

IDENTIFICATION

Product Code: MAINDEC-8I-D02B-D
Product Name: Instruction Test 2
Date Created: March 21, 1968
Maintainer: Diagnostic Group
Author: H. Horowitz

1. ABSTRACT

This program is an extensive test of autoindexing, indirect addressing, and the DCA instruction for the PDP-8I. It also offers minimal testing for interrupt and the AND, TAD, ISZ, JMP and JMS instructions.

2. REQUIREMENTS

2.1 Equipment

PDP-8I, 8S equipped with Teletype

2.2 Storage

The program occupies memory locations 0000-4021. The Binary Loader must be stored in the last memory page.

2.3 Preliminary Programs

It is assumed that Maindec 8I-D01(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

201

4.3 Operator Action

- a. Set the SWITCH REGISTER to 201. Press LOAD ADDRESS.
- b. PUSH START. 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 START button will clear their flags and no FLAGS will turn on unless authorized.

8. MISCELLANEOUS

8.1 Execution Time

Five program loops per second.

9. PROGRAM DESCRIPTION

The program is a series of many small individual tests. Each test is performed using previously checked functions 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. 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

5. Check for unauthorized Autoindexing

At the completion of 40 program loops the bell rings to assure the operator that the program is functioning properly.

10. LISTING

/INSTRUCTION TEST 2

| | | | | |
|------|------|--------|-------|--------|
| 0000 | 0000 | *0 | | |
| 0001 | 5001 | | 0 | /LOC 0 |
| 0002 | 0002 | | JMP 1 | /LOC 1 |
| 0003 | 0003 | | 2 | /LOC 2 |
| | | | 3 | /LOC 3 |
| 0007 | 0007 | *7 | | |
| 0007 | 0000 | | 0 | |
| 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 | 5252 | K5555, | 5252 | |
| 0064 | 0004 | K4, | 4 | |

| | | | | |
|------|------|--------|------|----------|
| | 0110 | *110 | | |
| | 0000 | | 0 | |
| | 0172 | *172 | | |
| 0172 | 0176 | K176, | 176 | /LOC 172 |
| 0173 | 0172 | K172, | 174 | /173 |
| 0174 | 0173 | K173, | 173 | /174 |
| 0175 | 0174 | K174, | 174 | /175 |
| 0176 | 0175 | K175, | 172 | /176 |
| 0177 | 1234 | K1234, | 12*4 | /177 |

0200 0200
0200 0000

*200
TP0, 0

/DCA TEST 1

0201 7200
0202 1052
0203 3377
0204 7440
0205 7402
0206 1052
0207 7410
0210 0000
0211 7041
0212 1377
0213 7440
0214 7402

CLA
TAD K4400
DCA TP177
SZA
HLT
TAD K4400
SKP
0
CI
TAD TP177
SZA
HLT

/DCA DID NOT CLEAR AC

/AC=- (4400)

/DCA FAILED
/AC SHOULD EQUAL ZERO

/DCA TEST 2

0215 7200
0216 1053
0217 3200
0220 7440
0221 7402
0222 1053
0223 7041
0224 1200
0225 7440
0226 7402

CLA
TAD K4577
DCA TP0
SZA
HLT
TAD K4577
CI
TAD TP0
SZA
HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD EQUAL ZERO

/DCA TEST 3

0227 7200
0230 1020
0231 3200
0232 7440
0233 7402
0234 1200
0235 7040
0236 7440
0237 7402

CLA
TAD K7777
DCA TP0
SZA
HLT
TAD TP0
CMA
SZA
HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 4

0240 7200
0241 1036
0242 3200
0243 7440
0244 7402
0245 1200

CLA
TAD K0
DCA TP0
SZA
HLT
TAD TP0

/DCA DID NOT CLEAR AC

0246 7440
0247 7402

SZA
HLT

/UCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 5

| | | | |
|------|------|-----|-----------------------------------|
| 0250 | 7200 | CLA | |
| 0251 | 1054 | TAD | K2525 |
| 0252 | 3200 | DC | TP0 |
| 0253 | 7440 | SZA | |
| 0254 | 7402 | HLT | /DCA DID NOT CLEAR AC |
| 0255 | 1054 | TAU | K2525 |
| 0256 | 7041 | CIA | |
| 0257 | 1200 | TAU | TP0 |
| 0260 | 7440 | SZA | |
| 0261 | 7402 | HLT | /DCA FAILED /AC SHOULD BE ZERO |

/DCA TEST 6

| | | | |
|------|------|-----|-----------------------------------|
| 0262 | 7200 | CLA | |
| 0263 | 1055 | TAD | K6666 |
| 0264 | 3200 | DC | TP0 |
| 0265 | 7440 | SZA | |
| 0266 | 7402 | HLT | /DCA DID NOT CLEAR AC |
| 0267 | 1055 | TAD | K6666 |
| 0270 | 7041 | CIA | |
| 0271 | 1200 | TAU | TP0 |
| 0272 | 7440 | SZA | |
| 0273 | 7402 | HLT | /DCA FAILED /AC SHOULD BE ZERO |

/DCA TEST 7

| | | | |
|------|------|-----|-----------------------------------|
| 0274 | 7200 | CLA | |
| 0275 | 1056 | TAD | K4444 |
| 0276 | 3377 | DC | TP177 |
| 0277 | 7440 | SZA | |
| 0300 | 7402 | HLT | /DCA DID NOT CLEAR AC |
| 0301 | 1056 | TAU | K4444 |
| 0302 | 7041 | CIA | |
| 0303 | 1377 | TAU | TP177 |
| 0304 | 7440 | SZA | |
| 0305 | 7402 | HLT | /DCA FAILED /AC SHOULD BE ZERO |

/DCA TEST 8

| | | | |
|------|------|-----|-----------------------|
| 0306 | 7200 | CLA | |
| 0307 | 1057 | TAD | K7070 |
| 0310 | 3377 | DC | TP177 |
| 0311 | 7440 | SZA | |
| 0312 | 7402 | HLT | /DCA DID NOT CLEAR AC |
| 0313 | 1057 | TAU | K7070 |
| 0314 | 7041 | CIA | |
| 0315 | 1377 | TAU | TP177 |
| 0316 | 7440 | SZA | |
| 0317 | 7402 | HLT | /DCA FAILED |

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/AC SHOULD BE ZERO

/DCA TEST 9

| | | | |
|------|------|-----|-----------------------|
| 0320 | 7200 | CLA | |
| 0321 | 1060 | TAD | K0707 |
| 0322 | 3000 | DCA | 0 |
| 0323 | 7440 | SZ | |
| 0324 | 7402 | HLI | /DCA DID NOT CLEAR AC |
| 0325 | 1060 | TAD | K0707 |
| 0326 | 7041 | CIA | |
| 0327 | 1000 | TA | 0 |
| 0330 | 7440 | SZA | |
| 0331 | 7402 | HLI | /DCA FAILED |

/AC SHOULD BE ZERO

/DCA TEST 10

| | | | |
|------|------|-----|-----------------------|
| 0332 | 7200 | CLA | |
| 0333 | 1061 | TAD | K5252 |
| 0334 | 3000 | DCA | 0 |
| 0335 | 7440 | SZA | |
| 0336 | 7402 | HLI | /DCA DID NOT CLEAR AC |
| 0337 | 1061 | TAD | K5252 |
| 0340 | 7041 | CIA | |
| 0341 | 1000 | TA | 0 |
| 0342 | 7440 | SZA | |
| 0343 | 7402 | HLI | /DCA FAILED |

/AC SHOULD BE ZERO

/DCA TEST 11

| | | | |
|------|------|-----|-----------------------|
| 0344 | 7200 | CLA | |
| 0345 | 1062 | TAD | K1111 |
| 0346 | 3000 | DCA | 0 |
| 0347 | 7440 | SZA | |
| 0350 | 7402 | HLI | /DCA DID NOT CLEAR AC |
| 0351 | 1062 | TAD | K1111 |
| 0352 | 7041 | CIA | |
| 0353 | 1000 | TA | 0 |
| 0354 | 7440 | SZA | |
| 0355 | 7402 | HLI | /DCA FAILED |

/AC SHOULD BE ZERO

/DCA TEST 12

| | | | |
|------|------|-----|-----------------------|
| 0356 | 7200 | CLA | |
| 0357 | 1063 | TAD | K5555 |
| 0360 | 3000 | DCA | 0 |
| 0361 | 7440 | SZA | |
| 0362 | 7402 | HLI | /DCA DID NOT CLEAR AC |
| 0363 | 1063 | TAD | K5555 |
| 0364 | 7041 | CIA | |
| 0365 | 1000 | TA | 0 |
| 0366 | 7440 | SZA | |
| 0367 | 7402 | HLI | /DCA FAILED |

/AC SHOULD BE ZERO

0370 7000
0371 7000
0372 7000
0373 7000
0374 7000
0375 7000
0376 7410
0377 0000

TP177,

NOP
NOP
NOP
NOP
NOP
NOP
SKP
0

0400

*400

/INDIRECT ADDRESSING TEST 1

0400 7200
 0401 1442
 0402 7041
 0403 1177
 0404 7440
 0405 7402

CLA
 TAU I K0177 /OPERAND=1234
 CIA
 TAU K1234
 SZA
 HLI /TAD INDIRECT FAILED
 /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 2

0406 7200
 0407 7410
 0410 0000
 0411 1020
 0412 0442
 0413 7041
 0414 1177
 0415 7440
 0416 7402

CL*
 SKP
 0
 TAU K7777
 ANW I K0177 /OPERAND=1234
 CIA
 TAU K1234
 SZA
 HLT /AND INDIRECT FAILED
 /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 3

0417 7200
 0420 1020
 0421 3000
 0422 2436
 0423 7402
 0424 1000
 0425 7440
 0426 7402

CL*
 TAU K7777
 DCA 0
 ISB I K0
 HLT /ISZ FAILED, NO SKIP
 TAD 0
 SZA
 HLT /ISZ INDIRECT FAILED
 /AC SHOULD BE 0

/INDIRECT ADDRESSING TEST 4

0427 7200
 0430 1572
 0431 7041
 0432 1176
 0433 7440
 0434 7402

CLA
 TAU I K176 /OPERAND=175
 CIA
 TAU K175
 SZA
 HLT /TAD INDIRECT FAILED
 /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 5

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

/INDIRECT ADDRESSING TEST 6

| | | | |
|------|------|----------|--|
| 0444 | 7200 | CLA | |
| 0445 | 1172 | TAU 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 | TAU K176 | |
| 0455 | 7040 | GMA | |
| 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 | TAU K176 | |
| 0464 | 7440 | SZA | |
| 0465 | 7402 | HLT | /TAD INDIRECT FAILED /AC SHOULD BE ZERO |

/INDIRECT ADDRESSING TEST 8

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

/INDIRECT ADDRESSING TEST 9

| | | | |
|------|------|----------|--|
| 0475 | 7200 | CLA | |
| 0476 | 1173 | TAD K172 | |
| 0477 | 3000 | DC 0 | |
| 0500 | 2436 | ISZ I K0 | |
| 0501 | 7410 | SKP | |
| 0502 | 7402 | HLT | /ISZ 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 /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 /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 | ISZ I K0 | |
| 0532 | 7410 | SKP | |
| 0533 | 7402 | HLT | /ISZ SKIPPED ILLEGALLY |
| 0534 | 1000 | TAD 0 | |
| 0535 | 7041 | CIA | |
| 0536 | 1174 | TAD K173 | |
| 0537 | 7040 | CMA | |
| 0540 | 7440 | SZA | |
| 0541 | 7402 | HLT | /DCA INDIRECT FAILED /AC SHOULD BE ZERO |

/INDIRECT ADDRESSING TEST 13

| | | | |
|------|------|------------|--|
| 0542 | 7200 | CLA | |
| 0543 | 1575 | TAU I K174 | /OPERAND=173 |
| 0544 | 7041 | CIA | |
| 0545 | 1174 | TAU K173 | |
| 0546 | 7440 | SZA | |
| 0547 | 7402 | HLT | /TAD INDIRECT FAILED /AC SHOULD BE ZERO |

/INDIRECT ADDRESSING TEST 14

| | | | |
|------|------|------------|----------------------|
| 0550 | 7200 | CLA | |
| 0551 | 1020 | TAU K7777 | |
| 0552 | 0575 | AND I K174 | /OPERAND=173 |
| 0553 | 7041 | CIA | |
| 0554 | 1174 | TAU K173 | |
| 0555 | 7440 | SZA | /AND INDIRECT FAILED |
| 0556 | 7402 | HLI | /AC SHOULD BE ZERO |

/INDIRECT ADDRESSING TEST 15

| | | | |
|------|------|----------|--|
| 0557 | 7200 | CLA | |
| 0560 | 1175 | TAL K174 | |
| 0561 | 3000 | DCA 0 | |
| 0562 | 2436 | IS# I K0 | |
| 0563 | 7410 | SKH | |
| 0564 | 7402 | HLT | /ISZ SKIPPED ILLEGALLY |
| 0565 | 1000 | TAU 0 | |
| 0566 | 7041 | CIA | |
| 0567 | 1175 | TAU K174 | |
| 0570 | 7040 | CM | |
| 0571 | 7440 | SZA | |
| 0572 | 7402 | HLI | /DCA INDIRECT FAILED /AC SHOULD BE ZERO |
| 0573 | 5377 | JMP ,+4 | |
| 0574 | 7000 | NOH | |
| 0575 | 7000 | NOH | |
| 0576 | 7000 | NOH | |
| 0577 | 7000 | NOH | |

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 | SZ* | |
| 0605 | 7402 | HLT | /TAD INDIRECT FAILED /AC SHOULD BE ZERO |

/AUTO INDEX TEST 1

| | | | |
|------|------|-----------|-------------------------|
| 0606 | 7200 | CLA* | |
| 0607 | 1036 | TAU K0 | /CONSTANT TO BE INDEXED |
| 0610 | 3010 | DCA 10 | |
| 0611 | 0410 | ANU I 10 | /DO AUTO INDEX |
| 0612 | 1010 | TAU 10 | |
| 0613 | 1035 | TAD K7776 | /AC SHOULD EQUAL 7777 |
| 0614 | 7040 | CMA | |
| 0615 | 7440 | SZ* | /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 | ANU I 10 | /DO AUTO INDEX |
| 0623 | 1010 | TAU 10 | |
| 0624 | 1036 | TAD K0 | /AC SHOULD EQUAL 7777 |
| 0625 | 7040 | CMA | |
| 0626 | 7440 | SZ* | /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 | TAU 10 | |
| 0635 | 1051 | TAU K0001 | /AC SHOULD EQUAL 7777 |
| 0636 | 7040 | CMA | |
| 0637 | 7440 | SZ* | /AC SHOULD BE ZERO |
| 0640 | 7402 | HLT | /AUTO INDEX ERROR |

/AUTO INDEX TEST 4

| | | | |
|------|------|-----------|-------------------------|
| 0641 | 7200 | CLA | |
| 0642 | 1033 | TAU K7773 | /CONSTANT TO BE INDEXED |
| 0643 | 3010 | DC 10 | |
| 0644 | 1410 | TAD I 10 | /DO AUTO INDEX |
| 0645 | 7200 | CLA | |
| 0646 | 1010 | TAU 10 | |

0647 1047
0650 7040
0651 7440
0652 7402

TAV K0003
CMA
SEA
HLT

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 5

| | | | |
|------|------|-----------|-------------------------|
| 0653 | 7200 | CLA | |
| 0654 | 1032 | TAU K7767 | /CONSTANT TO BE INDEXED |
| 0655 | 3010 | DCA 10 | |
| 0656 | 0410 | AND I 10 | /DO AUTO INDEX |
| 0657 | 1010 | TAU 10 | |
| 0660 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777 |
| 0661 | 7040 | CMA | |
| 0662 | 7440 | SZA | /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 | TAU 10 | |
| 0671 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777 |
| 0672 | 7040 | CMA | |
| 0673 | 7440 | SZA | /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 | TAU 10 | |
| 0702 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777 |
| 0703 | 7040 | CMA | |
| 0704 | 7440 | SZA | /AC SHOULD BE ZERO |
| 0705 | 7402 | HLT | /AUTO INDEX ERROR |

/AUTO INDEX TEST 8

| | | | |
|------|------|-----------|-------------------------|
| 0706 | 7200 | CLA | |
| 0707 | 1026 | TAU K7677 | /CONSTANT TO BE INDEXED |
| 0710 | 3010 | DCA 10 | |
| 0711 | 0410 | AND I 10 | /DO AUTO INDEX |
| 0712 | 1010 | TAU 10 | |
| 0713 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777 |
| 0714 | 7040 | CMA | |
| 0715 | 7440 | SZA | /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 | TAU K0177 | /AC SHOULD EQUAL 7777 |
| 0725 | 7040 | CMA | |
| 0726 | 7440 | SZA | /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 | SZA | /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 | SZA | /AC SHOULD BE ZERO |
| 0751 | 7402 | HLT | /AUTO INDEX ERROR |

/AUTO INDEX TEST 12

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

/AUTO INDEX TEST 13

0764 7200
0765 1021
0766 3010
0767 0410
0770 1010
0771 1021
0772 7040
0773 7440
0774 7402
0775 7000
0776 7000
0777 7000

CLA
TAD K3777
DCA 10
AND I 10
TAD 10
TAU K3777
CMA
SZA
HLI
NOP
NOP
NOP

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO

/AUTO INDEX ERROR

```

1000
*1000
/AUTO INDEX TEST 14

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

```

```

/AUTO INDEX TEST 15

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

```

```

/AUTO INDEX TEST 16

1024 7200          CLA
1025 1035          TAU K7776          /CONSTANT TO BE INDEXED
1026 3011          DCA 11
1027 0411          AND I 11          /DO AUTO INDEX
1030 1011          TAU 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 | TA K7775 | /CONSTANT TO BE INDEXED |
| 1037 | 3011 | DCA 11 | |
| 1040 | 3411 | DCA I 11 | /DO AUTO INDEX |
| 1041 | 1011 | TAW 11 | |
| 1042 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777 |
| 1043 | 7040 | CMA | |
| 1044 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1045 | 7402 | HLI | /AUTO INDEX ERROR |

| | | | |
|------|------|---------------------|-------------------------|
| | | /AUTO INDEX TEST 18 | |
| 1046 | 7200 | CLA | |
| 1047 | 1033 | TAW K7773 | /CONSTANT TO BE INDEXED |
| 1050 | 3011 | DCA 11 | |
| 1051 | 1411 | TAP 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 | HLI | /AUTO INDEX ERROR |

| | | | |
|------|------|---------------------|-------------------------|
| | | /AUTO INDEX TEST 19 | |
| 1060 | 7200 | CLA | |
| 1061 | 1032 | TAW K7767 | /CONSTANT TO BE INDEXED |
| 1062 | 3011 | DCA 11 | |
| 1063 | 0411 | AND I 11 | /DO AUTO INDEX |
| 1064 | 1011 | TA 11 | |
| 1065 | 1046 | TAD K0007 | |
| 1066 | 7040 | CMA | |
| 1067 | 7440 | SZ | /AC SHOULD BE ZERO |
| 1070 | 7402 | HLI | /AUTO INDEX ERROR |

| | | | |
|------|------|---------------------|-------------------------|
| | | /AUTO INDEX TEST 20 | |
| 1071 | 7200 | CLA | |
| 1072 | 1031 | TAW 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 | HLI | /AUTO INDEX ERROR |

```

/AUTO INDEX TEST 21
1102 7200      CLA
1103 1027      TAD K7757          /CONSTANT TO BE INDEXED
1104 3011      DC* 11
1105 0411      AND I 11          /DO AUTO INDEX
1106 1011      TAD 11
1107 1044      TA K0057          /AC SHOULD EQUAL 7777
1110 7040      CMA
1111 7440      SZA          /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      TA 11
1120 1043      TAD K0077          /AC SHOULD EQUAL 7777
1121 7040      CMA
1122 7440      SZA          /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      SZA          /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      SZA          /AC SHOULD BE ZERO
1145 7402      HLT          /AUTO INDEX ERROR

```



```

/AUTO INDEX TEST 25
1146 7200      CL#
1147 1023      TAN K0777      /CONSTANT TO BE INDEXED
1150 3011      DCA 11
1151 0411      AND I 11      /DO AUTO INDEX
1152 1011      TAN 11
1153 1040      TAN K0777      /AC SHOULD EQUAL 7777
1154 7040      CM#
1155 7440      SZA      /AC SHOULD BE ZERO
1156 7402      HLI      /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 26
1157 7200      CLA
1160 1022      TAD K5777      /CONSTANT TO BE INDEXED
1161 3011      DCA 11
1162 2411      ISZ I 11      /DO AUTO INDEX
1163 7000      NOP
1164 1011      TA 11
1165 1037      TAD K1777      /AC SHOULD EQUAL 7777
1166 7040      CMA
1167 7440      SZA      /AC SHOULD BE ZERO
1170 7402      HLI      /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

| | | | |
|------|------|-----------|-------------------------|
| 1200 | 7200 | CL | |
| 1201 | 1021 | TA- K3777 | /CONSTANT TO BE INDEXED |
| 1202 | 3011 | DCA 11 | |
| 1203 | 0411 | AND I 11 | /DO AUTO INDEX |
| 1204 | 1011 | TAU 11 | |
| 1205 | 1021 | 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 | TAU K7777 | /CONSTANT TO BE INDEXED |
| 1213 | 3011 | DC* 11 | |
| 1214 | 0411 | AND I 11 | /DO AUTO INDEX |
| 1215 | 1011 | TAU 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 | TAU K0 | /CONSTANT TO BE INDEXED |
| 1224 | 3012 | DCA 12 | |
| 1225 | 0412 | AND I 12 | /DO AUTO INDEX |
| 1226 | 1012 | TAD 12 | |
| 1227 | 1035 | TAU 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 | TAU K7776 | /CONSTANT TO BE INDEXED |
| 1235 | 3012 | DCA 12 | |
| 1236 | 0412 | AND I 12 | /DO AUTO INDEX |
| 1237 | 1012 | TAD 12 | |
| 1240 | 1036 | TAU 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 | TAW 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 | TAW K7773 | /CONSTANT TO BE INDEXED |
| 1257 | 3012 | DCA 12 | |
| 1260 | 1412 | TAW I 12 | /DO AUTO INDEX |
| 1261 | 7200 | CLA | |
| 1262 | 1012 | TAW 12 | |
| 1263 | 1047 | TAW 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 | TAW K7767 | /CONSTANT TO BE INDEXED |
| 1271 | 3012 | DCA 12 | |
| 1272 | 0412 | AND I 12 | /DO AUTO INDEX |
| 1273 | 1012 | TAD 12 | |
| 1274 | 1046 | TAW 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     TAW K0017      /AC SHOULD EQUAL 7777
1306 7040     CMA
1307 7440     SZA      /AC SHOULD BE ZERO
1310 7402     HLT      /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 35
1311 7200      CLM
1312 1027     TAD K7737      /CONSTANT TO BE INDEXED
1313 3012     DCA 12
1314 0412     AND I 12      /DO AUTO INDEX
1315 1012     TAW 12
1316 1044     TAD K0037      /AC SHOULD EQUAL 7777
1317 7040     CMA
1320 7440     SZA      /AC SHOULD BE ZERO
1321 7402     HLT      /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 36
1322 7200      CLA
1323 1026     TAW K7677      /CONSTANT TO BE INDEXED
1324 3012     DCA 12
1325 0412     AND I 12      /DO AUTO INDEX
1326 1012     TAD 12
1327 1043     TAW K0077      /AC SHOULD EQUAL 7777
1330 7040     CMA
1331 7440     SZA      /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     TAW K0177      /AC SHOULD EQUAL 7777
1341 7040     CMA
1342 7440     SZA      /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 | DC* 12 | |
| 1347 | 0412 | AND I 12 | /DO AUTO INDEX |
| 1350 | 1012 | TAU 12 | |
| 1351 | 1041 | TAW K0377 | /AC SHOULD EQUAL 7777 |
| 1352 | 7040 | CMA | |
| 1353 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1354 | 7402 | HL | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 39 | |
| 1355 | 7200 | CLA | |
| 1356 | 1023 | TAU K6777 | /CONSTANT TO BE INDEXED |
| 1357 | 3012 | DC* 12 | |
| 1360 | 0412 | AND I 12 | /DO AUTO INDEX |
| 1361 | 1012 | TA 12 | |
| 1362 | 1040 | TAW K0777 | /AC SHOULD EQUAL 7777 |
| 1363 | 7040 | CMA | |
| 1364 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1365 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 40 | |
| 1366 | 7200 | CL | |
| 1367 | 1022 | TAD K5777 | /CONSTANT TO BE INDEXED |
| 1370 | 3012 | DCA 12 | |
| 1371 | 2412 | IS* I 12 | /DO AUTO INDEX |
| 1372 | 7000 | NOP | |
| 1373 | 1012 | TAU 12 | |
| 1374 | 1037 | TAD K1777 | /AC SHOULD EQUAL 7777 |
| 1375 | 7040 | CMA | |
| 1376 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1377 | 7402 | HLI | /AUTO INDEX ERROR |

| | | | |
|------|------|---------------------|-------------------------|
| | 1400 | *1400 | |
| | | /AUTO INDEX TEST 41 | |
| 1400 | 7200 | CL* | |
| 1401 | 1021 | TAD K3777 | /CONSTANT TO BE INDEXED |
| 1402 | 3012 | DC* 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 | SZA | /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 | SZA | /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 | SZA | /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 | TAU K7773 | /CONSTANT TO BE INDEXED |
| 1457 | 3013 | DCA 13 | |
| 1460 | 1413 | TAD I 13 | /DO AUTO INDEX |
| 1461 | 7200 | CLA | |
| 1462 | 1013 | TAU 13 | |
| 1463 | 1047 | TAD K0003 | /AC SHOULD EQUAL 7777 |
| 1464 | 7040 | CMA | |
| 1465 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1466 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 47 | |
| 1467 | 7200 | CLA | |
| 1470 | 1032 | TAU 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 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 48 | |
| 1500 | 7200 | CLA | |
| 1501 | 1031 | TAU K7757 | /CONSTANT TO BE INDEXED |
| 1502 | 3013 | DCA 13 | |
| 1503 | 0413 | AND I 13 | /DO AUTO INDEX |
| 1504 | 1013 | TA 13 | |
| 1505 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777 |
| 1506 | 7040 | CMA | |
| 1507 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1510 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /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 | TAU 13 | |
| 1516 | 1044 | TAD K0037 | /AC SHOULD EQUAL 7777 |
| 1517 | 7040 | CMA | |
| 1520 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1521 | 7402 | HLI | /AUTO INDEX ERROR |

| | | | |
|------|------|---------------------|-------------------------|
| | | /AJTO INDEX TEST 50 | |
| 1522 | 7200 | CLA | |
| 1523 | 1026 | TAD K7677 | /CONSTANT TO BE INDEXED |
| 1524 | 3013 | DC 13 | |
| 1525 | 0413 | AND I 13 | /DD AUTO INDEX |
| 1526 | 1013 | TAU 13 | |
| 1527 | 1043 | TAU K0077 | /AC SHOULD EQUAL 7777 |
| 1530 | 7040 | CM# | |
| 1531 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1532 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AJTO INDEX TEST 51 | |
| 1533 | 7200 | CLA | |
| 1534 | 1025 | TAD K7577 | /CONSTANT TO BE INDEXED |
| 1535 | 3013 | DCA 13 | |
| 1536 | 0413 | AND I 13 | /DD AUTO INDEX |
| 1537 | 1013 | TAU 13 | |
| 1540 | 1042 | TAU K0177 | /AC SHOULD EQUAL 7777 |
| 1541 | 7040 | CM# | |
| 1542 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1543 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AJTO INDEX TEST 52 | |
| 1544 | 7200 | CLA | |
| 1545 | 1024 | TAU K7377 | /CONSTANT TO BE INDEXED |
| 1546 | 3013 | DC# 13 | |
| 1547 | 0413 | AND I 13 | /DD AUTO INDEX |
| 1550 | 1013 | TAU 13 | |
| 1551 | 1041 | TAU K0377 | /AC SHOULD EQUAL 7777 |
| 1552 | 7040 | CM# | |
| 1553 | 7440 | SZ | /AC SHOULD BE ZERO |
| 1554 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AJTO INDEX TEST 53 | |
| 1555 | 7200 | CLA | |
| 1556 | 1023 | TAD K6777 | /CONSTANT TO BE INDEXED |
| 1557 | 3013 | DC# 13 | |
| 1560 | 0413 | AND I 13 | /DD AUTO INDEX |
| 1561 | 1013 | TAU 13 | |
| 1562 | 1040 | TAU K0777 | /AC SHOULD EQUAL 7777 |
| 1563 | 7040 | CM# | |
| 1564 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1565 | 7402 | HLT | /AUTO INDEX ERROR |

| | | | |
|------|------|-----|-------------------------------|
| 1566 | 7200 | CLA | |
| 1567 | 1022 | TAU | K0777 /CONSTANT TO BE INDEXED |
| 1570 | 3013 | DC* | 13 |
| 1571 | 2413 | ISE | I 13 /DO AUTO INDEX |
| 1572 | 7000 | NO* | |
| 1573 | 1013 | TAU | 13 |
| 1574 | 1037 | TAU | K1777 /AC SHOULD EQUAL 7777 |
| 1575 | 7040 | CM* | |
| 1576 | 7440 | SZ* | /AC SHOULD BE ZERO |
| 1577 | 7402 | HLI | /AUTO INDEX ERROR |

| | | | |
|------|------|---------------------|-------------------------|
| | 1600 | *1600 | |
| | | /AJTO INDEX TEST 55 | |
| 1500 | 7200 | CLA | |
| 1501 | 1021 | TAU K3777 | /CONSTANT TO BE INDEXED |
| 1502 | 3013 | DCA 13 | |
| 1503 | 0413 | AND I 13 | /DO AUTO INDEX |
| 1504 | 1013 | TA- 13 | |
| 1505 | 1021 | TAD K3777 | /AC SHOULD EQUAL 7777 |
| 1506 | 7040 | CM^ | |
| 1507 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1510 | 7402 | HLT | /AJTO INDEX ERROR |
| | | /AUTO INDEX TEST 56 | |
| | | CLA | |
| 1611 | 7200 | TAN K7777 | /CONSTANT TO BE INDEXED |
| 1612 | 1020 | DC^ 13 | |
| 1613 | 3013 | AND I 13 | /DO AUTO INDEX |
| 1614 | 0413 | TAD 13 | |
| 1615 | 1013 | TAD K7777 | /AC SHOULD EQUAL 7777 |
| 1616 | 1020 | CM^ | |
| 1617 | 7040 | SZA | /AC SHOULD BE ZERO |
| 1620 | 7440 | HLT | /AUTO INDEX ERROR |
| 1621 | 7402 | | |
| | | /AUTO INDEX TEST 57 | |
| | | CLA | |
| 1622 | 7200 | TAN K0 | /CONSTANT TO BE INDEXED |
| 1623 | 1036 | DCA 14 | |
| 1624 | 3014 | AND I 14 | /DO AUTO INDEX |
| 1625 | 0414 | TA- 14 | |
| 1626 | 1014 | TAD K7776 | /AC SHOULD EQUAL 7777 |
| 1627 | 1035 | CM^ | |
| 1630 | 7040 | SZA | /AC SHOULD BE ZERO |
| 1631 | 7440 | HLT | /AUTO INDEX ERROR |
| 1632 | 7402 | | |

```

/AUTO INDEX TEST 58
1633 7200          CLA
1634 1035          TAU K7776          /CONSTANT TO BE INDEXED
1635 3014          DCA 14
1636 0414          ANU I 14          /DO AUTO INDEX
1637 1014          TAU 14
1640 1036          TAD K0          /AC SHOULD EQUAL 7777
1641 7040          CM
1642 7440          SZA          /AC SHOULD BE ZERO
1643 7402          HLT          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 59
1644 7200          CLA
1645 1034          TAU K7775          /CONSTANT TO BE INDEXED
1646 3014          DCA 14
1647 3414          DCA I 14          /DO AUTO INDEX
1650 1014          TAU 14
1651 1051          TAU K0001          /AC SHOULD EQUAL 7777
1652 7040          CMA
1653 7440          SZA          /AC SHOULD BE ZERO
1654 7402          HLT          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 60
1655 7200          CLA
1656 1033          TAU K7773          /CONSTANT TO BE INDEXED
1657 3014          DCA 14
1660 1414          TAU I 14          /DO AUTO INDEX
1661 7200          CLA
1662 1014          TAU 14
1663 1047          TAD K0003          /AC SHOULD EQUAL 7777
1664 7040          CMA
1665 7440          SZA          /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          ANU I 14          /DO AUTO INDEX
1673 1014          TAU 14
1674 1046          TAD K0007          /AC SHOULD EQUAL 7777
1675 7040          CMA
1676 7440          SZA          /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 | TAP 14 | |
| 1705 | 1045 | TAU K0017 | /AC SHOULD EQUAL 7777 |
| 1706 | 7040 | CMA | |
| 1707 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1710 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 63 | |
| 1711 | 7200 | CLA | |
| 1712 | 1027 | TAU K7737 | /CONSTANT TO BE INDEXED |
| 1713 | 3014 | DCB 14 | |
| 1714 | 0414 | AND I 14 | /DO AUTO INDEX |
| 1715 | 1014 | TAD 14 | |
| 1716 | 1044 | TAU K0037 | /AC SHOULD EQUAL 7777 |
| 1717 | 7040 | CMA | |
| 1720 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1721 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 64 | |
| 1722 | 7200 | CLA | |
| 1723 | 1026 | TAU K7677 | /CONSTANT TO BE INDEXED |
| 1724 | 3014 | DCA 14 | |
| 1725 | 0414 | AND I 14 | /DO AUTO INDEX |
| 1726 | 1014 | TA 14 | |
| 1727 | 1043 | TAD K0077 | /AC SHOULD EQUAL 7777 |
| 1730 | 7040 | CMA | |
| 1731 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1732 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 65 | |
| 1733 | 7200 | CLA | |
| 1734 | 1025 | TAU K7577 | /CONSTANT TO BE INDEXED |
| 1735 | 3014 | DCB 14 | |
| 1736 | 0414 | AND I 14 | /DO AUTO INDEX |
| 1737 | 1014 | TAP 14 | |
| 1740 | 1042 | TAU K0177 | /AC SHOULD EQUAL 7777 |
| 1741 | 7040 | CMA | |
| 1742 | 7440 | SZA | /AC SHOULD BE ZERO |
| 1743 | 7402 | HLI | /AUTO INDEX ERROR |

```
1744 7200 /AUTO INDEX TEST 66
1745 1024 CLA
1746 3014 TAD K7377 /CONSTANT TO BE INDEXED
1747 0414 DCA 14
1750 1014 ANW I 14 /DO AUTO INDEX
1751 1041 TAP 14
1752 7040 TAD K0377 /AC SHOULD EQUAL 7777
1753 7440 CMA
1754 7402 SZA /AC SHOULD BE ZERO
HLT /AUTO INDEX ERROR
```

```
1755 7200 /AUTO INDEX TEST 67
1756 1023 CLA
1757 3014 TAD K6777 /CONSTANT TO BE INDEXED
1760 0414 DCA 14
1761 1014 ANW I 14 /DO AUTO INDEX
1762 1040 TAU 14
1763 7040 TAD K0777 /AC SHOULD EQUAL 7777
1764 7440 CMA
1765 7402 SZA /AC SHOULD BE ZERO
HLT /AUTO INDEX ERROR
```

```
1766 7200 /AUTO INDEX TEST 68
1767 1022 CLA
1770 3014 TAD K5777 /CONSTANT TO BE INDEXED
1771 2414 DCA 14
1772 7000 ISR I 14 /DO AUTO INDEX
1773 1014 NO
1774 1037 TAU 14
1775 7040 TAD K1777 /AC SHOULD EQUAL 7777
1776 7440 CMA
1777 7402 SZA /AC SHOULD BE ZERO
HLT /AUTO INDEX ERROR
```

| | | | |
|------|------|---------------------|-------------------------|
| 2000 | | *2000 | |
| | | /AUTO INDEX TEST 69 | |
| 2000 | 7200 | CLA | |
| 2001 | 1021 | TA- K3777 | /CONSTANT TO BE INDEXED |
| 2002 | 3014 | DCA 14 | |
| 2003 | 0414 | AND I 14 | /DO AUTO INDEX |
| 2004 | 1014 | TAD 14 | |
| 2005 | 1021 | TAU K3777 | /AC SHOULD EQUAL 7777 |
| 2006 | 7040 | CMA | |
| 2007 | 7410 | SK- | |
| 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 | TAU K7777 | /CONSTANT TO BE INDEXED |
| 2015 | 3014 | DC- 14 | |
| 2016 | 0414 | AND I 14 | /DO AUTO INDEX |
| 2017 | 1014 | TAD 14 | |
| 2020 | 1020 | TAU 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 | TAU K0 | /CONSTANT TO BE INDEXED |
| 2026 | 3015 | DCA 15 | |
| 2027 | 0415 | AND I 15 | /DO AUTO INDEX |
| 2030 | 1015 | TAD 15 | |
| 2031 | 1035 | TA K7776 | /AC SHOULD EQUAL 7777 |
| 2032 | 7040 | CMA | |
| 2033 | 7440 | SZ | /AC SHOULD BE ZERO |
| 2034 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 72 | |
| 2035 | 7200 | CLA | |
| 2036 | 1035 | TAC K7776 | /CONSTANT TO BE INDEXED |
| 2037 | 3015 | DCA 15 | |
| 2040 | 0415 | AND I 15 | /DO AUTO INDEX |
| 2041 | 1015 | TAD 15 | |
| 2042 | 1036 | TAU K0 | /AC SHOULD EQUAL 7777 |
| 2043 | 7040 | CMA | |
| 2044 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2045 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 73 | |
| 2046 | 7200 | CLA | |
| 2047 | 1034 | TAU K7775 | /CONSTANT TO BE INDEXED |
| 2050 | 3015 | DC 15 | |
| 2051 | 3415 | DCA I 15 | /DO AUTO INDEX |
| 2052 | 1015 | TA- 15 | |
| 2053 | 1051 | TAU K0001 | /AC SHOULD EQUAL 7777 |

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2054 7040
2055 7440
2056 7402

CMA
SZ
HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

| | | | |
|------|------|---------------------|-------------------------|
| | | /AUTO INDEX TEST 74 | |
| 2057 | 7200 | CLA | |
| 2060 | 1033 | TAU K7773 | /CONSTANT TO BE INDEXED |
| 2061 | 3015 | DCA 15 | |
| 2062 | 1415 | TAD I 15 | /DO AUTO INDEX |
| 2063 | 7200 | CLA | |
| 2064 | 1015 | TAU 15 | |
| 2065 | 1047 | TA- K0003 | /AC SHOULD EQUAL 7777 |
| 2066 | 7040 | CMA | |
| 2067 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2070 | 7402 | HLT | /AUTO INDEX ERROR |
| | | | |
| | | /AUTO INDEX TEST 75 | |
| 2071 | 7200 | CLA | |
| 2072 | 1032 | TAU K7767 | /CONSTANT TO BE INDEXED |
| 2073 | 3015 | DCA 15 | |
| 2074 | 0415 | AND I 15 | /DO AUTO INDEX |
| 2075 | 1015 | TAU 15 | |
| 2076 | 1046 | TAD K0007 | /AC SHOULD EQUAL 7777 |
| 2077 | 7040 | CM* | |
| 2100 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2101 | 7402 | HLT | /AUTO INDEX ERROR |
| | | | |
| | | /AUTO INDEX TEST 76 | |
| 2102 | 7200 | CLA | |
| 2103 | 1031 | TAU K7757 | /CONSTANT TO BE INDEXED |
| 2104 | 3015 | DCA 15 | |
| 2105 | 0415 | AND I 15 | /DO AUTO INDEX |
| 2106 | 1015 | TAU 15 | |
| 2107 | 1045 | TAU K0017 | /AC SHOULD EQUAL 7777 |
| 2110 | 7040 | CM* | |
| 2111 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2112 | 7402 | HLT | /AUTO INDEX ERROR |
| | | | |
| | | /AUTO INDEX TEST 77 | |
| 2113 | 7200 | CLA | |
| 2114 | 1027 | TAU K7737 | /CONSTANT TO BE INDEXED |
| 2115 | 3015 | DCA 15 | |
| 2116 | 0415 | AND I 15 | /DO AUTO INDEX |
| 2117 | 1015 | TAU 15 | |
| 2120 | 1044 | TAU 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     ANW I 15      /DO AUTO INDEX
2130 1015     TAD 15
2131 1043     TAD K0077      /AC SHOULD EQUAL 7777
2132 7040     CMA
2133 7440     SZ      /AC SHOULD BE ZERO
2134 7402     HLT      /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 79
2135 7200      CLA
2136 1025     TAW K7577      /CONSTANT TO BE INDEXED
2137 3015     DCA 15
2140 0415     AND I 15      /DO AUTO INDEX
2141 1015     TAW 15
2142 1042     TAD K0177      /AC SHOULD EQUAL 7777
2143 7040     CMA
2144 7440     SZ*      /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     ANW I 15      /DO AUTO INDEX
2152 1015     TAU 15
2153 1041     TAW 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     TAW K6777      /CONSTANT TO BE INDEXED
2161 3015     DCA 15
2162 0415     ANW I 15      /DO AUTO INDEX
2163 1015     TAW 15
2164 1040     TAU 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 | TA# K5777 | /CONSTANT TO BE INDEXED |
| 2202 | 3015 | DC# 15 | |
| 2203 | 2415 | IS# I 15 | /DO AUTO INDEX |
| 2204 | 7000 | NO# | |
| 2205 | 1015 | TA# 15 | |
| 2206 | 1037 | TA# K1777 | /AC SHOULD EQUAL 7777 |
| 2207 | 7040 | CM# | |
| 2210 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2211 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 83 | |
| 2212 | 7200 | CLA | |
| 2213 | 1021 | TA# K3777 | /CONSTANT TO BE INDEXED |
| 2214 | 3015 | DC# 15 | |
| 2215 | 0415 | AN# I 15 | /DO AUTO INDEX |
| 2216 | 1015 | TA# 15 | |
| 2217 | 1021 | TA# K3777 | /AC SHOULD EQUAL 7777 |
| 2220 | 7040 | CM# | |
| 2221 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2222 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 84 | |
| 2223 | 7200 | CL# | |
| 2224 | 1020 | TA# K7777 | /CONSTANT TO BE INDEXED |
| 2225 | 3015 | DC# 15 | |
| 2226 | 0415 | AN# I 15 | /DO AUTO INDEX |
| 2227 | 1015 | TA# 15 | |
| 2230 | 1020 | TA# K7777 | /AC SHOULD EQUAL 7777 |
| 2231 | 7040 | CM# | |
| 2232 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2233 | 7402 | HL# | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 85 | |
| 2234 | 7200 | CLA | |
| 2235 | 1036 | TA# K0 | /CONSTANT TO BE INDEXED |
| 2236 | 3016 | DC# 16 | |
| 2237 | 0416 | AN# I 16 | /DO AUTO INDEX |
| 2240 | 1016 | TA# 16 | |
| 2241 | 1035 | TA# K7776 | /AC SHOULD EQUAL 7777 |
| 2242 | 7040 | CM# | |
| 2243 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2244 | 7402 | HLT | /AUTO INDEX ERROR |

```

/AUTO INDEX TEST 86
2245 7200          CLA
2246 1035          TAU K7776          /CONSTANT TO BE INDEXED
2247 3016          DCA 16
2250 0416          ANU I 16          /DO AUTO INDEX
2251 1016          TAU 16
2252 1036          TAU 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          TA K7775          /CONSTANT TO BE INDEXED
2260 3016          DCA 16
2261 3416          DCA I 16          /DO AUTO INDEX
2262 1016          TAU 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          CL
2270 1033          TAU K7773          /CONSTANT TO BE INDEXED
2271 3016          DCA 16
2272 1416          TAD I 16          /DO AUTO INDEX
2273 7200          CLA
2274 1016          TAU 16
2275 1047          TAU 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          TA K7767          /CONSTANT TO BE INDEXED
2303 3016          DCA 16
2304 0416          ANU 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          TAU K7757          /CONSTANT TO BE INDEXED
2314 3016          DCA 16
2315 0416          AND I 16          /DO AUTO INDEX
2316 1016          TA 16
2317 1045          TAD K0017          /AC SHOULD EQUAL 7777
2320 7040          CMA

```

| | | | |
|---------------------|------|-----------|-------------------------|
| 2321 | 7440 | SEA | /AC SHOULD BE ZERO |
| 2322 | 7402 | HLT | /AUTO INDEX ERROR |
| /AUTO INDEX TEST 91 | | | |
| 2323 | 7200 | CLA | |
| 2324 | 1027 | TAU K7737 | /CONSTANT TO BE INDEXED |
| 2325 | 3016 | DCA 16 | |
| 2326 | 0416 | AND I 16 | /DO AUTO INDEX |
| 2327 | 1016 | TAU 16 | |
| 2330 | 1044 | TAV K0037 | /AC SHOULD EQUAL 7777 |
| 2331 | 7040 | CMA | |
| 2332 | 7440 | SEA | /AC SHOULD BE ZERO |
| 2333 | 7402 | HLT | /AUTO INDEX ERROR |
| /AUTO INDEX TEST 92 | | | |
| 2334 | 7200 | CLA | |
| 2335 | 1026 | TAU K7677 | /CONSTANT TO BE INDEXED |
| 2336 | 3016 | DCA 16 | |
| 2337 | 0416 | AND I 16 | /DO AUTO INDEX |
| 2340 | 1016 | TAU 16 | |
| 2341 | 1043 | TAV K0077 | /AC SHOULD EQUAL 7777 |
| 2342 | 7040 | CMA | |
| 2343 | 7440 | SEA | /AC SHOULD BE ZERO |
| 2344 | 7402 | HLT | /AUTO INDEX ERROR |
| /AUTO INDEX TEST 93 | | | |
| 2345 | 7200 | CLA | |
| 2346 | 1025 | TAU K7577 | /CONSTANT TO BE INDEXED |
| 2347 | 3016 | DC 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 | SEA | /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      ANP I 16        /DO AUTO INDEX
2362 1016      TAD 16
2363 1041      TAW K0377       /AC SHOULD EQUAL 7777
2364 7040      CMA
2365 7440      SZ              /AC SHOULD BE ZERO
2366 7402      HLT             /AUTO INDEX ERROR
```

```
                /AUTO INDEX TEST 95
2367 7200      CLA
2370 1023      TAW K6777       /CONSTANT TO BE INDEXED
2371 3016      DCA 16
2372 0416      ANP I 16        /DO AUTO INDEX
2373 1016      TAD 16
2374 1040      TAW K0777       /AC SHOULD EQUAL 7777
2375 7040      CMA
2376 7440      SZ              /AC SHOULD BE ZERO
2377 7402      HLT             /AUTO INDEX ERROR
```

PAUSE

/TEST 2 - TAPE 3

2400

*2400

/AJTO INDEX TEST 96

| | | | |
|------|------|-----|-------------------------------|
| 2400 | 7200 | CLA | |
| 2401 | 1022 | TAC | K5777 /CONSTANT TO BE INDEXED |
| 2402 | 3016 | DC* | 16 /DO AUTO INDEX |
| 2403 | 2416 | IS* | I 16 |
| 2404 | 7000 | NOP | |
| 2405 | 1016 | TAP | 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 |

/AJTO INDEX TEST 97

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

| | | | |
|------|------|----------------------|-------------------------|
| | | /AUTO INDEX TEST 98 | |
| 2423 | 7200 | CL* | |
| 2424 | 1020 | TAU K7777 | /CONSTANT TO BE INDEXED |
| 2425 | 3016 | DCA 16 | |
| 2426 | 0416 | ANU I 16 | /DO AUTO INDEX |
| 2427 | 1016 | TA- 16 | |
| 2430 | 1020 | TAU K7777 | /AC SHOULD EQUAL 7777 |
| 2431 | 7040 | CMA | |
| 2432 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2433 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 99 | |
| 2434 | 7200 | CL* | |
| 2435 | 1036 | TAD K0 | /CONSTANT TO BE INDEXED |
| 2436 | 3017 | DC* 17 | |
| 2437 | 0417 | ANU I 17 | /DO AUTO INDEX |
| 2440 | 1017 | TAU 17 | |
| 2441 | 1035 | TAU K7776 | /AC SHOULD EQUAL 7777 |
| 2442 | 7040 | CM- | |
| 2443 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2444 | 7402 | HLT | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 100 | |
| 2445 | 7200 | CLA | |
| 2446 | 1035 | TA K7776 | /CONSTANT TO BE INDEXED |
| 2447 | 3017 | DC* 17 | |
| 2450 | 0417 | ANU I 17 | /DO AUTO INDEX |
| 2451 | 1017 | TA- 17 | |
| 2452 | 1036 | TAD K0 | /AC SHOULD EQUAL 7777 |
| 2453 | 7040 | CMA | |
| 2454 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2455 | 7402 | HLI | /AUTO INDEX ERROR |
| | | /AUTO INDEX TEST 101 | |
| 2456 | 7200 | CL* | |
| 2457 | 1034 | TAU K7775 | /CONSTANT TO BE INDEXED |
| 2460 | 3017 | DC* 17 | |
| 2461 | 3417 | DCA I 17 | /DO AUTO INDEX |
| 2462 | 1017 | TAU 17 | |
| 2463 | 1051 | TAD K0001 | /AC SHOULD EQUAL 7777 |
| 2464 | 7040 | CMA | |
| 2465 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2466 | 7402 | HL | /AUTO INDEX ERROR |

| | | | |
|------|------|----------------------|-------------------------|
| | | /AUTO INDEX TEST 102 | |
| 2467 | 7200 | CLA | |
| 2470 | 1033 | TA- 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 | TAW 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 | TAW K7767 | /CONSTANT TO BE INDEXED |
| 2503 | 3017 | DCA 17 | |
| 2504 | 0417 | AND I 17 | /DO AUTO INDEX |
| 2505 | 1017 | TAW 17 | |
| 2506 | 1046 | TAU 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 | TAU 17 | |
| 2517 | 1045 | TAD K0017 | /AC SHOULD EQUAL 7777 |
| 2520 | 7040 | CM* | |
| 2521 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2522 | 7402 | HLT | /AUTO INDEX ERROR |

| | | | |
|------|------|----------------------|-------------------------|
| | | /AJTO INDEX TEST 105 | |
| 2523 | 7200 | CLA | |
| 2524 | 1027 | TAA 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 |
| | | | |
| | | /AJTO INDEX TEST 106 | |
| 2534 | 7200 | CLA | |
| 2535 | 1026 | TAA K7677 | /CONSTANT TO BE INDEXED |
| 2536 | 3017 | DCA 17 | |
| 2537 | 0417 | AND I 17 | /DO AUTO INDEX |
| 2540 | 1017 | TAA 17 | |
| 2541 | 1043 | TAA 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 | TAA 17 | |
| 2552 | 1042 | TAA 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 | TAA 17 | |
| 2563 | 1041 | TAA 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 | TAA K6777 | /CONSTANT TO BE INDEXED |
| 2571 | 3017 | DCA 17 | |
| 2572 | 0417 | AND I 17 | /DO AUTO INDEX |
| 2573 | 1017 | TAD 17 | |
| 2574 | 1040 | TAA K0777 | /AC SHOULD EQUAL 7777 |
| 2575 | 7040 | CMA | |
| 2576 | 7440 | SZA | /AC SHOULD BE ZERO |
| 2577 | 7402 | HLT | /AUTO INDEX ERROR |

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2600
*2600
/AUTO INDEX TEST 110
2600 7200          CLA
2601 1022         TAD K5777          /CONSTANT TO BE INDEXED
2602 3017         JCA 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 7000         CMA
2608 7440         SZA          /AC SHOULD BE ZERO
2609 7440         HLT          /AUTO INDEX ERROR
2611 7402

/AUTO INDEX TEST 111
2612 7200          CLA
2613 1021         TAD K3777          /CONSTANT TO BE INDEXED
2614 3017         JCA 17
2615 0417         AND I 17          /DO AUTO INDEX
2616 1017         TAD 17
2617 1021         TAD K3777          /AC SHOULD EQUAL 7777
2618 7000         CMA
2619 7440         SZA          /AC SHOULD BE ZERO
2621 7440         HLT          /AUTO INDEX ERROR
2622 7402

/AUTO INDEX TEST 112
2623 7200          CLA
2624 1020         TAD K7777          /CONSTANT TO BE INDEXED
2625 3017         JCA 17
2626 0417         AND I 17          /DO AUTO INDEX
2627 1017         TAD 17
2628 1020         TAD K7777          /AC SHOULD EQUAL 7777
2629 7000         CMA
2631 7000         SZA          /AC SHOULD BE ZERO
2632 7440         HLT          /AUTO INDEX ERROR
2633 7402

/AUTO INDEX TEST 113
2634 5236         JMP .+2
2635 7402         HLT          /JMP FAILED
2636 7410         SKP          /JMP WORKED (A LITTLE)
2637 2544         T644
2640 1237         TAJ , -1
2641 3010         JCA 10
2642 5410         JMP I 10          /TEST INSTRUCTION
2643 7402         HLT          /JMP INDIRECT FAILED
2644 7402         HLT          /LOCATION 2610, NO INDEX
                               /IN WTI STATE,

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/AUTO INDEX TEST 114
2645 4247 JMS ,+2
2646 7402 HLT /JMS FAILED
2647 7402 HLT /JMS FAILED
2650 1247 TAD , -1
2651 7410 SKP
2652 2646 . -4
2653 7041 CIA
2654 1252 TAD , -2
2655 7440 SZA
2656 7402 HLT /WRONG ADDRESS STORED
/ DURING JMS
/ JMS WORKS (I GUESS)

2657 7410 SKP
2660 2664 . +4
2661 1260 TAD , -1
2662 3010 DCA 10
2663 4410 JMS I 10 /TEST INSTRUCTION
2664 7402 HLT /JMS FAILED
2665 7402 HLT /JMS FAILED
2666 1265 TAD , -1
2667 7410 SKP
2670 2664 . -4
2671 7041 CIA
2672 1270 TAD , -2
2673 7440 SZA
2674 7402 HLT /WRONG ADDRESS STORED DURING JMS

/INTERRUPT TEST 1

2675 4676 JMS I ,+1
2676 4011 STR /RUBOUT CHARACTER
2677 6041 TSF
2700 6046 TLS
2701 6041 TSF
2702 5301 JMP , -1
2703 7200 CLA
2704 1312 TAD BACK1 /FLAG IS ON
2705 3002 DCA 2
2706 6001 ION
2707 7000 NOP /GO TO LOC 0000
2710 7402 HLT /NO INTERRUPT
2711 2710 OUT1, , -1
2712 2713 BACK1, , +1
2713 7440 SZA /RETURN FROM LOC 1
2714 7402 HLT /AC SHOULD BE 0
/CONFIDENCE CHECK

2715 1000 TAD 0
2716 7041 CIA
2717 1311 TAD OUT1
2720 7640 SZA CLA
2721 7402 HLT /INTERRUPT ERROR
/WRONG ADDRESS STORED

```

| | | | | |
|-------------------|------|--------|-----------|---|
| 2722 | 1041 | | TAD K0377 | /RUBOUT CHARACTER |
| 2723 | 6041 | | TSP | |
| 2724 | 6040 | | TLS | |
| 2725 | 6041 | | TSP | |
| 2726 | 5320 | | JMP ,-1 | |
| 2727 | 7200 | | CLA | /FLAG IS ON |
| 2730 | 1330 | | TAD BACK3 | |
| 2731 | 3002 | | DCA 2 | |
| 2732 | 6001 | | ION | |
| 2733 | 1020 | | TAD K7777 | |
| 2734 | 7402 | | HLT | /NO INTERRUPT |
| 2735 | 2734 | OUT3, | , -1 | |
| 2736 | 2737 | BACK3, | , +1 | |
| 2737 | 7040 | | CMA | /RETURN FROM LOC1 |
| 2740 | 7440 | | SZA | |
| 2741 | 7402 | | HLT | /CONFIDENCE CHECK /AC SHOULD BE 0 |
| 2742 | 1000 | | TAD 0 | |
| 2743 | 7041 | | CIA | |
| 2744 | 1330 | | TAD OUT3 | |
| 2745 | 7640 | | SZA CLA | /INTERRUPT ERROR |
| 2746 | 7402 | | HLT | /WRONG ADDRESS STORED |
| | | | | |
| /INTERRUPT TEST 3 | | | | |
| 2747 | 1041 | | TAD K0377 | /RUBOUT CHARACTER |
| 2750 | 6041 | | TSP | |
| 2751 | 6040 | | TLS | |
| 2752 | 6041 | | TSP | |
| 2753 | 5352 | | JMP ,-1 | |
| 2754 | 7200 | | CLA | /FLAG IS ON |
| 2755 | 1364 | | TAD BACK2 | |
| 2756 | 3002 | | DCA 2 | |
| 2757 | 1020 | | TAD K7777 | |
| 2760 | 6001 | | ION | |
| 2761 | 6020 | | AND K7777 | |
| 2762 | 7402 | | HLT | /NO INTERRUPT |
| 2763 | 2762 | OUT2, | , -1 | |
| 2764 | 2765 | BACK2, | , +1 | |
| 2765 | 7040 | | CMA | /RETURN FROM LOC1 |
| 2766 | 7440 | | SZA | |
| 2767 | 7402 | | HLT | /CONFIDENCE CHECK /AC SHOULD BE 0 |
| 2770 | 1000 | | TAD 0 | |
| 2771 | 7041 | | CIA | |
| 2772 | 1363 | | TAD OUT2 | |
| 2773 | 7640 | | SZA CLA | |
| 2774 | 7402 | | HLT | /INTERRUPT ERROR /WRONG ADDRESS STORED |
| 2775 | 7000 | | NOP | |
| 2776 | 7000 | | NOP | |
| 2777 | 7000 | | NOP | |

| | | | |
|------|------|-------------------|-------------------------|
| | 3000 | *3000 | |
| | | /INTERRUPT TEST 4 | |
| 3000 | 1041 | TAD K0377 | /RUBOUT CHARACTER |
| 3001 | 6041 | TSF | |
| 3002 | 6046 | ILS | |
| 3003 | 6041 | TSF | |
| 3004 | 5233 | JMP ,-1 | |
| 3005 | 7207 | CLA | /FLAG IS ON |
| 3006 | 1215 | TAD BACK4 | |
| 3007 | 3002 | DCA 2 | |
| 3010 | 1020 | TAD K7777 | |
| 3011 | 6001 | ION | |
| 3012 | 3003 | DCA 3 | |
| 3013 | 7402 | HLT | /NO INTERRUPT |
| 3014 | 3013 | OUT4, ,-1 | |
| 3015 | 3016 | BACK4, +1 | |
| 3016 | 7440 | SZA | /RETURN FROM LOC1 |
| 3017 | 7402 | HLT | /CONFIDENCE CHECK |
| | | | /AC SHOULD BE ZERO |
| 3020 | 1003 | TAD 3 | |
| 3021 | 7040 | CMA | |
| 3022 | 7440 | SZA | |
| 3023 | 7402 | HLT | /DCA PRIOR TO INTERRUPT |
| | | | /FAILED |
| 3024 | 3003 | DCA 3 | |
| 3025 | 1030 | TAD 0 | |
| 3026 | 7041 | CIA | |
| 3027 | 1214 | TAD OUT4 | |
| 3030 | 7640 | SZA CLA | |
| 3031 | 7402 | HLT | /INTERRUPT ERROR |
| | | | /WRONG ADDRESS STORED |
| | | /INTERRUPT TEST 5 | |
| 3032 | 1041 | TAD K0377 | /RUBOUT CHARACTER |
| 3033 | 6041 | TSF | |
| 3034 | 6046 | ILS | |
| 3035 | 6041 | TSF | |
| 3036 | 5235 | JMP ,-1 | |
| 3037 | 7200 | CLA | /FLAG IS ON |
| 3040 | 1250 | TAD BACK5 | |
| 3041 | 3002 | DCA 2 | |
| 3042 | 1035 | TAD K7776 | |

| | | | | |
|------|------|-------------------|-----------|-----------------------|
| 3043 | 3003 | | DCA 3 | |
| 3044 | 6001 | | ION | |
| 3045 | 2003 | | ISZ 3 | |
| 3046 | 7402 | | HLT | /NO INTERRUPT |
| 3047 | 3046 | OUT5, | , -1 | |
| 3050 | 3051 | BACK5, | , +1 | |
| 3051 | 7440 | | SZA | /RETURN FROM LOC1 |
| 3052 | 7402 | | HLT | /CONFIDENCE CHECK |
| | | | | /AC SHOULD BE ZERO |
| 3053 | 1003 | | TAD 3 | |
| 3054 | 7040 | | CMA | |
| 3055 | 7440 | | SZA | |
| 3056 | 7402 | | HLT | /ISZ PRIOR TO |
| | | | | /INTERRUPT FAILED |
| 3057 | 3003 | | DCA 3 | |
| 3060 | 1000 | | TAD 0 | |
| 3061 | 7041 | | CIA | |
| 3062 | 1247 | | TAD OUT5 | |
| 3063 | 7640 | | SZA CLA | |
| 3064 | 7402 | | HLT | /INTERRUPT ERROR |
| | | | | /WRONG ADDRESS STORED |
| | | /INTERRUPT TEST 6 | | |
| 3065 | 1041 | | TAD K0377 | /RUBOUT CHARACTER |
| 3066 | 6041 | | TSF | |
| 3067 | 6046 | | ILS | |
| 3070 | 6041 | | TSF | |
| 3071 | 5270 | | JMP , -1 | |
| 3072 | 7200 | | CLA | /FLAG IS ON |
| 3073 | 1304 | | TAD BACK6 | |
| 3074 | 3002 | | DCA 2 | |
| 3075 | 1020 | | TAD K7777 | |
| 3076 | 3003 | | DCA 3 | |
| 3077 | 6001 | | ION | |
| 3100 | 2003 | | ISZ 3 | |
| 3101 | 7402 | | HLT | /NO INTERRUPT |
| 3102 | 7402 | | HLT | |
| 3103 | 3102 | OUT6, | , -1 | |
| 3104 | 3105 | BACK6, | , +1 | |
| 3105 | 7440 | | SZA | /RETURN FROM LOC 1 |
| 3106 | 7402 | | HLT | /CONFIDENCE CHECK |
| | | | | /AC SHOULD BE ZERO |
| 3107 | 1003 | | TAD 3 | |
| 3110 | 7440 | | SZA | |
| 3111 | 7402 | | HLT | /ISZ PRIOR TO |
| | | | | /INTERRUPT FAILED |
| 3112 | 3003 | | DCA 3 | |
| 3113 | 1000 | | TAD 0 | |
| 3114 | 7041 | | CIA | |
| 3115 | 1303 | | TAD OUT6 | |
| 3116 | 7640 | | SZA CLA | |
| 3117 | 7402 | | HLT | /INTERRUPT ERROR |
| | | | | /WRONG ADDRESS STORED |

```

/INTERRUPT TEST 7
3120 1041 TAD K0377 /RUBOUT CHARACTER
3121 6041 TSF
3122 6046 TLS
3123 6041 TSF
3124 5323 JMP , -1
3125 7200 CLA /FLAG IS ON
3126 1334 TAD BACK7
3127 3002 DCA 2
3130 6001 ION
3131 5331 JMP ,
3132 7402 HLT /NO INTERRUPT
3133 3131 OUT7, , -2
3134 3135 BACK7, , +1
3135 7440 SZA /RETURN FROM LOC 1
3136 7402 HLT /CONFIDENCE CHECK
/AC SHOULD BE 0

3137 1000 TAD 0
3140 7041 CIA
3141 1333 TAD OUT7
3142 7640 SZA CLA
3143 7402 HLT /INTERRUPT ERROR
/WRONG ADDRESS STORED

```

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/INTERRUPT TEST 8
3144 1041 TAD K0377 /RUBOUT CHARACTER
3145 6041 TSF
3146 6046 TLS
3147 6041 TSF
3150 5347 JMP , -1
3151 7200 CLA /FLAG IS ON
3152 1360 TAD BACK8
3153 3002 DCA 2
3154 6001 ION
3155 4003 JMS 3
3156 7402 HLT /NO INTERRUPT
3157 3156 OUT8, , -1
3160 3161 BACK8, , +1
3161 7440 SZA /RETURN FROM LOC 1
3162 7402 HLT /CONFIDENCE CHECK
/AC SHOULD BE ZERO

3163 1003 TAD 3
3164 7041 CIA
3165 1357 TAD OUT8
3166 7440 SZA
3167 7402 HLT /JMS ERROR PRIOR
/TO INTERRUPT WRONG
/ADDRESS STORED

```

3170 1100
3171 7041
3172 1064
3173 7540
3174 7402

3175 7000
3176 7000
3177 7000

TAU 2
CIA
TAU K4
SFA CLA
HLT

NOP
NOP
NOP

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

*3200
/INTERRUPT TEST 9
3200 1041 TAD K0377 /RUBOUT CHARACTER
3201 6041 TSF
3202 6046 TLS
3203 6041 TSF
3204 5233 JMP ,-1
3205 7200 CLA /FLAG IS ON
3206 1215 TAD BACK9
3207 3002 DCA 2
3210 1020 TAD K7777
3211 6001 ION
3212 7200 CLA
3213 7402 HLT /NO INTERRUPT
3214 3213 OUT9, ,-1
3215 3216 BACK9, ,+1
3216 7440 SZA
3217 7402 HLT /RETURN FROM LOC 1
/CLA PRIOR TO INTERRUPT
/FAILED

3220 1000 TAD 0
3221 7041 CIA
3222 1214 TAD OUT9
3223 7640 SZA CLA
3224 7402 HLT /INTERRUPT FAILED
/WRONG ADDRESS STORED

/INTERRUPT TEST 10
3225 1041 TAD K0377 /RUBOUT CHARACTER
3226 6041 TSF
3227 6046 TLS
3230 6041 TSF
3231 5230 JMP ,-1
3232 7200 CLA /FLAG IS ON
3233 1242 TAD BACK10
3234 3002 DCA 2
3235 6001 ION
3236 6041 TSF
3237 7402 HLT /NO INTERRUPT
3240 7402 HLT

```


/ILLEGAL AUTO INDEX TEST 2

3355 7200
 3356 5757
 3357 2173
 3360 2010

CLA
 JMP I .+1
 AN#2
 K2010, 20+0

2173
 2173 0610
 2174 5775
 2175 3370

*2173
 AND2, AN# I 2010
 JMP I .+1
 REI2

/TEST INSTRUCTION

3370
 3370 1760
 3371 7440
 3372 7402

*3370
 RET2, TAD I K2010
 SZ#
 HLI

/ERROR. AC SHOULD BE ZERO
 /AND I 2010 ALTERED (2010)

3373 5774
 3374 3400

JMP I .+1
 3400

/ILLEGAL AUTO INDEX TEST 3

3400
 3400 7200
 3401 5602
 3402 1173
 3403 1010

*3400
 CLA
 JMP I .+1
 AND3
 K1010, 10 0

1173
 1173 0610
 1174 5775
 1175 3410

*1173
 AND3, AND I 1010
 JMP I .+1
 RET3

/TEST INSTRUCTION

3410
 3410 1603
 3411 7440
 3412 7402

*3410
 RET3, TAD I K1010
 SZ#
 HLI

/ERROR. AC SHOULD BE ZERO
 /AND I 1010 ALTERED (1010)

3413 7200
 3414 3603

CLA
 DCA I K1010

/ILLEGAL AUTO INDEX TEST 4

| | | | |
|------|------|------------------|---------------------------|
| 3415 | 7200 | CLA | |
| 3416 | 5617 | JMP I ,+1 | |
| 3417 | 0574 | AND4 | |
| 3420 | 0410 | K410, 410 | |
| | 0574 | *574 | |
| 0574 | 0610 | AND4, AND I 410 | /TEST INSTRUCTION |
| 0575 | 5776 | JMP I ,+1 | |
| 0576 | 3430 | RET4 | |
| | 3430 | *3430 | |
| 3430 | 1620 | RET4, TAD I K410 | |
| 3431 | 7440 | SZA | |
| 3432 | 7402 | HLT | /ERROR, AC SHOULD BE ZERO |
| | | | /AND I 410 ALTERED (410) |
| 3433 | 7200 | CLA | |
| 3434 | 3620 | DCA I K410 | |

/ILLEGAL AUTO INDEX TEST 5

| | | | |
|------|------|------------------|---------------------------|
| 3435 | 7200 | CLA | |
| 3436 | 5637 | JMP I ,+1 | |
| 3437 | 0371 | AND5 | |
| 3440 | 0210 | K210, 210 | |
| | 0370 | *370 | |
| 0370 | 5374 | JMP ,+4 | |
| 0371 | 0610 | AND5, AND I 210 | /TEST INSTRUCTION |
| 0372 | 5773 | JMP I ,+1 | |
| 0373 | 3450 | RET5 | |
| | 3450 | *3450 | |
| 3450 | 1640 | RET5, TAD I K210 | |
| 3451 | 7440 | SZA | |
| 3452 | 7402 | HLT | /ERROR, AC SHOULD BE ZERO |
| | | | /AND I 210 ALTERED (210) |
| 3453 | 7200 | CLA | |
| 3454 | 3640 | DCA I K210 | |

/ILLEGAL AUTO INDEX TEST 6

3455 7200
 3456 5657
 3457 0130
 3460 0110

CLA
 JMP I .+1
 AND6
 K110, 110

0130 0130
 0130 0510
 0131 5532
 0132 3470

*130
 AND6, AND I 110
 JMP I .+1
 RE16

/TEST INSTRUCTION

3470 1660
 3471 7440
 3472 7402

*3470
 RET6, TAW I K110
 SZ0
 HLI

/ERROR, AC SHOULD BE ZERO
 /AND I 110 ALTERED (110)

3473 7200
 3474 3110

CLA
 DCA 110

/ILLEGAL AUTO INDEX TEST 7

3475 7200
 3476 5677
 3477 0124
 3500 0050

CLA
 JMP I .+1
 AND7
 K50, 50

0124 0124
 0124 0450
 0125 5526
 0126 3510

*124
 AND7, AND I 50
 JMP I .+1
 RE17

/TEST INSTRUCTION

3510 1700
 3511 7440
 3512 7402

*3510
 RET7, TAW I K50
 SZ0
 HLI

/ERROR, AC SHOULD BE ZERO
 /AND I 50 ALTERED (50)

3513 7200
 3514 3050

CLA
 DCA 50

/ILLEGAL AUTO INDEX TEST 8

3515 7200
 3516 5717
 3517 0120
 3520 0030

CLA
 JMP I .+1
 ANUB
 K30, 30

0120 0120
 0120 0430
 0121 5522
 0122 3530

*120
 ANDB, AND I 30 /TEST INSTRUCTION
 JMP I .+1
 RE18

3530 3530
 3530 1720
 3531 7440
 3532 7402

*3530
 RETB, TAD I K30
 SZA
 HLT /ERROR, AC SHOULD BE ZERO
 /AND I 30 ALTERED (30)

3533 7200
 3534 3030

CLA
 DCA 30

/ILLEGAL AUTO INDEX TEST 9

3535 7200
 3536 3000
 3537 5740
 3540 0074

CLA
 DCA 0
 JM I .+1
 AND9

0074 0074
 0074 0400
 0075 5476
 0076 3550

*74
 AND9, AND I 0 /TEST INSTRUCTION
 JM I .+1
 RET9

3550 3550
 3550 1436
 3551 7440
 3552 7402

*3550
 RET9, TAD I K0
 SZA
 HLT /ERROR, AC SHOULD BE ZERO
 /AND I 0 ALTERED (0)

3553 7200
 3554 3000

CLA
 DCA 0

SYMBOL TABLE

| | |
|--------|------|
| AND1 | 4000 |
| AND10 | 0070 |
| AND2 | 2173 |
| AND3 | 1173 |
| AND4 | 0574 |
| AND5 | 0371 |
| AND6 | 0130 |
| AND7 | 0124 |
| AND8 | 0120 |
| AND9 | 0074 |
| BACK1 | 2711 |
| BACK10 | 3242 |
| BACK11 | 3317 |
| BACK12 | 3334 |
| BACK2 | 2763 |
| BACK3 | 2735 |
| BACK4 | 3015 |
| BACK5 | 3050 |
| BACK6 | 3104 |
| BACK7 | 3134 |
| BACK8 | 3160 |
| BACK9 | 3215 |
| BELCOD | 3625 |
| BLCNT | 3623 |
| JMPIX | 4021 |
| K0 | 0036 |
| K0001 | 0051 |
| K0003 | 0047 |
| K0007 | 0046 |
| K0017 | 0045 |
| K0037 | 0044 |
| K0077 | 0043 |
| K0177 | 0042 |
| K0377 | 0041 |
| K0707 | 0060 |
| K0777 | 0040 |
| K1010 | 3403 |
| K110 | 3460 |
| K1111 | 0062 |
| K1234 | 0177 |
| K172 | 0173 |
| K173 | 0174 |
| K174 | 0175 |
| K175 | 0176 |
| K176 | 0172 |
| K1777 | 0037 |
| K201 | 3622 |
| K2010 | 3360 |
| K210 | 3440 |
| K2525 | 0054 |
| K30 | 3520 |
| K3777 | 0021 |
| K4 | 0064 |

SYMBOL TABLE

| | |
|--------|------|
| K4010 | 3343 |
| K410 | 3420 |
| K4400 | 0052 |
| K4444 | 0056 |
| K4577 | 0053 |
| K50 | 3500 |
| K5252 | 0061 |
| K5555 | 0063 |
| K5777 | 0022 |
| K6666 | 0055 |
| K6777 | 0023 |
| K7070 | 0057 |
| K7377 | 0024 |
| K7577 | 0025 |
| K7677 | 0026 |
| K7737 | 0027 |
| K7757 | 0031 |
| K7767 | 0032 |
| K7773 | 0033 |
| K7775 | 0034 |
| K7776 | 0035 |
| K7777 | 0020 |
| OUT1 | 2710 |
| OUT10 | 3241 |
| OUT2 | 2762 |
| OUT3 | 2734 |
| OUT4 | 3014 |
| OUT5 | 3047 |
| OUT6 | 3103 |
| OUT7 | 3133 |
| OUT8 | 3157 |
| OUT9 | 3214 |
| RET1 | 3350 |
| RET10 | 3600 |
| RET2 | 3370 |
| RET3 | 3410 |
| RET4 | 3430 |
| RET5 | 3450 |
| RET6 | 3470 |
| RET7 | 3510 |
| RET8 | 3530 |
| RET9 | 3550 |
| RNGCNT | 3624 |
| STR | 4011 |
| TP0 | 0200 |
| TP177 | 0377 |

SYMBOL TABLE

| | |
|-------|------|
| K7777 | 0020 |
| K3777 | 0021 |
| K5777 | 0022 |
| K6777 | 0023 |
| K7377 | 0024 |
| K7577 | 0025 |
| K7677 | 0026 |
| K7737 | 0027 |
| K7757 | 0031 |
| K7767 | 0032 |
| K7773 | 0033 |
| K7775 | 0034 |
| K7776 | 0035 |
| K0 | 0036 |
| K1777 | 0037 |
| K0777 | 0040 |
| K0377 | 0041 |
| K0177 | 0042 |
| K0077 | 0043 |
| K0037 | 0044 |
| K0017 | 0045 |
| K0007 | 0046 |
| K0003 | 0047 |
| K0001 | 0051 |
| K4400 | 0052 |
| K4577 | 0053 |
| K2525 | 0054 |
| K6666 | 0055 |
| K4444 | 0056 |
| K7070 | 0057 |
| K0707 | 0060 |
| K5252 | 0061 |
| K1111 | 0062 |
| K5555 | 0063 |
| K4 | 0064 |
| AND10 | 0070 |
| AND9 | 0074 |
| AND8 | 0120 |
| AND7 | 0124 |
| AND6 | 0130 |
| K176 | 0172 |
| K172 | 0173 |
| K173 | 0174 |
| K174 | 0175 |
| K175 | 0176 |
| K1234 | 0177 |
| TP0 | 0200 |
| AND5 | 0371 |
| TP177 | 0377 |
| AND4 | 0574 |
| AND3 | 1173 |
| AND2 | 2173 |
| OUT1 | 2710 |

SYMBOL TABLE

| | |
|--------|------|
| BACK1 | 2711 |
| OUT3 | 2734 |
| BACK3 | 2735 |
| OUT2 | 2762 |
| BACK2 | 2763 |
| OUT4 | 3014 |
| BACK4 | 3015 |
| OUT5 | 3047 |
| BACK5 | 3050 |
| OUT6 | 3103 |
| BACK6 | 3104 |
| OUT7 | 3133 |
| BACK7 | 3134 |
| OUT8 | 3157 |
| BACK8 | 3160 |
| OUT9 | 3214 |
| BACK9 | 3215 |
| OUT10 | 3241 |
| BACK10 | 3242 |
| BACK11 | 3317 |
| BACK12 | 3334 |
| K4010 | 3343 |
| RET1 | 3350 |
| K2010 | 3360 |
| RET2 | 3370 |
| K1010 | 3403 |
| RET3 | 3410 |
| K410 | 3420 |
| RET4 | 3430 |
| K210 | 3440 |
| RET5 | 3450 |
| K110 | 3460 |
| RET6 | 3470 |
| K50 | 3500 |
| RET7 | 3510 |
| K30 | 3520 |
| RET8 | 3530 |
| RET9 | 3550 |
| RET10 | 3600 |
| K201 | 3622 |
| BLCNT | 3623 |
| RNGCNT | 3624 |
| BELCOD | 3625 |
| AND1 | 4000 |
| STR | 4011 |
| JMPIX | 4021 |

MAINDEC EVALUATION REQUEST

After sufficient familiarization with the operation and documentation of this MAINDEC, please indicate your assessment of the following areas and return this form to Digital Equipment Corporation.

IDENTIFICATION: MAINDEC NO. _____ Program Title _____

USAGE: Used by: Field Service Production Other _____

Frequency of Usage: Daily Weekly Monthly

SUGGESTIONS FOR IMPROVEMENT

1. Are the program loading and operating instructions: clear? , incomplete? , difficult to follow?
2. Do the error reports and program documentation provide sufficient diagnostic information. in all cases? , in most cases? , in very few cases? . Suggestions for improvement:

3. Is the program effective in isolating malfunctions: in all cases? , in most cases? , in very few cases? . Would additional Scope loops or Switch Register control be helpful? _____
Suggestions for improvement:

4. Does the program ever fail to detect malfunctions exposed by other software? _____
Were Margins used? _____ Please describe malfunction in detail:

5. Does the program ever report non-existent malfunctions? _____
Please indicate erroneous report and any pertinent operating conditions:

6. Does this MAINDEC ever expose malfunctions in the Central Processor or other peripheral units not detected by the appropriate MAINDEC? _____
Please describe malfunction and MAINDEC(S) used:

7. Does the document provide a general understanding of the functional programming requirements of the system? Good , Fair , None . Would a general description of programming requirements increase the effectiveness of this MAINDEC? _____

Remarks:

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