

IDENTIFICATION

PRODUCT CODE:	MAINDEC-8E-D088
PRODUCT NAME:	PDP-8/E INSTRUCTION TEST 2
DATE CREATED:	JUNE 18, 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-D0A(N) HAS BEEN RUN SUCCESSFULLY.

3. LOADING PROCEDURE

3.1 METHOD

THE STANDARD BINARY LOADER IS USED.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS (NONE)

4.2 STARTING ADDRESS

200

4.3 OPERATOR ACTION

- A. SET THE SWITCH REGISTER TO 200. PRESS LOAD ADDRESS.
- B. PUSH CLEAR AND THEN CONTINUE. A PROGRAMMED HALT OCCURS WHEN AN ERROR IS ENCOUNTERED.

5. OPERATING PROCEDURE

SAME AS SECTION 4.

6. ERRORS

6.1 ERROR HALTS AND DESCRIPTION

SEE LISTING.

6.2 ERROR RECOVERY

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

7. RESTRICTIONS

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

8. MISCELLANEOUS

8.1 EXECUTION TIME

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

9. PROGRAM DESCRIPTION

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

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

1. DCA TEST
2. INDIRECT ADDRESSING TEST

- A. USING TAD
- B. USING AND

3. AUTOINDEX TEST

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

4. PROCESSOR IOT TEST

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

5. INTERRUPT TEST

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

6. CHECK FOR UNAUTHORIZED AUTOINDEXING

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

10. LISTING

/PDP-8/E INSTRUCTION TEST 2 MAINDEC-8E-D0BB
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6000	SKON=6000	/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
6023	SRQ=6003	/SKIP IF INTERRUPT REQUEST
6024	GTF=6004	/GET INTERRUPT FLAGS
6005	RTF=6005	/RESTORE INTERRUPT FLAGS AND TURN INTERRUPT ON
6007	CAF=6007	/CLEAR ALL FLAGS, AC, LINK, AND ENABLE TTY INTERRUPT F.F.
6040	SPF=6040	/SET PRINTER FLAG
6035	KIE=6035	/ENABLE TTY INTERRUPT F.F. WHEN AC 11 EQUALS A 1
7002	BSW=7002	/SWAP BYTES IN AC

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

0007	0007	*7	0	
				/CONSTANTS AND VARIABLES

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

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

0110	0110	*110	
0110	0000		0

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

	0200	*200		
		/DCA TEST 1		
0200	7200	CLA		
0201	7410	SKP		
0202	0000	TP0,	0	
0203	1052	TAD	K4400	
0204	3377	DCA	TP177	
0205	7440	SEA		
0206	7402	HLT		/DCA DID NOT CLEAR AC
0207	7410	SKP		
0210	0000	0		
0211	1052	TAD	K4400	
0212	7041	CIA		/AC=-(4400)
0213	1377	TAD	TP177	
0214	7440	SEA		
0215	7402	HLT		/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		/DCA DID NOT CLEAR AC
0223	1053	TAD	K4577	
0224	7041	CIA		
0225	1202	TAD	TP0	
0226	7440	SEA		
0227	7402	HLT		/DCA FAILED

/AC SHOULD EQUAL ZERO

/DCA TEST 3

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

/DCA TEST 4

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

/DCA TEST 5

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

/DCA TEST 6

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

/P(

/DCA TEST 7

0275	7200	CLA	
0276	1056	TAD	K4444
0277	3377	DCA	TP177
0300	7440	SEA	
0301	7402	HLT	/DCA DID NOT CLEAR AC
0302	1056	TAD	K4444
0303	7041	CIA	
0304	1377	TAD	TP177
0305	7440	SEA	
0306	7402	HLT	/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	/DCA DID NOT CLEAR AC
0314	1057	TAD	K7070
0315	7041	CIA	
0316	1377	TAD	TP177
0317	7440	SEA	
0320	7402	HLT	/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	/DCA DID NOT CLEAR AC
0326	1060	TAD	K0707
0327	7041	CIA	
0330	1000	TAD	0
0331	7440	SEA	
0332	7402	HLT	/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	/DCA DID NOT CLEAR AC
0340	1061	TAD	K5252
0341	7041	CIA	
0342	1000	TAD	0
0343	7440	SEA	
0344	7402	HLT	/DCA FAILED /AC SHOULD BE ZERO

/DCA TEST 11

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

/DCA TEST 12

0357	7200	CLA	
0360	1063	TAD K5555	
0361	3000	DCA 0	
0362	7440	SEA	
0363	7402	HLT	/DCA DID NOT CLEAR AC
0364	1063	TAD K5555	
0365	7041	CIA	
0366	1000	TAD 0	
0367	7440	SEA	
0370	7402	HLT	/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 *400

/INDIRECT ADDRESSING TEST 1

0400	7200	CLA	
0401	1442	TAD I K0177	/OPERAND=1234
0402	7041	CIA	
0403	1177	TAD K1234	
0404	7440	SZA	
0405	7402	HLT	/TAD INDIRECT FAILED /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	
0423	7402	HLT	/ISZ FAILED. NO SKIP
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	/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	CLA	
0461	1573	TAD I K172	/OPERAND=176
0462	7041	CIA	
0463	1172	TAD K176	
0464	7440	SEA	
0465	7402	HLT	/TAD INDIRECT FAILED /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 8

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

/INDIRECT ADDRESSING TEST 9

0475	7200	CLA	
0476	1173	TAD K172	
0477	3000	DCA 0	
0500	2136	ISE I K0	
0501	7410	SKP	
0502	7402	HLT	/ISE SKIPPED ILLEGALLY
0503	1000	TAD 0	
0504	7041	CIA	
0505	1173	TAD K172	
0506	7040	CMA	
0507	7440	SEA	
0510	7402	HLT	/DCA INDIRECT FAILED /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 10

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

/INDIRECT ADDRESSING TEST 11

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

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

/INDIRECT ADDRESSING TEST 12

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

/INDIRECT ADDRESSING TEST 13

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

/INDIRECT ADDRESSING TEST 14

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

/INDIRECT ADDRESSING TEST 15

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

/AC SHOULD BE ZERO

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

0600

*600

/INDIRECT ADDRESSING TEST 16

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

/AUTO INDEX TEST 1

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

/AUTO INDEX TEST 2

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

/AUTO INDEX TEST 3

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

/AUTO INDEX TEST 4

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

/AUTO INDEX TEST 5

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

/AUTO INDEX TEST 6

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

/AUTO INDEX TEST 7

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

/AUTO INDEX TEST 8

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

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

/AUTO INDEX TEST 9

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

/AUTO INDEX TEST 10

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

/AUTO INDEX TEST 11

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

/AUTO INDEX TEST 12

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

/AUTO INDEX TEST 13

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

1000 *1000

/AUTO INDEX TEST 14

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

/AUTO INDEX TEST 15

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

/AUTO INDEX TEST 16

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

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

/AUTO INDEX TEST 17

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

/AUTO INDEX TEST 18

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

/AUTO INDEX TEST 19

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

/AUTO INDEX TEST 20

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

/AUTO INDEX TEST 21

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

1105	0411	AND I 11	/DO AUTO INDEX
1106	1011	TAD 11	
1107	1044	TAD K0037	/AC SHOULD EQUAL 7777
1110	7040	CMA	
1111	7440	SZA	/AC SHOULD BE ZERO
1112	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 22			
1113	7200	CLA	
1114	1026	TAD K7677	/CONSTANT TO BE INDEXED
1115	3011	DCA 11	
1116	0411	AND I 11	/DO AUTO INDEX
1117	1011	TAD 11	
1120	1043	TAD K0077	/AC SHOULD EQUAL 7777
1121	7040	CMA	
1122	7440	SZA	/AC SHOULD BE ZERO
1123	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 23			
1124	7200	CLA	
1125	1025	TAD K7577	/CONSTANT TO BE INDEXED
1126	3011	DCA 11	
1127	0411	AND I 11	/DO AUTO INDEX
1130	1011	TAD 11	
1131	1042	TAD K0177	/AC SHOULD EQUAL 7777
1132	7040	CMA	
1133	7440	SZA	/AC SHOULD BE ZERO
1134	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 24			
1135	7200	CLA	
1136	1024	TAD K7377	/CONSTANT TO BE INDEXED
1137	3011	DCA 11	
1140	0411	AND I 11	/DO AUTO INDEX
1141	1011	TAD 11	
1142	1041	TAD K0377	/AC SHOULD EQUAL 7777
1143	7040	CMA	
1144	7440	SZA	/AC SHOULD BE ZERO
1145	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 25			
1146	7200	CLA	
1147	1023	TAD K6777	/CONSTANT TO BE INDEXED
1150	3011	DCA 11	
1151	0411	AND I 11	/DO AUTO INDEX
1152	1011	TAD 11	
1153	1040	TAD K0777	/AC SHOULD EQUAL 7777
1154	7040	CMA	
1155	7440	SZA	/AC SHOULD BE ZERO
1156	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 26			
1157	7200	CLA	
1160	1022	TAD K5777	/CONSTANT TO BE INDEXED

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

PAUSE

/TEST 2 - TAPE 2

1200 *1200

/AUTO INDEX TEST 27

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

/AUTO INDEX TEST 28

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

/AUTO INDEX TEST 29

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

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

/AUTO INDEX TEST 30

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

/AUTO INDEX TEST 31

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

/AUTO INDEX TEST 32

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

/AUTO INDEX TEST 33

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

/AUTO INDEX TEST 34

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

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

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

/AUTO INDEX TEST 40

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

1400

*1400
/AUTO INDEX TEST 41

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

/AUTO INDEX TEST 42

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

/AUTO INDEX TEST 43

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

/AUTO INDEX TEST 44

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

/AUTO INDEX TEST 45

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

/AUTO INDEX TEST 46

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

/AUTO INDEX TEST 47

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

/AUTO INDEX TEST 48

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


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

```

```

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

```

```

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

```

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

```

```

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

```

1565 7402

HLT

/AUTO INDEX ERROR

/AUTO INDEX TEST 54

1566 7200

CLA

1567 1022

TAD K5777

/CONSTANT TO BE INDEXED

1570 3013

DCA 13

1571 2413

ISZ I 13

/DO AUTO INDEX

1572 7000

NOP

1573 1013

TAD 13

1574 1037

TAD K1777

/AC SHOULD EQUAL 7777

1575 7040

CMA

1576 7440

SZA

/AC SHOULD BE ZERO

1577 7402

HLT

/AUTO INDEX ERROR

1600

*1600

/AUTO INDEX TEST 55

1600 7200

CLA

1601 1021

TAD K3777

/CONSTANT TO BE INDEXED

1602 3013

DCA 13

1603 0413

AND I 13

/DO AUTO INDEX

1604 1013

TAD 13

1605 1021

TAD K3777

/AC SHOULD EQUAL 7777

1606 7040

CMA

1607 7440

SZA

/AC SHOULD BE ZERO

1610 7402

HLT

/AUTO INDEX ERROR

/AUTO INDEX TEST 56

1611 7200

CLA

1612 1020

TAD K7777

/CONSTANT TO BE INDEXED

1613 3013

DCA 13

1614 0413

AND I 13

/DO AUTO INDEX

1615 1013

TAD 13

1616 1020

TAD K7777

/AC SHOULD EQUAL 7777

1617 7040

CMA

1620 7440

SZA

/AC SHOULD BE ZERO

1621 7402

HLT

/AUTO INDEX ERROR

/AUTO INDEX TEST 57

1622 7200

CLA

1623 1036

TAD K0

/CONSTANT TO BE INDEXED

1624 3014

DCA 14

1625 0414

AND I 14

/DO AUTO INDEX

1626 1014

TAD 14

1627 1035

TAD K7776

/AC SHOULD EQUAL 7777

1630 7040

CMA

1631 7440

SZA

/AC SHOULD BE ZERO

1632 7402

HLT

/AUTO INDEX ERROR

/AUTO INDEX TEST 58

1633 7200

CLA

1634 1035

TAD K7776

/CONSTANT TO BE INDEXED

1635 3014

DCA 14

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	SZA	/AC SHOULD BE ZERO
1643	7402	HLT	/AUTO INDEX ERROR

/AUTO INDEX TEST 59

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

/AUTO INDEX TEST 60

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

/AUTO INDEX TEST 61

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

/AUTO INDEX TEST 62

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

/AUTO INDEX TEST 63

1711	7200	CLA	
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1712	1027	TAD K7737	/CONSTANT TO BE INDEXED
1713	3014	DCA 14	
1714	0414	AND I 14	/DO AUTO INDEX
1715	1014	TAD 14	
1716	1044	TAD K0037	/AC SHOULD EQUAL 7777
1717	7040	CMA	
1720	7440	SZA	/AC SHOULD BE ZERO
1721	7402	HLT	/AUTO INDEX ERROR

/AUTO INDEX TEST 64

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

/AUTO INDEX TEST 65

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

/AUTO INDEX TEST 66

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

/AUTO INDEX TEST 67

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

/AUTO INDEX TEST 68

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

2000

*2000

/AUTO INDEX TEST 69

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

/AUTO INDEX TEST 70

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

/AUTO INDEX TEST 71

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

/AUTO INDEX TEST 72

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

2043 7040
2044 7440
2045 7402

CMA
SZA
HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 73

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

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

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 74

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

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

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 75

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

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

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 76

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

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

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AUTO INDEX TEST 77

2113 7200
2114 1027
2115 3015
2116 0415

CLA
TAD K7737
DCA 15
AND I 15

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

2117	1015	TAD 15	
2120	1044	TAD K0037	/AC SHOULD EQUAL 7777
2121	7040	CMA	
2122	7440	SZA	/AC SHOULD BE ZERO
2123	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 78			
2124	7200	CLA	
2125	1026	TAD K7677	/CONSTANT TO BE INDEXED
2126	3015	DCA 15	
2127	0415	AND I 15	/DO AUTO INDEX
2130	1015	TAD 15	
2131	1043	TAD K0077	/AC SHOULD EQUAL 7777
2132	7040	CMA	
2133	7440	SZA	/AC SHOULD BE ZERO
2134	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 79			
2135	7200	CLA	
2136	1025	TAD K7577	/CONSTANT TO BE INDEXED
2137	3015	DCA 15	
2140	0415	AND I 15	/DO AUTO INDEX
2141	1015	TAD 15	
2142	1042	TAD K0177	/AC SHOULD EQUAL 7777
2143	7040	CMA	
2144	7440	SZA	/AC SHOULD BE ZERO
2145	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 80			
2146	7200	CLA	
2147	1024	TAD K7377	/CONSTANT TO BE INDEXED
2150	3015	DCA 15	
2151	0415	AND I 15	/DO AUTO INDEX
2152	1015	TAD 15	
2153	1041	TAD K0377	/AC SHOULD EQUAL 7777
2154	7040	CMA	
2155	7440	SZA	/AC SHOULD BE ZERO
2156	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 81			
2157	7200	CLA	
2160	1023	TAD K6777	/CONSTANT TO BE INDEXED
2161	3015	DCA 15	
2162	0415	AND I 15	/DO AUTO INDEX
2163	1015	TAD 15	
2164	1040	TAD K0777	/AC SHOULD EQUAL 7777
2165	7040	CMA	
2166	7440	SZA	/AC SHOULD BE ZERO
2167	7402	HLT	/AUTO INDEX ERROR
2170	7000	NOP	
2171	7000	NOP	
2172	5376	JMP .+4	
2173	7000	NOP	
2174	7000	NOP	

2175 7000 NOP
 2176 7000 NOP
 2177 7000 NOP

2200 *2200

/AUTO INDEX TEST 82

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

/AUTO INDEX TEST 83

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

/AUTO INDEX TEST 84

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

/AUTO INDEX TEST 85

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

/AUTO INDEX TEST 86

2245 7200 CLA
 2246 1035 TAD K7776 /CONSTANT TO BE INDEXED

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

/AUTO INDEX TEST 87

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

/AUTO INDEX TEST 88

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

/AUTO INDEX TEST 89

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

/AUTO INDEX TEST 90

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

/AUTO INDEX TEST 91

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

/AUTO INDEX TEST 92

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

/AUTO INDEX TEST 93

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

/AUTO INDEX TEST 94

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

/AUTO INDEX TEST 95

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

PAUSE

/TEST 2 - TAPE 3

2400 *2400

/AUTO INDEX TEST 96

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

/AUTO INDEX TEST 97

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

/AUTO INDEX TEST 98

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

/AUTO INDEX TEST 99

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

```

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

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

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

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

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

2522 7402

HLT

/AUTO INDEX ERROR

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

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

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

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

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

2575	7040	CMA	
2576	7440	SZA	/AC SHOULD BE ZERO
2577	7402	HLT	/AUTO INDEX ERROR
2600	*2600		
			/AUTO INDEX TEST 110
2600	7200	CLA	
2601	1022	TAD K5777	/CONSTANT TO BE INDEXED
2602	3017	DCA 17	
2603	2417	ISZ I 17	/DO AUTO INDEX
2604	7000	NOP	
2605	1017	TAD 17	
2606	1037	TAD K1777	/AC SHOULD EQUAL 7777
2607	7040	CMA	
2610	7440	SZA	/AC SHOULD BE ZERO
2611	7402	HLT	/AUTO INDEX ERROR
			/AUTO INDEX TEST 111
2612	7200	CLA	
2613	1021	TAD K3777	/CONSTANT TO BE INDEXED
2614	3017	DCA 17	
2615	0417	AND I 17	/DO AUTO INDEX
2616	1017	TAD 17	
2617	1021	TAD K3777	/AC SHOULD EQUAL 7777
2620	7040	CMA	
2621	7440	SZA	/AC SHOULD BE ZERO
2622	7402	HLT	/AUTO INDEX ERROR
			/AUTO INDEX TEST 112
2623	7200	CLA	
2624	1020	TAD K7777	/CONSTANT TO BE INDEXED
2625	3017	DCA 17	
2626	0417	AND I 17	/DO AUTO INDEX
2627	1017	TAD 17	
2630	1020	TAD K7777	/AC SHOULD EQUAL 7777
2631	7040	CMA	
2632	7440	SZA	/AC SHOULD BE ZERO
2633	7402	HLT	/AUTO INDEX ERROR
			/AUTO INDEX TEST 113
2634	9236	JMP .+2	
2635	7402	HLT	/JMP FAILED
2636	7410	SKP	/JMP WORKED (A LITTLE)
2637	2644	2644	
2640	1237	TAD .-1	
2641	3010	DCA 10	
2642	5410	JMP I 10	/TEST INSTRUCTION
2643	7402	HLT	/JMP INDIRECT FAILED
2644	7402	HLT	/LOCATION 2610. NO INDEX
			/IN DEFER STATE.

```

/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
2656 7402      HLT          /WRONG ADDRESS STORED
                               /DURING JMS
                               /JMS WORKS (I GUESS)

2657 7410      SKP
2660 2664      .+4
2661 1260      TAD .-1
2662 3010      DCA 10
2663 4410      JMS I 10      /TEST INSTRUCTION
2664 7402      HLT          /JMS FAILED
2665 7402      HLT          /JMS FAILED
2666 1265      TAD .-1
2667 7410      SKP
2670 2664      .-4
2671 7041      CIA
2672 1270      TAD .-2
2673 7440      SEA
2674 7402      HLT          /WRONG ADDRESS STORED DURING JMS
2675 5676      JMP I .+1      /GO TO PROCESSOR IOT TESTS
2676 4200      PIOTST

/INTERRUPT TEST 1

2677 4700      INTEST, JMS I .+1
2700 4011      STR
2701 6040      SPF          /SET PRINTER FLAG
2702 6041      TSF
2703 7402      HLT          /SPF OR TSF FAILED
2704 7200      CLA
2705 1313      TAD BACK1      /FLAG IS ON
2706 3002      DCA 2
2707 6001      ION
2710 7000      NOP          /GO TO LOC 0000
2711 7402      HLT          /NO INTERRUPT
2712 2711      OUT1, .-1
2713 2714      BACK1, .+1
2714 7440      SEA
2715 7402      HLT          /RETURN FROM LOC 1
                               /AC SHOULD BE 0
                               /CONFIDENCE CHECK

2716 1000      TAD 0
2717 7041      CIA
2720 1312      TAD OUT1
2721 7640      SEA CLA
2722 7402      HLT          /INTERRUPT ERROR
                               /WRONG ADDRESS STORED

```


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

/WRONG ADDRESS STORED

/INTERRUPT TEST 6

3061	6040		SPF	/SET PRINTER FLAG
3062	6041		TSF	
3063	7402		HLT	/SPF FAILED TO SET PRINTER FLAG
3064	7200		CLA	/FLAG IS ON
3065	1276		TAD BACK6	
3066	3002		DCA 2	
3067	1020		TAD K7777	
3070	3003		DCA 3	
3071	6001		ION	
3072	2003		ISZ 3	
3073	7402		HLT	/NO INTERRUPT
3074	7402		HLT	
3075	3074	OUT6,	.-1	
3076	3077	BACK6,	.*1	
3077	7440		SZA	/RETURN FROM LOC 1
3100	7402		HLT	/CONFIDENCE CHECK
				/AC SHOULD BE ZERO
3101	1003		TAD 3	
3102	7440		SZA	
3103	7402		HLT	/ISZ PRIOR TO
				/INTERRUPT FAILED
3104	3003		DCA 3	
3105	1000		TAD 0	
3106	7041		CIA	
3107	1275		TAD OUT6	
3110	7640		SZA CLA	
3111	7402		HLT	/INTERRUPT ERROR
				/WRONG ADDRESS STORED

/INTERRUPT TEST 7

3112	6040		SPF	/SET PRINTER FLAG
3113	6041		TSF	
3114	7402		HLT	/SPF FAILED TO SET PRINTER FLAG
3115	7200		CLA	/FLAG IS ON
3116	1324		TAD BACK7	
3117	3002		DCA 2	
3120	6001		ION	
3121	5321		JMP .	
3122	7402		HLT	/NO INTERRUPT
3123	3121	OUT7,	.-2	
3124	3125	BACK7,	.*1	
3125	7440		SZA	/RETURN FROM LOC 1
3126	7402		HLT	/CONFIDENCE CHECK
				/AC SHOULD BE 0
3127	1000		TAD 0	
3130	7041		CIA	
3131	1323		TAD OUT7	
3132	7640		SZA CLA	
3133	7402		HLT	/INTERRUPT ERROR
				/WRONG ADDRESS STORED

```

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

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

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

3163 5764      JMP I .+1
3164 3200      3200

      *3200
      /INTERRUPT TEST 9
3200 6040      SPF      /SET PRINTER FLAG
3201 6041      TSF
3202 7402      HLT      /SPF FAILED TO SET PRINTER FLAG
3203 7200      CLA      /FLAG IS ON
3204 1213      TAD BACK9
3205 3002      DCA 2
3206 1020      TAD K777
3207 6001      ION
3210 7200      CLA
3211 7402      HLT      /NO INTERRUPT
3212 3211      OUT9,    .-1
3213 3214      BACK9,   .+1
3214 7440      SZA
3215 7402      HLT      /RETURN FROM LOC 1
                          /CLA PRIOR TO INTERRUPT
                          /FAILED

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

```

3222	7402	HLT	/INTERRUPT FAILED /WRONG ADDRESS STORED
			/INTERRUPT TEST 10
3223	6040	SPF	/SET PRINTER FLAG
3224	6041	TSF	
3225	7402	HLT	/SPF FAILED TO SET PRINTER FLAG
3226	7200	CLA	/FLAG IS ON
3227	1236	TAD BACK10	
3230	3002	DCA 2	
3231	6001	ION	
3232	6041	TSF	
3233	7402	HLT	/NO INTERRUPT
3234	7402	HLT	
3235	3234	OUT10, .-1	
3236	3237	BACK10, .+1	
3237	7440	SZA	/RETURN FROM LOC 1
3240	7402	HLT	/CONFIDENCE CHECK /AC SHOULD BE ZERO
3241	1000	TAD 0	
3242	7041	CIA	
3243	1235	TAD OUT10	
3244	7640	SZA CLA	
3245	7402	HLT	/INTERRUPT ERROR /WRONG ADDRESS STORED
			/INTERRUPT TEST 11
3246	6040	SPF	/SET PRINTER FLAG
3247	6041	TSF	
3250	7402	HLT	/SPF FAILED TO SET PRINTER FLAG
3251	7200	CLA	/FLAG IS ON
3252	1311	TAD BACK11	
3253	3002	DCA 2	
3254	6001	ION	
3255	6002	IOF	
3256	6001	ION	
3257	6002	IOF	
3260	6001	ION	
3261	6002	IOF	
3262	6001	ION	
3263	6002	IOF	
3264	6001	ION	
3265	6002	IOF	
3266	6001	ION	
3267	6002	IOF	
3270	6001	ION	
3271	6002	IOF	
3272	6001	ION	
3273	6002	IOF	
3274	6001	ION	
3275	6002	IOF	
3276	6001	ION	
3277	6002	IOF	

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

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

/WHAT HAPPENED TO MY FLAG

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

/INTERRUPT TEST 12		
3314	6042	TCF
3315	7200	CLA
3316	1326	TAD BACK12
3317	3002	DCA 2
3320	6001	ION
3321	7000	NOP
3322	7000	NOP
3323	7000	NOP
3324	7000	NOP
3325	7410	SKP
3326	3330	BACK12, .+2
3327	7410	SKP
3330	7402	HLT

/CLEAR FLAG

/INTERRUPT WITH NO
 /FLAG.

3331	6002	IOF
------	------	-----

/INTERRUPT TEST 13		
3332	6040	SPF
3333	6041	TSF
3334	7402	HLT
3335	7200	CLA
3336	1345	TAD BAC13
3337	3002	DCA 2
3340	6001	ION
3341	7410	SKP
3342	7402	HLT
3343	7402	HLT
3344	3343	OUTT13, .-1
3345	3346	BAC13, .+1
3346	7440	SZA
3347	7402	HLT
3350	1000	TAD 0
3351	7041	CIA
3352	1344	TAD OUTT13
3353	7640	SZA CLA
3354	7402	HLT

/SPF FAILED TO SET PRINTER FLAG.

/NO INTERRUPT

/INTERRUPT ERROR
 /WRONG ADDRESS STORED

```

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

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

3600          PAGE

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

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

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

```

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

/ILLEGAL AUTO INDEX TEST 2

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

/ILLEGAL AUTO INDEX TEST 3

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

/ILLEGAL AUTO INDEX TEST 4

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

0574	0610	AND4,	AND I 410	/TEST INSTRUCTION
0575	5776		JMP I .+1	
0576	3637		RET4	
	3637	*K410+1		
3637	1636	RET4,	TAD I K410	
3640	7440		SZA	
3641	7402		HLT	/ERROR. AC SHOULD BE ZERO
				/AND I 410 ALTERED (410)
3642	7200		CLA	
3643	3636		DCA I K410	

/ILLEGAL AUTO INDEX TEST 5

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

/ILLEGAL AUTO INDEX TEST 6

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

/ILLEGAL AUTO INDEX TEST 7

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

/ILLEGAL AUTO INDEX TEST 8

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

/ILLEGAL AUTO INDEX TEST 9

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

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

/ILLEGAL AUTO INDEX TEST 10

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

		3724	*IAIT10+1	
	3724	1446	RET10, TAD I K0007	
	3725	7440	SZA	
	3726	7402	HLT	/ERROR, AC SHOULD BE ZERO
				/AND I 7 ALTERED (7)
	3727	7200	CLA	
	3730	3007	DCA 7	

/CHECK FOR TTY BELL

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

		4010	*4010	
	4010	0000	0	
	4011	0000	STR, 0	
	4012	1220	TAD JMP1X	
	4013	3001	DCA 1	

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

```

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

```

```

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

```

-5203
JMP

```

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

```

```

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

```

```

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

```

/CLEAR ALL FLAGS, AC, AND LINK

/CAF SHOULD NOT SKIP

/CAF FAILED, AC AND LINK SHOULD BE ZERO

/SET PRINTER FLAG

/SPF SHOULD NOT SKIP

/SPF OR TSF FAILED

/CLEAR ALL FLAGS, AC, AND LINK

/CAF FAILED, TTY FLAG SHOULD BE CLEAR

/SKIP IF INTERRUPT REQUEST

/SRQ FAILED OR SPURIOUS INTERRUPT OCCURED

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

/SET PRINTER FLAG

/SKIP IF INTERRUPT REQUEST

/SRQ FAILED OR CAF FAILED TO ENABLE TTY INTERRUPT

/CLEAR ALL FLAGS, AC, AND LINK

/DISABLE TTY INTERRUPT, (AC 11 EQUALS ZERO)

/KIE SHOULD NOT SKIP

/SET PRINTER FLAG

/SPF OR TSF FAILED

/SKIP IF INTERRUPT REQUEST

/KIE FAILED TO DISABLE TTY INTERRUPT OR SRQ FAILED

```

/PROCESSOR IOT TEST 5
4244 7201      CLA IAC
4245 6035      KIE
4246 6040      SPF
4247 6041      TSF
4250 7402      HLT
4251 6003      SRQ
4252 7402      HLT

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

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

/PROCESSOR IOT TEST 6
4253 6007      CAF
4254 1267      TAD      BACK13
4255 3002      DCA      2
4256 6001      ION
4257 7410      SKP
4260 7402      HLT
4261 6000      SKON
4262 7402      HLT
4263 6000      SKON
4264 7410      SKP
4265 7402      HLT
4266 5271      JMP      .+3
4267 4270      BACK13, .+1
4270 7402      HLT

/TURN INTERRUPT ON

/ION SHOULD NOT SKIP
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF
/SKON FAILED TO SKIP OR ION FAILED
/SKIP IF INTERRUPT ON AND TURN INTERRUPT OFF

/SKON FAILED

/ILLEGAL INTERRUPT OCCURRED

/PROCESSOR IOT TEST 7
4271 6007      CAF
4272 1304      TAD BACK14
4273 3002      DCA 2
4274 6001      ION
4275 6002      IOF
4276 7410      SKP
4277 7402      HLT
4300 6000      SKON
4301 7410      SKP
4302 7402      HLT
4303 5306      JMP      .+3
4304 4305      BACK14, .+1
4305 7402      HLT

/TURN INTERRUPT ON
/TURN INTERRUPT OFF

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

/IOF FAILED

/ILLEGAL INTERRUPT OCCURED

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

/CLEAR ALL FLAGS, AC, AND LINK

/GET INTERRUPT FLAGS

/GTF SHOULD NOT SKIP
/MASK

/GTF FAILED, (AC SHOULD EQUAL 0000)

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

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

```

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

/GTF FAILED

/PROCESSOR IOT TEST 10

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

/GTF FAILED TO GET INTERRUPT BUS FLAG

/PROCESSOR IOT TEST 11

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

/ILLEGAL INTERRUPT OCCURED

/PROCESSOR IOT TEST 12

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

/ILLEGAL INTERRUPT OCCURED

5340 [

7402-

```

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

```

5

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

4000	11100000	11111111	10000000	00000000	00000000	00000000	00000000	00000000	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

AITST3	3622	K1010	3625	OUTT14	3367
AND1	4000	K110	3660	PIOTST	4200
AND10	0070	K1111	0062	PTST14	4400
AND2	2173	K1234	0177	RET1	3604
AND3	1173	K172	0173	RET10	3724
AND4	0574	K173	0174	RET2	3615
AND5	0372	K174	0175	RET3	3626
AND6	0130	K175	0176	RET4	3637
AND7	0124	K176	0172	RET5	3650
AND8	0120	K1777	0037	RET6	3661
AND9	0074	K200	3746	RET7	3672
BAC13	3345	K2010	3614	RET8	3703
BAC14	3370	K210	3647	RET9	3714
BAC15	3412	K2525	0054	RNGCNT	3750
BACK1	2713	K30	3702	RTF	6005
BACK10	3236	K3777	0021	SKON	6000
BACK11	3311	K4	0065	SPF	6040
BACK12	3326	K4010	3603	SRQ	6003
BACK13	4267	K410	3636	STR	4011
BACK14	4304	K4400	0052	TP0	0202
BACK15	4356	K4444	0056	TP177	0377
BACK16	4375	K4577	0053		
BACK17	4415	K50	3671		
BACK2	2761	K5200	0064		
BACK3	2735	K5252	0061		
BACK4	3013	K5555	0063		
BACK5	3044	K5777	0022		
BACK6	3076	K6666	0055		
BACK7	3124	K6777	0023		
BACK8	3146	K7070	0057		
BACK9	3213	K7377	0024		
BELCOD	3751	K7577	0025		
BLCNT	3747	K7677	0026		
BSW	7002	K7737	0027		
CAF	6007	K7757	0031		
GTF	6004	K7767	0032		
IAIT1	3600	K7773	0033		
IAIT10	3723	K7775	0034		
IAIT89	3713	K7776	0035		
INTEST	2677	K7777	0020		
JMPIX	4020	KIE	6035		
K0	0036	OUT1	2712		
K0001	0051	OUT10	3235		
K0003	0047	OUT2	2760		
K0007	0046	OUT3	2734		
K0017	0045	OUT4	3012		
K0037	0044	OUT5	3043		
K0077	0043	OUT6	3075		
K0177	0042	OUT7	3123		
K0377	0041	OUT8	3145		
K0707	0060	OUT9	3212		
K0777	0040	OUTT13	3344		

ERRORS DETECTED: 0

LINKS GENERATED: 0

RUN-TIME: 20 SECONDS

2K CORE USED