

IDENTIFICATION

PRODUCT CODE:	MAINDEC-8E-D008
PRODUCT NAME:	PDP-8/E INSTRUCTION TEST 2
DATE CREATED:	JUNE 10, 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-00A(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 1530 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 SRO
- C. USING SPF
- D. USING KIE
- E. USING SKON
- F. USING ION
- G. USING IOF
- H. USING STF
- 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-D08B
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```

6000 SKON=6000 /SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
6003 SRD=6003 /SKIP IF INTERRUPT REQUEST
6004 CTF=6004 /GET INTERRUPT FLAG
6005 RTF=6005 /RESTORE INTERRUPT FLAG AND TURN INTERRUPT ON
6007 CAF=6007 /CLEAR ALL FLAG, 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 BSM=7002 /SMAP BYTES IN AC

```

```

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

```

```

0007 *7
0008

```

B
/CONSTANTS AND VARIABLES

```

0020 *20
0021 7777 K7777, 7777
0022 3777 K3777, 3777
0023 5777 K5777, 5777
0024 6777 K6777, 6777
0025 7377 K7377, 7377
0026 7577 K7577, 7577
0027 7677 K7677, 7677
0028 7737 K7737, 7737
0029 0
0031 7757 K7757, 7757
0032 7767 K7767, 7767
0033 7773 K7773, 7773
0034 7775 K7775, 7775
0035 7776 K7776, 7776
0036 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 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
0110	0000		

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
------	------

/DCA TEST 1
CLA
SKP
TP0,
0
TAD K4400
DCA TP177

/DCA DID NOT CLEAR AC

/AC=-(4400)

0210	0000	0	TAD K4400
0211	1052	0	CIA
0212	7041	0	TAD TP177
0213	1377	0	SEA
0214	7440	0	HLT
0215	7402	0	

/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	SEA
0234	7402	HLT
0235	1202	TAD TP0
0236	7040	CHA
0237	7440	SEA
0240	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 4

0241	7200	CLA
0242	1036	TAD KB
0243	3202	DCA TP0
0244	7440	SEA
0245	7402	HLT
0246	1202	TAD TP0
0247	7440	SEA
0250	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 5

0251	7200	CLA
0252	1054	TAD K2525
0253	3202	DCA TP0
0254	7440	SEA
0255	7402	HLT
0256	1054	TAD K2525
0257	7041	CIA
0260	1202	TAD TP0
0261	7440	SEA
0262	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 6

0263	7200	CLA
0264	1055	TAD K6666
0265	3202	DCA TP0
0266	7440	SEA
0267	7402	HLT
0270	1055	TAD K6666
0271	7041	CIA
0272	1202	TAD TP0
0273	7440	SEA
0274	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 7

0275	7200	CLA
0276	1056	TAD K4444
0277	5377	DCA TP177
0300	7440	SEA
0301	7402	HLT
0302	1056	TAD K4444
0303	7041	CIA
0304	1377	TAD TP177
0305	7440	SEA
0306	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 8

0307	7200	CLA
0310	1057	TAD K7070
0311	5377	DCA TP177
0312	7440	SEA
0313	7402	HLT
0314	1057	TAD K7070
0315	7041	CIA
0316	1377	TAD TP177
0317	7440	SEA
0320	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 9

0321	7200	CLA
0322	1060	TAD K0707
0323	5000	DCA 0
0324	7440	SEA
0325	7402	HLT
0326	1060	TAD K0707
0327	7041	CIA
0330	1000	TAD 0
0331	7440	SEA
0332	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 10

0333	7200	CLA
0334	1061	TAD K5252
0335	5000	DCA 0
0336	7440	SEA
0337	7402	HLT
0340	1061	TAD K5252
0341	7041	CIA
0342	1000	TAD 0
0343	7440	SEA
0344	7402	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 11

```
0345 7200 CLA
0346 1062 TAD K1111
0347 3000 DCA 0
0350 7440 SEA
0351 7402 HLT
0352 1062 TAD K1111
0353 7041 CIA
0354 1000 TAD 0
0355 7440 SEA
0356 7402 HLT
```

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 12

```
0357 7200 CLA
0360 1063 TAD K5555
0361 3000 DCA 0
0362 7440 SEA
0363 7402 HLT
0364 1063 TAD K5555
0365 7041 CIA
0366 1000 TAD 0
0367 7440 SEA
0370 7402 HLT
```

/DCA DID NOT CLEAR AC

/DCA FAILED
/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 0400

/INDIRECT ADDRESSING TEST 1

```
0400 7200 CLA
0401 1442 TAD I K0177
0402 7041 CIA
0403 1177 TAD K1234
0404 7440 SEA
0405 7402 HLT
```

/TAD INDIRECT FAILED
/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 SEA
0416 7402 HLT /AND INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 3

0417 7200 CLA
0420 1020 TAD K7777
0421 3000 DCA 0
0422 2436 ISZ I K0 /ISZ FAILED. NO SKIP
0423 7402 HLT
0424 1000 TAD 0
0425 7440 SEA /ISZ INDIRECT FAILED
0426 7402 HLT /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 SEA
0434 7402 HLT /TAD INDIRECT FAILED
/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 SEA /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 SEA
0457 7402 HLT /DCA INDIRECT FAILED

/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 7

0460 7200
0461 1573
0462 7041
0463 1172
0464 7440
0465 7402

CLA
TAD I K172
CIA
TAD K176
SEA
HLT

/OPERAND=176

/TAD INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 8

0466 7200
0467 1020
0470 0573
0471 7041
0472 1172
0473 7440
0474 7402

CLA
TAD K7777
AND I K172
CIA
TAD K176
SEA
HLT

/OPERAND=176

/AND INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 9

0475 7200
0476 1173
0477 3000
0500 2936
0501 7410
0502 7402
0503 1000
0504 7041
0505 1173
0506 7040
0507 7400
0510 7402

CLA
TAD K172
DCA 0
ISE I K0
SKP
HLT
TAD 0
CIA
TAD K172
GMA
SEA
HLT

/ISE SKIPPED ILLEGALLY

/DCA INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 10

0511 7200
0512 1574
0513 7041
0514 1173
0515 7440
0516 7402

CLA
TAD I K173
CIA
TAD K172
SEA
HLT

/OPERAND=172

/TAD INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 11

0517 7200
0520 1020
0521 0574
0522 7041

CLA
TAD K7777
AND I K173
CIA

/OPERAND=172

0523 4173
0524 7440
0525 7402

TAD K172
SEA
HLT

/AND INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 12

0526 7200
0527 1174
0530 3000
0531 2436
0532 7410
0533 7402
0534 1000
0535 7041
0536 1174
0537 7040
0540 7440
0541 7402

CLA
TAD K173
DCA 0
ISE I K0
SKP
HLT
TAD 0
CIA
TAD K173
CMA
SEA
HLT

/ISE SKIPPED ILLEGALLY

/DCA INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 13

0542 7200
0543 1575
0544 7041
0545 1174
0546 7440
0547 7402

CLA
TAD I K174
CIA
TAD K173
SEA
HLT

/OPERAND=173

/TAD INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 14

0550 7200
0551 1020
0552 0575
0553 7041
0554 1174
0555 7440
0556 7402

CLA
TAD K7777
AND I K174
CIA
TAD K173
SEA
HLT

/OPERAND=173

/AND INDIRECT FAILED
/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 15

0557 7200
0560 1175
0561 3000
0562 2436
0563 7410
0564 7402
0565 1000
0566 7041
0567 1175
0570 7040
0571 7440
0572 7402

CLA
TAD K174
DCA 0
ISE I K0
SKP
HLT
TAD 0
CIA
TAD K174
CMA
SEA
HLT

/ISE SKIPPED ILLEGALLY

/DCA INDIRECT FAILED

0573 5377 JMP .+4
 0574 7000 NOP
 0575 7000 NOP
 0576 7000 NOP
 0577 7000 NOP

/AC SHOULD BE ZERO

0600 *600
 /INDIRECT ADDRESSING TEST 16

0600 7200 CLA /OPERAND=174
 0601 1576 TAD I K175
 0602 7041 CIA
 0603 1175 TAD K174
 0604 7440 SEA
 0605 7402 HLT

/TAD INDIRECT FAILED
 /AC SHOULD BE ZERO

/AUTO INDEX TEST 1

0606 7200 CLA /CONSTANT TO BE INDEXED
 0607 1036 TAD K0
 0610 5010 DCA 10 /DO AUTO INDEX
 0611 0410 AND I 10
 0612 1010 TAD 10
 0613 1035 TAD K7776 /AC SHOULD EQUAL 7777
 0614 7040 CMA
 0615 7440 SEA
 0616 7402 HLT

/AC SHOULD BE ZERO
 /AUTO INDEX ERROR

/AUTO INDEX TEST 2

0617 7200 CLA /CONSTANT TO BE INDEXED
 0620 1035 TAD K7776
 0621 5010 DCA 10 /DO AUTO INDEX
 0622 0410 AND I 10
 0623 1010 TAD 10
 0624 1036 TAD K0
 0625 7040 CMA
 0626 7440 SEA
 0627 7402 HLT

/AC SHOULD BE ZERO
 /AUTO INDEX ERROR

/AUTO INDEX TEST 3

0630 7200 CLA /CONSTANT TO BE INDEXED
 0631 1034 TAD K7775
 0632 5010 DCA 10 /DO AUTO INDEX
 0633 5410 DCA I 10
 0634 1010 TAD 10
 0635 1051 TAD K0001
 0636 7040 CMA
 0637 7440 SEA
 0640 7402 HLT

/AC SHOULD BE ZERO
 /AUTO INDEX ERROR

/AUTO INDEX TEST 4

```
0641 7200
0642 1033
0643 3010
0644 1410
0645 7200
0646 1010
0647 1047
0650 7040
0651 7440
0652 7402

CLA
TAD K7775
DCA 10
TAD I 10
CLA
TAD 10
TAD K0003
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
```

/AUTO INDEX TEST 5

```
0653 7200
0654 1032
0655 3010
0656 0410
0657 1010
0660 1046
0661 7040
0662 7440
0663 7402

CLA
TAD K7767
DCA 10
AND I 10
TAD 10
TAD K0007
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
```

/AUTO INDEX TEST 6

```
0664 7200
0665 1031
0666 3010
0667 0410
0670 1010
0671 1045
0672 7040
0673 7440
0674 7402

CLA
TAD K7757
DCA 10
AND I 10
TAD 10
TAD K0017
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
```

/AUTO INDEX TEST 7

```
0675 7200
0676 1027
0677 3010
0700 0410
0701 1010
0702 1044
0703 7040
0704 7440
0705 7402

CLA
TAD K7737
DCA 10
AND I 10
TAD 10
TAD K0037
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
```

/AUTO INDEX TEST 8

```
0706 7200
0707 1026
0710 3010
0711 0410

CLA
TAD K7677
DCA 10
AND I 10

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
```

0712 1010 TAD 10
0713 1043 TAD K0077 /AC SHOULD EQUAL 7777
0714 7040 CHA
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 /DO AUTO INDEX
0722 0410 AND 1 10
0723 1010 TAD 10
0724 1042 TAD K0177 /AC SHOULD EQUAL 7777
0725 7040 CHA
0726 7440 SZA /AC SHOULD BE ZERO
0727 7402 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 10

0730 7200 CLA
0731 1024 TAD K7577 /CONSTANT TO BE INDEXED
0732 3010 DCA 10 /DO AUTO INDEX
0733 0410 AND 1 10
0734 1010 TAD 10
0735 1041 TAD K0377 /AC SHOULD EQUAL 7777
0736 7040 CHA
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 /DO AUTO INDEX
0744 0410 AND 1 10
0745 1010 TAD 10
0746 1040 TAD K0777 /AC SHOULD EQUAL 7777
0747 7040 CHA
0750 7440 SZA /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 /DO AUTO INDEX
0755 2410 10 10
0756 7000 NOP
0757 1010 TAD 10
0760 1037 TAD K1777 /AC SHOULD EQUAL 7777
0761 7040 CHA
0762 7440 SZA /AC SHOULD BE ZERO
0763 7402 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 13

0764	7200	CLA	/CONSTANT TO BE INDEXED
0765	1021	TAD K3777	
0766	3010	DCA 10	/DO AUTO INDEX
0767	0410	AND I 10	
0770	1010	TAD 10	/AC SHOULD EQUAL 7777
0771	1021	TAD K3777	
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 41000

/AUTO INDEX TEST 14

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

/AUTO INDEX TEST 15

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

/AUTO INDEX TEST 16

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

1033 7440
1034 7402

SEA
HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 17

1035 7200
1036 1034
1037 3011
1040 3411
1041 1011
1042 1051
1043 7040
1044 7440
1045 7402

CLA
TAD K7775
DCA 11
DCA I 11
TAD 11
TAD K0001
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 18

1046 7200
1047 1033
1050 3011
1051 3411
1052 7200
1053 1011
1054 1047
1055 7040
1056 7440
1057 7402

CLA
TAD K7773
DCA 11
TAD I 11
CLA
TAD 11
TAD K0003
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 19

1060 7200
1061 1032
1062 3011
1063 0411
1064 1011
1065 1046
1066 7040
1067 7440
1070 7402

CLA
TAD K7767
DCA 11
AND I 11
TAD 11
TAD K0007
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 20

1071 7200
1072 1031
1073 3011
1074 0411
1075 1011
1076 1045
1077 7040
1100 7440
1101 7402

CLA
TAD K7757
DCA 11
AND I 11
TAD 11
TAD K0017
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 21

1102 7200
1103 1027
1104 3011

CLA
TAD K7737
DCA 11

/CONSTANT TO BE INDEXED

1105 0411
1106 1011
1107 1044
1110 7040
1111 7440
1112 7402

AND I 11
TAD 11
TAD K0037
CMA
SEA
HLT

/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 22

1113 7200
1114 1026
1115 3011
1116 0411
1117 1011
1120 1043
1121 7040
1122 7440
1123 7402

CLA
TAD K7677
DCA 11
AND I 11
TAD 11
TAD K0077
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 23

1124 7200
1125 1025
1126 3011
1127 0411
1130 1011
1131 1042
1132 7040
1133 7440
1134 7402

CLA
TAD K7977
DCA 11
AND I 11
TAD 11
TAD K0177
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 24

1135 7200
1136 1024
1137 3011
1140 0411
1141 1011
1142 1041
1143 7040
1144 7440
1145 7402

CLA
TAD K7377
DCA 11
AND I 11
TAD 11
TAD K0377
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 25

1146 7200
1147 1023
1150 3011
1151 0411
1152 1011
1153 1040
1154 7040
1155 7440
1156 7402

CLA
TAD K6777
DCA 11
AND I 11
TAD 11
TAD K0777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 26

1157 7200
1160 1022

CLA
TAD K5777

/CONSTANT TO BE INDEXED

/DO AUTO INDEX
 /AC SHOULD EQUAL 7777
 LD BE ZERO
 INDEX ERROR

/TEST 2 - TAPE 2

1/AUTO INDEX TEST 27

/CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /AC SHOULD EQUAL 7777

/AUTO INDEX TEST 28

/CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /AC SHOULD EQUAL 7777

/AUTO INDEX TEST 29

NT TO BE INDEXED
/OO AUTO INDEX
/AC SHOULD EQUAL 7777

1231 7440
1232 7402

SEA
HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 30

1233 7200
1234 1035
1235 3012
1236 0412
1237 1012
1240 1036
1241 7040
1242 7440
1243 7402

CLA
TAD K7776
DCA 12
AND I 12
TAD 12
TAD K0
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 31

1244 7200
1245 1034
1246 3012
1247 3412
1250 1012
1251 1051
1252 7040
1253 7440
1254 7402

CLA
TAD K7775
DCA 12
DCA I 12
TAD 12
TAD K0001
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 32

1255 7200
1256 1033
1257 3012
1260 1412
1261 7200
1262 1012
1263 1047
1264 7040
1265 7440
1266 7402

CLA
TAD K7773
DCA 12
TAD I 12
CLA
TAD 12
TAD K0003
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 33

1267 7200
1270 1032
1271 3012
1272 0412
1273 1012
1274 1046
1275 7040
1276 7440
1277 7402

CLA
TAD K7767
DCA 12
AND I 12
TAD 12
TAD K0007
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 34

1300 7200
1301 1031
1302 3012
1303 0412

CLA
TAD K7757
DCA 12
AND I 12

/CONSTANT TO BE INDEXED
/DO AUTO INDEX

1304 1012
1305 1045
1306 7040
1307 7440
1310 7402

TAD 12
TAD K0017
CMA
SEA
HLT

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 35

1311 7200
1312 1027
1313 3012
1314 0412
1315 1012
1316 1044
1317 7040
1320 7440
1321 7402

CLA
TAD K7737
DCA 12
AND I 12
TAD 12
TAD K0037
CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 36

1322 7200
1323 1026
1324 3012
1325 0412
1326 1012
1327 1043
1330 7040
1331 7440
1332 7402

CLA
TAD K7677
DCA 12
AND I 12
TAD 12
TAD K0077
CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 37

1333 7200
1334 1025
1335 3012
1336 0412
1337 1012
1340 1042
1341 7040
1342 7440
1343 7402

CLA
TAD K7577
DCA 12
AND I 12
TAD 12
TAD K0177
CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 38

1344 7200
1345 1024
1346 3012
1347 0412
1350 1012
1351 1041
1352 7040
1353 7440
1354 7402

CLA
TAD K7377
DCA 12
AND I 12
TAD 12
TAD K0377
CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 39

1355 7200
1356 1023
1357 3012

CLA
TAD K6777
DCA 12

/CONSTANT TO BE INDEXED

1360 0412 AND I 12 /DO AUTO INDEX
1361 1012 TAD 12 /AC SHOULD EQUAL 7777
1362 1040 TAD K0777
1363 7040 CMA
1364 7440 SEA
1365 74E2 HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 40
1366 7200 CLA
1367 1022 TAD K5777 /CONSTANT TO BE INDEXED
1370 3012 DCA 12 /DO AUTO INDEX
1371 2412 ISE I 12
1372 70E0 NOP
1373 1012 TAD 12 /AC SHOULD EQUAL 7777
1374 1037 TAD K1777
1375 7040 CMA
1376 7440 SEA /AC SHOULD BE ZERO
1377 7402 HLT /AUTO INDEX ERROR

*1400
/AUTO INDEX TEST 41
1400 7200 CLA
1401 1021 TAD K3777 /CONSTANT TO BE INDEXED
1402 3012 DCA 12 /DO AUTO INDEX
1403 0412 AND I 12
1404 1012 TAD 12 /AC SHOULD EQUAL 7777
1405 1021 TAD K3777
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 /DO AUTO INDEX
1414 0412 AND I 12
1415 1012 TAD 12 /AC SHOULD EQUAL 7777
1416 1020 TAD K7777
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 /DO AUTO INDEX
1425 0413 AND I 13
1426 1013 TAD 13 /AC SHOULD EQUAL 7777
1427 1035 TAD K7776
1430 7040 CMA
1431 7440 SEA /AC SHOULD BE ZERO
1432 74E2 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 44

```

1433 7200          CLA
1434 1035          TAD K7776
1435 3013          DCA 13
1436 0413          AND I 13
1437 1013          TAD 13
1440 1036          TAD K0
1441 7040          CMA
1442 7440          SEA
1443 7402          HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

```

```

1444 7200          /AUTO INDEX TEST 45
1445 1034          CLA
1446 3013          TAD K7775
1447 3413          DCA 13
1450 1013          DCA I 13
1451 1051          TAD 13
1452 7040          TAD K0001
1453 7440          CMA
1454 7402          SEA
1454 7402          HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

```

```

1455 7200          /AUTO INDEX TEST 46
1456 1033          CLA
1457 3013          TAD K7773
1460 1413          DCA 13
1461 7200          TAD I 13
1462 1013          CLA
1463 1047          TAD 13
1464 7040          TAD K0003
1465 7440          CMA
1466 7402          SEA
1466 7402          HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

```

```

1467 7200          /AUTO INDEX TEST 47
1470 1032          CLA
1471 3013          TAD K7767
1472 0413          DCA 13
1473 1013          AND I 13
1474 1046          TAD 13
1475 7040          TAD K0007
1476 7440          CMA
1477 7402          SEA
1477 7402          HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

```

```

1500 7200          /AUTO INDEX TEST 48
1501 1031          CLA
1502 3013          TAD K7797
1503 0413          DCA 13
1504 1013          AND I 13
1505 1045          TAD 13
1506 7040          TAD K0017
1507 7440          CMA
1510 7402          SEA
1510 7402          HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

```


/AUTO INDEX TEST 49

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

/AUTO INDEX TEST 50

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

/AUTO INDEX TEST 51

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

/AUTO INDEX TEST 52

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

/AUTO INDEX TEST 53

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

1565 7402

HLT

/AUTO INDEX ERROR

/AUTO INDEX TEST 54

1566 7200
1567 1022
1570 3013
1571 2413
1572 7000
1573 1013
1574 1037
1575 7040
1576 7440
1577 7402

CLA

TAD K5777

DCA 13
ISE I 13
NOP

TAD 13

TAD K1777

CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

1600

*1600
/AUTO INDEX TEST 55

1600 7200
1601 1021
1602 3013
1603 0413
1604 1013
1605 1021
1606 7040
1607 7440
1610 7402

CLA

TAD K3777

DCA 13
AND I 13
TAD 13
TAD K3777

CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 56

1611 7200
1612 1020
1613 3013
1614 0413
1615 1013
1616 1020
1617 7040
1620 7440
1621 7402

CLA

TAD K7777

DCA 13
AND I 13
TAD 13
TAD K7777

CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 57

1622 7200
1623 1036
1624 3014
1625 0414
1626 1014
1627 1035
1630 7040
1631 7440
1632 7402

CLA

TAD K0

DCA 14
AND I 14
TAD 14
TAD K7776

CMA
SEA
HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 58

1633 7200
1634 1035
1635 3014

CLA

TAD K7776
DCA 14

/CONSTANT TO BE INDEXED

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

/AUTO INDEX TEST 60

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

/AUTO INDEX TEST 61

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

/AUTO INDEX TEST 62

1700 7200 CLA /CONSTANT TO BE INDEXED
1701 1031 TAD K7757
1702 3014 DCA 14 /DO AUTO INDEX
1703 0414 AND I 14
1704 1014 TAD 14 /AC SHOULD EQUAL 7777
1705 1045 TAD K0017
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 /DO AUTO INDEX
1714 0414 AND I 14 /AC SHOULD EQUAL 7777
1715 1014 TAD 14
1716 1044 TAD K0037
1717 7040 CMA
1720 7440 SEA
1721 7402 HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR
```

/AUTO INDEX TEST 64

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

/AUTO INDEX TEST 69

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

/AUTO INDEX TEST 66

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

/AUTO INDEX TEST 67

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

/AUTO INDEX TEST 68

1766 7200
1767 1022
1770 3014
1771 2414
1772 7000
1773 1014
1774 1037
1775 7040
1776 7440
1777 7402

CLA
TAD K5777
DCA 14
ISE I 14
NOP
TAD 14
TAD K1777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

2000 7200
2001 1021
2002 3014
2003 0414
2004 1014
2005 1021
2006 7040
2007 7410
2010 0000
2011 7440
2012 7402

*2000
/AUTO INDEX TEST 69
CLA
TAD K3777
DCA 14
AND I 14
TAD 14
TAD K3777
CMA
SKP
0
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

2013 7200
2014 1020
2015 3014
2016 0414
2017 1014
2020 1020
2021 7040
2022 7440
2023 7402

/AUTO INDEX TEST 70
CLA
TAD K7777
DCA 14
AND I 14
TAD 14
TAD K7777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

2024 7200
2025 1036
2026 3015
2027 0415
2030 1015
2031 1035
2032 7040
2033 7440
2034 7402

/AUTO INDEX TEST 71
CLA
TAD K0
DCA 15
AND I 15
TAD 15
TAD K7776
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

2035 7200
2036 1035
2037 3015
2040 0415
2041 1015
2042 1036

/AUTO INDEX TEST 72
CLA
TAD K7776
DCA 15
AND I 15
TAD 15
TAD K0

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777

2043 7040 CMA
2044 7440 SEA
2045 7402 HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 73

2046 7200 CLA
2047 1034 TAD K7775
2050 3015 DCA 15
2051 3415 DCA I 15
2052 1015 TAD 15
2053 1051 TAD K0001
2054 7040 CMA
2055 7440 SEA
2056 7402 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 CLA
2060 1033 TAD K7773
2061 3015 DCA 15
2062 1415 TAD I 15
2063 7200 CLA
2064 1015 TAD 15
2065 1047 TAD K0003
2066 7040 CMA
2067 7440 SEA
2070 7402 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 CLA
2072 1032 TAD K7767
2073 3015 DCA 15
2074 0415 AND I 15
2075 1015 TAD 15
2076 1046 TAD K0007
2077 7040 CMA
2100 7440 SEA
2101 7402 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 CLA
2103 1031 TAD K7757
2104 3015 DCA 15
2105 0415 AND I 15
2106 1015 TAD 15
2107 1045 TAD K0017
2110 7040 CMA
2111 7440 SEA
2112 7402 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 CLA
2114 1027 TAD K7737
2115 3015 DCA 15
2116 0415 AND I 15

/CONSTANT TO BE INDEXED
/DO AUTO INDEX

2117 1015
2120 1044
2121 7040
2122 7440
2123 7402

TAD 15
TAD K0037
CMA
SEA
HLT

/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 78

2124 7200
2125 1026
2126 3015
2127 0415
2130 1015
2131 1043
2132 7040
2133 7440
2134 7402

CLA
TAD K7677
DCA 15
AND I 15
TAD 15
TAD K0077
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 79

2135 7200
2136 1025
2137 3015
2140 0415
2141 1015
2142 1042
2143 7040
2144 7440
2145 7402

CLA
TAD K7577
DCA 15
AND I 15
TAD 15
TAD K0177
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 80

2146 7200
2147 1024
2150 3015
2151 0415
2152 1015
2153 1041
2154 7040
2155 7440
2156 7402

CLA
TAD K7377
DCA 15
AND I 15
TAD 15
TAD K0377
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 81

2157 7200
2160 1023
2161 3015
2162 0415
2163 1015
2164 1040
2165 7040
2166 7440
2167 7402
2170 7000
2171 7000
2172 5376
2173 7000
2174 7000

CLA
TAD K6777
DCA 15
AND I 15
TAD 15
TAD K0777
CMA
SEA
HLT
NOP
NOP
JMP .+4
NOP

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

2175 7000
2176 7000
2177 7000

NOP
NOP
NOP

2200

*2200
/AUTO INDEX TEST 02

2200 7200
2201 1022
2202 3015
2203 2415
2204 7000
2205 1015
2206 1037
2207 7040
2210 7440
2211 7402

CLA
TAD K5777
DCA 15
ISE I 15
NOP
TAD 15
TAD K1777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 03

2212 7200
2213 1021
2214 3015
2215 0415
2216 1015
2217 1021
2220 7040
2221 7440
2222 7402

CLA
TAD K3777
DCA 15
AND I 15
TAD 15
TAD K3777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 04

2223 7200
2224 1020
2225 3015
2226 0415
2227 1015
2230 1020
2231 7040
2232 7440
2233 7402

CLA
TAD K7777
DCA 15
AND I 15
TAD 15
TAD K7777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 05

2234 7200
2235 1036
2236 3016
2237 0416
2240 1016
2241 1035
2242 7040
2243 7440
2244 7402

CLA
TAD K0
DCA 16
AND I 16
TAD 16
TAD K7776
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 06

2245 7200
2246 1035

CLA
TAD K7776

/CONSTANT TO BE INDEXED

1

2247 3016 DCA 16
2250 0416 AND I 16
2251 1016 TAD 16
2252 1036 TAD K0
2253 7040 CMA
2254 7440 SEA
2255 7402 HLT

/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 07

2256 7200 CLA
2257 1034 TAD K7775
2260 3016 DCA 16
2261 3416 DCA I 16
2262 1016 TAD 16
2263 1051 TAD K0001
2264 7040 CMA
2265 7440 SEA
2266 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 08

2267 7200 CLA
2270 1033 TAD K7773
2271 3016 DCA 16
2272 1416 TAD I 16
2273 7200 CLA
2274 1016 TAD 16
2275 1047 TAD K0003
2276 7040 CMA
2277 7440 SEA
2300 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 09

2301 7200 CLA
2302 1032 TAD K7767
2303 3016 DCA 16
2304 0416 AND I 16
2305 1016 TAD 16
2306 1046 TAD K0007
2307 7040 CMA
2310 7440 SEA
2311 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 90

2312 7200 CLA
2313 1031 TAD K7757
2314 3016 DCA 16
2315 0416 AND I 16
2316 1016 TAD 16
2317 1045 TAD K0017
2320 7040 CMA
2321 7440 SEA
2322 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD EQUAL 7777
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 91

```

2323 7200
2324 1027
2325 3016
2326 0416
2327 1016
2330 1044
2331 7040
2332 7440
2333 7402

CLA
TAD K7737
DCA 16
AND I 16
TAD 16
TAD K0037
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
    
```

```

/AUTO INDEX TEST 92

2334 7200
2335 1026
2336 3016
2337 0416
2340 1016
2341 1043
2342 7040
2343 7440
2344 7402

CLA
TAD K7677
DCA 16
AND I 16
TAD 16
TAD K0077
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
    
```

```

/AUTO INDEX TEST 93

2345 7200
2346 1025
2347 3016
2350 0416
2351 1016
2352 1042
2353 7040
2354 7440
2355 7402

CLA
TAD K7577
DCA 16
AND I 16
TAD 16
TAD K0177
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
    
```

```

/AUTO INDEX TEST 94

2356 7200
2357 1024
2360 3016
2361 0416
2362 1016
2363 1041
2364 7040
2365 7440
2366 7402

CLA
TAD K7377
DCA 16
AND I 16
TAD 16
TAD K0377
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
    
```

```

/AUTO INDEX TEST 95

2367 7200
2370 1023
2371 3016
2372 0416
2373 1016
2374 1040
2375 7040
2376 7440
2377 7402

CLA
TAD K6777
DCA 16
AND I 16
TAD 16
TAD K0777
CMA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR
    
```

PAUSE

/TEST 2 - TAPE 3

2400 *2400

/AUTO INDEX TEST 96

```
2400 7200
2401 1022
2402 3016
2403 2416
2404 7000
2405 1016
2406 1037
2407 7040
2410 7440
2411 7402
```

/CONSTANT TO BE INDEXED
/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 97

```
2412 7200
2413 1021
2414 3016
2415 0416
2416 1016
2417 1021
2420 7040
2421 7440
2422 7402
```

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 98

```
2423 7200
2424 1020
2425 3016
2426 0416
2427 1016
2430 1020
2431 7040
2432 7440
2433 7402
```

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 99

```
2434 7200
2435 1036
2436 3017
2437 0417
2440 1017
2441 1035
2442 7040
2443 7440
2444 7402
```

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 100

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

/AUTO INDEX TEST 101

```
2456 7200 CLA
2457 1034 TAD K7775 /CONSTANT TO BE INDEXED
2460 3017 DCA 17 /DO AUTO INDEX
2461 3417 DCA I 17
2462 1017 TAD 17 /AC SHOULD EQUAL 7777
2463 1051 TAD K0001
2464 7040 CMA
2465 7440 SEA /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 /DO AUTO INDEX
2472 1417 TAD I 17
2473 7200 CLA
2474 1017 TAD 17 /AC SHOULD EQUAL 7777
2475 1047 TAD K0003
2476 7040 CMA
2477 7440 SEA /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 /DO AUTO INDEX
2504 0417 AND I 17
2505 1017 TAD 17 /AC SHOULD EQUAL 7777
2506 1046 TAD K0007
2507 7040 CMA
2510 7440 SEA /AC SHOULD BE ZERO
2511 7402 HLT /AUTO INDEX ERROR
```

/AUTO INDEX TEST 104

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

2522 7402 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 105
2523 7200 CLA /CONSTANT TO BE INDEXED
2524 1027 TAD K7737
2525 3017 DCA 17 /DO AUTO INDEX
2526 0417 AND I 17
2527 1017 TAD 17
2530 1044 TAD K0037 /AC SHOULD EQUAL 7777
2531 7040 CMA
2532 7440 SEA
2533 7402 HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 106
2534 7200 CLA /CONSTANT TO BE INDEXED
2535 1026 TAD K7677
2536 3017 DCA 17 /DO AUTO INDEX
2537 0417 AND I 17
2540 1017 TAD 17
2541 1043 TAD K0077 /AC SHOULD EQUAL 7777
2542 7040 CMA
2543 7440 SEA
2544 7402 HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 107
2545 7200 CLA /CONSTANT TO BE INDEXED
2546 1025 TAD K7577
2547 3017 DCA 17 /DO AUTO INDEX
2550 0417 AND I 17
2551 1017 TAD 17
2552 1042 TAD K0177 /AC SHOULD EQUAL 7777
2553 7040 CMA
2554 7440 SEA
2555 7402 HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 108
2556 7200 CLA /CONSTANT TO BE INDEXED
2557 1024 TAD K7377
2560 3017 DCA 17 /DO AUTO INDEX
2561 0417 AND I 17
2562 1017 TAD 17
2563 1041 TAD K0377 /AC SHOULD EQUAL 7777
2564 7040 CMA
2565 7440 SEA
2566 7402 HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 109
2567 7200 CLA /CONSTANT TO BE INDEXED
2570 1023 TAD K6777
2571 3017 DCA 17 /DO AUTO INDEX
2572 0417 AND I 17
2573 1017 TAD 17
2574 1040 TAD K0777 /AC SHOULD EQUAL 7777

2575 7040 CMA
2576 7440 SEA
2577 7402 HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

2600 *2600
/AUTO INDEX TEST 110

2600 7200 CLA
2601 1022 TAD K5777
2602 3017 DCA 17
2603 2417 1SE I 17
2604 7000 NOP
2605 1017 TAD 17
2606 1037 TAD K1777
2607 7040 CMA
2610 7440 SEA
2611 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 111

2612 7200 CLA
2613 1021 TAD K5777
2614 3017 DCA 17
2615 0417 AND I 17
2616 1017 TAD 17
2617 1021 TAD K5777
2620 7040 CMA
2621 7440 SEA
2622 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 112

2623 7200 CLA
2624 1020 TAD K7777
2625 3017 DCA 17
2626 0417 AND I 17
2627 1017 TAD 17
2630 1020 TAD K7777
2631 7040 CMA
2632 7440 SEA
2633 7402 HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX
/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 113

2634 5236 JMP .+2
2635 7402 HLT
2636 7410 SKP
2637 2644 2644
2640 1237 TAD .-1
2641 3010 DCA 10
2642 5410 JMP I 10
2643 7402 HLT
2644 7402 HLT

/JMP FAILED
/JMP WORKED (A LITTLE)
/TEST INSTRUCTION
/JMP INDIRECT FAILED
/LOCATION 2610. NO INDEX
/IN DEFER STATE.

/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

SEA

/WRONG ADDRESS STORED

HLT

2656 7402

HLT

/DURING JMS

2657 7410

SKP

2660 2664

.-4

2661 1260

TAD .-1

2662 3010

DCA 10

2663 4410

JMS 1 10

2664 7402

HLT

2665 7402

HLT

2666 1265

TAD .-1

2667 7410

SKP

2670 2664

.-4

2671 7041

CIA

2672 1270

TAD .-2

2673 7440

SEA

2674 7402

HLT

2675 5676

JMP 1 .+1

2676 4200

PIOTST

/INTERUPT TEST 1

/WRONG ADDRESS STORED DURING JMS

/GO TO PROCESSOR 107 TESTS

/INTERUPT TEST 1

2677 4700

JMS 1 .+1

2700 4011

STR

2701 4040

SPF

2702 4041

TSF

2703 7402

HLT

2704 7200

CLA TAD BACK1

2705 1313

TAD BACK1

2706 3002

DCA 2

2707 6001

ION

2710 7000

NOP

2711 7402

HLT

2712 2711

.-1

2713 2714

.-4

2714 7440

SEA

2715 7402

HLT

OUT1,
BACK1,

/RETURN FROM LOC 1

/AC SHOULD BE 0

/CONFIDENCE CHECK

/GO TO LOC 0000

/NO INTERRUPT

/SET PRINTER FLAG

/SPF OR TSF FAILED

/FLAG IS ON

TAD 0

CIA

TAD OUT1

SEA CLA

HLT

/INTERUPT ERROR

/WRONG ADDRESS STORED

/INTERRUPT TEST 2

SPF

/SET PRINTER FLAG

2723 6040
2724 6041
2725 7402
2726 7200
2727 1335/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

2730 3002

2731 6001

TAD BACKS

2732 1020

DCA 2

2733 7402

ION

2734 2733

TAD K7777

/NO INTERRUPT

2735 2736

HLT

OUTS,
BACKS,

.-1

/RETURN FROM LOC1

2736 7040

CMA

2737 7440

SEA

/CONFIDENCE CHECK
/AC SHOULD BE 0

2740 7402

HLT

2741 1000

TAD 0

2742 7041

CIA

2743 1334

TAD OUTS

2744 7640

SEA CLA

2745 7402

HLT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

/INTERRUPT TEST 3

SPF

/SET PRINTER FLAG

2746 6040

TSF

2747 6041

HLT

2750 7402

CLA

2751 7200

TAD BACKS

2752 1361

DCA 2

2753 3002

TAD K7777

2754 1020

ION

2755 6001

AND K7777

2756 0020

HLT

2757 7402

.-1

2760 2757

.-1

2761 2762

CMA

2762 7040

SEA

2763 7440

SEA

2764 7402

HLT

2765 1000

TAD 0

2766 7041

CIA

2767 1360

TAD OUTS

2770 7640

SEA CLA

2771 7402

HLT

2772 5773

JMP I .+1

2773 3000

3000

/INTERRUPT ERROR
/WRONG ADDRESS STORED

3000

*3000

/INTERRUPT TEST 4

3000 6040

SPF

/SET PRINTER FLAG

3001 6041

TSF

/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

/RETURN FROM LOC1
/CONFIDENCE CHECK
/AC SHOULD BE ZERO

/DCA PRIOR TO INTERRUPT
/FAILED

/INTERUPT ERROR
/WRONG ADDRESS STORED

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

/NO INTERRUPT

/RETURN FROM LOC1
/CONFIDENCE CHECK
/AC SHOULD BE ZERO

/ISZ PRIOR TO
/INTERUPT FAILED

/INTERUPT ERROR

3002	7402	HLT
3003	7200	CLA
3004	1213	TAD BACK4
3005	3002	DCA 2
3006	1020	TAD K7777
3007	6021	ION
3010	3003	DCA 3
3011	7402	HLT
3012	3011	OUT4, +1
3013	3014	SEA
3014	7440	SEA
3015	7402	HLT
3016	1003	TAD 3
3017	7040	CMA
3020	7440	SEA
3021	7402	HLT
3022	3003	DCA 3
3023	1000	TAD 0
3024	7041	CIA
3025	1212	TAD OUT4
3026	7640	SEA CLA
3027	7402	HLT
/INTERUPT TEST 5		
3030	6040	SPF
3031	6041	TSF
3032	7402	HLT
3033	7200	CLA
3034	1244	TAD BACK5
3035	3002	DCA 2
3036	1035	TAD K7776
3037	5003	DCA 3
3040	6001	ION
3041	2003	ISZ 3
3042	7402	HLT
3043	3042	OUT5, +1
3044	3045	BACK5, +1
3045	7440	SEA
3046	7402	HLT
3047	1003	TAD 3
3050	7040	CMA
3051	7440	SEA
3052	7402	HLT
3053	5003	DCA 3
3054	1000	TAD 0
3055	7041	CIA
3056	1243	TAD OUT5
3057	7640	SEA CLA
3060	7402	HLT

/INTERRUPT TEST 6

```

3061 6040
3062 6041      SP
3063 7442      TSF
3064 7200      HLT
3065 1276      CLA
3066 3002      TAD BACK6
3067 1020      DCA 2
3070 3003      TAD K7777
3071 6001      DCA 3
3072 2003      ION
3073 7402      ISE 3
3074 7402      HLT
3075 3074      HLT
3076 3077      OUT6,
3077 7440      .+1
3100 7402      SEZ
      HLT

```

/NO INTERRUPT

```

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

```

```

3101 1003      TAD 3
3102 7440      SEZ
3103 7402      HLT

```

```

/ISE PRIOR TO
/INTERRUPT FAILED

```

```

3104 3003      DCA 3
3105 1000      TAD 0
3106 7041      CIA
3107 1275      TAD OUT6
3110 7640      SEZ CLA
3111 7402      HLT

```

```

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

/INTERRUPT TEST 7

```

3112 6040
3113 6041      SP
3114 7402      TSF
3115 7200      HLT
3116 1324      CLA
3117 3002      TAD BACK7
3120 6001      DCA 2
3121 5321      ION
3121 5321      JMP .
3122 7402      HLT
3123 3121      HLT
3124 3125      .-2
3125 7440      .+1
3126 7402      SEZ
      HLT

```

/NO INTERRUPT

```

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

```

```

3127 1000      TAD 0
3130 7041      CIA
3131 1323      TAD OUT7
3132 7640      SEZ CLA
3133 7402      HLT

```

```

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

/INTERRUPT TEST 8

```

3134 6040
3135 6041
3136 7402
3137 7200
3140 1346
3141 3002
3142 6001
3143 4003
3144 7402
3145 3144
3146 3147
3147 7440
3150 7402

      OUT8,
      BACK9,

      SP
      TSF
      HLT
      CLA
      TAD BACK8
      DCA 2
      ION
      JMS 3
      HLT
      .-1
      .+1
      SZA
      HLT

      TAD 3
      CIA
      TAD OUT8
      SZA
      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
  
```

```

/JMS ERROR PRIOR
/TO INTERRUPT WRONG
/ADDRESS STORED
  
```

```

3156 1000
3157 7041
3160 1065
3161 7640
3162 7402

      TAD 0
      CIA
      TAD K4
      SZA CLA
      HLT

      JMP I .+1
      3200
  
```

```

/INTERRUPT ERROR
/WRONG ADDRESS STORED
  
```

*3200 /INTERRUPT TEST 9

```

3200 0040
3201 6041
3202 7402
3203 7200
3204 1213
3205 3002
3206 1020
3207 6001
3210 7200
3211 7402
3212 3211
3213 3214
3214 7440
3215 7402

      OUT9,
      BACK9,

      SP
      TSF
      HLT
      CLA
      TAD BACK9
      DCA 2
      TAD K7777
      ION
      CLA
      HLT
      .-1
      .+1
      SZA
      HLT

      TAD 0
      CIA
      TAD OUT9
      SZA CLA
  
```

```

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

/NO INTERRUPT

```

/RETURN FROM LOC 1
/CLA PRIOR TO INTERRUPT
/FAILED
  
```


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

/WHAT HAPPENED TO MY FLAG

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

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

/INTERRUPT TEST 12

/CLEAR FLAG

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

/INTERRUPT WITH NO
/FLAG.

IOF

/INTERRUPT TEST 13

/SPF FAILED TO SET PRINTER FLAG.

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 OUT113, .-1
3345 3346 BAC13, .+1
3346 7440 SEA
3347 7402 HLT
3350 1000 TAD 0
3351 7041 CIA
3352 1344 TAD OUT113
3353 7640 SEA CLA
3354 7402 HLT

/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	5/65	JMP I .+1	
3365	3366	.+1	
3366	7402	HLT	/NO INTERRUPT
3367	3366	OUT14, .-1	
3370	3371	BAC14, .+1	
3371	7440	SEA	
3372	7402	HLT	
3373	1000	TAD 0	
3374	7041	CIA	
3375	1367	TAD OUT14	
3376	7640	SEA 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	8213	JMP .+3	/CAF FAILED TO CLEAR ION
3411	7402	HLT	
3412	3411	.-1	
3413	6007	CAF	/CLEAR FOR EXIT.
3414	5615	JMP I .+1	
3415	3600	IAIT1	

PAGE

/ILLEGAL AUTO INDEX TEST1

3600	7200	IAIT1, CLA	
3601	5602	JMP I .+1	
3602	4000	AND1	
3603	4010	K4010, 4010	
4000	4000	*4000	
4001	0610	AND1,	
4002	5602	AND I 4010	/TEST INSTRUCTION
4002	3604	JMP I .+1	
4002	3604	RET1	

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

3606 7402 HLT /ERROR. AC SHOULD BE ZERO
3607 7200 CLA /AND I 4010 ALTERED (4010)
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
2174 5775 AND2, AND I 2010
2175 3615 JMP I .+1
RET2 RET2 /TEST INSTRUCTION

3615 3615 *K2010+1
3616 1614 RET2, TAD I K2010
3617 7402 SEA
HLT
3620 5621 JMP I .+1 /ERROR. AC SHOULD BE ZERO
3621 3622 AITSTS /AND I 2010 ALTERED (2010)

/ILLEGAL AUTO INDEX TEST 3

3622 7200 AITSTS, CLA
3623 5624 JMP I .+1
3624 1173 AND3
3625 1010 K1010, 1010

1173 1173 *1173
1174 0610 AND3, AND I 1010
1175 5775 JMP I .+1
3626 3626 RET3 /TEST INSTRUCTION

3626 3626 *K1010+1
3627 1625 RET3, TAD I K1010
3630 7402 SEA
HLT
3631 7200 CLA
3632 3625 DCA I K1010
/ERROR. AC SHOULD BE ZERO
/AND I 1010 ALTERED (1010)

/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 3637 *K410+1
3637 1636 RET4, TAD I K410
3640 7440 SEA
3641 7422 HLT
3642 7200 CLA
3643 3636 DCA I K410
/ERROR. AC SHOULD BE ZERO
/AND I 410 ALTERED (410)

/ILLEGAL AUTO INDEX TEST 5

3644 7200 CLA
3645 5646 JMP I .+1
3646 0372 AND5
3647 0210 K210, 210
0371 0371 *371
0371 5375 JMP .+4
0372 0610 AND I 210
0373 5774 JMP I .+1
0374 3650 RET5
/TEST INSTRUCTION

3650 3650 *K210+1
3647 1647 RET5, TAD I K210
3651 7440 SEA
3652 7402 HLT
3653 7200 CLA
3654 3647 DCA I K210
/ERROR. AC SHOULD BE ZERO
/AND I 210 ALTERED (210)

/ILLEGAL AUTO INDEX TEST 6

3655 7200 CLA
3656 0657 JMP I .+1
3657 0130 AND6
3660 0110 K110, 110
0130 0130 *130
0131 0510 AND I 110
0131 5532 JMP I .+1
0132 3661 RET6
/TEST INSTRUCTION

3661 3661 *K110+1
3661 1660 RET6, TAD I K110
3662 7440 SEA
3663 7402 HLT
3664 7200 CLA
3665 3110 DCA 110
/ERROR. AC SHOULD BE ZERO
/AND I 110 ALTERED (110)

/ILLEGAL AUTO INDEX TEST 7

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

/ILLEGAL AUTO INDEX TEST 8

3677	7200	CLA	
3700	5701	JMP I .+1	
3701	0120	AND0	
3702	0030	K30,	
		30	
0120	0120	*120	
0121	0430	AND8,	
0122	5522	AND I 30	
		JMP I .+1	
		RET0	
			/TEST INSTRUCTION
3703	3703	*K30+1	
3703	1702	RET0,	
3704	7440	TAD I K30	
3705	7402	SZA	
		HLT	
3706	7200	CLA	
3707	3030	DCA 30	
			/ERROR. AC SHOULD BE ZERO
			/AND I 30 ALTERED (30)

/ILLEGAL AUTO INDEX TEST 9

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

3714 3714 *IAITS9+1
3715 1436 RET9, TAD I K0
3716 7440 SEA
3717 7402 HLT
3717 7200
3720 3000
CLA
DCA 0
/ERROR, AC SHOULD BE ZERO
/AND I 0 ALTERED (0)

/ILLEGAL AUTO INDEX TEST 10

3721 7200 CLA
3722 5723 JMP I .+1
3723 0070 IAIT10, AND10
0070 *70
0071 0407 AND I 7
0071 5472 JMP I .+1
0072 3724 RET10
3724 *IAIT10+1
/TEST INSTRUCTION

3724 1446 RET10, TAD I K0007
3725 7440 SEA
3726 7402 HLT
3727 7200 CLA
3730 3007 DCA 7
/ERROR, AC SHOULD BE ZERO
/AND I 7 ALTERED (7)

/CHECK FOR TTY BELL

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

4010 4010 *4010
4010 0000 0
4011 0000 STR,
4012 1220 0
4013 3001 TAD JMP
DCA 1

4014 3002 DCA 2
 4015 3003 DCA 3
 4016 2211 ISE STR
 4017 5611 JMP I STR
 4020 5402 JMP IX, 5402

/PROCESSOR IOT TEST
 4200 4200 PAGE
 4201 4602 PIOTST, CLA CLL
 4202 4011 JMS I .+1
 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
 -5203
 5402

/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

```
4244 72C1 /PROCESSOR IOT TEST 5
4245 6035 CLA IAC
4246 6040 KIE
4247 6041 SPF
4250 7402 TSF
4251 6003 HLT
4252 7402 SRO
HLT
```

```
4253 60E7 /PROCESSOR IOT TEST 6
4254 1267 CAF
4255 3002 TAD BACK13
4256 6001 DCA 2
4257 7410 ION
4260 7402 SKP
4261 6000 HLT
4262 7402 SKON
4263 6000 HLT
4264 7410 SKP
4265 7402 HLT
4266 5271 JMP
4267 4270 .+3
4270 7402 HLT
```

```
BACK13, .+3
/ILLEGAL INTERRUPT OCCURRED

4271 60E7 /PROCESSOR IOT TEST 7
4272 1304 CAF
4273 3002 TAD BACK14
4274 6001 DCA 2
4275 6002 ION
4276 7410 IOF
4277 7402 SKP
4300 6000 HLT
4301 7410 SKON
4302 7402 SKP
4303 5306 HLT
4304 4305 JMP
4305 7402 .+3
HLT
```

```
BACK14, .+3
/ILLEGAL INTERRUPT OCCURED

4306 6007 /PROCESSOR IOT TEST 8
4307 7040 CAF
4310 6004 CMA
4311 7410 GTF
4312 7402 SKP
4313 0064 AND K5200
4314 7440 SEA
4315 7402 HLT
```

```
4316 7360 /PROCESSOR IOT TEST 9
4317 6004 CLA CMA CLL CML
GTF
```

/ENABLE TTY INTERRUPT (AC11 IS SET)
/SET PRINTER FLAG

/SPF OR TSF FAILED
/SKIP IF INTERRUPT REQUEST
/KIE FAILED TO ENABLE TTY INTERRUPT OR SRO FAILED

/CLEAR ALL FLAGS, AC, AND LINK

/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

/CLEAR ALL FLAGS, AC, AND LINK

/TURN INTERRUPT ON
/TURN INTERRUPT OFF

/IOF SHOULD NOT SKIP
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF

/IOF FAILED

/ILLEGAL INTERRUPT OCCURED

/CLEAR ALL FLAGS, AC, AND LINK

/GET INTERRUPT FLAGS

/GTF SHOULD NOT SKIP
/MASK

/GTF FAILED, (AC SHOULD EQUAL 0000)

/SET LINK AND AC
/GET INTERRUPT FLAGS, (AC SHOULD EQUAL 4000)

4320 7420
4321 7422
4322 0064
4323 7124
4324 7430
4325 7440
4326 7402
SNL
HLT
AND K5200
CLL RAL
SEL
SEA
HLT

/LINK SHOULD BE 1
/MASK
/AC SHOULD EQUAL ZERO
/GTF FAILED

/PROCESSOR IOT TEST 10
4327 6007
4330 6040
4331 6004
4332 0064
4333 7006
4334 7004
4335 7430
4336 7440
4337 7402
CAF
SPF
GTF
AND K5200
RTL
RAL
SEL
SEA
HLT

/CLEAR ALL FLAGS, (AC, LINK, AND ENABLE TTY INTERRUPT
/SET PRINTER FLAG
/GET INTERRUPT FLAGS, (AC SHOULD EQUAL 1000)
/MASK
/PUT INTERRUPT BUS- (AC SHOULD EQUAL 4000)
/FLAG INTO LINK, (AC SHOULD EQUAL ZERO)
/GTF FAILED TO GET INTERRUPT BUS FLAG

/PROCESSOR IOT TEST 11
4340 6007
4341 1356
4342 3002
4343 6001
4344 6004
4345 0064
4346 6000
4347 7402
4350 7102
4351 7012
4352 7430
4353 7440
4354 7402
4355 5360
4356 4357
4357 7402
CAF
TAD
DCA
ION
GTF
AND K5200
SKON
HLT
CLL BSM
RTR
SEL
SEA
HLT
JMP
HLT

/CLEAR ALL FLAGS
/TURN INTERRUPT ON
/GET INTERRUPT FLAGS, (AC SHOULD EQUAL 0200)
/MASK
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/GTF CLEARED INTERRUPT (ION)
/PUT INTERRUPT BUS- (AC SHOULD EQUAL 0002)
/FLAG INTO LINK, (AC SHOULD EQUAL ZERO)
/GTF FAILED TO GET INTERRUPT FLAG
/ILLEGAL INTERRUPT OCCURED

2402-4360 7320
4361 1375
4362 3002
4363 6005
4364 7410
4365 7402
4366 7420
4367 7440
4370 7402
4371 6000
4372 7402
4373 5774
4374 4400
4375 4376
4376 7402
7320
1375
3002
6005
7410
7402
7420
7440
7402
6000
7402
5774
4400
4376
7402
/PROCESSOR IOT TEST 12
CLA CLL CML
TAD
DCA
RTF
SKP
HLT
SNL
SEA
SKON
HLT
JMP 1
PTST14
BACK16, *+1
HLT

/RESTORE ALL FLAGS
/RTF SHOULD NOT SKIP
/LINK SHOULD BE ZERO
/AC EQUALS ZERO
/RTF FAILED, LINK AND AC SHOULD BE ZERO
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/RTF FAILED TO TURN INTERRUPT ON
/ILLEGAL INTERRUPT OCCURED

```
4400 6007 /PROCESSOR IOT TEST 13
4401 1215 PTST14, CAF
4402 5002 TAD BACK17
4403 7330 DCA 2
4404 6005 CLA CLL CML RAR
4405 7420 RTF
4406 7402 SNL
4407 6000 HLT
4410 7402 SKON
4411 6007 HLT
4412 7300 CAF
4413 5614 CLA CLL
4414 2677 JMP I .+1
4415 4416 INTST
4416 7402 BACK17, .+1
      HLT
```

5

```
/AC EQUALS 4000
/RESTORE ALL FLAGS

/RTF FAILED TO RESTORE LINK
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/RTF FAILED TO TURN INTERRUPT ON
/CLEAR ALL FLAGS, AC, LINK, AND ENABLE TTY INTERRUPT
/GO TO INTERRUPT TESTS

/ILLEGAL INTERRUPT OCCURED
```

[illegible]

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

AI1TS13	3622	K1010	3625	OUT114	3367
AND1	4000	K110	3660	PIOTST	4200
AND10	0070	K1111	0062	PTST14	4400
AND2	2173	K1234	0177	RET1	3604
AND3	1173	K1172	0173	RET10	3724
AND4	0574	K1173	0174	RET2	3615
AND5	0372	K1174	0175	RET3	3626
AND6	0130	K1175	0176	RET4	3637
AND7	0124	K1176	0172	RET5	3650
AND8	0120	K11777	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
BAC10	3236	K30	3702	RTF	6005
BAC11	3311	K3777	0021	SKON	6000
BAC12	3326	K4010	0065	SPF	6040
BAC13	4267	K410	3636	SRQ	6003
BAC14	4304	K4400	0052	STR	4011
BAC15	4356	K4444	0056	TP0	0202
BAC16	4375	K4577	0053	TP177	0377
BAC17	4415	K50	3671		
BAC12	2761	K5200	0064		
BAC13	2735	K5252	0061		
BAC14	3013	K5555	0063		
BAC15	3044	K5777	0022		
BAC16	3076	K6666	0055		
BAC17	3124	K6777	0023		
BAC18	3146	K7070	0057		
BAC19	3213	K7377	0024		
BELCOD	3751	K7577	0025		
BLCNT	3747	K7677	0026		
BSN	7002	K7737	0027		
CAF	6007	K7757	0031		
GTF	6004	K7767	0032		
IA1T1	3600	K7773	0033		
IA1T10	3723	K7775	0034		
IA1TS9	3713	K7776	0035		
INTEST	2677	K7777	0020		
JMP1X	4020	K1E	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	OUT13	3344		

ERRORS DETECTED: 0

LINKS GENERATED: 0

RUN-TIME: 20 SECONDS

2K CORE USED