

IDENTIFICATION

PRODUCT CODE:	MAINDEC-8E-D008
PRODUCT NAME:	POP-8/E INSTRUCTION TEST 2
DATE CREATED:	JUNE 10, 1971
MAINTAINER:	DIAGNOSTIC GROUP
AUTHOR:	ED. FORTMILLER



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
- 8. MISCELLANEOUS
 - 8.1 EXECUTION TIME
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.
THE TELETYPE BELL RINGS AT THE END OF 1500 PROGRAM PASSES
WHICH IS APPROXIMATELY EVERY 5 SECONDS.

9. PROGRAM DESCRIPTION

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

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

1. DCA TEST

2. INDIRECT ADDRESSING TEST

- A. USING TAD
- B. USING AND

3. AUTOINDEX TEST

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

4. PROCESSOR IOT TEST

- A. USING CAF
- B. USING SRQ
- C. USING SPF
- D. USING KIT
- E. USING SKON
- F. USING ION
- G. USING IOT
- 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 1

6. CHECK FOR UNAUTHORIZED AUTOINDEXING

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

/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 FLAGS
6005 RTF=6005 /RESTORE INTERRUPT FLAGS AND TURN INTERRUPT ON
6007 CAF=6007 /CLEAR ALL FLAGS, AC, LINK, AND ENABLE TTY INTERRUPT F.F.
6040 SPF=6040 /SET PRINTER FLAG
6035 KIE=6035 /ENABLE TTY INTERRUPT F.F. WHEN AC 11 EQUALS A 1
7002 BSM=7002 /SHAP BYTE$ IN AC
  
```

```

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

```

0007 *7 B
0008 /CONSTANTS AND VARIABLES
  
```

```

0020 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
0031 0000 0
0032 7757 K7757, 7757
0033 7767 K7767, 7767
0034 7775 K7775, 7775
0035 7776 K7776, 7776
0036 0000 K0, 0
0037 1777 K1777, 1777
0040 0777 K0777, 0777
0041 0377 K0377, 0377
0042 0177 K0177, 0177
0043 0077 K0077, 0077
0044 0037 K0037, 0037
0045 0017 K0017, 0017
0046 0007 K0007, 0007
0047 0003 K0003, 0003
0050 0000 0
0051 0001 K0001, 0001
0052 4400 K4400, 4400
0053 4577 K4577, 4577
0054 2525 K2525, 2525
  
```

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

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

0200	0200	*200		
	0201	/DCA TEST 1		
	0202	CLA		
	0203	SKP		
	0204	0		
	0205	TAD K4400		
	0206	DCA TP177		
	0207	SEA		
	0208	HLT		
	0209	SKP		
	0210	0		
	0211	TAD K4400		
	0212	CIA		
	0213	TAD TP177		
	0214	SEA		
	0215	HLT		

/DCA DID NOT CLEAR AC

/AC=-(4400)

/DCA FAILED

/AC SHOULD EQUAL ZERO

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 TEST 2

/DCA DID NOT CLEAR AC

/DCA FAILED

/AC SHOULD EQUAL ZERO

/DCA TEST 3

02300	72000	CLA
02311	10200	TAD K7777
02332	32020	DCA TP0
02333	74400	SEA
02334	74020	HLT
02335	12020	TAD TP0
02336	70400	CHA
02337	74400	SEA
02340	74020	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 4

02411	72000	CLA
02422	10336	TAD KB
02433	32020	DCA TP0
02444	74400	SEA
02445	74020	HLT
02446	12020	TAD TP0
02447	74400	SEA
02450	74020	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 5

02511	72000	CLA
02522	10554	TAD K2525
02533	32020	DCA TP0
02544	74400	SEA
02555	74020	HLT
02556	10554	TAD K2525
02557	70411	CIA
02560	12020	TAD TP0
02561	74400	SEA
02562	74020	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 6

02630	72000	CLA
02644	10555	TAD K6666
02655	32020	DCA TP0
02666	74400	SEA
02677	74020	HLT
02700	10555	TAD K6666
02711	70411	CIA
02722	12020	TAD TP0
02733	74400	SEA
02744	74020	HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
/AC SHOULD BE ZERO

/DCA TEST 7

0275	7200	CLA
0276	1056	TAD K4444
0277	3377	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	3377	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	3000	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	3000	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	0
0354	1000	TAD	0
0355	7440	SEA	
0356	7402	HLT	

/DCA DID NOT CLEAR AC

/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	0
0366	1000	TAD	0
0367	7440	SEA	
0370	7402	HLT	

/DCA FAILED
/AC SHOULD BE ZERO

/DCA DID NOT CLEAR AC

0371	7000	NOP	
0372	7000	NOP	
0373	7000	NOP	
0374	7000	NOP	
0375	7000	NOP	
0376	7410	SKP	
0377	0000	0	

TP177, 0

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	

/OPERAND=1234
/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
 0426 7402 HLT /ISZ INDIRECT FAILED
 /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
 0443 7402 HLT /AND INDIRECT FAILED
 /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
 0452 1000 TAD 0
 0453 7041 CIA
 0454 1172 TAD K176
 0455 7040 CMA
 0456 7440 SEA
 0457 7402 HLT /ISZ SKIPPED ILLEGALLY
 /DCA INDIRECT FAILED

/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 7

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

/INDIRECT ADDRESSING TEST 8

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

/INDIRECT ADDRESSING TEST 9

0475	7200	CLA	/ISE SKIPPED ILLEGALLY
0476	1173	TAD K172	
0477	2000	DCA 0	
0500	2936	ISE I K0	
0501	7410	SKP	
0502	7402	HLT	
0503	1000	TAD 0	
0504	7041	CIA	
0505	1173	TAD K172	
0506	7040	CMA	
0507	7440	SEA	/DCA INDIRECT FAILED
0510	7402	HLT	/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 10

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

/INDIRECT ADDRESSING TEST 11

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

0523 1173
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
GMA
SEA
HLT

/DCA INDIRECT FAILED
/AC SHOULD BE ZERO

/ISE SKIPPED ILLEGALLY

/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

/TAD INDIRECT FAILED
/AC SHOULD BE ZERO

/OPERAND=173

/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

/AND INDIRECT FAILED
/AC SHOULD BE ZERO

/OPERAND=173

/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
GMA
SEA
HLT

/ISE SKIPPED ILLEGALLY

/DCA INDIRECT FAILED

0573 5377
0574 7000
0575 7000
0576 7000
0577 7000

JMP .+4
NOP
NOP
NOP
NOP

/AC SHOULD BE ZERO

0600

*600
/INDIRECT ADDRESSING TEST 16

0600 7200
0601 1576
0602 7041
0603 1175
0604 7440
0605 7402

CLA
TAD I K175
CIA
TAD K174
SEA
HLT

/OPERAND=174

/TAD INDIRECT FAILED
/AC SHOULD BE ZERO

/AUTO INDEX TEST 1

0606 7200
0607 1035
0610 5010
0611 0410
0612 1010
0613 1035
0614 7040
0615 7440
0616 7402

CLA
TAD K0
DCA 10
AND I 10
TAD 10
TAD K7776
CHA
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 2

0617 7200
0620 1035
0621 5010
0622 0410
0623 1010
0624 1035
0625 7040
0626 7440
0627 7402

CLA
TAD K7776
DCA 10
AND I 10
TAD 10
TAD K0
CHA
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 3

0630 7200
0631 1034
0632 5010
0633 3410
0634 1010
0635 1051
0636 7040
0637 7440
0640 7402

CLA
TAD K7775
DCA 10
DCA I 10
TAD 10
TAD K0001
CHA
SEA
HLT

/CONSTANT TO BE INDEXED
/DO AUTO INDEX

/AC SHOULD BE ZERO
/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

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

/AUTO INDEX TEST 4

CLA
 TAD K7773
 DCA 10
 TAD I 10
 CLA
 TAD 10
 TAD K0003
 CMA
 SEA
 HLT

/CONSTANT TO BE INDEXED
 /DD AUTO INDEX
 /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

/AUTO INDEX TEST 6

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

/CONSTANT TO BE INDEXED
 /DD AUTO INDEX
 /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

/AUTO INDEX TEST 7

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

/CONSTANT TO BE INDEXED
 /DD AUTO INDEX
 /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

/AUTO INDEX TEST 8

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

/CONSTANT TO BE INDEXED
 /DD AUTO INDEX
 /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
 /DD AUTO INDEX

0712 1010
0713 1043
0714 7040
0715 7440
0716 7402

TAD 10
TAD K0077
CHA
SEA
HLT

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

/AUTO INDEX TEST 9

0717 7200
0720 1025
0721 3010
0722 0410
0723 1010
0724 1042
0725 7040
0726 7440
0727 7402

CLA
TAD K7577
DCA 10
AND 1 10
TAD 10
TAD K0177
CHA
SEA
HLT

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

/AUTO INDEX TEST 10

0730 7200
0731 1024
0732 3010
0733 0410
0734 1010
0735 1041
0736 7040
0737 7440
0740 7402

CLA
TAD K7377
DCA 10
AND 1 10
TAD 10
TAD K0377
CHA
SEA
HLT

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

/AUTO INDEX TEST 11

0741 7200
0742 1023
0743 3010
0744 0410
0745 1010
0746 1040
0747 7040
0750 7440
0751 7402

CLA
TAD K6777
DCA 10
AND 1 10
TAD 10
TAD K0777
CHA
SEA
HLT

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

/AUTO INDEX TEST 12

0752 7200
0753 1022
0754 3010
0755 2410
0756 7000
0757 1010
0760 1037
0761 7040
0762 7440
0763 7402

CLA
TAD K5777
DCA 10
1SE 1 10
NOP
TAD 10
TAD K1777
CHA
SEA
HLT

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

/AUTO INDEX TEST 13

0764	7200	CLA	/CONSTANT TO BE INDEXED
0765	1021	TAD K3777	
0766	3010	DCA 10	/OO 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	/OO 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	0	
1011	7440	SEA	/AC SHOULD BE ZERO
1012	7402	HLT	/AUTO INDEX ERROR

/AUTO INDEX TEST 15

1013	7200	CLA	/CONSTANT TO BE INDEXED
1014	1036	TAD K0	
1015	3011	DCA 11	/OO 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	/OO AUTO INDEX
1027	0411	AND I 11	
1030	1011	TAD 11	/AC SHOULD EQUAL 7777
1031	1036	TAD K0	
1032	7040	CMA	

1033 7440 SEA /AC SHOULD BE ZERO
1034 7402 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 17

1035 7200 CLA /CONSTANT TO BE INDEXED
1036 1034 TAD K7779 /DO AUTO INDEX
1037 3011 DCA I 11 /AC SHOULD EQUAL 7777
1040 3411 DCA I 11
1041 1011 TAD I 11
1042 1051 TAD K0001
1043 7040 CMA /AC SHOULD BE ZERO
1044 7440 SEA /AUTO INDEX ERROR
1045 7402 HLT

/AUTO INDEX TEST 18

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

/AUTO INDEX TEST 19

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

/AUTO INDEX TEST 20

1071 7200 CLA /CONSTANT TO BE INDEXED
1072 1031 TAD K7797 /DO AUTO INDEX
1073 3011 DCA I 11 /AC SHOULD EQUAL 7777
1074 0411 AND I 11
1075 1011 TAD I 11
1076 1045 TAD K0017
1077 7040 CMA /AC SHOULD BE ZERO
1080 7440 SEA /AUTO INDEX ERROR
1101 7402 HLT

/AUTO INDEX TEST 21

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

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

/AUTO INDEX TEST 22
1113 7200 CLA /CONSTANT TO BE INDEXED
1114 1026 TAD K7677 /DO AUTO INDEX
1115 3011 DCA 11 /AC SHOULD EQUAL 7777
1116 0411 AND I 11
1117 1011 TAD 11
1120 1043 TAD K0077
1121 7040 CMA
1122 7440 SEA /AC SHOULD BE ZERO
1123 7402 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 23
1124 7200 CLA /CONSTANT TO BE INDEXED
1125 1025 TAD K7977 /DO AUTO INDEX
1126 3011 DCA 11 /AC SHOULD EQUAL 7777
1127 0411 AND I 11
1130 1011 TAD 11
1131 1042 TAD K0177
1132 7040 CMA /AC SHOULD BE ZERO
1133 7440 SEA /AUTO INDEX ERROR
1134 7402 HLT

/AUTO INDEX TEST 24
1135 7200 CLA /CONSTANT TO BE INDEXED
1136 1024 TAD K7377 /DO AUTO INDEX
1137 3011 DCA 11 /AC SHOULD EQUAL 7777
1140 0411 AND I 11
1141 1011 TAD 11
1142 1041 TAD K0377
1143 7040 CMA /AC SHOULD BE ZERO
1144 7440 SEA /AUTO INDEX ERROR
1145 7402 HLT

/AUTO INDEX TEST 25
1146 7200 CLA /CONSTANT TO BE INDEXED
1147 1023 TAD K6777 /DO AUTO INDEX
1150 3011 DCA 11 /AC SHOULD EQUAL 7777
1151 0411 AND I 11
1152 1011 TAD 11
1153 1040 TAD K0777
1154 7040 CMA /AC SHOULD BE ZERO
1155 7440 SEA /AUTO INDEX ERROR
1156 7402 HLT

/AUTO INDEX TEST 26
1157 7200 CLA /CONSTANT TO BE INDEXED
1160 1022 TAD K5777

```

1161 3011 DCA 11
1162 2411 ISE I 11
1163 7000 NOP
1164 1011 TAD 11
1165 1037 TAD K1777
1166 7040 CMA
1167 7440 SEA
1170 7402 HLT
1171 7000 NOP
1172 5376 JMP .+4
1173 7000 NOP
1174 7000 NOP
1175 7000 NOP
1176 7000 NOP
1177 7000 NOP

```

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

PAUSE

/TEST 2 - TAPE 2

1200 41200

```

1200 7200 /AUTO INDEX TEST 27
1201 1021 CLA
1202 3011 TAD K3777
1203 0411 DCA 11
1204 1011 AND I 11
1205 1001 TAD 11
1206 1001 TAD K3777
1207 7440 CMA
1208 7440 SEA
1209 7402 HLT

```

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

/AUTO INDEX TEST 28

```

1211 7200 /AUTO INDEX TEST 29
1212 1020 CLA
1213 3011 TAD K7777
1214 0411 DCA 11
1215 1011 AND I 11
1216 1011 TAD 11
1217 1020 TAD K7777
1220 7040 CMA
1221 7402 SEA
1222 7402 HLT

```

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

/AUTO INDEX TEST 29

```

1222 7200 /CONSTANT TO BE INDEXED
1223 1036 TAD K0
1224 3012 DCA 12
1225 0412 AND I 12
1226 1012 TAD 12
1227 1035 TAD K7776
1230 7040 CMA

```

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

1231 7440 SEA
1232 7402 HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 30

1233 7200 CLA
1234 1035 TAD K7776
1235 3012 DCA 12
1236 0412 AND I 12
1237 1012 TAD 12
1240 1036 TAD K0
1241 7040 CMA
1242 7440 SEA
1243 7402 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 CLA
1245 1034 TAD K7775
1246 3012 DCA 12
1247 3412 DCA I 12
1250 1012 TAD 12
1251 1051 TAD K0001
1252 7040 CMA
1253 7440 SEA
1254 7402 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 CLA
1256 1033 TAD K7773
1257 3012 DCA 12
1260 1412 TAD I 12
1261 7200 CLA
1262 1012 TAD 12
1263 1047 TAD K0003
1264 7040 CMA
1265 7440 SEA
1266 7402 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 CLA
1270 1032 TAD K7767
1271 3012 DCA 12
1272 0412 AND I 12
1273 1012 TAD 12
1274 1046 TAD K0007
1275 7040 CMA
1276 7440 SEA
1277 7402 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 CLA
1301 1031 TAD K7757
1302 3012 DCA 12
1303 0412 AND I 12

/CONSTANT TO BE INDEXED
/DO AUTO INDEX

1304 1012 TAD 12 /AC SHOULD BE ZERO
1305 1045 TAD K0017 /AUTO INDEX ERROR
1306 7040 CHA
1307 7440 SEA
1310 7402 HLT

/AUTO INDEX TEST 35

1311 7200 CLA /CONSTANT TO BE INDEXED
1312 1027 TAD K7737 /DO AUTO INDEX
1313 3012 DCA 12 /AC SHOULD BE ZERO
1314 0412 AND I 12 /AUTO INDEX ERROR
1315 1012 TAD 12
1316 1044 TAD K0037
1317 7040 CHA
1320 7440 SEA
1321 7402 HLT

/AUTO INDEX TEST 36

1322 7200 CLA /CONSTANT TO BE INDEXED
1323 1026 TAD K7677 /DO AUTO INDEX
1324 3012 DCA 12 /AC SHOULD BE ZERO
1325 0412 AND I 12 /AUTO INDEX ERROR
1326 1012 TAD 12
1327 1043 TAD K0077
1330 7040 CHA
1331 7440 SEA
1332 7402 HLT

/AUTO INDEX TEST 37

1333 7200 CLA /CONSTANT TO BE INDEXED
1334 1025 TAD K7577 /DO AUTO INDEX
1335 3012 DCA 12 /AC SHOULD BE ZERO
1336 0412 AND I 12 /AUTO INDEX ERROR
1337 1012 TAD 12
1340 1042 TAD K0177
1341 7040 CHA
1342 7440 SEA
1343 7402 HLT

/AUTO INDEX TEST 38

1344 7200 CLA /CONSTANT TO BE INDEXED
1345 1024 TAD K7377 /DO AUTO INDEX
1346 3012 DCA 12 /AC SHOULD BE ZERO
1347 0412 AND I 12 /AUTO INDEX ERROR
1350 1012 TAD 12
1351 1041 TAD K0377
1352 7040 CHA
1353 7440 SEA
1354 7402 HLT

/AUTO INDEX TEST 39

1355 7200 CLA /CONSTANT TO BE INDEXED
1356 1023 TAD K6777 /DO AUTO INDEX
1357 3012 DCA 12 /AC SHOULD BE ZERO
/AUTO INDEX ERROR

1360 0412
 1361 1012
 1362 1040
 1363 7040
 1364 7440
 1365 74E2

AND I 12
 TAD 12
 TAD K0777
 CMA
 SEA
 HLT

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

1366 72E0
 1367 1022
 1370 3012
 1371 2412
 1372 70E0
 1373 1012
 1374 1037
 1375 7040
 1376 7440
 1377 7402

CLA
 TAD K5777
 DCA 12
 ISE I 12
 NOP
 TAD 12
 TAD K1777
 CMA
 SEA
 HLT

/AUTO INDEX TEST 40
 /CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /AC SHOULD EQUAL 7777
 /AC SHOULD BE ZERO
 /AUTO INDEX ERROR

1400 1400
 1401 1021
 1402 3012
 1403 0412
 1404 1012
 1405 1021
 1406 7040
 1407 7440
 1410 7402

CLA
 TAD K3777
 DCA 12
 AND I 12
 TAD 12
 TAD K3777
 CMA
 SEA
 HLT

*1400
 /AUTO INDEX TEST 41
 /CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /AC SHOULD EQUAL 7777
 /AC SHOULD BE ZERO
 /AUTO INDEX ERROR

1411 7200
 1412 1020
 1413 3012
 1414 0412
 1415 1012
 1416 1020
 1417 7040
 1420 7440
 1421 7402

CLA
 TAD K7777
 DCA 12
 AND I 12
 TAD 12
 TAD K7777
 CMA
 SEA
 HLT

/AUTO INDEX TEST 42
 /CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /AC SHOULD EQUAL 7777
 /AC SHOULD BE ZERO
 /AUTO INDEX ERROR

1422 72E0
 1423 1036
 1424 3013
 1425 0413
 1426 1013
 1427 1035
 1430 7040
 1431 7440
 1432 74E2

CLA
 TAD K0
 DCA 13
 AND I 13
 TAD 13
 TAD K7776
 CMA
 SEA
 HLT

/AUTO INDEX TEST 43
 /CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /AC SHOULD EQUAL 7777
 /AC SHOULD BE ZERO
 /AUTO INDEX ERROR

/AUTO INDEX TEST 44

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

/AUTO INDEX TEST 45

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

/AUTO INDEX TEST 46

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

/AUTO INDEX TEST 47

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

/AUTO INDEX TEST 48

1500 7200 CLA /CONSTANT TO BE INDEXED
 1501 1031 TAD K7797 /DO AUTO INDEX
 1502 3013 DCA 13
 1503 0413 AND I 13 /AC SHOULD EQUAL 7777
 1504 1013 TAD 13
 1505 1045 TAD K0017
 1506 7040 CMA
 1507 7440 SEA /AC SHOULD BE ZERO
 1510 7402 HLT /AUTO INDEX ERROR

/AUTO INDEX TEST 49
CLA
TAD K7737 /CONSTANT TO BE INDEXED
DCA 13 /DO AUTO INDEX
AND I 13
TAD 13
TAD K0037 /AC SHOULD EQUAL 7777
CMA
SEA
HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 50
CLA
TAD K7677 /CONSTANT TO BE INDEXED
DCA 13 /DO AUTO INDEX
AND I 13
TAD 13
TAD K0077 /AC SHOULD EQUAL 7777
CMA
SEA
HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 51
CLA
TAD K7577 /CONSTANT TO BE INDEXED
DCA 13 /DO AUTO INDEX
AND I 13
TAD 13
TAD K0177 /AC SHOULD EQUAL 7777
CMA
SEA
HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 52
CLA
TAD K7377 /CONSTANT TO BE INDEXED
DCA 13 /DO AUTO INDEX
AND I 13
TAD 13
TAD K0377 /AC SHOULD EQUAL 7777
CMA
SEA
HLT /AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 53
CLA
TAD K6777 /CONSTANT TO BE INDEXED
DCA 13 /DO AUTO INDEX
AND I 13
TAD 13
TAD K0777 /AC SHOULD EQUAL 7777
CMA
SEA /AC SHOULD BE ZERO

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
 ISZ I 13
 NOP
 TAO 13
 TAD K1777
 CHA
 SEA
 HLT

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

*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
 CHA
 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
 CHA
 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
 CHA
 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 /AC SHOULD EQUAL 7777
1640 1036 TAD K0 /AC SHOULD BE ZERO
1641 7040 CMA /AUTO INDEX ERROR
1642 7440 SEA
1643 7402 HLT

/AUTO INDEX TEST 59

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

/AUTO INDEX TEST 60

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

/AUTO INDEX TEST 61

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

/AUTO INDEX TEST 62

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

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

/AUTO INDEX TEST 69

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

/AUTO INDEX TEST 66

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

/AUTO INDEX TEST 67

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

/AUTO INDEX TEST 68

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

2000	7200	*2000		
2001	1021	/AUTO INDEX TEST 69		
2002	3014	CLA		
2003	0414	TAD K3777	/CONSTANT TO BE INDEXED	
2004	1014	DCA 14	/DO AUTO INDEX	
2005	1021	AND I 14		
2006	7040	TAD 14		
2007	7410	TAD K3777	/AC SHOULD EQUAL 7777	
2010	0000	CMA		
2011	7440	SKP		
2012	7402	0		
		SEA	/AC SHOULD BE ZERO	
		HLT	/AUTO INDEX ERROR	

2013	7200	/AUTO INDEX TEST 70		
2014	1020	CLA		
2015	3014	TAD K7777	/CONSTANT TO BE INDEXED	
2016	0414	DCA 14	/DO AUTO INDEX	
2017	1014	AND I 14		
2020	1020	TAD 14		
2021	7040	TAD K7777	/AC SHOULD EQUAL 7777	
2022	7440	CMA		
2023	7402	SEA	/AC SHOULD BE ZERO	
		HLT	/AUTO INDEX ERROR	

2024	7200	/AUTO INDEX TEST 71		
2025	1036	CLA		
2026	3015	TAD K0	/CONSTANT TO BE INDEXED	
2027	0415	DCA 15	/DO AUTO INDEX	
2030	1015	AND I 15		
2031	1035	TAD 15		
2032	7040	TAD K7776	/AC SHOULD EQUAL 7777	
2033	7440	CMA		
2034	7402	SEA	/AC SHOULD BE ZERO	
		HLT	/AUTO INDEX ERROR	

2035	7200	/AUTO INDEX TEST 72		
2036	1035	CLA		
2037	3015	TAD K7776	/CONSTANT TO BE INDEXED	
2040	0415	DCA 15	/DO AUTO INDEX	
2041	1015	AND I 15		
2042	1036	TAD 15		
		TAD K0	/AC SHOULD EQUAL 7777	

2043 7040 CMA /AC SHOULD BE ZERO
2044 7440 SEA /AUTO INDEX ERROR
2045 7402 HLT

/AUTO INDEX TEST 73

2046 7200 CLA /CONSTANT TO BE INDEXED
2047 1034 TAD K7775 /DO AUTO INDEX
2050 3015 DCA I 15 /AC SHOULD BE ZERO
2051 3415 DCA I 15 /AUTO INDEX ERROR
2052 1015 TAD I 15
2053 1051 TAD K0001
2054 7040 CMA
2055 7440 SEA
2056 7402 HLT

/AUTO INDEX TEST 74

2057 7200 CLA /CONSTANT TO BE INDEXED
2060 1033 TAD K7773 /DO AUTO INDEX
2061 3015 DCA I 15 /AC SHOULD BE ZERO
2062 1415 TAD I 15 /AUTO INDEX ERROR
2063 7200 CLA
2064 1015 TAD 15
2065 1047 TAD K0003
2066 7040 CMA
2067 7440 SEA
2070 7402 HLT

/AUTO INDEX TEST 75

2071 7200 CLA /CONSTANT TO BE INDEXED
2072 1032 TAD K7767 /DO AUTO INDEX
2073 3015 DCA I 15 /AC SHOULD BE ZERO
2074 0415 AND I 15 /AUTO INDEX ERROR
2075 1015 TAD 15
2076 1046 TAD K0007
2077 7040 CMA
2100 7440 SEA
2101 7402 HLT

/AUTO INDEX TEST 76

2102 7200 CLA /CONSTANT TO BE INDEXED
2103 1031 TAD K7757 /DO AUTO INDEX
2104 3015 DCA I 15 /AC SHOULD BE ZERO
2105 0415 AND I 15 /AUTO INDEX ERROR
2106 1015 TAD 15
2107 1045 TAD K0017
2110 7040 CMA
2111 7440 SEA
2112 7402 HLT

/AUTO INDEX TEST 77

2113 7200 CLA /CONSTANT TO BE INDEXED
2114 1027 TAD K7737 /DO AUTO INDEX
2115 3015 DCA I 15
2116 0415 AND I 15

2117 1015 TAD 15 /AC SHOULD BE ZERO
2120 1044 TAD K0037 /AUTO INDEX ERROR
2121 7040 CMA
2122 7440 SEA
2123 7402 HLT

/AUTO INDEX TEST 78

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

/AUTO INDEX TEST 79

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

/AUTO INDEX TEST 80

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

/AUTO INDEX TEST 81

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

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
/AC SHOULD EQUAL 7777

/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
/AC SHOULD EQUAL 7777

/AUTO INDEX TEST 06

2245 7200
2246 1035

CLA
TAD K7776

/CONSTANT TO BE INDEXED

/A

2247 3016
 2250 0416
 2251 1016
 2252 1036
 2253 7040
 2254 7440
 2255 7402

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

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

/AUTO INDEX TEST 07

2256 7200
 2257 1034
 2260 3016
 2261 3416
 2262 1016
 2263 1051
 2264 7040
 2265 7440
 2266 7402

CLA
 TAD K7775
 DCA 16
 DCA I 16
 TAD 16
 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 08

2267 7200
 2270 1033
 2271 3016
 2272 1416
 2273 7200
 2274 1016
 2275 1047
 2276 7040
 2277 7440
 2300 7402

CLA
 TAD K7773
 DCA 16
 TAD I 16
 CLA
 TAD 16
 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 09

2301 7200
 2302 1032
 2303 3016
 2304 0416
 2305 1016
 2306 1046
 2307 7040
 2310 7440
 2311 7402

CLA
 TAD K7767
 DCA 16
 AND I 16
 TAD 16
 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 90

2312 7200
 2313 1031
 2314 3016
 2315 0416
 2316 1016
 2317 1045
 2320 7040
 2321 7440
 2322 7402

CLA
 TAD K7757
 DCA 16
 AND I 16
 TAD 16
 TAD K0017
 CMA
 SEA
 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 1045
 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

CLA
 TAD K5777
 DCA 16
 ISE I 16
 NOP
 TAD 16
 TAD K1777
 CMA
 SEA
 HLT

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

/AUTO INDEX TEST 97

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

CLA
 TAD K3777
 DCA 16
 AND I 16
 TAD 16
 TAD K3777
 CMA
 SEA
 HLT

/CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /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

CLA
 TAD K7777
 DCA 16
 AND I 16
 TAD 16
 TAD K7777
 CMA
 SEA
 HLT

/CONSTANT TO BE INDEXED
 /DO AUTO INDEX
 /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

CLA
 TAD K0
 DCA 17
 AND I 17
 TAD 17
 TAD K7776
 CMA
 SEA
 HLT

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

2445 7200
 2446 1035
 2447 3017
 2450 0417
 2451 1017
 2452 1036
 2453 7040
 2454 7440
 2455 7402

/AUTO INDEX TEST 100

CLA
 TAD K7776
 DCA 17
 AND I 17
 TAD 17
 TAD K0
 CMA
 SEA
 HLT

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

2456 7200
 2457 1034
 2460 3017
 2461 3417
 2462 1017
 2463 1051
 2464 7040
 2465 7440
 2466 7402

/AUTO INDEX TEST 101

CLA
 TAD K7775
 DCA 17
 DCA I 17
 TAD 17
 TAD K0001
 CMA
 SEA
 HLT

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

2467 7200
 2470 1033
 2471 3017
 2472 1417
 2473 7200
 2474 1017
 2475 1047
 2476 7040
 2477 7440
 2500 7402

/AUTO INDEX TEST 102

CLA
 TAD K7773
 DCA 17
 TAD I 17
 CLA
 TAD 17
 TAD K0003
 CMA
 SEA
 HLT

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

2501 7200
 2502 1032
 2503 3017
 2504 0417
 2505 1017
 2506 1046
 2507 7040
 2510 7440
 2511 7402

/AUTO INDEX TEST 103

CLA
 TAD K7767
 DCA 17
 AND I 17
 TAD 17
 TAD K0007
 CMA
 SEA
 HLT

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

2512 7200
 2513 1031
 2514 3017
 2515 0417
 2516 1017
 2517 1045
 2520 7040
 2521 7440

/AUTO INDEX TEST 104

CLA
 TAD K7757
 DCA 17
 AND I 17
 TAD 17
 TAD K0017
 CMA
 SEA

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

/AUTO INDEX TEST 106

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

/AUTO INDEX TEST 107

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

/AUTO INDEX TEST 108

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

/AUTO INDEX TEST 109

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

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 ISE 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 EQUAL 7777
/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 EQUAL 7777
/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 EQUAL 7777
/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 5010 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
 2646 7402
 2647 7402
 2650 1247
 2651 7410
 2652 2646
 2653 7041
 2654 1252
 2655 7440
 2656 7402

/JMS FAILED
 /JMS FAILED

/WRONG ADDRESS STORED
 /DURING JMS
 /JMS WORKS (I GUESS)

/TEST INSTRUCTION
 /JMS FAILED
 /JMS FAILED

2657 7410
 2660 2664
 2661 1260
 2662 3010
 2663 4410
 2664 7402
 2665 7402
 2666 1265
 2667 7410
 2670 2664
 2671 7041
 2672 1270
 2673 7440
 2674 7402
 2675 3676
 2676 4200

/INTERUPT TEST 1

/WRONG ADDRESS STORED DURING JMS
 /GO TO PROCESSOR IOT TESTS

INTEST, JMS I .+1

2677 4700
 2700 4011
 2701 6040
 2702 6041
 2703 7402
 2704 7200
 2705 1313
 2706 3002
 2707 6001
 2710 7000
 2711 7402
 2712 2711
 2713 2714
 2714 7440
 2715 7402

/SET PRINTER FLAG

/SPF OR TSF FAILED

/FLAG IS ON

/GO TO LOC 0000
 /NO INTERRUPT

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

OUT1,
BACK1,

2716 1000
 2717 7041
 2720 1312
 2721 7640
 2722 7402

/INTERUPT ERROR
 /WRONG ADDRESS STORED

/INTERRUPT TEST 2

2723 6040
 2724 6041
 2725 7402
 2726 7200
 2727 1335
 2730 3002
 2731 6001
 2732 1020
 2733 7402
 2734 2733
 2735 2736
 2736 7040
 2737 7440
 2740 7402

OUTS,
BACKS,

SPF
 TSF
 HLT
 CLA
 TAD BACKS
 DCA 2
 ION
 TAD K7777
 HLT
 .-1
 .+1
 CMA
 SEA
 HLT

/SET PRINTER FLAG

/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

/RETURN FROM LOC1

/CONFIDENCE CHECK
/AC SHOULD BE 0

2741 1000
 2742 7041
 2743 1334
 2744 7640
 2745 7402

TAD 0
 CIA
 TAD OUTS
 SEA CLA
 HLT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

/INTERRUPT TEST 3

2746 6040
 2747 6041
 2750 7402
 2751 7200
 2752 1361
 2753 3002
 2754 1020
 2755 6001
 2756 0020
 2757 7402
 2760 2757
 2761 2762
 2762 7040
 2763 7440
 2764 7402

OUT2,
BACK2,

SPF
 TSF
 HLT
 CLA
 TAD BACK2
 DCA 2
 TAD K7777
 ION
 AND K7777
 HLT
 .-1
 .+1
 CMA
 SEA
 HLT

/SET PRINTER FLAG

/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

/RETURN FROM LOC1

/CONFIDENCE CHECK
/AC SHOULD BE 0

2765 1000
 2766 7041
 2767 1360
 2770 7640
 2771 7402
 2772 5773
 2773 3000

TAD 0
 CIA
 TAD OUT2
 SEA CLA
 HLT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

JMP I .+1
 3000

3000

*3000
/INTERRUPT TEST 4

/SET PRINTER FLAG

3000 6040
 3001 6041

SPF
 TSF

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

/SPF FAILED TO SET PRINTER FLAG
 /FLAG IS ON

3012 3011 OUT4,
 3013 3014 BACK4,
 3014 7440 .+1
 3015 7402 SEA
 HLT

/NO INTERRUPT

3016 1023 TAD 3
 3017 7040 CMA
 3020 7440 SEA
 3021 7402 HLT

/RETURN FROM LOG1
 /CONFIDENCE CHECK
 /AC SHOULD BE ZERO

3022 3003 DCA 3
 3023 1000 TAD 0
 3024 7041 CIA
 3025 1212 TAD OUT4
 3026 7640 SEA CLA
 3027 7402 HLT

/DCA PRIOR TO INTERRUPT
 /FAILED

3030 6040 /INTERRUPT TEST 5
 3031 6041 SPF
 3032 7402 TSF
 3033 7200 HLT
 3034 1244 CLA
 3035 3002 TAD BACK5
 3036 1035 DCA 2
 TAD K7776

/INTERRUPT ERROR
 /WRONG ADDRESS STORED
 /SET PRINTER FLAG

3037 5003 DCA 3
 3040 6001 ION
 3041 2003 ISZ 3
 3042 7402 HLT
 3043 3042 OUT5,
 3044 3045 .-1
 3045 7440 .+1
 3046 7402 SEA
 HLT

/SPF FAILED TO SET PRINTER FLAG
 /FLAG IS ON

3047 1003 TAD 3
 3050 7040 CMA
 3051 7440 SEA
 3052 7402 HLT

/NO INTERRUPT
 /RETURN FROM LOG1
 /CONFIDENCE CHECK
 /AC SHOULD BE ZERO

3053 5003 DCA 3
 3054 1000 TAD 0
 3055 7041 CIA
 3056 1243 TAD OUT5
 3057 7640 SEA CLA
 3060 7402 HLT

/ISZ PRIOR TO
 /INTERRUPT FAILED

3053 5003 DCA 3
 3054 1000 TAD 0
 3055 7041 CIA
 3056 1243 TAD OUT5
 3057 7640 SEA CLA
 3060 7402 HLT

/INTERRUPT ERROR

/WRONG ADDRESS STORED

/INTERRUPT TEST 6

3061 6040
 3062 6041
 3063 74E2
 3064 7200
 3065 1276
 3066 3002
 3067 1020
 3070 3003
 3071 6001
 3072 2003
 3073 7402
 3074 7402
 3075 3074
 3076 3077
 3077 7440
 3100 7402

SPF
 TSF
 HLT
 CLA
 TAD BACK6
 DCA 2
 TAD K7777
 DCA 3
 ION
 ISE 3
 HLT
 HLT
 .-1
 .+1
 SEA
 HLT

/SET PRINTER FLAG

/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

OUT6,
BACK6,

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

3101 1003
 3102 7440
 3103 7402

TAD 3
 SEA
 HLT

/ISE PRIOR TO
/INTERRUPT FAILED

3104 3003
 3105 1000
 3106 7041
 3107 1275
 3110 7640
 3111 7402

DCA 3
 TAD 0
 CIA
 TAD OUT6
 SEA
 CLA
 HLT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

/INTERRUPT TEST 7

3112 6040
 3113 6041
 3114 7402
 3115 7200
 3116 1324
 3117 3002
 3120 6001
 3121 5321
 3122 7402
 3123 3121
 3124 3125
 3125 7440
 3126 7402

SPF
 TSF
 HLT
 CLA
 TAD BACK7
 DCA 2
 ION
 JMP .
 HLT
 HLT
 .-2
 .+1
 SEA
 HLT

OUT7,
 BACK7,

/SET PRINTER FLAG

/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

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

3127 1000
 3130 7041
 3131 1323
 3132 7640
 3133 7402

TAD 0
 CIA
 TAD OUT7
 SEA
 CLA
 HLT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

/INTERRUPT TEST 8

/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

```

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

SPF
TSF
HLT
CLA
TAD BACK8
DCA 2
ION
JMS 3
HLT
.-1
.+1
SEA
HLT

TAD 3
CIA
TAD OUT8
SEA
HLT

```

```

3156 1000
3157 7041
3160 1065
3161 7640
3162 7402

TAD 0
CIA
TAD K4
SEA CLA
HLT

JMP I .+1
3200

```

/INTERRUPT ERROR
/WRONG ADDRESS STORED

*3200 /INTERRUPT TEST 9

/SET PRINTER FLAG

/SPF FAILED TO SET PRINTER FLAG
/FLAG IS ON

/NO INTERRUPT

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

```

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

SPF
TSF
HLT
CLA
TAD BACK9
DCA 2
TAD K7777
ION
CLA
HLT
.-1
.+1
SEA
HLT

TAD 0
CIA
TAD OUT9
SEA CLA

```

3222 7402 HLT /INTERRUPT FAILED
/WRONG ADDRESS STORED

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

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

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

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

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

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

/WHAT HAPPENED TO MY FLAG

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

/INTERRUPT TEST 12

/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
 3331 6002 IOF

/INTERRUPT WITH NO
/FLAG.

/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 OUTT13, .-1
 3345 3346 BAC13, .+1
 3346 7440 SEA
 3347 7402 HLT
 3350 1000 TAD 0
 3351 7041 CIA
 3352 1344 TAD OUTT13
 3353 7640 SEA
 3354 7402 HLT

/NO INTERRUPT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

/INTERRUPT TEST 14

```

3355 6040
3356 6041
3357 7402
3360 7200
3361 1370
3362 3002
3363 6001
3364 5765
3365 3366
3366 7402
3367 3366
3370 3371
3371 7440
3372 7402
3373 1000
3374 7041
3375 1367
3376 7640
3377 7402

SPF
TSF
HLT
CLA
TAD BAC14
DCA 2
ION
JMP I .+1
.HLT
.HLT
.BAC14, .+1
.SZA
.HLT
TAD 0
CIA
TAD OUTT14
SZA CLA
HLT

/SPF FAILED TO SET PRINTER FLAG

/NO INTERRUPT

/INTERRUPT ERROR
/WRONG ADDRESS STORED

```

/INTERRUPT TEST 15.

```

3400 6007
3401 1212
3402 3002
3403 6001
3404 7000
3405 6007
3406 6040
3407 6000
3410 8213
3411 7402
3412 3411
3413 6007
3414 5615
3415 3600

CAF
TAD BAC15
DCA 2
ION
NOP
CAF
SPF
SKON
JMP .+3
HLT
.HLT
.CAF
JMP I .+1
IAIT1

/CLEAR THE WORLD
/GET RETURN INTERRUPT ADDRESS
/STORE IT IN ADDRESS 2
/INTERRUPT ON
/CLEAR THE WORLD
/SET PAINTER FLAG.
/CAF FAILED TO CLEAR ION
/CLEAR FOR EXIT.

```

3600 PAGE

/ILLEGAL AUTO INDEX TEST1

```

3600 7200
3601 5602
3602 4000
3603 4010
4000 4000
4001 0610
4002 5602
4002 3604
3604 3604
3604 1603
3605 7440

IAIT1, CLA
JMP I .+1
K4010, 4010
*4000
ANDI, AND I 4010
JMP I .+1
RETI, RETI
*K4010+1
TAD I K4010
SZA

/TEST INSTRUCTION

```

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

/TEST INSTRUCTION

2173 2173 *2173
2174 0610 AND2, AND I 2010
2175 5775 JMP I .+1
RET2

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

3615 3615 *K2010+1
3616 1614 RET2, TAD I K2010
3617 7402 SEA
HLT
3620 3621 JMP I .+1
3621 3622 AITSTS

/ILLEGAL AUTO INDEX TEST 3

3622 7200 /ILLEGAL AUTO INDEX TEST 3
3623 5624 AITSTS, CLA
3624 1173 JMP I .+1
3625 1010 AND3
K1010, 1010

/TEST INSTRUCTION

1173 1173 *1173
1174 0610 AND I 1010
5775 JMP I .+1
1175 3626 RET3

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

3626 3626 *K1010+1
3627 1625 RET3, TAD I K1010
3630 7402 SEA
HLT
3631 7200 CLA
3632 3625 DCA I K1010

/ILLEGAL AUTO INDEX TEST 4

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

0574 *574

```

0574 0610 AND4, AND I 410 /TEST INSTRUCTION
0575 5776 JMP I .+1
0576 3637 RET4

```

```

3637 3637 *K410+1
3640 1636 RET4, TAD I K410 /ERROR. AC SHOULD BE ZERO
3641 7440 SEA /AND I 410 ALTERED (410)
3642 7422 HLT
3643 7200 CLA
3645 3636 DCA I K410

```

/ILLEGAL AUTO INDEX TEST 5

```

3644 7200 CLA
3645 5646 JMP I .+1
3646 0372 AND5
3647 0210 K210, 210
0371 *371
0371 5375 JMP .+4 /TEST INSTRUCTION
0372 0610 AND I 210
0373 9774 JMP I .+1
0374 3650 RET5

```

```

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

```

/ILLEGAL AUTO INDEX TEST 6

```

3655 7200 CLA
3656 8657 JMP I .+1 /TEST INSTRUCTION
3657 0130 AND6
3660 0110 K110, 110
0130 *130
0130 0510 AND I 110 /TEST INSTRUCTION
0131 5532 JMP I .+1
0132 3661 RET6

```

```

3661 3661 *K110+1
3662 1660 RET6, TAD I K110 /ERROR. AC SHOULD BE ZERO
3663 7440 SEA /AND I 110 ALTERED (110)
3664 7402 HLT
3665 7200 CLA
3666 3110 DCA 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 JMP I .+1
RET7 /TEST INSTRUCTION

3672 3672 *K50+1
3673 1671 RET7,
3674 7480 TAD I K50
HLT
SZA

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

3675 7200 CLA
3676 3050 DCA 50

/ILLEGAL AUTO INDEX TEST 8

3677 7200 CLA
3700 9701 JMP I .+1
3701 0120 AND8
3702 0030 K30,
30

0120 0430 *120
0121 5522 AND8,
0122 3703 JMP I .+1
RET8 /TEST INSTRUCTION

3703 3703 *K30+1
3704 1702 RET8,
3705 7440 TAD I K30
7482 HLT
SZA

/ERROR. AC SHOULD BE ZERO
/AND I 30 ALTERED (30)

3706 7200 CLA
3707 3030 DCA 30

/ILLEGAL AUTO INDEX TEST 9

3710 7200 CLA
3711 3000 DCA 0
3712 5713 JMP I .+1
3713 0074 IAIT9,
AND9

0074 0074 *74
0075 0400 AND9,
0076 5476 AND I 0
3714 3714 JMP I .+1
RET9 /TEST INSTRUCTION

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

/ILLEGAL AUTO INDEX TEST 10

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

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

/CHECK FOR TTY BELL

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

4010	4010	0000	*4010	
4011	4011	0000	STR, 0	
4012	4012	1220	TAD JMP1X	
4013	4013	5001	DCA 1	

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

PROCESSOR IOT TEST
4200 7300 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
5MP*

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 CAF
4230 6003 SPF
4231 7402 SRQ
HLT

PROCESSOR IOT TEST 4
4232 6007 CAF
4233 6035 KIE
4234 7410 SKP
4235 7402 HLT
4236 6040 HLT
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
4245 6035 KIE
4246 6040 SPF
4247 6041 TSF
4250 7402 HLT
4251 6003 SRO
4252 7402 HLT
/PROCESSOR IOT TEST 5
CLA IAC
/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

```

```

4253 60E7
4254 1267 CAF
4255 30E2 TAD
4256 6001 DCA
4257 7410 ION
4260 7410 SKP
4261 6000 HLT
4262 7402 SKON
4263 6000 SKON
4264 7410 SKP
4265 7402 HLT
4266 9271 JMP
4267 4270 .+1
4270 7402 HLT
/PROCESSOR IOT TEST 6
CAF
TAD BACK13 2
DCA
ION
SKP
HLT
SKON
SKON
SKP
HLT
JMP .+3
/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

```

```

4271 60E7
4272 1304 CAF
4273 30E2 TAD
4274 6001 DCA
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 HLT
/PROCESSOR IOT TEST 7
CAF
TAD BACK14
DCA 2
ION
IOF
SKP
HLT
SKON
SKP
HLT
JMP .+3
/TURN INTERRUPT ON
/TURN INTERRUPT OFF
/IOF SHOULD NOT SKIP
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/IOF FAILED
/ILLEGAL INTERRUPT OCCURED

```

```

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

```

```

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

```

4320 7420
4321 7402
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

4327 6007
4330 6040
4331 6004
4332 0064
4333 7006
4334 7004
4335 7430
4336 7440
4337 7402

/PROCESSOR IOT TEST 10
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

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 9360
4356 4357
4357 7402

/PROCESSOR IOT TEST 11
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

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

/PROCESSOR IOT TEST 12
CLA CLL CML
TAD
DCA
RTF
SKP
HLT
SNL
SEA
SKON
HLT
JMP I
PTST14
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

2402

5340

```

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 INTERST
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

```


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

A1TST3	3622	K1010	3625	OUTT14	3367
AND1	4000	K110	3660	PIOTST	4200
AND10	0070	K1111	0062	PTST14	4400
AND2	2173	K1234	0177	RET1	3604
AND3	1173	K1172	0173	RET10	3724
AND4	0574	K173	0174	RET2	3615
AND5	0372	K174	0175	RET3	3626
AND6	0130	K175	0176	RET4	3637
AND7	0124	K176	0172	RET5	3650
AND8	0120	K1777	0037	RET6	3661
AND9	0074	K200	3746	RET7	3672
BAC13	3345	K2010	3614	RET8	3703
BAC14	3370	K210	3647	RET9	3714
BAC15	3412	K2525	0054	RNGCNT	3750
BAC16	4375	K30	3702	RTF	6005
BAC17	4415	K3777	0021	SKON	6000
BAC18	2761	K4	0065	SPF	6040
BAC19	2735	K4010	3603	SRQ	6003
BAC20	3013	K410	3636	STR	4011
BAC21	3044	K4400	0052	TP0	0202
BAC22	3076	K4444	0056	TP177	0377
BAC23	3124	K4577	0053		
BAC24	3146	K50	3671		
BAC25	3243	K5200	0064		
BAC26	3243	K5252	0061		
BAC27	3243	K5555	0063		
BAC28	3243	K5777	0022		
BAC29	3751	K6666	0055		
BELCOD	3747	K6777	0023		
BLCNT	7002	K7070	0057		
BSN	6007	K7377	0024		
CAF	6004	K7577	0025		
GTF	3600	K7757	0031		
IAIT1	3723	K7767	0032		
IAIT10	3713	K7773	0033		
IAIT89	2677	K7775	0034		
INTERST	4020	K7776	0035		
JMP1X	0036	K7777	0020		
K0	0051	K1E	6035		
K0001	0047	OUT1	2712		
K0003	0046	OUT10	3235		
K0007	0045	OUT2	2760		
K0017	0044	OUT3	2734		
K0037	0043	OUT4	3012		
K0077	0042	OUT5	3043		
K0177	0041	OUT6	3075		
K0377	0060	OUT7	3123		
K0707	0040	OUT8	3145		
K0777		OUT9	3212		
		OUTT13	3344		

ERRORS DETECTED: 0

LINKS GENERATED: 0

RUN-TIME: 20 SECONDS

2K CORE USED