

|      |      |             |  |
|------|------|-------------|--|
| 0400 | 7200 | CLA         |  |
| 0401 | 1442 | TAD I K0177 | /OPERAND=1234                              |
| 0402 | 7041 | CIA         |  |
| 0403 | 1177 | TAD K1234   |  |
| 0404 | 7440 | SZA         |  |
| 0405 | 7402 | HLT         | /TAD INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 2

|      |      |     |  |
|------|------|-----|--|
| 0406 | 7200 | CLA |  |
| 0407 | 7410 | SKP |  |
| 0410 | 0000 | 0   |  |

|      |      |             |  |
|------|------|-------------|--|
| 0411 | 1020 | TAD K7777   |  |
| 0412 | 0442 | AND I K0177 | /OPERAND=1234                              |
| 0413 | 7041 | CIA         |  |
| 0414 | 1177 | TAD K1234   |  |
| 0415 | 7440 | SZA         |  |
| 0416 | 7402 | HLT         | /AND INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 3

|      |      |           |   |
|------|------|-----------|---|
| 0417 | 7200 | CLA       |   |
| 0420 | 1020 | TAD K7777 |   |
| 0421 | 3000 | DCA 0     |   |
| 0422 | 2436 | ISZ I K0  |   |
| 0423 | 7402 | HLT       | /ISZ FAILED. NO SKIP                    |
| 0424 | 1000 | TAD 0     |   |
| 0425 | 7440 | SZA       |   |
| 0426 | 7402 | HLT       | /ISZ INDIRECT FAILED<br>/AC SHOULD BE 0 |

## /INDIRECT ADDRESSING TEST 4

|      |      |            |  |
|------|------|------------|--|
| 0427 | 7200 | CLA        |  |
| 0430 | 1572 | TAD I K176 | /OPERAND=175                               |
| 0431 | 7041 | CIA        |  |
| 0432 | 1176 | TAD K175   |  |
| 0433 | 7440 | SZA        |  |
| 0434 | 7402 | HLT        | /TAD INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 5

|      |      |            |                      |
|------|------|------------|----------------------|
| 0435 | 7200 | CLA        |                      |
| 0436 | 1020 | TAD K7777  |                      |
| 0437 | 0572 | AND I K176 | /OPERAND=175         |
| 0440 | 7041 | CIA        |                      |
| 0441 | 1176 | TAD K175   |                      |
| 0442 | 7440 | SZA        | /AND INDIRECT FAILED |
| 0443 | 7402 | HLT        | /AC SHOULD BE ZERO   |

## /INDIRECT ADDRESSING TEST 6

|      |      |          |                        |
|------|------|----------|------------------------|
| 0444 | 7200 | CLA      |                        |
| 0445 | 1172 | TAD K176 |                        |
| 0446 | 3000 | DCA 0    |                        |
| 0447 | 2436 | ISZ I K0 |                        |
| 0450 | 7410 | SKP      |                        |
| 0451 | 7402 | HLT      | /ISZ SKIPPED ILLEGALLY |
| 0452 | 1000 | TAD 0    |                        |
| 0453 | 7041 | CIA      |                        |
| 0454 | 1172 | TAD K176 |                        |
| 0455 | 7040 | CMA      |                        |
| 0456 | 7440 | SZA      |                        |
| 0457 | 7402 | HLT      | /DCA INDIRECT FAILED   |

/AC SHOULD BE ZERO

## /INDIRECT ADDRESSING TEST 7

|      |      |            |  |
|------|------|------------|--|
| 0460 | 7200 | CLA        |  |
| 0461 | 1573 | TAD I K172 | /OPERAND=176                               |
| 0462 | 7041 | CIA        |  |
| 0463 | 1172 | TAD K176   |  |
| 0464 | 7440 | SZA        |  |
| 0465 | 7402 | HLT        | /TAD INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 8

|      |      |            |  |
|------|------|------------|--|
| 0466 | 7200 | CLA        |  |
| 0467 | 1020 | TAD K7777  |  |
| 0470 | 0573 | AND I K172 | /OPERAND=176                               |
| 0471 | 7041 | CIA        |  |
| 0472 | 1172 | TAD K176   |  |
| 0473 | 7440 | SZA        |  |
| 0474 | 7402 | HLT        | /AND INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 9

|      |      |          |  |
|------|------|----------|--|
| 0475 | 7200 | CLA      |  |
| 0476 | 1173 | TAD K172 |  |
| 0477 | 3000 | DCA 0    |  |
| 0500 | 2436 | ISE I K0 |  |
| 0501 | 7410 | SKP      |  |
| 0502 | 7402 | HLT      | /ISE SKIPPED ILLEGALLY                     |
| 0503 | 1000 | TAD 0    |  |
| 0504 | 7041 | CIA      |  |
| 0505 | 1173 | TAD K172 |  |
| 0506 | 7040 | CMA      |  |
| 0507 | 7440 | SZA      |  |
| 0510 | 7402 | HLT      | /DCA INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 10

|      |      |            |  |
|------|------|------------|--|
| 0511 | 7200 | CLA        |  |
| 0512 | 1574 | TAD I K173 | /OPERAND=172                               |
| 0513 | 7041 | CIA        |  |
| 0514 | 1173 | TAD K172   |  |
| 0515 | 7440 | SZA        |  |
| 0516 | 7402 | HLT        | /TAD INDIRECT FAILED<br>/AC SHOULD BE ZERO |

## /INDIRECT ADDRESSING TEST 11

|      |      |            |              |
|------|------|------------|--------------|
| 0517 | 7200 | CLA        |              |
| 0520 | 1020 | TAD K7777  |              |
| 0521 | 0574 | AND I K173 | /OPERAND=172 |
| 0522 | 7041 | CIA        |              |

0523 1173 TAD K172  
0524 7440 SZA /AND INDIRECT FAILED  
0525 7402 HLT /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 12

0526 7200 CLA  
0527 1174 TAD K173  
0530 3000 DCA 0  
0531 2436 ISE I K0  
0532 7410 SKP  
0533 7402 HLT /ISE SKIPPED ILLEGALLY  
0534 1000 TAD 0  
0535 7041 CIA  
0536 1174 TAD K173  
0537 7040 CMA  
0540 7440 SEA  
0541 7402 HLT /DCA INDIRECT FAILED  
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 13

0542 7200 CLA  
0543 1975 TAD I K174 /OPERAND=173  
0544 7041 CIA  
0545 1174 TAD K173  
0546 7440 SEA  
0547 7402 HLT /TAD INDIRECT FAILED  
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 14

0550 7200 CLA  
0551 1020 TAD K7777  
0552 0575 AND I K174 /OPERAND=173  
0553 7041 CIA  
0554 1174 TAD K173  
0555 7440 SEA /AND INDIRECT FAILED  
0556 7402 HLT /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 15

0557 7200 CLA  
0560 1175 TAD K174  
0561 3000 DCA 0  
0562 2436 ISE I K0  
0563 7410 SKP  
0564 7402 HLT /ISE SKIPPED ILLEGALLY  
0565 1000 TAD 0  
0566 7041 CIA  
0567 1175 TAD K174  
0570 7040 CMA  
0571 7440 SEA  
0572 7402 HLT /DCA INDIRECT FAILED

/AC SHOULD BE ZERO

|      |      |     |     |
|------|------|-----|-----|
| 0573 | 5377 | JMP | .*4 |
| 0574 | 7000 | NOP |     |
| 0575 | 7000 | NOP |     |
| 0576 | 7000 | NOP |     |
| 0577 | 7000 | NOP |     |

0600

\*600

/INDIRECT ADDRESSING TEST 16

|      |      |     |        |  |
|------|------|-----|--------|--|
| 0600 | 7200 | CLA |        |  |
| 0601 | 1576 | TAD | I K175 | /OPERAND=174                               |
| 0602 | 7041 | CIA |        |  |
| 0603 | 1175 | TAD | K174   |  |
| 0604 | 7440 | SEA |        |  |
| 0605 | 7402 | HLT |        | /TAD INDIRECT FAILED<br>/AC SHOULD BE ZERO |

/AUTO INDEX TEST 1

|      |      |     |       |                         |
|------|------|-----|-------|-------------------------|
| 0606 | 7200 | CLA |       |                         |
| 0607 | 1036 | TAD | K0    | /CONSTANT TO BE INDEXED |
| 0610 | 3010 | DCA | 10    |                         |
| 0611 | 0410 | AND | I 10  | /DO AUTO INDEX          |
| 0612 | 1010 | TAD | 10    |                         |
| 0613 | 1035 | TAD | K7776 | /AC SHOULD EQUAL 7777   |
| 0614 | 7040 | CMA |       |                         |
| 0615 | 7440 | SEA |       | /AC SHOULD BE ZERO      |
| 0616 | 7402 | HLT |       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 2

|      |      |     |       |                         |
|------|------|-----|-------|-------------------------|
| 0617 | 7200 | CLA |       |                         |
| 0620 | 1035 | TAD | K7776 | /CONSTANT TO BE INDEXED |
| 0621 | 3010 | DCA | 10    |                         |
| 0622 | 0410 | AND | I 10  | /DO AUTO INDEX          |
| 0623 | 1010 | TAD | 10    |                         |
| 0624 | 1036 | TAD | K0    | /AC SHOULD EQUAL 7777   |
| 0625 | 7040 | CMA |       |                         |
| 0626 | 7440 | SEA |       | /AC SHOULD BE ZERO      |
| 0627 | 7402 | HLT |       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 3

|      |      |     |       |                         |
|------|------|-----|-------|-------------------------|
| 0630 | 7200 | CLA |       |                         |
| 0631 | 1034 | TAD | K7775 | /CONSTANT TO BE INDEXED |
| 0632 | 3010 | DCA | 10    |                         |
| 0633 | 3410 | DCA | I 10  | /DO AUTO INDEX          |
| 0634 | 1010 | TAD | 10    |                         |
| 0635 | 1051 | TAD | K0001 | /AC SHOULD EQUAL 7777   |
| 0636 | 7040 | CMA |       |                         |
| 0637 | 7440 | SEA |       | /AC SHOULD BE ZERO      |
| 0640 | 7402 | HLT |       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 4

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0641 | 7200 | CLA       |                         |
| 0642 | 1033 | TAD K7773 | /CONSTANT TO BE INDEXED |
| 0643 | 3010 | DCA 10    |                         |
| 0644 | 1410 | TAD I 10  | /DO AUTO INDEX          |
| 0645 | 7200 | CLA       |                         |
| 0646 | 1010 | TAD 10    |                         |
| 0647 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777   |
| 0650 | 7040 | CMA       |                         |
| 0651 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0652 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 5

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0653 | 7200 | CLA       |                         |
| 0654 | 1032 | TAD K7767 | /CONSTANT TO BE INDEXED |
| 0655 | 3010 | DCA 10    |                         |
| 0656 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0657 | 1010 | TAD 10    |                         |
| 0660 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777   |
| 0661 | 7040 | CMA       |                         |
| 0662 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0663 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 6

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0664 | 7200 | CLA       |                         |
| 0665 | 1031 | TAD K7757 | /CONSTANT TO BE INDEXED |
| 0666 | 3010 | DCA 10    |                         |
| 0667 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0670 | 1010 | TAD 10    |                         |
| 0671 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777   |
| 0672 | 7040 | CMA       |                         |
| 0673 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0674 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 7

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0675 | 7200 | CLA       |                         |
| 0676 | 1027 | TAD K7737 | /CONSTANT TO BE INDEXED |
| 0677 | 3010 | DCA 10    |                         |
| 0700 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0701 | 1010 | TAD 10    |                         |
| 0702 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777   |
| 0703 | 7040 | CMA       |                         |
| 0704 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0705 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 8

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0706 | 7200 | CLA       |                         |
| 0707 | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 0710 | 3010 | DCA 10    |                         |
| 0711 | 0410 | AND I 10  | /DO AUTO INDEX          |

|      |      |           |                       |
|------|------|-----------|-----------------------|
| 0712 | 1010 | TAD 10    |                       |
| 0713 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777 |
| 0714 | 7040 | CMA       |                       |
| 0715 | 7440 | SEA       | /AC SHOULD BE ZERO    |
| 0716 | 7402 | HLT       | /AUTO INDEX ERROR     |

## /AUTO INDEX TEST 9

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0717 | 7200 | CLA       |                         |
| 0720 | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 0721 | 3010 | DCA 10    |                         |
| 0722 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0723 | 1010 | TAD 10    |                         |
| 0724 | 1042 | TAD K0177 | /AC SHOULD EQUAL 7777   |
| 0725 | 7040 | CMA       |                         |
| 0726 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0727 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 10

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0730 | 7200 | CLA       |                         |
| 0731 | 1024 | TAD K7377 | /CONSTANT TO BE INDEXED |
| 0732 | 3010 | DCA 10    |                         |
| 0733 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0734 | 1010 | TAD 10    |                         |
| 0735 | 1041 | TAD K0377 | /AC SHOULD EQUAL 7777   |
| 0736 | 7040 | CMA       |                         |
| 0737 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0740 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 11

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0741 | 7200 | CLA       |                         |
| 0742 | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 0743 | 3010 | DCA 10    |                         |
| 0744 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0745 | 1010 | TAD 10    |                         |
| 0746 | 1040 | TAD K0777 | /AC SHOULD EQUAL 7777   |
| 0747 | 7040 | CMA       |                         |
| 0750 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0751 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 12

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0752 | 7200 | CLA       |                         |
| 0753 | 1022 | TAD K5777 | /CONSTANT TO BE INDEXED |
| 0754 | 3010 | DCA 10    |                         |
| 0755 | 2410 | ISE I 10  | /DO AUTO INDEX          |
| 0756 | 7000 | NOP       |                         |
| 0757 | 1010 | TAD 10    |                         |
| 0760 | 1037 | TAD K1777 | /AC SHOULD EQUAL 7777   |
| 0761 | 7040 | CMA       |                         |
| 0762 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0763 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 13

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 0764 | 7200 | CLA       |                         |
| 0765 | 1021 | TAD K3777 | /CONSTANT TO BE INDEXED |
| 0766 | 3010 | DCA 10    |                         |
| 0767 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 0770 | 1010 | TAD 10    |                         |
| 0771 | 1021 | TAD K3777 | /AC SHOULD EQUAL 7777   |
| 0772 | 7040 | CMA       |                         |
| 0773 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 0774 | 7402 | HLT       | /AUTO INDEX ERROR       |
| 0775 | 7000 | NOP       |                         |
| 0776 | 7000 | NOP       |                         |
| 0777 | 7000 | NOP       |                         |

1000      \*1000

/AUTO INDEX TEST 14

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1000 | 7200 | CLA       |                         |
| 1001 | 1020 | TAD K7777 | /CONSTANT TO BE INDEXED |
| 1002 | 3010 | DCA 10    |                         |
| 1003 | 0410 | AND I 10  | /DO AUTO INDEX          |
| 1004 | 1010 | TAD 10    |                         |
| 1005 | 1020 | TAD K7777 | /AC SHOULD EQUAL 7777   |
| 1006 | 7040 | CMA       |                         |
| 1007 | 7410 | SKP       |                         |
| 1010 | 0000 | 0         |                         |
| 1011 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1012 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 15

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1013 | 7200 | CLA       |                         |
| 1014 | 1036 | TAD K0    | /CONSTANT TO BE INDEXED |
| 1015 | 3011 | DCA 11    |                         |
| 1016 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1017 | 1011 | TAD 11    |                         |
| 1020 | 1035 | TAD K7776 | /AC SHOULD EQUAL 7777   |
| 1021 | 7040 | CMA       |                         |
| 1022 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1023 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 16

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1024 | 7200 | CLA       |                         |
| 1025 | 1035 | TAD K7776 | /CONSTANT TO BE INDEXED |
| 1026 | 3011 | DCA 11    |                         |
| 1027 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1030 | 1011 | TAD 11    |                         |
| 1031 | 1036 | TAD K0    | /AC SHOULD EQUAL 7777   |
| 1032 | 7040 | CMA       |                         |



|      |      |     |                    |
|------|------|-----|--------------------|
| 1033 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1034 | 7402 | HLT | /AUTO INDEX ERROR  |

## /AUTO INDEX TEST 17

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1035 | 7200 | CLA       |                         |
| 1036 | 1034 | TAD K7775 | /CONSTANT TO BE INDEXED |
| 1037 | 3011 | DCA 11    |                         |
| 1040 | 3411 | DCA I 11  | /DO AUTO INDEX          |
| 1041 | 1011 | TAD 11    |                         |
| 1042 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777   |
| 1043 | 7040 | CMA       |                         |
| 1044 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1045 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 18

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1046 | 7200 | CLA       |                         |
| 1047 | 1033 | TAD K7773 | /CONSTANT TO BE INDEXED |
| 1050 | 3011 | DCA 11    |                         |
| 1051 | 1411 | TAD I 11  | /DO AUTO INDEX          |
| 1052 | 7200 | CLA       |                         |
| 1053 | 1011 | TAD 11    |                         |
| 1054 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777   |
| 1055 | 7040 | CMA       |                         |
| 1056 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1057 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 19

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1060 | 7200 | CLA       |                         |
| 1061 | 1032 | TAD K7767 | /CONSTANT TO BE INDEXED |
| 1062 | 3011 | DCA 11    |                         |
| 1063 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1064 | 1011 | TAD 11    |                         |
| 1065 | 1046 | TAD K0007 |                         |
| 1066 | 7040 | CMA       |                         |
| 1067 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1070 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 20

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1071 | 7200 | CLA       |                         |
| 1072 | 1031 | TAD K7757 | /CONSTANT TO BE INDEXED |
| 1073 | 3011 | DCA 11    |                         |
| 1074 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1075 | 1011 | TAD 11    |                         |
| 1076 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777   |
| 1077 | 7040 | CMA       |                         |
| 1100 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1101 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 21

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1102 | 7200 | CLA       |                         |
| 1103 | 1027 | TAD K7737 | /CONSTANT TO BE INDEXED |
| 1104 | 3011 | DCA 11    |                         |

|      |      |           |                       |
|------|------|-----------|-----------------------|
| 1105 | 0411 | AND I 11  | /DO AUTO INDEX        |
| 1106 | 1011 | TAD 11    |                       |
| 1107 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777 |
| 1110 | 7040 | CMA       |                       |
| 1111 | 7440 | SEA       | /AC SHOULD BE ZERO    |
| 1112 | 7402 | HLT       | /AUTO INDEX ERROR     |

/AUTO INDEX TEST 22

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1113 | 7200 | CLA       |                         |
| 1114 | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 1115 | 3011 | DCA 11    |                         |
| 1116 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1117 | 1011 | TAD 11    |                         |
| 1120 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777   |
| 1121 | 7040 | CMA       |                         |
| 1122 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1123 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 23

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1124 | 7200 | CLA       |                         |
| 1125 | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 1126 | 3011 | DCA 11    |                         |
| 1127 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1130 | 1011 | TAD 11    |                         |
| 1131 | 1042 | TAD K0177 | /AC SHOULD EQUAL 7777   |
| 1132 | 7040 | CMA       |                         |
| 1133 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1134 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 24

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1135 | 7200 | CLA       |                         |
| 1136 | 1024 | TAD K7377 | /CONSTANT TO BE INDEXED |
| 1137 | 3011 | DCA 11    |                         |
| 1140 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1141 | 1011 | TAD 11    |                         |
| 1142 | 1041 | TAD K0377 | /AC SHOULD EQUAL 7777   |
| 1143 | 7040 | CMA       |                         |
| 1144 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1145 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 25

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1146 | 7200 | CLA       |                         |
| 1147 | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 1150 | 3011 | DCA 11    |                         |
| 1151 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1152 | 1011 | TAD 11    |                         |
| 1153 | 1040 | TAD K0777 | /AC SHOULD EQUAL 7777   |
| 1154 | 7040 | CMA       |                         |
| 1155 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1156 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 26

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1157 | 7200 | CLA       |                         |
| 1160 | 1022 | TAD K5777 | /CONSTANT TO BE INDEXED |

|      |      |           |                       |
|------|------|-----------|-----------------------|
| 1161 | 3011 | DCA 11    |                       |
| 1162 | 2411 | ISE I 11  | /DO AUTO INDEX        |
| 1163 | 7000 | NOP       |                       |
| 1164 | 1011 | TAD 11    |                       |
| 1165 | 1037 | TAD K1777 | /AC SHOULD EQUAL 7777 |
| 1166 | 7040 | CMA       |                       |
| 1167 | 7440 | SZA       | /AC SHOULD BE ZERO    |
| 1170 | 7402 | HLT       | /AUTO INDEX ERROR     |
| 1171 | 7000 | NOP       |                       |
| 1172 | 5376 | JMP ,+4   |                       |
| 1173 | 7000 | NOP       |                       |
| 1174 | 7000 | NOP       |                       |
| 1175 | 7000 | NOP       |                       |
| 1176 | 7000 | NOP       |                       |
| 1177 | 7000 | NOP       |                       |

PAUSE

/TEST 2 - TAPE 2

1200 \*1200

/AUTO INDEX TEST 27

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1200 | 7200 | CLA       |                         |
| 1201 | 1021 | TAD K3777 | /CONSTANT TO BE INDEXED |
| 1202 | 3011 | DCA 11    |                         |
| 1203 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1204 | 1011 | TAD 11    |                         |
| 1205 | 1001 | TAD K3777 | /AC SHOULD EQUAL 7777   |
| 1206 | 7040 | CMA       |                         |
| 1207 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1210 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 28

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1211 | 7200 | CLA       |                         |
| 1212 | 1020 | TAD K7777 | /CONSTANT TO BE INDEXED |
| 1213 | 3011 | DCA 11    |                         |
| 1214 | 0411 | AND I 11  | /DO AUTO INDEX          |
| 1215 | 1011 | TAD 11    |                         |
| 1216 | 1020 | TAD K7777 | /AC SHOULD EQUAL 7777   |
| 1217 | 7040 | CMA       |                         |
| 1220 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1221 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 29

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1222 | 7200 | CLA       |                         |
| 1223 | 1036 | TAD K0    | /CONSTANT TO BE INDEXED |
| 1224 | 3012 | DCA 12    |                         |
| 1225 | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1226 | 1012 | TAD 12    |                         |
| 1227 | 1035 | TAD K7776 | /AC SHOULD EQUAL 7777   |
| 1230 | 7040 | CMA       |                         |

|      |      |     |                    |
|------|------|-----|--------------------|
| 1231 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1232 | 7402 | HLT | /AUTO INDEX ERROR  |

## /AUTO INDEX TEST 30

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1233 | 7200 | CLA       |                         |
| 1234 | 1035 | TAD K7776 | /CONSTANT TO BE INDEXED |
| 1235 | 3012 | DCA 12    |                         |
| 1236 | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1237 | 1012 | TAD 12    |                         |
| 1240 | 1036 | TAD K0    | /AC SHOULD EQUAL 7777   |
| 1241 | 7040 | CMA       |                         |
| 1242 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1243 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 31

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1244 | 7200 | CLA       |                         |
| 1245 | 1034 | TAD K7775 | /CONSTANT TO BE INDEXED |
| 1246 | 3012 | DCA 12    |                         |
| 1247 | 3412 | DCA I 12  | /DO AUTO INDEX          |
| 1250 | 1012 | TAD 12    |                         |
| 1251 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777   |
| 1252 | 7040 | CMA       |                         |
| 1253 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1254 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 32

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1255 | 7200 | CLA       |                         |
| 1256 | 1033 | TAD K7773 | /CONSTANT TO BE INDEXED |
| 1257 | 3012 | DCA 12    |                         |
| 1260 | 1412 | TAD I 12  | /DO AUTO INDEX          |
| 1261 | 7200 | CLA       |                         |
| 1262 | 1012 | TAD 12    |                         |
| 1263 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777   |
| 1264 | 7040 | CMA       |                         |
| 1265 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1266 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 33

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1267 | 7200 | CLA       |                         |
| 1270 | 1032 | TAD K7767 | /CONSTANT TO BE INDEXED |
| 1271 | 3012 | DCA 12    |                         |
| 1272 | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1273 | 1012 | TAD 12    |                         |
| 1274 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777   |
| 1275 | 7040 | CMA       |                         |
| 1276 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1277 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 34

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1300 | 7200 | CLA       |                         |
| 1301 | 1031 | TAD K7757 | /CONSTANT TO BE INDEXED |
| 1302 | 3012 | DCA 12    |                         |
| 1303 | 0412 | AND I 12  | /DO AUTO INDEX          |

|                     |      |           |                         |
|---------------------|------|-----------|-------------------------|
| 1304                | 1012 | TAD 12    |                         |
| 1305                | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777   |
| 1306                | 7040 | CMA       |                         |
| 1307                | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1310                | 7402 | HLT       | /AUTO INDEX ERROR       |
| /AUTO INDEX TEST 35 |      |           |                         |
| 1311                | 7200 | CLA       |                         |
| 1312                | 1027 | TAD K7737 | /CONSTANT TO BE INDEXED |
| 1313                | 3012 | DCA 12    |                         |
| 1314                | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1315                | 1012 | TAD 12    |                         |
| 1316                | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777   |
| 1317                | 7040 | CMA       |                         |
| 1320                | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1321                | 7402 | HLT       | /AUTO INDEX ERROR       |
| /AUTO INDEX TEST 36 |      |           |                         |
| 1322                | 7200 | CLA       |                         |
| 1323                | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 1324                | 3012 | DCA 12    |                         |
| 1325                | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1326                | 1012 | TAD 12    |                         |
| 1327                | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777   |
| 1330                | 7040 | CMA       |                         |
| 1331                | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1332                | 7402 | HLT       | /AUTO INDEX ERROR       |
| /AUTO INDEX TEST 37 |      |           |                         |
| 1333                | 7200 | CLA       |                         |
| 1334                | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 1335                | 3012 | DCA 12    |                         |
| 1336                | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1337                | 1012 | TAD 12    |                         |
| 1340                | 1042 | TAD K0177 | /AC SHOULD EQUAL 7777   |
| 1341                | 7040 | CMA       |                         |
| 1342                | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1343                | 7402 | HLT       | /AUTO INDEX ERROR       |
| /AUTO INDEX TEST 38 |      |           |                         |
| 1344                | 7200 | CLA       |                         |
| 1345                | 1024 | TAD K7377 | /CONSTANT TO BE INDEXED |
| 1346                | 3012 | DCA 12    |                         |
| 1347                | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1350                | 1012 | TAD 12    |                         |
| 1351                | 1041 | TAD K0377 | /AC SHOULD EQUAL 7777   |
| 1352                | 7040 | CMA       |                         |
| 1353                | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1354                | 7402 | HLT       | /AUTO INDEX ERROR       |
| /AUTO INDEX TEST 39 |      |           |                         |
| 1355                | 7200 | CLA       |                         |
| 1356                | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 1357                | 3012 | DCA 12    |                         |

|      |      |           |                       |
|------|------|-----------|-----------------------|
| 1360 | 0412 | AND I 12  | /DO AUTO INDEX        |
| 1361 | 1012 | TAD 12    |                       |
| 1362 | 1040 | TAD K0777 | /AC SHOULD EQUAL 7777 |
| 1363 | 7040 | CMA       |                       |
| 1364 | 7440 | SEA       | /AC SHOULD BE ZERO    |
| 1365 | 7402 | HLT       | /AUTO INDEX ERROR     |

/AUTO INDEX TEST 40

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1366 | 7200 | CLA       |                         |
| 1367 | 1022 | TAD K5777 | /CONSTANT TO BE INDEXED |
| 1370 | 3012 | DCA 12    |                         |
| 1371 | 2412 | ISE I 12  | /DO AUTO INDEX          |
| 1372 | 7000 | NOP       |                         |
| 1373 | 1012 | TAD 12    |                         |
| 1374 | 1037 | TAD K1777 | /AC SHOULD EQUAL 7777   |
| 1375 | 7040 | CMA       |                         |
| 1376 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1377 | 7402 | HLT       | /AUTO INDEX ERROR       |

1400

\*1400  
/AUTO INDEX TEST 41

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1400 | 7200 | CLA       |                         |
| 1401 | 1021 | TAD K3777 | /CONSTANT TO BE INDEXED |
| 1402 | 3012 | DCA 12    |                         |
| 1403 | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1404 | 1012 | TAD 12    |                         |
| 1405 | 1021 | TAD K3777 | /AC SHOULD EQUAL 7777   |
| 1406 | 7040 | CMA       |                         |
| 1407 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1410 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 42

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1411 | 7200 | CLA       |                         |
| 1412 | 1020 | TAD K7777 | /CONSTANT TO BE INDEXED |
| 1413 | 3012 | DCA 12    |                         |
| 1414 | 0412 | AND I 12  | /DO AUTO INDEX          |
| 1415 | 1012 | TAD 12    |                         |
| 1416 | 1020 | TAD K7777 | /AC SHOULD EQUAL 7777   |
| 1417 | 7040 | CMA       |                         |
| 1420 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1421 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 43

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1422 | 7200 | CLA       |                         |
| 1423 | 1036 | TAD K0    | /CONSTANT TO BE INDEXED |
| 1424 | 3013 | DCA 13    |                         |
| 1425 | 0413 | AND I 13  | /DO AUTO INDEX          |
| 1426 | 1013 | TAD 13    |                         |
| 1427 | 1035 | TAD K7776 | /AC SHOULD EQUAL 7777   |
| 1430 | 7040 | CMA       |                         |
| 1431 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1432 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 44

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1433 | 7200 | CLA       |                         |
| 1434 | 1035 | TAD K7776 | /CONSTANT TO BE INDEXED |
| 1435 | 3013 | DCA 13    |                         |
| 1436 | 0413 | AND I 13  | /DO AUTO INDEX          |
| 1437 | 1013 | TAD 13    |                         |
| 1440 | 1036 | TAD K0    | /AC SHOULD EQUAL 7777   |
| 1441 | 7040 | CMA       |                         |
| 1442 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1443 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 45

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1444 | 7200 | CLA       |                         |
| 1445 | 1034 | TAD K7775 | /CONSTANT TO BE INDEXED |
| 1446 | 3013 | DCA 13    |                         |
| 1447 | 3413 | DCA I 13  | /DO AUTO INDEX          |
| 1450 | 1013 | TAD 13    |                         |
| 1451 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777   |
| 1452 | 7040 | CMA       |                         |
| 1453 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1454 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 46

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1455 | 7200 | CLA       |                         |
| 1456 | 1033 | TAD K7773 | /CONSTANT TO BE INDEXED |
| 1457 | 3013 | DCA 13    |                         |
| 1460 | 1413 | TAD I 13  | /DO AUTO INDEX          |
| 1461 | 7200 | CLA       |                         |
| 1462 | 1013 | TAD 13    |                         |
| 1463 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777   |
| 1464 | 7040 | CMA       |                         |
| 1465 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1466 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 47

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1467 | 7200 | CLA       |                         |
| 1470 | 1032 | TAD K7767 | /CONSTANT TO BE INDEXED |
| 1471 | 3013 | DCA 13    |                         |
| 1472 | 0413 | AND I 13  | /DO AUTO INDEX          |
| 1473 | 1013 | TAD 13    |                         |
| 1474 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777   |
| 1475 | 7040 | CMA       |                         |
| 1476 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1477 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 48

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1500 | 7200 | CLA       |                         |
| 1501 | 1031 | TAD K7757 | /CONSTANT TO BE INDEXED |
| 1502 | 3013 | DCA 13    |                         |
| 1503 | 0413 | AND I 13  | /DO AUTO INDEX          |
| 1504 | 1013 | TAD 13    |                         |
| 1505 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777   |
| 1506 | 7040 | CMA       |                         |
| 1507 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1510 | 7402 | HLT       | /AUTO INDEX ERROR       |

/P

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/AUTO INDEX TEST 49
1511 7200          CLA
1512 1027          TAD K7737          /CONSTANT TO BE INDEXED
1513 3013          DCA 13
1514 0413          AND I 13          /DO AUTO INDEX
1515 1013          TAD 13
1516 1044          TAD K0037          /AC SHOULD EQUAL 7777
1517 7040          CMA
1520 7440          SZA          /AC SHOULD BE ZERO
1521 7402          HLT          /AUTO INDEX ERROR

/AUTO INDEX TEST 50
1522 7200          CLA
1523 1026          TAD K7677          /CONSTANT TO BE INDEXED
1524 3013          DCA 13
1525 0413          AND I 13          /DO AUTO INDEX
1526 1013          TAD 13
1527 1043          TAD K0077          /AC SHOULD EQUAL 7777
1530 7040          CMA
1531 7440          SZA          /AC SHOULD BE ZERO
1532 7402          HLT          /AUTO INDEX ERROR

/AUTO INDEX TEST 51
1533 7200          CLA
1534 1025          TAD K7577          /CONSTANT TO BE INDEXED
1535 3013          DCA 13
1536 0413          AND I 13          /DO AUTO INDEX
1537 1013          TAD 13
1540 1042          TAD K0177          /AC SHOULD EQUAL 7777
1541 7040          CMA
1542 7440          SZA          /AC SHOULD BE ZERO
1543 7402          HLT          /AUTO INDEX ERROR

/AUTO INDEX TEST 52
1544 7200          CLA
1545 1024          TAD K7377          /CONSTANT TO BE INDEXED
1546 3013          DCA 13
1547 0413          AND I 13          /DO AUTO INDEX
1550 1013          TAD 13
1551 1041          TAD K0377          /AC SHOULD EQUAL 7777
1552 7040          CMA
1553 7440          SZA          /AC SHOULD BE ZERO
1554 7402          HLT          /AUTO INDEX ERROR

/AUTO INDEX TEST 53
1555 7200          CLA
1556 1023          TAD K6777          /CONSTANT TO BE INDEXED
1557 3013          DCA 13
1560 0413          AND I 13          /DO AUTO INDEX
1561 1013          TAD 13
1562 1040          TAD K0777          /AC SHOULD EQUAL 7777
1563 7040          CMA
1564 7440          SZA          /AC SHOULD BE ZERO

```



|                     |       |           |                         |
|---------------------|-------|-----------|-------------------------|
| 1565                | 7402  | HLT       | /AUTO INDEX ERROR       |
| /AUTO INDEX TEST 54 |       |           |                         |
| 1566                | 7200  | CLA       |                         |
| 1567                | 1022  | TAD K5777 | /CONSTANT TO BE INDEXED |
| 1570                | 3013  | DCA 13    |                         |
| 1571                | 2413  | ISE I 13  | /DO AUTO INDEX          |
| 1572                | 7000  | NOP       |                         |
| 1573                | 1013  | TAD 13    |                         |
| 1574                | 1037  | TAD K1777 | /AC SHOULD EQUAL 7777   |
| 1575                | 7040  | CMA       |                         |
| 1576                | 7440  | SZA       | /AC SHOULD BE ZERO      |
| 1577                | 7402  | HLT       | /AUTO INDEX ERROR       |
|                     |       |           |                         |
| 1600                | *1600 |           |                         |
| /AUTO INDEX TEST 55 |       |           |                         |
| 1600                | 7200  | CLA       |                         |
| 1601                | 1021  | TAD K3777 | /CONSTANT TO BE INDEXED |
| 1602                | 3013  | DCA 13    |                         |
| 1603                | 0413  | AND I 13  | /DO AUTO INDEX          |
| 1604                | 1013  | TAD 13    |                         |
| 1605                | 1021  | TAD K3777 | /AC SHOULD EQUAL 7777   |
| 1606                | 7040  | CMA       |                         |
| 1607                | 7440  | SZA       | /AC SHOULD BE ZERO      |
| 1610                | 7402  | HLT       | /AUTO INDEX ERROR       |
|                     |       |           |                         |
| /AUTO INDEX TEST 56 |       |           |                         |
| 1611                | 7200  | CLA       |                         |
| 1612                | 1020  | TAD K7777 | /CONSTANT TO BE INDEXED |
| 1613                | 3013  | DCA 13    |                         |
| 1614                | 0413  | AND I 13  | /DO AUTO INDEX          |
| 1615                | 1013  | TAD 13    |                         |
| 1616                | 1020  | TAD K7777 | /AC SHOULD EQUAL 7777   |
| 1617                | 7040  | CMA       |                         |
| 1620                | 7440  | SZA       | /AC SHOULD BE ZERO      |
| 1621                | 7402  | HLT       | /AUTO INDEX ERROR       |
|                     |       |           |                         |
| /AUTO INDEX TEST 57 |       |           |                         |
| 1622                | 7200  | CLA       |                         |
| 1623                | 1036  | TAD K0    | /CONSTANT TO BE INDEXED |
| 1624                | 3014  | DCA 14    |                         |
| 1625                | 0414  | AND I 14  | /DO AUTO INDEX          |
| 1626                | 1014  | TAD 14    |                         |
| 1627                | 1035  | TAD K7776 | /AC SHOULD EQUAL 7777   |
| 1630                | 7040  | CMA       |                         |
| 1631                | 7440  | SZA       | /AC SHOULD BE ZERO      |
| 1632                | 7402  | HLT       | /AUTO INDEX ERROR       |
|                     |       |           |                         |
| /AUTO INDEX TEST 58 |       |           |                         |
| 1633                | 7200  | CLA       |                         |
| 1634                | 1035  | TAD K7776 | /CONSTANT TO BE INDEXED |
| 1635                | 3014  | DCA 14    |                         |

/P

|      |      |          |                       |
|------|------|----------|-----------------------|
| 1636 | 0414 | AND I 14 | /DO AUTO INDEX        |
| 1637 | 1014 | TAD 14   |                       |
| 1640 | 1036 | TAD K0   | /AC SHOULD EQUAL 7777 |
| 1641 | 7040 | CMA      |                       |
| 1642 | 7440 | SEA      | /AC SHOULD BE ZERO    |
| 1643 | 7402 | HLT      | /AUTO INDEX ERROR     |

/AUTO INDEX TEST 59

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1644 | 7200 | CLA       |                         |
| 1645 | 1034 | TAD K7775 | /CONSTANT TO BE INDEXED |
| 1646 | 3014 | DCA 14    |                         |
| 1647 | 3414 | DCA I 14  | /DO AUTO INDEX          |
| 1650 | 1014 | TAD 14    |                         |
| 1651 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777   |
| 1652 | 7040 | CMA       |                         |
| 1653 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1654 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 60

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1655 | 7200 | CLA       |                         |
| 1656 | 1033 | TAD K7773 | /CONSTANT TO BE INDEXED |
| 1657 | 3014 | DCA 14    |                         |
| 1660 | 1414 | TAD I 14  | /DO AUTO INDEX          |
| 1661 | 7200 | CLA       |                         |
| 1662 | 1014 | TAD 14    |                         |
| 1663 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777   |
| 1664 | 7040 | CMA       |                         |
| 1665 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1666 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 61

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1667 | 7200 | CLA       |                         |
| 1670 | 1032 | TAD K7767 | /CONSTANT TO BE INDEXED |
| 1671 | 3014 | DCA 14    |                         |
| 1672 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1673 | 1014 | TAD 14    |                         |
| 1674 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777   |
| 1675 | 7040 | CMA       |                         |
| 1676 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1677 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 62

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1700 | 7200 | CLA       |                         |
| 1701 | 1031 | TAD K7757 | /CONSTANT TO BE INDEXED |
| 1702 | 3014 | DCA 14    |                         |
| 1703 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1704 | 1014 | TAD 14    |                         |
| 1705 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777   |
| 1706 | 7040 | CMA       |                         |
| 1707 | 7440 | SEA       | /AC SHOULD BE ZERO      |
| 1710 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 63

|      |      |     |  |
|------|------|-----|--|
| 1711 | 7200 | CLA |  |
|------|------|-----|--|

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1712 | 1027 | TAD K7737 | /CONSTANT TO BE INDEXED |
| 1713 | 3014 | DCA 14    |                         |
| 1714 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1715 | 1014 | TAD 14    |                         |
| 1716 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777   |
| 1717 | 7040 | CMA       |                         |
| 1720 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1721 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 64

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1722 | 7200 | CLA       |                         |
| 1723 | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 1724 | 3014 | DCA 14    |                         |
| 1725 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1726 | 1014 | TAD 14    |                         |
| 1727 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777   |
| 1730 | 7040 | CMA       |                         |
| 1731 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1732 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 65

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1733 | 7200 | CLA       |                         |
| 1734 | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 1735 | 3014 | DCA 14    |                         |
| 1736 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1737 | 1014 | TAD 14    |                         |
| 1740 | 1042 | TAD K0177 | /AC SHOULD EQUAL 7777   |
| 1741 | 7040 | CMA       |                         |
| 1742 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1743 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 66

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1744 | 7200 | CLA       |                         |
| 1745 | 1024 | TAD K7377 | /CONSTANT TO BE INDEXED |
| 1746 | 3014 | DCA 14    |                         |
| 1747 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1750 | 1014 | TAD 14    |                         |
| 1751 | 1041 | TAD K0377 | /AC SHOULD EQUAL 7777   |
| 1752 | 7040 | CMA       |                         |
| 1753 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1754 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 67

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1755 | 7200 | CLA       |                         |
| 1756 | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 1757 | 3014 | DCA 14    |                         |
| 1760 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 1761 | 1014 | TAD 14    |                         |
| 1762 | 1040 | TAD K0777 | /AC SHOULD EQUAL 7777   |
| 1763 | 7040 | CMA       |                         |
| 1764 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1765 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 68

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 1766 | 7200 | CLA       |                         |
| 1767 | 1022 | TAD K5777 | /CONSTANT TO BE INDEXED |
| 1770 | 3014 | DCA 14    |                         |
| 1771 | 2414 | ISZ I 14  | /DO AUTO INDEX          |
| 1772 | 7000 | NOP       |                         |
| 1773 | 1014 | TAD 14    |                         |
| 1774 | 1037 | TAD K1777 | /AC SHOULD EQUAL 7777   |
| 1775 | 7040 | CMA       |                         |
| 1776 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 1777 | 7402 | HLT       | /AUTO INDEX ERROR       |

2000

\*2000  
/AUTO INDEX TEST 69

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2000 | 7200 | CLA       |                         |
| 2001 | 1021 | TAD K3777 | /CONSTANT TO BE INDEXED |
| 2002 | 3014 | DCA 14    |                         |
| 2003 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 2004 | 1014 | TAD 14    |                         |
| 2005 | 1021 | TAD K3777 | /AC SHOULD EQUAL 7777   |
| 2006 | 7040 | CMA       |                         |
| 2007 | 7410 | SKP       |                         |
| 2010 | 0000 | 0         |                         |
| 2011 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2012 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 70

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2013 | 7200 | CLA       |                         |
| 2014 | 1020 | TAD K7777 | /CONSTANT TO BE INDEXED |
| 2015 | 3014 | DCA 14    |                         |
| 2016 | 0414 | AND I 14  | /DO AUTO INDEX          |
| 2017 | 1014 | TAD 14    |                         |
| 2020 | 1020 | TAD K7777 | /AC SHOULD EQUAL 7777   |
| 2021 | 7040 | CMA       |                         |
| 2022 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2023 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 71

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2024 | 7200 | CLA       |                         |
| 2025 | 1036 | TAD K0    | /CONSTANT TO BE INDEXED |
| 2026 | 3015 | DCA 15    |                         |
| 2027 | 0415 | AND I 15  | /DO AUTO INDEX          |
| 2030 | 1015 | TAD 15    |                         |
| 2031 | 1035 | TAD K7776 | /AC SHOULD EQUAL 7777   |
| 2032 | 7040 | CMA       |                         |
| 2033 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2034 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 72

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2035 | 7200 | CLA       |                         |
| 2036 | 1035 | TAD K7776 | /CONSTANT TO BE INDEXED |
| 2037 | 3015 | DCA 15    |                         |
| 2040 | 0415 | AND I 15  | /DO AUTO INDEX          |
| 2041 | 1015 | TAD 15    |                         |
| 2042 | 1036 | TAD K0    | /AC SHOULD EQUAL 7777   |

2043 7040  
2044 7440  
2045 7402

CMA  
SZA  
HLT

/AC SHOULD BE ZERO  
/AUTO INDEX ERROR

## /AUTO INDEX TEST 73

2046 7200  
2047 1034  
2050 3015  
2051 3415  
2052 1015  
2053 1051  
2054 7040  
2055 7440  
2056 7402

CLA  
TAD K7775  
DCA 15  
DCA I 15  
TAD 15  
TAD K0001  
CMA  
SZA  
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO  
/AUTO INDEX ERROR

## /AUTO INDEX TEST 74

2057 7200  
2060 1033  
2061 3015  
2062 1415  
2063 7200  
2064 1015  
2065 1047  
2066 7040  
2067 7440  
2070 7402

CLA  
TAD K7773  
DCA 15  
TAD I 15  
CLA  
TAD 15  
TAD K0003  
CMA  
SZA  
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO  
/AUTO INDEX ERROR

## /AUTO INDEX TEST 75

2071 7200  
2072 1032  
2073 3015  
2074 0415  
2075 1015  
2076 1046  
2077 7040  
2100 7440  
2101 7402

CLA  
TAD K7767  
DCA 15  
AND I 15  
TAD 15  
TAD K0007  
CMA  
SZA  
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO  
/AUTO INDEX ERROR

## /AUTO INDEX TEST 76

2102 7200  
2103 1031  
2104 3015  
2105 0415  
2106 1015  
2107 1045  
2110 7040  
2111 7440  
2112 7402

CLA  
TAD K7757  
DCA 15  
AND I 15  
TAD 15  
TAD K0017  
CMA  
SZA  
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO  
/AUTO INDEX ERROR

## /AUTO INDEX TEST 77

2113 7200  
2114 1027  
2115 3015  
2116 0415

CLA  
TAD K7737  
DCA 15  
AND I 15

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

|      |      |           |                       |
|------|------|-----------|-----------------------|
| 2117 | 1015 | TAD 15    |                       |
| 2120 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777 |
| 2121 | 7040 | CMA       |                       |
| 2122 | 7440 | SZA       | /AC SHOULD BE ZERO    |
| 2123 | 7402 | HLT       | /AUTO INDEX ERROR     |

/AUTO INDEX TEST 78

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2124 | 7200 | CLA       |                         |
| 2125 | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 2126 | 3015 | DCA 15    |                         |
| 2127 | 0415 | AND I 15  | /DO AUTO INDEX          |
| 2130 | 1015 | TAD 15    |                         |
| 2131 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777   |
| 2132 | 7040 | CMA       |                         |
| 2133 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2134 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 79

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2135 | 7200 | CLA       |                         |
| 2136 | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 2137 | 3015 | DCA 15    |                         |
| 2140 | 0415 | AND I 15  | /DO AUTO INDEX          |
| 2141 | 1015 | TAD 15    |                         |
| 2142 | 1042 | TAD K0177 | /AC SHOULD EQUAL 7777   |
| 2143 | 7040 | CMA       |                         |
| 2144 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2145 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 80

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2146 | 7200 | CLA       |                         |
| 2147 | 1024 | TAD K7377 | /CONSTANT TO BE INDEXED |
| 2150 | 3015 | DCA 15    |                         |
| 2151 | 0415 | AND I 15  | /DO AUTO INDEX          |
| 2152 | 1015 | TAD 15    |                         |
| 2153 | 1041 | TAD K0377 | /AC SHOULD EQUAL 7777   |
| 2154 | 7040 | CMA       |                         |
| 2155 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2156 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 81

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2157 | 7200 | CLA       |                         |
| 2160 | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 2161 | 3015 | DCA 15    |                         |
| 2162 | 0415 | AND I 15  | /DO AUTO INDEX          |
| 2163 | 1015 | TAD 15    |                         |
| 2164 | 1040 | TAD K0777 | /AC SHOULD EQUAL 7777   |
| 2165 | 7040 | CMA       |                         |
| 2166 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2167 | 7402 | HLT       | /AUTO INDEX ERROR       |
| 2170 | 7000 | NOP       |                         |
| 2171 | 7000 | NOP       |                         |
| 2172 | 5376 | JMP .+4   |                         |
| 2173 | 7000 | NOP       |                         |
| 2174 | 7000 | NOP       |                         |

```

2175 7000      NOP
2176 7000      NOP
2177 7000      NOP

```

```

          2200      *2200
          /AUTO INDEX TEST 82
2200 7200      CLA
2201 1022      TAD K5777      /CONSTANT TO BE INDEXED
2202 3015      DCA 15
2203 2415      ISZ I 15      /DO AUTO INDEX
2204 7000      NOP
2205 1015      TAD 15
2206 1037      TAD K1777      /AC SHOULD EQUAL 7777
2207 7040      CMA
2210 7440      SZA      /AC SHOULD BE ZERO
2211 7402      HLT      /AUTO INDEX ERROR

```

```

          /AUTO INDEX TEST 83
2212 7200      CLA
2213 1021      TAD K3777      /CONSTANT TO BE INDEXED
2214 3015      DCA 15
2215 0415      AND I 15      /DO AUTO INDEX
2216 1015      TAD 15
2217 1021      TAD K3777      /AC SHOULD EQUAL 7777
2220 7040      CMA
2221 7440      SZA      /AC SHOULD BE ZERO
2222 7402      HLT      /AUTO INDEX ERROR

```

```

          /AUTO INDEX TEST 84
2223 7200      CLA
2224 1020      TAD K7777      /CONSTANT TO BE INDEXED
2225 3015      DCA 15
2226 0415      AND I 15      /DO AUTO INDEX
2227 1015      TAD 15
2230 1020      TAD K7777      /AC SHOULD EQUAL 7777
2231 7040      CMA
2232 7440      SZA      /AC SHOULD BE ZERO
2233 7402      HLT      /AUTO INDEX ERROR

```

```

          /AUTO INDEX TEST 85
2234 7200      CLA
2235 1036      TAD K0      /CONSTANT TO BE INDEXED
2236 3016      DCA 16
2237 0416      AND I 16      /DO AUTO INDEX
2240 1016      TAD 16
2241 1035      TAD K7776      /AC SHOULD EQUAL 7777
2242 7040      CMA
2243 7440      SZA      /AC SHOULD BE ZERO
2244 7402      HLT      /AUTO INDEX ERROR

```

```

          /AUTO INDEX TEST 86
2245 7200      CLA
2246 1035      TAD K7776      /CONSTANT TO BE INDEXED

```

|      |      |          |                       |
|------|------|----------|-----------------------|
| 2247 | 3016 | DCA 16   |                       |
| 2250 | 0416 | AND I 16 | /DO AUTO INDEX        |
| 2251 | 1016 | TAD 16   |                       |
| 2252 | 1036 | TAD K0   | /AC SHOULD EQUAL 7777 |
| 2253 | 7040 | CMA      |                       |
| 2254 | 7440 | SZA      | /AC SHOULD BE ZERO    |
| 2255 | 7402 | HLT      | /AUTO INDEX ERROR     |

/AUTO INDEX TEST 87

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2256 | 7200 | CLA       |                         |
| 2257 | 1034 | TAD K7775 | /CONSTANT TO BE INDEXED |
| 2260 | 3016 | DCA 16    |                         |
| 2261 | 3416 | DCA I 16  | /DO AUTO INDEX          |
| 2262 | 1016 | TAD 16    |                         |
| 2263 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777   |
| 2264 | 7040 | CMA       |                         |
| 2265 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2266 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 88

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2267 | 7200 | CLA       |                         |
| 2270 | 1033 | TAD K7773 | /CONSTANT TO BE INDEXED |
| 2271 | 3016 | DCA 16    |                         |
| 2272 | 1416 | TAD I 16  | /DO AUTO INDEX          |
| 2273 | 7200 | CLA       |                         |
| 2274 | 1016 | TAD 16    |                         |
| 2275 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777   |
| 2276 | 7040 | CMA       |                         |
| 2277 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2300 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 89

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2301 | 7200 | CLA       |                         |
| 2302 | 1032 | TAD K7767 | /CONSTANT TO BE INDEXED |
| 2303 | 3016 | DCA 16    |                         |
| 2304 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2305 | 1016 | TAD 16    |                         |
| 2306 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777   |
| 2307 | 7040 | CMA       | /AC SHOULD BE ZERO      |
| 2310 | 7440 | SZA       | /AUTO INDEX ERROR       |
| 2311 | 7402 | HLT       |                         |

/AUTO INDEX TEST 90

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2312 | 7200 | CLA       |                         |
| 2313 | 1031 | TAD K7757 | /CONSTANT TO BE INDEXED |
| 2314 | 3016 | DCA 16    |                         |
| 2315 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2316 | 1016 | TAD 16    |                         |
| 2317 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777   |
| 2320 | 7040 | CMA       |                         |
| 2321 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2322 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 91



|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2323 | 7200 | CLA       |                         |
| 2324 | 1027 | TAD K7737 | /CONSTANT TO BE INDEXED |
| 2325 | 3016 | DCA 16    |                         |
| 2326 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2327 | 1016 | TAD 16    |                         |
| 2330 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777   |
| 2331 | 7040 | CMA       |                         |
| 2332 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2333 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 92

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2334 | 7200 | CLA       |                         |
| 2335 | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 2336 | 3016 | DCA 16    |                         |
| 2337 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2340 | 1016 | TAD 16    |                         |
| 2341 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777   |
| 2342 | 7040 | CMA       |                         |
| 2343 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2344 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 93

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2345 | 7200 | CLA       |                         |
| 2346 | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 2347 | 3016 | DCA 16    |                         |
| 2350 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2351 | 1016 | TAD 16    |                         |
| 2352 | 1042 | TAD K0177 | /AC SHOULD EQUAL 7777   |
| 2353 | 7040 | CMA       |                         |
| 2354 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2355 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 94

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2356 | 7200 | CLA       |                         |
| 2357 | 1024 | TAD K7377 | /CONSTANT TO BE INDEXED |
| 2360 | 3016 | DCA 16    |                         |
| 2361 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2362 | 1016 | TAD 16    |                         |
| 2363 | 1041 | TAD K0377 | /AC SHOULD EQUAL 7777   |
| 2364 | 7040 | CMA       |                         |
| 2365 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2366 | 7402 | HLT       | /AUTO INDEX ERROR       |

## /AUTO INDEX TEST 95

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2367 | 7200 | CLA       |                         |
| 2370 | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 2371 | 3016 | DCA 16    |                         |
| 2372 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2373 | 1016 | TAD 16    |                         |
| 2374 | 1040 | TAD K0777 | /AC SHOULD EQUAL 7777   |
| 2375 | 7040 | CMA       |                         |
| 2376 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2377 | 7402 | HLT       | /AUTO INDEX ERROR       |

PAUSE

/TEST 2 - TAPE 3

2400 \*2400

/AUTO INDEX TEST 96

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2400 | 7200 | CLA       |                         |
| 2401 | 1022 | TAD K5777 | /CONSTANT TO BE INDEXED |
| 2402 | 3016 | DCA 16    |                         |
| 2403 | 2416 | ISZ I 16  | /DO AUTO INDEX          |
| 2404 | 7000 | NOP       |                         |
| 2405 | 1016 | TAD 16    |                         |
| 2406 | 1037 | TAD K1777 | /AC SHOULD EQUAL 7777   |
| 2407 | 7040 | CMA       |                         |
| 2410 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2411 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 97

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2412 | 7200 | CLA       |                         |
| 2413 | 1021 | TAD K3777 | /CONSTANT TO BE INDEXED |
| 2414 | 3016 | DCA 16    |                         |
| 2415 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2416 | 1016 | TAD 16    |                         |
| 2417 | 1021 | TAD K3777 | /AC SHOULD EQUAL 7777   |
| 2420 | 7040 | CMA       |                         |
| 2421 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2422 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 98

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2423 | 7200 | CLA       |                         |
| 2424 | 1020 | TAD K7777 | /CONSTANT TO BE INDEXED |
| 2425 | 3016 | DCA 16    |                         |
| 2426 | 0416 | AND I 16  | /DO AUTO INDEX          |
| 2427 | 1016 | TAD 16    |                         |
| 2430 | 1020 | TAD K7777 | /AC SHOULD EQUAL 7777   |
| 2431 | 7040 | CMA       |                         |
| 2432 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2433 | 7402 | HLT       | /AUTO INDEX ERROR       |

/AUTO INDEX TEST 99

|      |      |           |                         |
|------|------|-----------|-------------------------|
| 2434 | 7200 | CLA       |                         |
| 2435 | 1036 | TAD K0    | /CONSTANT TO BE INDEXED |
| 2436 | 3017 | DCA 17    |                         |
| 2437 | 0417 | AND I 17  | /DO AUTO INDEX          |
| 2440 | 1017 | TAD 17    |                         |
| 2441 | 1035 | TAD K7776 | /AC SHOULD EQUAL 7777   |
| 2442 | 7040 | CMA       |                         |
| 2443 | 7440 | SZA       | /AC SHOULD BE ZERO      |
| 2444 | 7402 | HLT       | /AUTO INDEX ERROR       |

```

/AUTO INDEX TEST 100
2445 7200      CLA
2446 1035     TAD K7776      /CONSTANT TO BE INDEXED
2447 3017     DCA 17
2450 0417     AND I 17      /DO AUTO INDEX
2451 1017     TAD 17
2452 1036     TAD K0      /AC SHOULD EQUAL 7777
2453 7040     CMA
2454 7440     SZA      /AC SHOULD BE ZERO
2455 7402     HLT      /AUTO INDEX ERROR

/AUTO INDEX TEST 101
2456 7200      CLA
2457 1034     TAD K7775      /CONSTANT TO BE INDEXED
2460 3017     DCA 17
2461 3417     DCA I 17      /DO AUTO INDEX
2462 1017     TAD 17
2463 1051     TAD K0001      /AC SHOULD EQUAL 7777
2464 7040     CMA
2465 7440     SZA      /AC SHOULD BE ZERO
2466 7402     HLT      /AUTO INDEX ERROR

/AUTO INDEX TEST 102
2467 7200      CLA
2470 1033     TAD K7773      /CONSTANT TO BE INDEXED
2471 3017     DCA 17
2472 1417     TAD I 17      /DO AUTO INDEX
2473 7200      CLA
2474 1017     TAD 17
2475 1047     TAD K0003      /AC SHOULD EQUAL 7777
2476 7040     CMA
2477 7440     SZA      /AC SHOULD BE ZERO
2500 7402     HLT      /AUTO INDEX ERROR

/AUTO INDEX TEST 103
2501 7200      CLA
2502 1032     TAD K7767      /CONSTANT TO BE INDEXED
2503 3017     DCA 17
2504 0417     AND I 17      /DO AUTO INDEX
2505 1017     TAD 17
2506 1046     TAD K0007      /AC SHOULD EQUAL 7777
2507 7040     CMA
2510 7440     SZA      /AC SHOULD BE ZERO
2511 7402     HLT      /AUTO INDEX ERROR

/AUTO INDEX TEST 104
2512 7200      CLA
2513 1031     TAD K7757      /CONSTANT TO BE INDEXED
2514 3017     DCA 17
2515 0417     AND I 17      /DO AUTO INDEX
2516 1017     TAD 17
2517 1045     TAD K0017      /AC SHOULD EQUAL 7777
2520 7040     CMA
2521 7440     SZA      /AC SHOULD BE ZERO

```

2522 7402

HLT

/AUTO INDEX ERROR

## /AUTO INDEX TEST 105

2523 7200

CLA

2524 1027

TAD K7737

/CONSTANT TO BE INDEXED

2525 3017

DCA 17

2526 0417

AND I 17

/DO AUTO INDEX

2527 1017

TAD 17

2530 1044

TAD K0037

/AC SHOULD EQUAL 7777

2531 7040

CMA

2532 7440

SZA

/AC SHOULD BE ZERO

2533 7402

HLT

/AUTO INDEX ERROR

## /AUTO INDEX TEST 106

2534 7200

CLA

2535 1026

TAD K7677

/CONSTANT TO BE INDEXED

2536 3017

DCA 17

2537 0417

AND I 17

/DO AUTO INDEX

2540 1017

TAD 17

2541 1043

TAD K0077

/AC SHOULD EQUAL 7777

2542 7040

CMA

2543 7440

SZA

/AC SHOULD BE ZERO

2544 7402

HLT

/AUTO INDEX ERROR

## /AUTO INDEX TEST 107

2545 7200

CLA

2546 1025

TAD K7577

/CONSTANT TO BE INDEXED

2547 3017

DCA 17

2550 0417

AND I 17

/DO AUTO INDEX

2551 1017

TAD 17

2552 1042

TAD K0177

/AC SHOULD EQUAL 7777

2553 7040

CMA

2554 7440

SZA

/AC SHOULD BE ZERO

2555 7402

HLT

/AUTO INDEX ERROR

## /AUTO INDEX TEST 108

2556 7200

CLA

2557 1024

TAD K7377

/CONSTANT TO BE INDEXED

2560 3017

DCA 17

2561 0417

AND I 17

/DO AUTO INDEX

2562 1017

TAD 17

2563 1041

TAD K0377

/AC SHOULD EQUAL 7777

2564 7040

CMA

2565 7440

SZA

/AC SHOULD BE ZERO

2566 7402

HLT

/AUTO INDEX ERROR

## /AUTO INDEX TEST 109

2567 7200

CLA

2570 1023

TAD K6777

/CONSTANT TO BE INDEXED

2571 3017

DCA 17

2572 0417

AND I 17

/DO AUTO INNEX

2573 1017

TAD 17

2574 1040

TAD K0777

/AC SHOULD EQUAL 7777

|      |       |                      |                          |
|------|-------|----------------------|--------------------------|
| 2575 | 7040  | CMA                  |                          |
| 2576 | 7440  | SZA                  | /AC SHOULD BE ZERO       |
| 2577 | 7402  | HLT                  | /AUTO INDEX ERROR        |
|      |       |                      |                          |
| 2600 | *2600 |                      |                          |
|      |       | /AUTO INDEX TEST 110 |                          |
|      |       |                      |                          |
| 2600 | 7200  | CLA                  |                          |
| 2601 | 1022  | TAD K5777            | /CONSTANT TO BE INDEXED  |
| 2602 | 3017  | DCA 17               |                          |
| 2603 | 2417  | ISZ I 17             | /DO AUTO INDEX           |
| 2604 | 7000  | NOP                  |                          |
| 2605 | 1017  | TAD 17               |                          |
| 2606 | 1037  | TAD K1777            | /AC SHOULD EQUAL 7777    |
| 2607 | 7040  | CMA                  |                          |
| 2610 | 7440  | SZA                  | /AC SHOULD BE ZERO       |
| 2611 | 7402  | HLT                  | /AUTO INDEX ERROR        |
|      |       |                      |                          |
|      |       | /AUTO INDEX TEST 111 |                          |
|      |       |                      |                          |
| 2612 | 7200  | CLA                  |                          |
| 2613 | 1021  | TAD K3777            | /CONSTANT TO BE INDEXED  |
| 2614 | 3017  | DCA 17               |                          |
| 2615 | 0417  | AND I 17             | /DO AUTO INDEX           |
| 2616 | 1017  | TAD 17               |                          |
| 2617 | 1021  | TAD K3777            | /AC SHOULD EQUAL 7777    |
| 2620 | 7040  | CMA                  |                          |
| 2621 | 7440  | SZA                  | /AC SHOULD BE ZERO       |
| 2622 | 7402  | HLT                  | /AUTO INDEX ERROR        |
|      |       |                      |                          |
|      |       | /AUTO INDEX TEST 112 |                          |
|      |       |                      |                          |
| 2623 | 7200  | CLA                  |                          |
| 2624 | 1020  | TAD K7777            | /CONSTANT TO BE INDEXED  |
| 2625 | 3017  | DCA 17               |                          |
| 2626 | 0417  | AND I 17             | /DO AUTO INDEX           |
| 2627 | 1017  | TAD 17               |                          |
| 2630 | 1020  | TAD K7777            | /AC SHOULD EQUAL 7777    |
| 2631 | 7040  | CMA                  |                          |
| 2632 | 7440  | SZA                  | /AC SHOULD BE ZERO       |
| 2633 | 7402  | HLT                  | /AUTO INDEX ERROR        |
|      |       |                      |                          |
|      |       | /AUTO INDEX TEST 113 |                          |
|      |       |                      |                          |
| 2634 | 5236  | JMP .+2              |                          |
| 2635 | 7402  | HLT                  | /JMP FAILED              |
| 2636 | 7410  | SKP                  | /JMP WORKED (A LITTLE)   |
| 2637 | 2644  | 2644                 |                          |
| 2640 | 1237  | TAD .-1              |                          |
| 2641 | 3010  | DCA 10               |                          |
| 2642 | 5410  | JMP I 10             | /TEST INSTRUCTION        |
| 2643 | 7402  | HLT                  | /JMP INDIRECT FAILED     |
| 2644 | 7402  | HLT                  | /LOCATION 2610. NO INDEX |
|      |       |                      | /IN DEFER STATE.         |



```

/INTERRUPT TEST 2
2723 6040      SPF          /SET PRINTER FLAG
2724 6041      TSF
2725 7402      HLT          /SPF FAILED TO SET PRINTER FLAG
2726 7200      CLA          /FLAG IS ON
2727 1335      TAD BACK3
2730 3002      DCA 2
2731 6001      ION
2732 1020      TAD K7777
2733 7402      HLT          /NO INTERRUPT
2734 2733      OUT3,      .-1
2735 2736      BACK3,     .+1
2736 7040      CMA          /RETURN FROM LOC1
2737 7440      SZA
2740 7402      HLT          /CONFIDENCE CHECK
                               /AC SHOULD BE 0

2741 1000      TAD 0
2742 7041      CIA
2743 1334      TAD OUT3
2744 7640      SZA CLA     /INTERRUPT ERROR
2745 7402      HLT          /WRONG ADDRESS STORED

/INTERRUPT TEST 3
2746 6040      SPF          /SET PRINTER FLAG
2747 6041      TSF
2750 7402      HLT          /SPF FAILED TO SET PRINTER FLAG
2751 7200      CLA          /FLAG IS ON
2752 1361      TAD BACK2
2753 3002      DCA 2
2754 1020      TAD K7777
2755 6001      ION
2756 0020      AND K7777
2757 7402      HLT          /NO INTERRUPT
2760 2757      OUT2,      .-1
2761 2762      BACK2,     .+1
2762 7040      CMA          /RETURN FROM LOC1
2763 7440      SZA
2764 7402      HLT          /CONFIDENCE CHECK
                               /AC SHOULD BE 0

2765 1000      TAD 0
2766 7041      CIA
2767 1360      TAD OUT2
2770 7640      SZA CLA     /INTERRUPT ERROR
2771 7402      HLT          /WRONG ADDRESS STORED

2772 5773      JMP I .+1
2773 3000      3000

3000          *3000
/INTERRUPT TEST 4
3000 6040      SPF          /SET PRINTER FLAG
3001 6041      TSF

```

|      |      |                        |                                 |
|------|------|------------------------|---------------------------------|
| 3002 | 7402 | HLT                    | /SPF FAILED TO SET PRINTER FLAG |
| 3003 | 7200 | CLA                    | /FLAG IS ON                     |
| 3004 | 1213 | TAD BACK4              |                                 |
| 3005 | 3002 | DCA 2                  |                                 |
| 3006 | 1020 | TAD K7777              |                                 |
| 3007 | 6001 | ION                    |                                 |
| 3010 | 3003 | DCA 3                  |                                 |
| 3011 | 7402 | HLT                    | /NO INTERRUPT                   |
| 3012 | 3011 | OUT4,<br>BACK4,<br>.-1 |                                 |
| 3013 | 3014 | .+1                    |                                 |
| 3014 | 7440 | SZA                    | /RETURN FROM LOC1               |
| 3015 | 7402 | HLT                    | /CONFIDENCE CHECK               |
|      |      |                        | /AC SHOULD BE ZERO              |
| 3016 | 1003 | TAD 3                  |                                 |
| 3017 | 7040 | CMA                    |                                 |
| 3020 | 7440 | SZA                    |                                 |
| 3021 | 7402 | HLT                    | /DCA PRIOR TO INTERRUPT         |
|      |      |                        | /FAILED                         |
| 3022 | 3003 | DCA 3                  |                                 |
| 3023 | 1000 | TAD 0                  |                                 |
| 3024 | 7041 | CIA                    |                                 |
| 3025 | 1212 | TAD OUT4               |                                 |
| 3026 | 7640 | SZA CLA                |                                 |
| 3027 | 7402 | HLT                    | /INTERRUPT ERROR                |
|      |      |                        | /WRONG ADDRESS STORED           |
|      |      | /INTERRUPT TEST 5      |                                 |
| 3030 | 6040 | SPF                    | /SET PRINTER FLAG               |
| 3031 | 6041 | TSF                    |                                 |
| 3032 | 7402 | HLT                    | /SPF FAILED TO SET PRINTER FLAG |
| 3033 | 7200 | CLA                    | /FLAG IS ON                     |
| 3034 | 1244 | TAD BACK5              |                                 |
| 3035 | 3002 | DCA 2                  |                                 |
| 3036 | 1035 | TAD K7776              |                                 |
| 3037 | 3003 | DCA 3                  |                                 |
| 3040 | 6001 | ION                    |                                 |
| 3041 | 2003 | ISZ 3                  |                                 |
| 3042 | 7402 | HLT                    | /NO INTERRUPT                   |
| 3043 | 3042 | OUT5,<br>BACK5,<br>.-1 |                                 |
| 3044 | 3045 | .+1                    |                                 |
| 3045 | 7440 | SZA                    | /RETURN FROM LOC1               |
| 3046 | 7402 | HLT                    | /CONFIDENCE CHECK               |
|      |      |                        | /AC SHOULD BE ZERO              |
| 3047 | 1003 | TAD 3                  |                                 |
| 3050 | 7040 | CMA                    |                                 |
| 3051 | 7440 | SZA                    |                                 |
| 3052 | 7402 | HLT                    | /ISZ PRIOR TO                   |
|      |      |                        | /INTERRUPT FAILED               |
| 3053 | 3003 | DCA 3                  |                                 |
| 3054 | 1000 | TAD 0                  |                                 |
| 3055 | 7041 | CIA                    |                                 |
| 3056 | 1243 | TAD OUT5               |                                 |
| 3057 | 7640 | SZA CLA                |                                 |
| 3060 | 7402 | HLT                    | /INTERRUPT ERROR                |



/WRONG ADDRESS STORED

```

/INTERRUPT TEST 6
3061 6040      SPF
3062 6041      TSF
3063 7402      HLT
3064 7200      CLA
3065 1276      TAD BACK6
3066 3002      DCA 2
3067 1020      TAD K7777
3070 3003      DCA 3
3071 6001      ION
3072 2003      ISZ 3
3073 7402      HLT
3074 7402      HLT
3075 3074      OUT6,  .-1
3076 3077      BACK6,  .+1
3077 7440      SZA
3100 7402      HLT
3101 1003      TAD 3
3102 7440      SZA
3103 7402      HLT
3104 3003      DCA 3
3105 1000      TAD 0
3106 7041      CIA
3107 1275      TAD OUT6
3110 7640      SZA CLA
3111 7402      HLT

/SET PRINTER FLAG
/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

/RETURN FROM LOC 1
/CONFIDENCE CHECK
/AC SHOULD BE ZERO

/ISZ PRIOR TO
/INTERRUPT FAILED

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

```

/INTERRUPT TEST 7
3112 6040      SPF
3113 6041      TSF
3114 7402      HLT
3115 7200      CLA
3116 1324      TAD BACK7
3117 3002      DCA 2
3120 6001      ION
3121 5321      JMP .
3122 7402      HLT
3123 3121      OUT7,  .-2
3124 3125      BACK7,  .+1
3125 7440      SZA
3126 7402      HLT
3127 1000      TAD 0
3130 7041      CIA
3131 1323      TAD OUT7
3132 7640      SZA CLA
3133 7402      HLT

/SET PRINTER FLAG
/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

/RETURN FROM LOC 1
/CONFIDENCE CHECK
/AC SHOULD BE 0

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

```

      /INTERRUPT TEST 8
3134 6040          SPF          /SET PRINTER FLAG
3135 6041          TSF
3136 7402          HLT          /SPF FAILED TO SET PRINTER FLAG
3137 7200          CLA          /FLAG IS ON
3140 1346          TAD BACK8
3141 3002          DCA 2
3142 6001          ION
3143 4003          JMS 3
3144 7402          HLT          /NO INTERRUPT
3145 3144          OUT8,      .-1
3146 3147          BACK8,    .+1
3147 7440          SZA          /RETURN FROM LOC 1
3150 7402          HLT          /CONFIDENCE CHECK
                                   /AC SHOULD BE ZERO

3151 1003          TAD 3
3152 7041          CIA
3153 1345          TAD OUT8
3154 7440          SZA
3155 7402          HLT          /JMS ERROR PRIOR
                                   /TO INTERRUPT WRONG
                                   /ADDRESS STORED

3156 1000          TAD 0
3157 7041          CIA
3160 1065          TAD K4
3161 7640          SZA CLA
3162 7402          HLT          /INTERRUPT ERROR
                                   /WRONG ADDRESS STORED

3163 5764          JMP I .+1
3164 3200          3200

      *3200
      /INTERRUPT TEST 9
3200 6040          SPF          /SET PRINTER FLAG
3201 6041          TSF
3202 7402          HLT          /SPF FAILED TO SET PRINTER FLAG
3203 7200          CLA          /FLAG IS ON
3204 1213          TAD BACK9
3205 3002          DCA 2
3206 1020          TAD K7777
3207 6001          ION
3210 7200          CLA
3211 7402          HLT          /NO INTERRUPT
3212 3211          OUT9,      .-1
3213 3214          BACK9,    .+1
3214 7440          SZA          /RETURN FROM LOC 1
3215 7402          HLT          /CLA PRIOR TO INTERRUPT
                                   /FAILED

3216 1000          TAD 0
3217 7041          CIA
3220 1212          TAD OUT9
3221 7640          SZA CLA

```

```

3222 7402          HLT          /INTERRUPT FAILED
                                   /WRONG ADDRESS STORED

                                   /INTERRUPT TEST 10
3223 6040          SPF          /SET PRINTER FLAG
3224 6041          TSF
3225 7402          HLT          /SPF FAILED TO SET PRINTER FLAG
3226 7200          CLA          /FLAG IS ON
3227 1236          TAD BACK10
3230 3002          DCA 2
3231 6001          ION
3232 6041          TSF
3233 7402          HLT          /NO INTERRUPT
3234 7402          HLT

3235 3234          OUT10, .-1
3236 3237          BACK10, .+1
3237 7440          SZA          /RETURN FROM LOC 1
3240 7402          HLT          /CONFIDENCE CHECK
                                   /AC SHOULD BE ZERO

3241 1000          TAD 0
3242 7041          CIA
3243 1235          TAD OUT10
3244 7640          SZA CLA
3245 7402          HLT          /INTERRUPT ERROR
                                   /WRONG ADDRESS STORED

                                   /INTERRUPT TEST 11
3246 6040          SPF          /SET PRINTER FLAG
3247 6041          TSF
3250 7402          HLT          /SPF FAILED TO SET PRINTER FLAG
3251 7200          CLA          /FLAG IS ON
3252 1311          TAD BACK11
3253 3002          DCA 2
3254 6001          ION
3255 6002          IOF
3256 6001          ION
3257 6002          IOF
3260 6001          ION
3261 6002          IOF
3262 6001          ION
3263 6002          IOF
3264 6001          ION
3265 6002          IOF
3266 6001          ION
3267 6002          IOF
3270 6001          ION
3271 6002          IOF
3272 6001          ION
3273 6002          IOF
3274 6001          ION
3275 6002          IOF
3276 6001          ION
3277 6002          IOF

```

```

3300 6001      ION
3301 6002      IOF
3302 6001      ION
3303 6002      IOF
3304 6001      ION
3305 6002      IOF

```

```

3306 6041      TSF
3307 7402      HLT
3310 7410      SKP
3311 3313      BACK11, .+2
3312 7410      SKP
3313 7402      HLT

```

/WHAT HAPPENED TO MY FLAG

```

/INTERRUPT OCCURRED DURING
/ION-IOF SEQUENCE
/SEE LOCATION 0000

```

/INTERRUPT TEST 12

```

3314 6042      TCF
3315 7200      CLA
3316 1326      TAD BACK12
3317 3002      DCA 2
3320 6001      ION
3321 7000      NOP
3322 7000      NOP
3323 7000      NOP
3324 7000      NOP
3325 7410      SKP
3326 3330      BACK12, .+2
3327 7410      SKP
3330 7402      HLT

```

/CLEAR FLAG

```

/INTERRUPT WITH NO
/FLAG.

```

3331 6002 IOF

/INTERRUPT TEST 13

```

3332 6040      SPF
3333 6041      TSF
3334 7402      HLT
3335 7200      CLA
3336 1345      TAD BAC13
3337 3002      DCA 2
3340 6001      ION
3341 7410      SKP
3342 7402      HLT
3343 7402      HLT
3344 3343      OUTT13, .-1
3345 3346      BAC13, .+1
3346 7440      SZA
3347 7402      HLT
3350 1000      TAD 0
3351 7041      CIA
3352 1344      TAD OUTT13
3353 7640      SZA CLA
3354 7402      HLT

```

/SPF FAILED TO SET PRINTER FLAG.

/NO INTERRUPT

```

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

```

/INTERRUPT TEST 14
3355 6040      SPF
3356 6041      TSF
3357 7402      HLT          /SPF FAILED TO SET PRINTER FLAG
3360 7200      CLA
3361 1370      TAD BAC14
3362 3002      DCA 2
3363 6001      ION
3364 5765      JMP I .+1
3365 3366      .+1
3366 7402      HLT          /NO INTERRUPT
3367 3366      OUTT14, .-1
3370 3371      BAC14, .+1
3371 7440      SZA
3372 7402      HLT
3373 1000      TAD 0
3374 7041      CIA
3375 1367      TAD OUTT14
3376 7640      SZA CLA
3377 7402      HLT          /INTERRUPT ERROR
                               /WRONG ADDRESS STORED

/INTERRUPT TEST 15.
3400 6007      CAF          /CLEAR THE WORLD
3401 1212      TAD BAC15    /GET RETURN INTERRUPT ADDRESS
3402 3002      DCA 2        /STORE IT IN ADDRESS 2
3403 6001      ION          /INTERRUPT ON
3404 7000      NOP          /
3405 6007      CAF          /CLEAR THE WORLD
3406 6040      SPF          /SET PAINTER FLAG.
3407 6000      SKON
3410 5213      JMP .+3      /
3411 7402      HLT          /CAF FAILED TO CLEAR ION
3412 3411      BAC15, .-1
3413 6007      CAF          /CLEAR FOR EXIT.
3414 5615      JMP I .+1
3415 3600      IAIT1

3600          PAGE

/ILLEGAL AUTO INDEX TEST1
3600 7200      IAIT1, CLA
3601 5602      JMP I .+1
3602 4000      AND1
3603 4010      K4010, 4010

4000          *4000
4000 0610      AND1, AND I 4010    /TEST INSTRUCTION
4001 5602      JMP I .+1
4002 3604      RET1

3604          *K4010+1
3604 1603      RET1, TAD I K4010
3605 7440      SZA

```

|      |      |             |                            |
|------|------|-------------|----------------------------|
| 3606 | 7402 | HLT         | /ERROR. AC SHOULD BE ZERO  |
|      |      |             | /AND I 4010 ALTERED (4010) |
| 3607 | 7200 | CLA         |                            |
| 3610 | 3603 | DCA I K4010 |                            |

/ILLEGAL AUTO INDEX TEST 2

|      |      |                   |                            |
|------|------|-------------------|----------------------------|
| 3611 | 7200 | CLA               |                            |
| 3612 | 5613 | JMP I .+1         |                            |
| 3613 | 2173 | AND2              |                            |
| 3614 | 2010 | K2010, 2010       |                            |
|      | 2173 | *2173             |                            |
| 2173 | 0610 | AND2, AND I 2010  | /TEST INSTRUCTION          |
| 2174 | 5775 | JMP I .+1         |                            |
| 2175 | 3615 | RET2              |                            |
|      | 3615 | *K2010+1          |                            |
| 3615 | 1614 | RET2, TAD I K2010 |                            |
| 3616 | 7440 | SZA               |                            |
| 3617 | 7402 | HLT               | /ERROR. AC SHOULD BE ZERO  |
|      |      |                   | /AND I 2010 ALTERED (2010) |
| 3620 | 5621 | JMP I .+1         |                            |
| 3621 | 3622 | AITST3            |                            |

/ILLEGAL AUTO INDEX TEST 3

|      |      |                   |                            |
|------|------|-------------------|----------------------------|
| 3622 | 7200 | AITST3, CLA       |                            |
| 3623 | 5624 | JMP I .+1         |                            |
| 3624 | 1173 | AND3              |                            |
| 3625 | 1010 | K1010, 1010       |                            |
|      | 1173 | *1173             |                            |
| 1173 | 0610 | AND3, AND I 1010  | /TEST INSTRUCTION          |
| 1174 | 5775 | JMP I .+1         |                            |
| 1175 | 3626 | RET3              |                            |
|      | 3626 | *K1010+1          |                            |
| 3626 | 1625 | RET3, TAD I K1010 |                            |
| 3627 | 7440 | SZA               |                            |
| 3630 | 7402 | HLT               | /ERROR. AC SHOULD BE ZERO  |
|      |      |                   | /AND I 1010 ALTERED (1010) |
| 3631 | 7200 | CLA               |                            |
| 3632 | 3625 | DCA I K1010       |                            |

/ILLEGAL AUTO INDEX TEST 4

|      |      |           |  |
|------|------|-----------|--|
| 3633 | 7200 | CLA       |  |
| 3634 | 5635 | JMP I .+1 |  |
| 3635 | 0574 | AND4      |  |
| 3636 | 0410 | K410, 410 |  |
|      | 0574 | *574      |  |

|      |      |         |            |                           |
|------|------|---------|------------|---------------------------|
| 0574 | 0610 | AND4,   | AND I 410  | /TEST INSTRUCTION         |
| 0575 | 5776 |         | JMP I .+1  |                           |
| 0576 | 3637 |         | RET4       |                           |
|      | 3637 | *K410+1 |            |                           |
| 3637 | 1636 | RET4,   | TAD I K410 |                           |
| 3640 | 7440 |         | SZA        |                           |
| 3641 | 7422 |         | HLT        | /ERROR. AC SHOULD BE ZERO |
|      |      |         |            | /AND I 410 ALTERED (410)  |
| 3642 | 7200 |         | CLA        |                           |
| 3643 | 3636 |         | DCA I K410 |                           |

## /ILLEGAL AUTO INDEX TEST 5

|      |      |         |            |                           |
|------|------|---------|------------|---------------------------|
| 3644 | 7200 |         | CLA        |                           |
| 3645 | 5646 |         | JMP I .+1  |                           |
| 3646 | 0372 |         | AND5       |                           |
| 3647 | 0210 | K210,   | 210        |                           |
|      | 0371 | *371    |            |                           |
| 0371 | 5375 |         | JMP .+4    |                           |
| 0372 | 0610 | AND5,   | AND I 210  | /TEST INSTRUCTION         |
| 0373 | 5774 |         | JMP I .+1  |                           |
| 0374 | 3650 |         | RET5       |                           |
|      | 3650 | *K210+1 |            |                           |
| 3650 | 1647 | RET5,   | TAD I K210 |                           |
| 3651 | 7440 |         | SZA        |                           |
| 3652 | 7402 |         | HLT        | /ERROR. AC SHOULD BE ZERO |
|      |      |         |            | /AND I 210 ALTERED (210)  |
| 3653 | 7200 |         | CLA        |                           |
| 3654 | 3647 |         | DCA I K210 |                           |

## /ILLEGAL AUTO INDEX TEST 6

|      |      |         |            |                           |
|------|------|---------|------------|---------------------------|
| 3655 | 7200 |         | CLA        |                           |
| 3656 | 0657 |         | JMP I .+1  |                           |
| 3657 | 0130 |         | AND6       |                           |
| 3660 | 0110 | K110,   | 110        |                           |
|      | 0130 | *130    |            |                           |
| 0130 | 0510 | AND6,   | AND I 110  | /TEST INSTRUCTION         |
| 0131 | 5532 |         | JMP I .+1  |                           |
| 0132 | 3661 |         | RET6       |                           |
|      | 3661 | *K110+1 |            |                           |
| 3661 | 1660 | RET6,   | TAD I K110 |                           |
| 3662 | 7440 |         | SZA        |                           |
| 3663 | 7402 |         | HLT        | /ERROR. AC SHOULD BE ZERO |
|      |      |         |            | /AND I 110 ALTERED (110)  |
| 3664 | 7200 |         | CLA        |                           |
| 3665 | 3110 |         | DCA 110    |                           |

/ILLEGAL AUTO INDEX TEST 7

|      |      |        |           |   |
|------|------|--------|-----------|---|
| 3666 | 7200 |        | CLA       |   |
| 3667 | 5670 |        | JMP I .+1 |   |
| 3670 | 0124 |        | AND7      |   |
| 3671 | 0050 | K50,   | 50        |   |
|      | 0124 | *124   |           |   |
| 0124 | 0450 | AND7,  | AND I 50  | /TEST INSTRUCTION                                   |
| 0125 | 5526 |        | JMP I .+1 |   |
| 0126 | 3672 |        | RET7      |   |
|      | 3672 | *K50+1 |           |   |
| 3672 | 1671 | RET7,  | TAD I K50 |   |
| 3673 | 7440 |        | SZA       |   |
| 3674 | 7402 |        | HLT       | /ERROR. AC SHOULD BE ZERO<br>/AND I 50 ALTERED (50) |
| 3675 | 7200 |        | CLA       |   |
| 3676 | 3050 |        | DCA 50    |   |

/ILLEGAL AUTO INDEX TEST 8

|      |      |        |           |   |
|------|------|--------|-----------|---|
| 3677 | 7200 |        | CLA       |   |
| 3700 | 5701 |        | JMP I .+1 |   |
| 3701 | 0120 |        | AND8      |   |
| 3702 | 0030 | K30,   | 30        |   |
|      | 0120 | *120   |           |   |
| 0120 | 0430 | AND8,  | AND I 30  | /TEST INSTRUCTION                                   |
| 0121 | 5522 |        | JMP I .+1 |   |
| 0122 | 3703 |        | RET8      |   |
|      | 3703 | *K30+1 |           |   |
| 3703 | 1702 | RET8,  | TAD I K30 |   |
| 3704 | 7440 |        | SZA       |   |
| 3705 | 7402 |        | HLT       | /ERROR. AC SHOULD BE ZERO<br>/AND I 30 ALTERED (30) |
| 3706 | 7200 |        | CLA       |   |
| 3707 | 3030 |        | DCA 30    |   |

/ILLEGAL AUTO INDEX TEST 9

|      |      |         |           |                   |
|------|------|---------|-----------|-------------------|
| 3710 | 7200 |         | CLA       |                   |
| 3711 | 3000 |         | DCA 0     |                   |
| 3712 | 5713 |         | JMP I .+1 |                   |
| 3713 | 0074 | IAITS9, | AND9      |                   |
|      | 0074 | *74     |           |                   |
| 0074 | 0400 | AND9,   | AND I 0   | /TEST INSTRUCTION |
| 0075 | 5476 |         | JMP I .+1 |                   |
| 0076 | 3714 |         | RET9      |                   |



```

3714 3714 *IAITS9+1
3714 1436 RET9, TAD I K0
3715 7440 SZA
3716 7402 HLT /ERROR, AC SHOULD BE ZERO
/AND I 0 ALTERED (0)

3717 7200 CLA
3720 3000 DCA 0

```

## /ILLEGAL AUTO INDEX TEST 10

```

3721 7200 CLA
3722 5723 JMP I .+1
3723 0070 IAIT10, AND10

0070 0070 *70
0070 0407 AND10, AND I 7 /TEST INSTRUCTION
0071 5472 JMP I .+1
0072 3724 RET10

```

```

3724 *IAIT10+1

3724 1446 RET10, TAD I K0007
3725 7440 SZA
3726 7402 HLT /ERROR, AC SHOULD BE ZERO
/AND I 7 ALTERED (7)

3727 7200 CLA
3730 3007 DCA 7

```

## /CHECK FOR TTY BELL

```

3731 1347 TAD BLCNT
3732 7001 IAC
3733 3347 DCA BLCNT
3734 1347 TAD BLCNT
3735 1350 TAD RNCNT
3736 7640 SZA CLA
3737 5746 JMP I K200
3740 3347 DCA BLCNT
3741 1351 TAD BELCOD
3742 6046 TFS
3743 6041 TSF
3744 5343 JMP .-1
3745 5746 JMP I .+1
3746 0200 K200, 200
3747 0000 BLCNT, 0
3750 4762 RNCNT, -3016
3751 0207 BELCOD, 207

```

```

4010 4010 *4010
4010 0000 0

4011 0000 STR, 0
4012 1220 TAD JMP IX
4013 3001 DCA 1

```

```

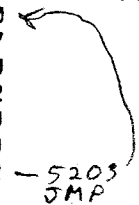
4014 3002      DCA 2
4015 3003      DCA 3
4016 2211      ISZ STR
4017 5611      JMP I STR
4020 5402      JMPIX, 5402
    
```

```

          /PROCESSOR IOT TEST
4200 4200      PAGE
4200 7300      PIOTST, CLA CLL
4201 4602      JMS I ,+1
4202 4011      STR
    
```

```

          /PROCESSOR IOT TEST 1
4203 7360      CLA CMA CLL CML
4204 6007      CAF
4205 7410      SKP
4206 7402      HLT
4207 7420      SNL
4210 7440      SZA
4211 7402      HLT
    
```



```

          /PROCESSOR IOT TEST 2
4212 6040      SPF
4213 7410      SKP
4214 7402      HLT
4215 6041      TSF
4216 7402      HLT
4217 6007      CAF
4220 6041      TSF
4221 7410      SKP
4222 7402      HLT
4223 6003      SRQ
4224 7410      SKP
4225 7402      HLT
    
```

```

          /PROCESSOR IOT TEST 3
4226 6007      CAF
4227 6040      SPF
4230 6003      SRQ
4231 7402      HLT
    
```

```

          /PROCESSOR IOT TEST 4
4232 6007      CAF
4233 6035      KIE
4234 7410      SKP
4235 7402      HLT
4236 6040      SPF
4237 6041      TSF
4240 7402      HLT
4241 6003      SRQ
4242 7410      SKP
4243 7402      HLT
    
```

/CLEAR ALL FLAGS, AC, AND LINK

/CAF SHOULD NOT SKIP

/CAF FAILED, AC AND LINK SHOULD BE ZERO

/SET PRINTER FLAG

/SPF SHOULD NOT SKIP

/SPF OR TSF FAILED

/CLEAR ALL FLAGS, AC, AND LINK

/CAF FAILED, TTY FLAG SHOULD BE CLEAR

/SKIP IF INTERRUPT REQUEST

/SRQ FAILED OR SPURIOUS INTERRUPT OCCURED

/CLEAR ALL FLAGS, AC, LINK, AND ENABLE TTY INTERRUPT

/SET PRINTER FLAG

/SKIP IF INTERRUPT REQUEST

/SRQ FAILED OR CAF FAILED TO ENABLE TTY INTERRUPT

/CLEAR ALL FLAGS, AC, AND LINK

/DISABLE TTY INTERRUPT, (AC 11 EQUALS ZERO)

/KIE SHOULD NOT SKIP

/SET PRINTER FLAG

/SPF OR TSF FAILED

/SKIP IF INTERRUPT REQUEST

/KIE FAILED TO DISABLE TTY INTERRUPT OR SRQ FAILED

```

/PROCESSOR IOT TEST 5
4244 7201          CLA IAC
4245 6035          KIE
4246 6040          SPF
4247 6041          TSF
4250 7402          HLT
4251 6003          SRQ
4252 7402          HLT
/ENABLE TTY INTERRUPT (AC11 IS SET)
/SET PRINTER FLAG
/SPF OR TSF FAILED
/SKIP IF INTERRUPT REQUEST
/KIE FAILED TO ENABLE TTY INTERRUPT OR SRQ FAILED

/PROCESSOR IOT TEST 6
4253 6007          CAF
4254 1267          TAD      BACK13
4255 3002          DCA      2
4256 6001          ION
4257 7410          SKP
4260 7402          HLT
4261 6000          SKON
4262 7402          HLT
4263 6000          SKON
4264 7410          SKP
4265 7402          HLT
4266 5271          JMP      .+3
4267 4270          BACK13, .+1
4270 7402          HLT
/TURN INTERRUPT ON
/ION SHOULD NOT SKIP
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/SKON FAILED TO SKIP OR ION FAILED
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/SKON FAILED
/ILLEGAL INTERRUPT OCCURRED

/PROCESSOR IOT TEST 7
4271 6007          CAF
4272 1304          TAD BACK14
4273 3002          DCA 2
4274 6001          ION
4275 6002          IOF
4276 7410          SKP
4277 7402          HLT
4300 6000          SKON
4301 7410          SKP
4302 7402          HLT
4303 5306          JMP      .+3
4304 4305          BACK14, .+1
4305 7402          HLT
/TURN INTERRUPT ON
/TURN INTERRUPT OFF
/IOF SHOULD NOT SKIP
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/IOF FAILED
/ILLEGAL INTERRUPT OCCURED

/PROCESSOR IOT TEST 8
4306 6007          CAF
4307 7040          CMA
4310 6004          GTF
4311 7410          SKP
4312 7402          HLT
4313 0064          AND K5200
4314 7440          SZA
4315 7402          HLT
/CLEAR ALL FLAGS, AC, AND LINK
/GET INTERRUPT FLAGS
/GTF SHOULD NOT SKIP
/MASK
/GTF FAILED, (AC SHOULD EQUAL 0000)

/PROCESSOR IOT TEST 9
4316 7360          CLA CMA CLL CML
4317 6004          GTF
/SET LINK AND AC
/GET INTERRUPT FLAGS, (AC SHOULD EQUAL 4000)

```

|      |      |           |                       |
|------|------|-----------|-----------------------|
| 4320 | 7420 | SNL       |                       |
| 4321 | 7402 | HLT       |                       |
| 4322 | 0064 | AND K5200 | /LINK SHOULD BE 1     |
| 4323 | 7104 | CLL RAL   | /MASK                 |
| 4324 | 7430 | SZL       | /AC SHOULD EQUAL ZERO |
| 4325 | 7440 | SZA       |                       |
| 4326 | 7402 | HLT       | /GTF FAILED           |

/PROCESSOR IOT TEST 10

|      |      |           |  |   |
|------|------|-----------|--|---|
| 4327 | 6007 | CAF       |  | /CLEAR ALL FLAGS, (AC, LINK, AND ENABLE TTY INTERRUPT |
| 4330 | 6040 | SPF       |  | /SET PRINTER FLAG                                     |
| 4331 | 6004 | GTF       |  | /GET INTERRUPT FLAGS, (AC SHOULD EQUAL 1000)          |
| 4332 | 0064 | AND K5200 |  | /MASK   |
| 4333 | 7006 | RTL       |  | /PUT INTERRUPT BUS- (AC SHOULD EQUAL 4000)            |
| 4334 | 7004 | RAL       |  | /FLAG INTO LINK, (AC SHOULD EQUAL ZERO)               |
| 4335 | 7430 | SZL       |  |   |
| 4336 | 7440 | SZA       |  |   |
| 4337 | 7402 | HLT       |  | /GTF FAILED TO GET INTERRUPT BUS FLAG                 |

/PROCESSOR IOT TEST 11

|      |      |             |        |  |
|------|------|-------------|--------|--|
| 4340 | 6007 | CAF         |        | /CLEAR ALL FLAGS                             |
| 4341 | 1356 | TAD         | BACK15 |  |
| 4342 | 3002 | DCA         | 2      |  |
| 4343 | 6001 | ION         |        | /TURN INTERRUPT ON                           |
| 4344 | 6004 | GTF         |        | /GET INTERRUPT FLAGS, (AC SHOULD EQUAL 0200) |
| 4345 | 0064 | AND K5200   |        | /MASK  |
| 4346 | 6000 | SKON        |        | /SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF |
| 4347 | 7402 | HLT         |        | /GTF CLEARED INTERRUPT (ION)                 |
| 4350 | 7102 | CLL BSW     |        | /PUT INTERRUPT BUS- (AC SHOULD EQUAL 0002)   |
| 4351 | 7012 | RTR         |        | /FLAG INTO LINK, (AC SHOULD EQUAL ZERO)      |
| 4352 | 7430 | SZL         |        |  |
| 4353 | 7440 | SZA         |        |  |
| 4354 | 7402 | HLT         |        | /GTF FAILED TO GET INTERRUPT FLAG ←          |
| 4355 | 5360 | JMP         | .,+3   |  |
| 4356 | 4357 | BACK15, .+1 |        |  |
| 4357 | 7402 | HLT         |        | /ILLEGAL INTERRUPT OCCURED                   |

/PROCESSOR IOT TEST 12

|      |      |             |        |  |
|------|------|-------------|--------|--|
| 4360 | 7320 | CLA CLL CML |        | /RESTORE ALL FLAGS                           |
| 4361 | 1375 | TAD         | BACK16 |  |
| 4362 | 3002 | DCA         | 2      |  |
| 4363 | 6005 | RTF         |        | /RTF SHOULD NOT SKIP                         |
| 4364 | 7410 | SKP         |        | /LINK SHOULD BE ZERO                         |
| 4365 | 7402 | HLT         |        | /AC EQUALS ZERO                              |
| 4366 | 7420 | SNL         |        | /RTF FAILED, LINK AND AC SHOULD BE ZERO      |
| 4367 | 7440 | SZA         |        | /SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF |
| 4370 | 7402 | HLT         |        | /RTF FAILED TO TURN INTERRUPT ON             |
| 4371 | 6000 | SKON        |        |  |
| 4372 | 7402 | HLT         |        |  |
| 4373 | 5774 | JMP I       | .,+1   |  |
| 4374 | 4400 | PTST14      |        |  |
| 4375 | 4376 | BACK16, .+1 |        |  |
| 4376 | 7402 | HLT         |        | /ILLEGAL INTERRUPT OCCURED                   |

5340

7402

```

4400 6007 /PROCESSOR IOT TEST 13
4401 1215 PTST14, CAF
4402 3002 TAD BACK17
4403 7330 DCA 2
4404 6005 CLA CLL CML RAR /AC EQUALS 4000
4405 7420 RTF /RESTORE ALL FLAGS
4406 7402 SNL
4407 6000 HLT /RTF FAILED TO RESTORE LINK
4410 7402 SKON /SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
4411 6007 HLT /RTF FAILED TO TURN INTERRUPT ON
4412 7300 CAF /CLEAR ALL FLAGS, AC, LINK, AND ENABLE TTY INTERRUPT
4413 5614 CLA CLL
4414 2677 JMP I .+1 /GO TO INTERRUPT TESTS
4415 4416 BACK17, .+1
4416 7402 HLT /ILLEGAL INTERRUPT OCCURED

```

5

|      |          |          |          |          |          |          |          |          |
|------|----------|----------|----------|----------|----------|----------|----------|----------|
| 0000 | 11110001 | 00000000 | 11111111 | 11111111 | 11111111 | 11111111 | 11111100 | 11101110 |
| 0100 | 00000000 | 10000000 | 11101110 | 11100000 | 00000000 | 00000000 | 00000000 | 00111111 |
| 0200 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 0300 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 0400 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 0500 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 0600 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 0700 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1000 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1100 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1200 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1300 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1400 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1500 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1600 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 1700 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2000 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2100 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2200 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2300 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2400 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2500 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2600 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 2700 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11110000 |
| 3000 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 3100 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111000 | 00000000 |
| 3200 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 3300 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 3400 | 11111111 | 11111100 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 |
| 3500 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 |
| 3600 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 3700 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11000000 | 00000000 | 00000000 |

|      |          |          |          |          |          |          |          |          |
|------|----------|----------|----------|----------|----------|----------|----------|----------|
| 4000 | 11100000 | 11111111 | 10000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 |
| 4100 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 |
| 4200 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 |
| 4300 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111111 | 11111110 |
| 4400 | 11111111 | 11111110 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 |
| 4500 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 | 00000000 |

4600  
4700

5000  
5100

5200  
5300

5400  
5500

5600  
5700

6000  
6100

6200  
6300

6400  
6500

6600  
6700

7000  
7100

7200  
7300

7400  
7500

7600  
7700

|        |      |        |      |        |      |
|--------|------|--------|------|--------|------|
| AITST3 | 3622 | K1010  | 3625 | OUTT14 | 3367 |
| AND1   | 4000 | K110   | 3660 | PIOTST | 4200 |
| AND10  | 0070 | K1111  | 0062 | PTST14 | 4400 |
| AND2   | 2173 | K1234  | 0177 | RET1   | 3604 |
| AND3   | 1173 | K172   | 0173 | RET10  | 3724 |
| AND4   | 0574 | K173   | 0174 | RET2   | 3615 |
| AND5   | 0372 | K174   | 0175 | RET3   | 3626 |
| AND6   | 0130 | K175   | 0176 | RET4   | 3637 |
| AND7   | 0124 | K176   | 0172 | RET5   | 3650 |
| AND8   | 0120 | K1777  | 0037 | RET6   | 3661 |
| AND9   | 0074 | K200   | 3746 | RET7   | 3672 |
| BAC13  | 3345 | K2010  | 3614 | RET8   | 3703 |
| BAC14  | 3370 | K210   | 3647 | RET9   | 3714 |
| BAC15  | 3412 | K2525  | 0054 | RNGCNT | 3750 |
| BACK1  | 2713 | K30    | 3702 | RTF    | 6005 |
| BACK10 | 3236 | K3777  | 0021 | SKON   | 6000 |
| BACK11 | 3311 | K4     | 0065 | SPF    | 6040 |
| BACK12 | 3326 | K4010  | 3603 | SRQ    | 6003 |
| BACK13 | 4267 | K410   | 3636 | STR    | 4011 |
| BACK14 | 4304 | K4400  | 0052 | TP0    | 0202 |
| BACK15 | 4356 | K4444  | 0056 | TP177  | 0377 |
| BACK16 | 4375 | K4577  | 0053 |        |      |
| BACK17 | 4415 | K50    | 3671 |        |      |
| BACK2  | 2761 | K5200  | 0064 |        |      |
| BACK3  | 2735 | K5252  | 0061 |        |      |
| BACK4  | 3013 | K5555  | 0063 |        |      |
| BACK5  | 3044 | K5777  | 0022 |        |      |
| BACK6  | 3076 | K6666  | 0055 |        |      |
| BACK7  | 3124 | K6777  | 0023 |        |      |
| BACK8  | 3146 | K7070  | 0057 |        |      |
| BACK9  | 3213 | K7377  | 0024 |        |      |
| BELCOD | 3751 | K7577  | 0025 |        |      |
| BLCNT  | 3747 | K7677  | 0026 |        |      |
| BSW    | 7002 | K7737  | 0027 |        |      |
| CAF    | 6007 | K7757  | 0031 |        |      |
| GTF    | 6004 | K7767  | 0032 |        |      |
| IAIT1  | 3600 | K7773  | 0033 |        |      |
| IAIT10 | 3723 | K7775  | 0034 |        |      |
| IAITS9 | 3713 | K7776  | 0035 |        |      |
| INTEST | 2677 | K7777  | 0020 |        |      |
| JMPIX  | 4020 | KIE    | 6035 |        |      |
| K0     | 0036 | OUT1   | 2712 |        |      |
| K0001  | 0051 | OUT10  | 3235 |        |      |
| K0003  | 0047 | OUT2   | 2760 |        |      |
| K0007  | 0046 | OUT3   | 2734 |        |      |
| K0017  | 0045 | OUT4   | 3012 |        |      |
| K0037  | 0044 | OUT5   | 3043 |        |      |
| K0077  | 0043 | OUT6   | 3075 |        |      |
| K0177  | 0042 | OUT7   | 3123 |        |      |
| K0377  | 0041 | OUT8   | 3145 |        |      |
| K0707  | 0060 | OUT9   | 3212 |        |      |
| K0777  | 0040 | OUTT13 | 3344 |        |      |



ERRORS DETECTED: 0

LINKS GENERATED: 0

RUN-TIME: 20 SECCNDS

2K CORE USED