

5 locations changed on tape "MAINT #1" Nov 12, 1968
L. Rice

<u>loc</u>	<u>was on tape</u>	<u>corrected re: listing</u>
2203	2411	2415
2227	1011	1015
2237	0412	0416
2247	3012	3016
2257	1030	1034

IDENTIFICATION

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

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1. ABSTRACT

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

2. REQUIREMENTS

2.1 Equipment

PDP-8I, 8S equipped with Teletype

2.2 Storage

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

2.3 Preliminary Programs

It is assumed that Maindec 8I-D01(n) has been run successfully.

3. LOADING PROCEDURE

3.1 Method

The standard Binary Loader is used.

4. STARTING PROCEDURE

4.1 Control Switch Settings (None)

4.2 Starting Address

201

4.3 Operator Action

a. Set the SWITCH REGISTER to 201. Press LOAD ADDRESS.

b. PUSH START. A programmed halt occurs when an error is encountered.

5. OPERATING PROCEDURE

Same as Section 4.

6. ERRORS

6.1 Error Halts and Description

See listing.

6.2 Error Recovery

If it is desired to loop on the test causing the error, replace the operate instruction preceding the HLT with a JMP to the beginning of the test.

7. RESTRICTIONS

All peripheral devices must be functioning to a degree that the processor START button will clear their flags and no FLAGS will turn on unless authorized.

8. MISCELLANEOUS

8.1 Execution Time

Five program loops per second.

9. PROGRAM DESCRIPTION

The program is a series of many small individual tests. Each test is performed using previously checked functions to validate the test. When an error is encountered, the operator should insert a jump instruction into memory to cause the program to loop on the failing test. The problem can then be found by using the oscilloscope.

The individual program tests are grouped into the following classifications and are performed in the order shown:

1. DCA Test
2. Indirect Addressing Test
 - a. using TAD
 - b. using AND

3. Autoindex Test

- a. using AND
- b. using DCA
- c. using TAD

4. Interrupt Test

- a. following NOP
- b. following TAD
- c. following AND
- d. following DCA
- e. following ISZ
- f. following JMP
- g. following JMS
- h. following CLA
- i. following TSF

5. Check for unauthorized Autoindexing

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

10. LISTING



/INSTRUCTION TEST 2

0000	0000	*0	0	/LOC 0
0001	5001		JMP 1	/LOC 1
0002	0002		2	/LOC 2
0003	0003		3	/LOC 3
0007	0007	*7	0	
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	
0030	7737	K7737,	7737	
0031	0000		0	
0032	7757	K7757,	7757	
0033	7767	K7767,	7767	
0034	7773	K7773,	7773	
0035	7775	K7775,	7775	
0036	7776	K7776,	7776	
0037	0000	K0,	0	
0040	1777	K1777,	1777	
0041	0777	K0777,	0777	
0042	0377	K0377,	0377	
0043	0177	K0177,	0177	
0044	0077	K0077,	0077	
0045	0037	K0037,	0037	
0046	0017	K0017,	0017	
0047	0007	K0007,	0007	
0050	0003	K0003,	0003	
0051	0000		0	
0052	0001	K0001,	0001	
0053	4400	K4400,	4400	
0054	4577	K4577,	4577	
0055	2525	K2525,	2525	
0056	6666	K6666,	6666	
0057	4444	K4444,	4444	
0060	7070	K7070,	7070	
0061	0707	K0707,	0707	
0062	5252	K5252,	5252	
0063	1111	K1111,	1111	
0064	5252	K5555,	5272	
0004	0004	K4,	4	

	0110	*110		
0110	0000		0	
	0172	*172		
0172	0176	K176,	176	/LOC 172
0173	0172	K172,	174	/173
0174	0173	K173,	175	/174
0175	0174	K174,	174	/175
0176	0175	K175,	172	/176
0177	1234	K1234,	1204	/177

0200 0200
0200 0000

*200
TP0, 0

/DCA TEST 1

0201	7200	CLA	
0202	1052	TAP	K4400
0203	3377	DCA	TP177
0204	7440	SZA	
0205	7402	HLT	/DCA DID NOT CLEAR AC
0206	1052	TAU	K4400
0207	7410	SKP	
0210	0000	0	
0211	7041	CI	/AC==(4400)
0212	1377	TAW	TP177
0213	7440	SZA	
0214	7402	HLT	/DCA FAILED /AC SHOULD EQUAL ZERO

/DCA TEST 2

0215	7200	CLA	
0216	1053	TAD	K4577
0217	3200	DCA	TP0
0220	7440	SZA	
0221	7402	HLT	/DCA DID NOT CLEAR AC
0222	1053	TAU	K4577
0223	7041	CI	
0224	1200	TAU	TP0
0225	7440	SZA	
0226	7402	HLT	/DCA FAILED /AC SHOULD EQUAL ZERO

/DCA TEST 3

0227	7200	CLA	
0230	1020	TAP	K7777
0231	3200	DCA	TP0
0232	7440	SZA	
0233	7402	HLT	/DCA DID NOT CLEAR AC
0234	1200	TAU	TP0
0235	7040	CMA	
0236	7440	SZA	
0237	7402	HLT	/DCA FAILED /AC SHOULD BE ZERO

/DCA TEST 4

0240	7200	CLA	
0241	1036	TAD	K0
0242	3200	DCA	TP0
0243	7440	SZA	/DCA DID NOT CLEAR AC
0244	7402	HLT	
0245	1200	TAU	TP0

0246 7440
0247 7402

SZA
HLT

/DCA FAILED
/AC SHOULD BE ZERO



/DCA TEST 5

0250 7200
 0251 1054
 0252 3200
 0253 7440
 0254 7402
 0255 1054
 0256 7041
 0257 1200
 0260 7440
 0261 7402

CLA
 TAD K2525
 DC TP0
 SZ#
 HLI
 TAU K2525
 CIA
 TAU TP0
 SZ#
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

/DCA TEST 6

0262 7200
 0263 1055
 0264 3200
 0265 7440
 0266 7402
 0267 1055
 0270 7041
 0271 1200
 0272 7440
 0273 7402

CLA
 TAD K6666
 DC# TP0
 SZ#
 HLI
 TAD K6666
 CIA
 TAU TP0
 SZ#
 HLT

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

/DCA TEST 7

0274 7200
 0275 1056
 0276 3377
 0277 7440
 0300 7402
 0301 1056
 0302 7041
 0303 1377
 0304 7440
 0305 7402

CLA
 TA# K4444
 DCA TP177
 SZ#
 HLI
 TA K4444
 CIA
 TAU TP177
 SZ#
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

/DCA TEST 8

0306 7200
 0307 1057
 0310 3377
 0311 7440
 0312 7402
 0313 1057
 0314 7041
 0315 1377
 0316 7440
 0317 7402

CLA
 TAU K7070
 DCA TP177
 SZ#
 HLI
 TAU K7070
 CI#
 TAU TP177
 SZ#
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED

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/AC SHOULD BE ZERO

/DCA TEST 9

0320 7200
 0321 1060
 2322 3000
 0323 7440
 0324 7402
 0325 1060
 0326 7041
 0327 1000
 0330 7440
 0331 7402

CLA
 TAU K0707
 DCA 0
 SZ
 HLI
 TAU K0707
 CIA
 TA 0
 SZA
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

/DCA TEST 10

0332 7200
 0333 1061
 0334 3000
 0335 7440
 0336 7402
 0337 1061
 0340 7041
 0341 1000
 0342 7440
 0343 7402

CLA
 TAU K0202
 DCA 0
 SZA
 HLI
 TAU K0202
 CIA
 TA 0
 SZA
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

/DCA TEST 11

0344 7200
 0345 1062
 0346 3000
 0347 7440
 0350 7402
 0351 1062
 0352 7041
 0353 1000
 0354 7440
 0355 7402

CLA
 TAU K1111
 DCA 0
 SZA
 HLI
 TAU K1111
 CIA
 TAU 0
 SZA
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

/DCA TEST 12

0356 7200
 0357 1063
 0360 3000
 0361 7440
 0362 7402
 0363 1063
 0364 7041
 0365 1000
 0366 7440
 0367 7402

CLA
 TAU K0505
 DCA 0
 SZA
 HLI
 TAU K0505
 CIA
 TAU 0
 SZA
 HLI

/DCA DID NOT CLEAR AC

/DCA FAILED
 /AC SHOULD BE ZERO

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

NOP
NOP
NOP
NOP
NOP
NOP
SK#

TP177, 0

0400

*420

/INDIRECT ADDRESSING TEST 1

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

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

/INDIRECT ADDRESSING TEST 2

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

CL#
 SKP
 0
 TAU K7777
 AND I K0177 /OPERAND=1234
 CIA
 TAU K1234
 SZ#
 HLI /AND INDIRECT FAILED
 /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 3

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

CLA
 TAU K7777
 DCA 0
 IS# I K0
 HLI /IS# FAILED, NO SKIP
 TAD 0
 SZA
 HLI /IS# INDIRECT FAILED
 /AC SHOULD BE 0

/INDIRECT ADDRESSING TEST 4

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

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

/INDIRECT ADDRESSING TEST 5

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

/INDIRECT ADDRESSING TEST 6

0444	7200	CLA	
0445	1172	TA- K176	
0446	3000	DCA 0	
0447	2436	ISZ I K0	
0450	7410	SKP	
0451	7402	HL	/ISZ SKIPPED ILLEGALLY
0452	1002	TAD 0	
0453	7041	CIA	
0454	1172	TAU K176	
0455	7040	CMA	
0456	7440	SZM	
0457	7402	HLT	/DCA INDIRECT FAILED /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 7

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

/INDIRECT ADDRESSING TEST 8

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

/INDIRECT ADDRESSING TEST 9

0475	7200	CLA	
0476	1173	TAU K172	
0477	3000	DC 0	
0500	2436	ISZ I K0	
0501	7410	SKP	
0502	7402	HLT	/ISZ SKIPPED ILLEGALLY
0503	1000	TAD 0	
0504	7041	CIA	
0505	1173	TAU K172	
0506	7040	CMA	
0507	7440	SZA	
0510	7402	HLT	/UCA INDIRECT FAILED /AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 10

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

/INDIRECT ADDRESSING TEST 11

0517	7200	CLA	
0520	1020	TAU K7777	
0521	0574	AND I K173	/OPERAND=172
0522	7041	CIA	
0523	1173	TAU K172	
0524	7440	SZA	/AND INDIRECT FAILED
0525	7402	HLT	/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 12

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

/INDIRECT ADDRESSING TEST 13

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

/INDIRECT ADDRESSING TEST 14

0550	7200	CLA	
0551	1020	TAU K777	
0552	0575	AND I K174	/OPERAND=173
0553	7041	CIA	
0554	1174	TAU K173	
0555	7440	SZA	/AND INDIRECT FAILED
0556	7402	HLI	/AC SHOULD BE ZERO

/INDIRECT ADDRESSING TEST 15

0557	7200	CLA	
0560	1175	TA K174	
0561	3000	DCA 0	
0562	2436	ISZ I K0	
0563	7410	SKN	
0564	7402	HLI	/ISZ SKIPPED ILLEGALLY
0565	1000	TAL 0	
0566	7041	CIA	
0567	1175	TAU K174	
0570	7040	CM	
0571	7440	SZA	
0572	7402	HLI	/DCA INDIRECT FAILED /AC SHOULD BE ZERO
0573	5377	JMP ,+4	
0574	7000	NOF	
0575	7000	NOF	
0576	7000	NO	
0577	7000	NOF	

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0600
*620
/INDIRECT ADDRESSING TEST 16

0600 7200          CLA
0601 1576          TAU I K175          /OPERAND=174
0602 7041          CIA
0603 1175          TAU K174
0604 7440          SZ
0605 7422          HLI          /TAU INDIRECT FAILED
                                /AC SHOULD BE ZERO

/AUTO INDEX TEST 1

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

/AUTO INDEX TEST 2

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

/AUTO INDEX TEST 3

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

/AUTO INDEX TEST 4

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

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0647 1047
0650 7040
0651 7440
0652 7402

TAU K0003
CMA
SZA
HLT

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/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	TA 10	
0660	1046	TAD K0007	/AC SHOULD EQUAL 7777
0661	7040	CMA	
0662	7440	SZA	/AC SHOULD BE ZERO
0663	7402	HLI	/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	TAJ 10	
0671	1045	TAD K0017	/AC SHOULD EQUAL 7777
0672	7040	CMA	
0673	7440	SZ:	/AC SHOULD BE ZERO
0674	7402	HLI	/AUTO INDEX ERROR

/AUTO INDEX TEST 7

0675	7200	CLA	
0676	1027	TAD K7757	/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	SZ	/AC SHOULD BE ZERO
0705	7402	HLI	/AUTO INDEX ERROR

/AUTO INDEX TEST 8

0706	7200	CLA	
0707	1026	TA 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	HLI	/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	ISZ I 10	/DO AUTO INDEX
0756	7000	NOV	
0757	1010	TA- 10	
0760	1037	TAD K1777	/AC SHOULD EQUAL 7777
0761	7040	CMA	
0762	7440	SZA	/AC SHOULD BE ZERO
0763	7402	HLT	/AUTO INDEX ERROR

/AUTO INDEX TEST 13

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

CLA
TAD K377
DC- 10
AND I 10
TAD 10
TAU K377
CMA
SZA
HLI
NOF
NOF
NOF

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

1000

*1000

/AJTO INDEX TEST 14

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

/AJTO 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	TAU 11	
1020	1035	TAD K7776	/AC SHOULD EQUAL 7777
1021	7040	CMA	
1022	7440	SZA	/AC SHOULD BE ZERO
1023	7402	HLT	/AUTO INDEX ERROR

/AJTO 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	TAU 11	
1031	1036	TAD K0	/AC SHOULD EQUAL 7777
1032	7040	CMA	
1033	7440	SZA	/AC SHOULD BE ZERO
1034	7402	HLT	/AUTO INDEX ERROR

1035	7200	/AUTO INDEX TEST 17	
1036	1034	CLA	
1037	3011	TA K7775	/CONSTANT TO BE INDEXED
1040	3411	DCA 11	
1041	1011	DCA I 11	/DO AUTO INDEX
1042	1051	TAW 11	
1043	7040	TAD K0001	/AC SHOULD EQUAL 7777
1044	7440	CMA	
1045	7402	SZA	/AC SHOULD BE ZERO
		HLI	/AUTO INDEX ERROR

1046	7200	/AUTO INDEX TEST 18	
1047	1033	CLA	
1050	3011	TAW K7773	/CONSTANT TO BE INDEXED
1051	1411	DCA 11	
1052	7200	TAF I 11	/DO AUTO INDEX
1053	1011	CLA	
1054	1047	TAD 11	
1055	7040	TAD K0003	/AC SHOULD EQUAL 7777
1056	7440	CMA	
1057	7402	SZA	/AC SHOULD BE ZERO
		HLI	/AUTO INDEX ERROR

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

1071	7200	/AUTO INDEX TEST 20	
1072	1031	CLA	
1073	3011	TAU K7757	/CONSTANT TO BE INDEXED
1074	0411	DC= 11	
1075	1011	AND I 11	/DO AUTO INDEX
1076	1045	TAD 11	
1077	7040	TAD K0017	/AC SHOULD EQUAL 7777
1100	7440	CMA	
1101	7402	SZA	/AC SHOULD BE ZERO
		HLI	/AUTO INDEX ERROR

		/AUTO INDEX TEST 21	
1102	7200	CLA	
1103	1027	TAD K7757	/CONSTANT TO BE INDEXED
1104	3011	DCA 11	
1105	0411	AND I 11	/DO AUTO INDEX
1106	1011	TAD 11	
1107	1044	TA K0057	/AC SHOULD EQUAL 7777
1110	7040	CMA	
1111	7440	SZA	/AC SHOULD BE ZERO
1112	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEA TEST 22	
1113	7200	CLA	
1114	1026	TA K7677	/CONSTANT TO BE INDEXED
1115	3011	DCA 11	
1116	0411	AND I 11	/DO AUTO INDEX
1117	1011	TA 11	
1120	1043	TAD K0077	/AC SHOULD EQUAL 7777
1121	7040	CMA	
1122	7440	SZA	/AC SHOULD BE ZERO
1123	7402	HLT	/AJTO IDEX 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	TAU K0177	/AC SHOULD EQUAL 7777
1132	7040	CMA	
1133	7440	SZA	/AC SHOULD BE ZERO
1134	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEA TEST 24	
1135	7200	CLA	
1136	1024	TAD K7377	/CONSTANT TO BE INDEXED
1137	3011	DCA 11	
1140	0411	AN I 11	/DO AUTO INDEX
1141	1011	TA 11	
1142	1041	TAU K0377	/AC SHOULD EQUAL 7777
1143	7040	CMA	
1144	7440	SZA	/AC SHOULD BE ZERO
1145	7402	HLT	/AUTO INDEX ERROR

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

/AUTO INDEX TEST 25
CLA
TAD K0777 /CONSTANT TO BE INDEXED
DCI 11
AND I 11 /DO AUTO INDEX
TAD 11
TAD K0777 /AC SHOULD EQUAL 7777
CM
SZA /AC SHOULD BE ZERO
HLI /AUTO INDEX ERROR
```

```
1157 7200
1160 1022
1161 3011
1162 2411
1163 7000
1164 1011
1165 1037
1166 7040
1167 7440
1170 7402
1171 7000
1172 5376
1173 7000
1174 7000
1175 7000
1176 7000
1177 7000

/AUTO INDEX TEST 26
CLA
TAD K0777 /CONSTANT TO BE INDEXED
DCA 11
ISZ I 11 /DO AUTO INDEX
NOP
TA 11
TAD K1777 /AC SHOULD EQUAL 7777
CMA
SZA /AC SHOULD BE ZERO
HLI /AUTO INDEX ERROR
NOP
JMP ,+4
NOP
NOP
NOP
NOP
NOP
```

PAJSE

/TEST 2 - TAPE 2

1200

*1200

1200	7200	/AUTO INDEX TEST 27	
1201	1021	CL	
1202	3011	TA- K3777	/CONSTANT TO BE INDEXED
1203	0411	DCA 11	
1204	1011	AND I 11	/DO AUTO INDEX
1205	1021	TAU 11	
1206	7040	TAD K3777	/AC SHOULD EQUAL 7777
1207	7440	CMA	
1210	7402	SZA	/AC SHOULD BE ZERO
		HLT	/AUTO INDEX ERROR

/AUTO INDEX TEST 28

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

/AUTO INDEX TEST 29

1222	7200	CLA	
1223	1036	TA- K0	/CONSTANT TO BE INDEXED
1224	3012	DCA 12	
1225	0412	AND I 12	/DO AUTO INDEX
1226	1012	TAD 12	
1227	1035	TAU K7776	/AC SHOULD EQUAL 7777
1230	7040	CMA	
1231	7440	SZA	/AC SHOULD BE ZERO
1232	7402	HLT	/AUTO INDEX ERROR

/AUTO INDEX TEST 30

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

```

/AUTO INDEX TEST 31
1244 7200          CLA
1245 1034          TAD K7775          /CONSTANT TO BE INDEXED
1246 3012          DCA 12
1247 3412          DCA I 12          /DO AUTO INDEX
1250 1012          TAD 12
1251 1051          TAU 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          TAU K7773          /CONSTANT TO BE INDEXED
1257 3012          DCA 12
1260 1412          TAU I 12          /DO AUTO INDEX
1261 7200          CLA
1262 1012          TAU 12
1263 1047          TAU 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          TAU K7767          /CONSTANT TO BE INDEXED
1271 3012          DCA 12
1272 0412          ANU I 12          /DO AUTO INDEX
1273 1012          TAD 12
1274 1046          TAU K0007          /AC SHOULD EQUAL 7777
1275 7040          CMA
1276 7440          SZA          /AC SHOULD BE ZERO
1277 7402          HLT          /AUTO INDEX ERROR
```

		/AJTO 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	TAU 12	
1305	1045	TAW K0017	/AC SHOULD EQUAL 7777
1306	7040	CMA	
1307	7440	SZ-	/AC SHOULD BE ZERO
1310	7402	HLT	/AUTO INDEX ERROR
		/AJTO 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	TAU 12	
1316	1044	TAD K0037	/AC SHOULD EQUAL 7777
1317	7040	CMA	
1320	7440	SZA	/AC SHOULD BE ZERO
1321	7402	HLI	/AUTO INDEX ERROR
		/AJTO INDEX TEST 36	
1322	7200	CLA	
1323	1026	TAW K7677	/CONSTANT TO BE INDEXED
1324	3012	DCA 12	
1325	0412	AND I 12	/DO AUTO INDEX
1326	1012	TAU 12	
1327	1043	TAW K0077	/AC SHOULD EQUAL 7777
1330	7040	CMA	
1331	7440	SZA	/AC SHOULD BE ZERO
1332	7402	HLI	/AUTO INDEX ERROR
		/AJTO 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	TAU 12	
1340	1042	TAW K0177	/AC SHOULD EQUAL 7777
1341	7040	CMA	
1342	7440	SZA	/AC SHOULD BE ZERO
1343	7402	HLI	/AUTO INDEX ERROR

		/AUTO INDEX TEST 38	
1344	7200	CLA	
1345	1024	TAD K7377	/CONSTANT TO BE INDEXED
1346	3012	DC* 12	
1347	0412	AND I 12	/DO AUTO INDEX
1350	1012	TAU 12	
1351	1041	TAM 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	TAU K6777	/CONSTANT TO BE INDEXED
1357	3012	DC- 12	
1360	0412	AND I 12	/DO AUTO INDEX
1361	1012	TA 12	
1362	1040	TAM K0777	/AC SHOULD EQUAL 7777
1363	7040	CMA	
1364	7440	SZA	/AC SHOULD BE ZERO
1365	7402	HLT	/AUTO INDEX ERROR
		/AUTO INDEX TEST 40	
1366	7200	CL	
1367	1022	TAU K0777	/CONSTANT TO BE INDEXED
1370	3012	DCA 12	
1371	2412	ISZ I 12	/DO AUTO INDEX
1372	7000	NOP	
1373	1012	TAU 12	
1374	1037	TAD K1777	/AC SHOULD EQUAL 7777
1375	7040	CMA	
1376	7440	SZA	/AC SHOULD BE ZERO
1377	7402	HLT	/AUTO INDEX ERROR

1400		*1400	
		/AUTO INDEX TEST 41	
1400	7200	CL*	
1401	1021	TAD K5777	/CONSTANT TO BE INDEXED
1402	3012	DC* 12	
1403	0412	AND I 12	/DO AUTO INDEX
1404	1012	TAU 12	
1405	1021	TAD K5777	/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	TAU 13	
1427	1035	TAD K7776	/AC SHOULD EQUAL 7777
1430	7040	CMA	
1431	7440	SZ-	/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	TAU 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	TAU 13	
1451	1051	TAU K0001	/AC SHOULD EQUAL 7777
1452	7040	CMA	
1453	7440	SZA	/AC SHOULD BE ZERO

HLT /AUTO INDEX ERROR

1454 7402

		/AJTO INDEX TEST 46	
1455	7200	CL*	
1456	1033	TAU K7773	/CONSTANT TO BE INDEXED
1457	3013	DCA 13	
1460	1413	TAU I 13	/DO AUTO INDEX
1461	7200	CLA	
1462	1013	TA 13	
1463	1047	TAD K0003	/AC SHOULD EQUAL 7777
1464	7040	CMA	
1465	7440	SZ*	/AC SHOULD BE ZERO
1466	7402	HL'	/AUTO INDEX ERROR

		/AJTO INDEX TEST 47	
1467	7200	CLA	
1470	1032	TA- 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	SZ*	/AC SHOULD BE ZERO
1477	7402	HL'	/AUTO INDEX ERROR

		/AJTO INDEX TEST 48	
1500	7200	CL*	
1501	1031	TAU K7757	/CONSTANT TO BE INDEXED
1502	3013	DCA 13	
1503	0413	AND I 13	/DO AUTO INDEX
1504	1013	TA 13	
1505	1045	TAD K0017	/AC SHOULD EQUAL 7777
1506	7040	CMA	
1507	7440	SZ*	/AC SHOULD BE ZERO
1510	7402	HL'	/AUTO INDEX ERROR

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

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

1566	7200	CL^	
1567	1022	TAW K0777	/CONSTANT TO BE INDEXED
1570	3013	DC^ 13	
1571	2413	IS^ ! 13	/DO AUTO INDEX
1572	7000	NO^	
1573	1013	TAW 13	
1574	1037	TAW K1777	/AC SHOULD EQUAL 7777
1575	7040	CM^	
1576	7440	SZ^	/AC SHOULD BE ZERO
1577	7402	HL^	/AUTO INDEX ERROR

1600	7200	*1600		
1601	1021	/AUTO INDEX TEST 55		
1602	3013	CLA		
1603	0413	TAU K3777	/CONSTANT TO BE INDEXED	
1604	1013	DCA 13		
1605	1021	AND I 13	/DO AUTO INDEX	
1606	7040	TA 13		
1607	7440	TAD K3777	/AC SHOULD EQUAL 7777	
1610	7402	CM*		
		SZA	/AC SHOULD BE ZERO	
		HLT	/AUTO INDEX ERROR	
		/AUTO INDEX TEST 56		
1611	7200	CLA		
1612	1020	TAU K7777	/CONSTANT TO BE INDEXED	
1613	3013	DC* 13		
1614	0413	AND I 13	/DO AUTO INDEX	
1615	1013	TAD 13		
1616	1020	TAD K7777	/AC SHOULD EQUAL 7777	
1617	7040	CM*		
1620	7440	SZA	/AC SHOULD BE ZERO	
1621	7402	HLT	/AUTO INDEX ERROR	
		/AUTO INDEX TEST 57		
1622	7200	CLA		
1623	1036	TAU K0	/CONSTANT TO BE INDEXED	
1624	3014	DC* 14		
1625	0414	AND I 14	/DO AUTO INDEX	
1626	1014	TA 14		
1627	1035	TAD K7776	/AC SHOULD EQUAL 7777	
1630	7040	CM*		
1631	7440	SZA	/AC SHOULD BE ZERO	
1632	7402	HLT	/AUTO INDEX ERROR	

		/AUTO INDEX TEST 58	
1633	7200	CL*	
1634	1035	TAD K7776	/CONSTANT TO BE INDEXED
1635	3014	DC* 14	
1636	0414	AND I 14	/DO AUTO INDEX
1637	1014	TA- 14	
1642	1036	TAD K0	/AC SHOULD EQUAL 7777
1641	7040	CM	
1642	7440	SZA	/AC SHOULD BE ZERO
1643	7402	HLT	/AUTO INDEX ERROR
		/AUTO INDEX TEST 59	
1644	7200	CLA	
1645	1034	TAD K7775	/CONSTANT TO BE INDEXED
1646	3014	DC* 14	
1647	3414	DC* I 14	/DO AUTO INDEX
1650	1014	TAU 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	CL*	
1656	1033	TA- K7773	/CONSTANT TO BE INDEXED
1657	3014	DC* 14	
1660	1414	TA- I 14	/DO AUTO INDEX
1661	7200	CL*	
1662	1014	TA- 14	
1663	1047	TAD K0003	/AC SHOULD EQUAL 7777
1664	7040	CM*	
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	DC* 14	
1672	0414	AND I 14	/DO AUTO INDEX
1673	1014	TAU 14	
1674	1046	TAD K0007	/AC SHOULD EQUAL 7777
1675	7040	CMA	
1676	7440	SZA	/AC SHOULD BE ZERO
1677	7402	HLT	/AUTO INDEX ERROR

```

/AUTO INDEX TEST 62
1700 7200          CLA
1701 1031         TAD K7757          /CONSTANT TO BE INDEXED
1702 3014         DCA 14
1703 0414         AND I 14          /DO AUTO INDEX
1704 1014         TAP 14
1705 1045         TAU K0017          /AC SHOULD EQUAL 7777
1706 7040         CM-
1707 7440         SZA          /AC SHOULD BE ZERO
1710 7402         HLI          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 63
1711 7200          CLA
1712 1027         TAU K7757          /CONSTANT TO BE INDEXED
1713 3014         DCB 14
1714 0414         ANP I 14          /DO AUTO INDEX
1715 1014         TAD 14
1716 1044         TAP K0037          /AC SHOULD EQUAL 7777
1717 7040         CMA
1720 7440         SZA          /AC SHOULD BE ZERO
1721 7402         HLI          /AUTO INDEX ERROR

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```

/AUTO INDEX TEST 64
1722 7200          CLA
1723 1026         TAU K7677          /CONSTANT TO BE INDEXED
1724 3014         DCA 14
1725 0414         AND I 14          /DO AUTO INDEX
1726 1014         TA 14
1727 1043         TAD K0077          /AC SHOULD EQUAL 7777
1730 7040         CMA
1731 7440         SZA          /AC SHOULD BE ZERO
1732 7402         HLI          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 65
1733 7200          CLA
1734 1025         TAP K7577          /CONSTANT TO BE INDEXED
1735 3014         DC 14
1736 0414         AND I 14          /DO AUTO INDEX
1737 1014         TAP 14
1740 1042         TAU K0177          /AC SHOULD EQUAL 7777
1741 7040         CM-
1742 7440         SZA          /AC SHOULD BE ZERO
1743 7402         HLI          /AUTO INDEX ERROR

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

		/AJTO INDEX TEST 67	
1755	7200	CLA	
1756	1023	TAU K6777	/CONSTANT TO BE INDEXED
1757	3014	DCA 14	
1760	0414	ANW I 14	/DO AUTO INDEX
1761	1014	TAU 14	
1762	1040	TAD K0777	/AC SHOULD EQUAL 7777
1763	7042	CM-	
1764	7440	SZA	/AC SHOULD BE ZERO
1765	7402	HLI	/AUTO INDEX ERROR

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

	2000	*2000	
		/AJTO INDEX TEST 69	
2000	7200	CLA	
2001	1021	TA- K3777	/CONSTANT TO BE INDEXED
2002	3014	DCA 14	
2003	0414	AND I 14	/DO AUTO INDEX
2004	1014	TAD 14	
2005	1021	TAU K3777	/AC SHOULD EQUAL 7777
2006	7040	CMA	
2007	7410	SK	
2010	0000	0	
2011	7440	SZA	/AC SHOULD BE ZERO
2012	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 70	
2013	7200	CLA	
2014	1020	TAU K7777	/CONSTANT TO BE INDEXED
2015	3014	DCA 14	
2016	0414	AND I 14	/DO AUTO INDEX
2017	1014	TAD 14	
2020	1020	TAU K7777	/AC SHOULD EQUAL 7777
2021	7040	CMA	
2022	7440	SZA	/AC SHOULD BE ZERO
2023	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 71	
2024	7200	CLA	
2025	1036	TAU K0	/CONSTANT TO BE INDEXED
2026	3015	DCA 15	
2027	0415	AND I 15	/DO AUTO INDEX
2030	1015	TAD 15	
2031	1035	TA K7776	/AC SHOULD EQUAL 7777
2032	7040	CMA	
2033	7440	SZ	/AC SHOULD BE ZERO
2034	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 72	
2035	7200	CLA	
2036	1035	TAU K7776	/CONSTANT TO BE INDEXED
2037	3015	DCA 15	
2040	0415	AND I 15	/DO AUTO INDEX
2041	1015	TAD 15	
2042	1036	TAU K0	/AC SHOULD EQUAL 7777
2043	7040	CMA	
2044	7440	SZA	/AC SHOULD BE ZERO
2045	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 73	
2046	7200	CLA	
2047	1034	TAU K7775	/CONSTANT TO BE INDEXED
2050	3015	DCA 15	
2051	3415	DCA I 15	/DO AUTO INDEX
2052	1015	TA 15	
2053	1051	TAU K0001	/AC SHOULD EQUAL 7777

2054 7040
2055 7440
2056 7402

CMA
SZ
HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

		/AJTO INDEX TEST 74	
2057	7200	CLA	
2060	1033	TAU K7773	/CONSTANT TO BE INDEXED
2061	3015	DCA 15	
2062	1415	TAD I 15	/DO AUTO INDEX
2063	7200	CLA	
2064	1015	TAU 15	
2065	1047	TA K0003	/AC SHOULD EQUAL 7777
2066	7040	CMA	
2067	7440	SZA	/AC SHOULD BE ZERO
2070	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 75	
2071	7200	CLA	
2072	1032	TAU K7767	/CONSTANT TO BE INDEXED
2073	3015	DCA 15	
2074	0415	AND I 15	/DO AUTO INDEX
2075	1015	TA 15	
2076	1046	TAD K0007	/AC SHOULD EQUAL 7777
2077	7040	CM~	
2100	7440	SZA	/AC SHOULD BE ZERO
2101	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 76	
2102	7200	CLA	
2103	1031	TAU K7757	/CONSTANT TO BE INDEXED
2104	3015	DCA 15	
2105	0415	AND I 15	/DO AUTO INDEX
2106	1015	TAU 15	
2107	1045	TAU K0017	/AC SHOULD EQUAL 7777
2110	7040	CM~	
2111	7440	SZA	/AC SHOULD BE ZERO
2112	7402	HLT	/AUTO INDEX ERROR
		/AJTO INDEX TEST 77	
2113	7200	CLA	
2114	1027	TAU K7737	/CONSTANT TO BE INDEXED
2115	3015	DCA 15	
2116	0415	AND I 15	/DO AUTO INDEX
2117	1015	TAU 15	
2120	1044	TA K0037	/AC SHOULD EQUAL 7777
2121	7040	CMA	
2122	7440	SZA	/AC SHOULD BE ZERO
2123	7402	HLT	/AUTO INDEX ERROR

2124	7202	/AUTO INDEX TEST 78	
2125	1026	CLA	
2126	3015	TAD K7677	/CONSTANT TO BE INDEXED
2127	0415	DCA 15	
2130	1015	AND I 15	/DO AUTO INDEX
2131	1043	TAD 15	
2132	7040	TAD K0077	/AC SHOULD EQUAL 7777
2133	7440	CMA	
2134	7402	SZ	/AC SHOULD BE ZERO
		HLT	/AUTO INDEX ERROR

2135	7200	/AUTO INDEX TEST 79	
2136	1025	CLA	
2137	3015	TAD K7577	/CONSTANT TO BE INDEXED
2140	0415	DCA 15	
2141	1015	AND I 15	/DO AUTO INDEX
2142	1042	TAD 15	
2143	7040	TAD K0177	/AC SHOULD EQUAL 7777
2144	7440	CMA	
2145	7402	SZ	/AC SHOULD BE ZERO
		HLT	/AUTO INDEX ERROR

2146	7200	/AUTO INDEX TEST 80	
2147	1024	CLA	
2150	3015	TAD K7377	/CONSTANT TO BE INDEXED
2151	0415	DCA 15	
2152	1015	AND I 15	/DO AUTO INDEX
2153	1041	TAD 15	
2154	7040	TAD K0377	/AC SHOULD EQUAL 7777
2155	7440	CMA	
2156	7402	SZA	/AC SHOULD BE ZERO
		HLT	/AUTO INDEX ERROR

2157	7200	/AUTO INDEX TEST 81	
2160	1023	CLA	
2161	3015	TAD K6777	/CONSTANT TO BE INDEXED
2162	0415	DCA 15	
2163	1015	AND I 15	/DO AUTO INDEX
2164	1040	TAD 15	
2165	7040	TAD K0777	/AC SHOULD EQUAL 7777
2166	7440	CM-	
2167	7402	SZA	/AC SHOULD BE ZERO
2170	7000	HLT	/AUTO INDEX ERROR
2171	7000	NOP	
2172	5376	NO	
2173	7000	JMP ,+4	
2174	7000	NOP	
2175	7000	NOP	
2176	7000	NOP	
2177	7000	NOP	

	2200		*2200	
			/AUTO INDEX TEST 82	
2200	7200		CLA	
2201	1022		TAU K5777	/CONSTANT TO BE INDEXED
2202	3015		DC~ 15	
2203	2415		IS~ I 15	/DO AUTO INDEX
2204	7000		NO*	
2205	1015		TAU 15	
2206	1037		TAL K1777	/AC SHOULD EQUAL 7777
2207	7040		CM*	
2210	7440		SZA	/AC SHOULD BE ZERO
2211	7402		HLT	/AUTO INDEX ERROR
			/AUTO INDEX TEST 83	
2212	7200		CLA	
2213	1021		TAU K5777	/CONSTANT TO BE INDEXED
2214	3015		DCA 15	
2215	0415		AN~ I 15	/DO AUTO INDEX
2216	1015		TAU 15	
2217	1021		TAU K3777	/AC SHOULD EQUAL 7777
2220	7040		CM*	
2221	7440		SZA	/AC SHOULD BE ZERO
2222	7402		HLT	/AUTO INDEX ERROR
			/AUTO INDEX TEST 84	
2223	7200		CL~	
2224	1020		TAU K7777	/CONSTANT TO BE INDEXED
2225	3015		DC~ 15	
2226	0415		ANW I 15	/DO AUTO INDEX
2227	1015		TAU 15	
2230	1020		TAD K7777	/AC SHOULD EQUAL 7777
2231	7040		CM*	
2232	7440		SZA	/AC SHOULD BE ZERO
2233	7402		HLT	/AUTO INDEX ERROR
			/AUTO INDEX TEST 85	
2234	7200		CLA	
2235	1036		TAU K0	/CONSTANT TO BE INDEXED
2236	3016		DC* 16	
2237	0416		ANU I 16	/DO AUTO INDEX
2240	1016		TA~ 16	
2241	1035		TAU K7776	/AC SHOULD EQUAL 7777
2242	7040		CM~	
2243	7440		SZA	/AC SHOULD BE ZERO
2244	7402		HLT	/AUTO INDEX ERROR

```

/AUTO INDEX TEST 86
2245 7200          CL#
2246 1035          TAU K7776          /CONSTANT TO BE INDEXED
2247 3016          DCA 16
2250 0416          AND I 16          /DO AUTO INDEX
2251 1016          TAU 16
2252 1036          TAU K0          /AC SHOULD EQUAL 7777
2253 7040          CMA
2254 7440          SZA          /AC SHOULD BE ZERO
2255 7402          HLI          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 87
2256 7200          CLA
2257 1034          TA K7775          /CONSTANT TO BE INDEXED
2260 3016          DCA 16
2261 3416          DCA I 16          /DO AUTO INDEX
2262 1016          TAU 16
2263 1051          TAD K0001          /AC SHOULD EQUAL 7777
2264 7040          CM#
2265 7440          SZA          /AC SHOULD BE ZERO
2266 7402          HLT          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 88
2267 7200          CL
2270 1033          TAU K7773          /CONSTANT TO BE INDEXED
2271 3016          DCA 16
2272 1416          TAD I 16          /DO AUTO INDEX
2273 7200          CLA
2274 1016          TAU 16
2275 1047          TAU K0003          /AC SHOULD EQUAL 7777
2276 7040          CMA
2277 7440          SZA          /AC SHOULD BE ZERO
2300 7402          HLI          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 89
2301 7200          CLA
2302 1032          TA K7767          /CONSTANT TO BE INDEXED
2303 3016          DCA 16
2304 0416          AND I 16          /DO AUTO INDEX
2305 1016          TAD 16
2306 1046          TAU K0007          /AC SHOULD EQUAL 7777
2307 7040          CMA          /AC SHOULD BE ZERO
2310 7440          SZA          /AUTO INDEX ERROR
2311 7402          HLI

```

```

/AUTO INDEX TEST 90
2312 7200          CLA
2313 1031          TAU K7757          /CONSTANT TO BE INDEXED
2314 3016          DCA 16
2315 0416          AND I 16          /DO AUTO INDEX
2316 1016          TA 16
2317 1040          TAD K0017          /AC SHOULD EQUAL 7777
2320 7040          CMA

```

2321 7440
2322 7402

SZA
HLT

/AC SHOULD BE ZERO
/AUTO INDEX ERROR

/AJTO INDEX TEST 91

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

CLA
TAU K7737
DCA 16
AND I 16
TAU 16
TAU K0037
CMA
SZA
HLT

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

/AJTO INDEX TEST 92

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

CLA
TAU K7677
DCA 16
AN I 16
TAU 16
TAU K0077
CMA
SZA
HLT

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

/AJTO INDEX TEST 93

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

CLA
TAU K7577
DC 16
AND I 16
TAD 16
TAD K0177
CMA
SZA
HLT

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

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

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

PAUSE



/TEST 2 - TAPE 3

2400

*2400

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

/AUTO INDEX TEST 96

CLA
 TAU K5777
 DC= 16
 IS= I 16
 NOP
 TAU 16
 TAD K1777
 CMA
 SZA
 HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
 /AUTO INDEX ERROR

/AUTO INDEX TEST 97

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

CLA
 TAD K5777
 DC= 16
 AND I 16
 TAU 16
 TAD K5777
 CMA
 SZA
 HLT

/CONSTANT TO BE INDEXED

/DO AUTO INDEX

/AC SHOULD EQUAL 7777

/AC SHOULD BE ZERO
 /AUTO INDEX ERROR

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

/AUTO INDEX TEST 102			
2467	7200	CLA	
2470	1033	TA K7773	/CONSTANT TO BE INDEXED
2471	3017	DCA 17	
2472	1417	TAU I 17	/DO AUTO INDEX
2473	7200	CLA	
2474	1017	TAD 17	
2475	1047	TAF 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	TAU K7767	/CONSTANT TO BE INDEXED
2503	3017	DC 17	
2504	0417	AND I 17	/DO AUTO INDEX
2505	1017	TAU 17	
2506	1046	TAU K0007	/AC SHOULD EQUAL 7777
2507	7040	CMA	
2510	7440	SZA	/AC SHOULD BE ZERO
2511	7402	HLT	/AUTO INDEX ERROR
/AUTO INDEX TEST 104			
2512	7200	CLA	
2513	1031	TAD K7757	/CONSTANT TO BE INDEXED
2514	3017	DCA 17	
2515	0417	AND I 17	/DO AUTO INDEX
2516	1017	TAU 17	
2517	1045	TAD K0017	/AC SHOULD EQUAL 7777
2520	7040	CM*	
2521	7440	SZA	/AC SHOULD BE ZERO
2522	7402	HLT	/AUTO INDEX ERROR

```

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

```

```

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

```

```

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

```

```

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

```

```

/AUTO INDEX TEST 109
2567 7200          CLA
2570 1023          TA= K6777          /CONSTANT TO BE INDEXED
2571 3017          DCA 17
2572 0417          AND I 17          /DO AUTO INDEX
2573 1017          TAD 17
2574 1040          TA= K0777          /AC SHOULD EQUAL 7777
2575 7040          CMA
2576 7440          SZA          /AC SHOULD BE ZERO
2577 7402          HLT          /AUTO INDEX ERROR

```

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```

2600
*2600
/AUTO INDEX TEST 110
2600 7200          CLA
2601 1020         TAJ K5777          /CONSTANT TO BE INDEXED
2602 3 17         JCA 17
2603 2417         ISA I 17          /DO AUTO INDEX
2604 7020         NOP
2605 1017         TAJ 17
2606 1037         TAD K1777          /AC SHOULD EQUAL 7777
2607 7040         CMA
2608 7440         SZA          /AC SHOULD BE ZERO
2611 7402         HLT          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 111
2612 7200          CLA
2613 1021         TAJ K3777          /CONSTANT TO BE INDEXED
2614 3017         JCA 17
2615 3417         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         TAJ K7777          /CONSTANT TO BE INDEXED
2625 3017         JCA 17
2626 3417         AND I 17          /DO AUTO INDEX
2627 1017         TAD 17
2628 1020         TAD K7777          /AC SHOULD EQUAL 7777
2630 7040         CMA
2632 7440         SZA          /AC SHOULD BE ZERO
2633 7402         HLT          /AUTO INDEX ERROR

```

```

/AUTO INDEX TEST 113
2634 5230         JMP .+2
2635 7402         HLT          /JMP FAILED
2636 7410         SXP          /JMP WORKED (A LITTLE)
2637 2044
2641 1237         TAD .-1
2641 3017         JCA 10
2642 3410         JMP I 10          /TEST INSTRUCTION
2643 7402         HLT          /JMP INDIRECT FAILED
2644 7402         HLT          /LOCATION 2610, NO INDEX
                               /IN WT! STATE,

```



```

/AUTO INDEX TEST 114
2645 4047 JMS ,+2
2646 7402 HLT /JMS FAILED
2647 7402 HLT /JMS FAILED
2651 2047 TAD , -1
2652 7402 SKP
2653 7402 , -4
2654 1260 CIA
2655 7402 TAD , -2
2656 7402 SZA
2657 7402 HLT /WRONG ADDRESS STORED
2658 2004 /DURING JMS
2659 2004 /JMS WORKS (I GUESS)
2661 1260 TAD , -1
2662 5010 LCA 10
2663 4410 JMS I 10 /TEST INSTRUCTION
2664 7402 HLT /JMS FAILED
2665 7402 HLT /JMS FAILED
2666 1260 TAD , -1
2667 7402 SKP
2668 2004 , -4
2670 2004 CIA
2671 7402 TAD , -2
2672 1270 SZA
2673 7402 HLT /WRONG ADDRESS STORED DURING JMS
2674 7402

/INTERRUPT TEST 1
2675 4070 JMS I ,+1
2676 4011 STR /RUBOUT CHARACTER
2677 6041 ISF
2678 6046 TLS
2679 6041 ISF
2680 6041 JMP , -1
2683 7010 CLA
2684 1010 TAD BACK1 /FLAG IS ON
2685 3002 LCA 2
2686 6001 IOI
2687 7000 NOP /GO TO LOC 0000
2688 7000 HLT /NO INTERRUPT
2689 2010 INT1, , -1
2690 2010 BACK1, ,+1
2691 2010 SZA /RETURN FROM LOC 1
2692 2010 HLT /AC SHOULD BE 0
2693 2010 /CONFIDENCE CHECK
2694 1000 TAD 0
2695 2000 CIA
2696 1000 TAD 0001
2697 2000 SZA CLA
2698 2000 HLT /INTERRUPT ERROR
2699 2000 /WRONG ADDRESS STORED

```

```

/INTERRUPT TEST 2
2722 1 41          TAD K0377          /RUBOUT CHARACTER
2723 6 41          TSP
2724 6 42          TLS
2725 6 41          TSP
2726 5322          JMP , -1
2727 7222          CLA          /FLAG IS ON
2728 1336          TAD BACK3
2731 3132          DCA 2
2732 6 41          ION
2733 1 22          TAD K7777
2734 7 72          HLT          /NO INTERRUPT
2735 2734          OUT3, , -1
2736 2737          BACK3, , +1
2737 7 40          CMA          /RETURN FROM LOC1
2740 7 40          SZA
2741 7 22          HLT          /CONFIDENCE CHECK
                                   /AC SHOULD BE 2
2742 1 22          TAD 0
2743 7 41          CIA
2744 1335          TAD OUT3
2745 7 40          SZA CLA          /INTERRUPT ERROR
2746 7 42          HLT          /WRONG ADDRESS STORED

```

```

/INTERRUPT TEST 3
2747 1 41          TAD K0377          /RUBOUT CHARACTER
2750 6 41          TSP
2751 6 46          TLS
2752 6 41          TSP
2753 5352          JMP , -1
2754 7200          CLA          /FLAG IS ON
2755 1364          TAD BACK2
2756 3132          DCA 2
2757 1 22          TAD K7777
2760 6 41          ION
2761 6 22          AND K7777
2762 7 42          HLT          /NO INTERRUPT
2763 2762          OUT2, , -1
2764 2765          BACK2, , +1
2765 7 40          CMA          /RETURN FROM LOC1
2766 7 41          SZA
2767 7 42          HLT          /CONFIDENCE CHECK
                                   /AC SHOULD BE 2
2770 1 41          TAD 1
2771 7 41          CIA
2772 1364          TAD OUT2
2773 7 41          SZA CLA          /INTERRUPT ERROR
2774 7 42          HLT          /WRONG ADDRESS STORED
2775 1 41          NOP
2776 1 41          NOP
2777 1 41          NOP

```

3000	2041	*3.001		
3001	6041	/I INTERRUPT TEST 4		
3002	6046	TAD K2377		/RUBOUT CHARACTER
3003	6041	ISF		
3004	5203	ILS		
3005	7207	ISF		
3006	1215	JMP *-1		
3007	5002	CLA		/FLAG IS ON
3010	1020	TAD BACK4		
3011	6001	DCA 2		
3012	3003	TAD K7777		
3013	7402	ION		
3014	5013	DCA 3		
3015	3016	HLI		/NO INTERRUPT
3016	7402	OUT4, *-1		
3017	7402	BACK4, ++1		
		SZA		/RETURN FROM LOC1
		HLT		/CONFIDENCE CHECK
				/AC SHOULD BE ZERO
3020	1003	TAD 3		
3021	7040	ORA		
3022	7402	SZA		
3023	7402	HLT		/DCA PRIOR TO INTERRUPT
				/FAILED
3024	3013	DCA 3		
3025	1000	TAD 0		
3026	7041	CIA		
3027	1214	TAD OUT4		
3030	7540	SZA CLA		
3031	7402	HLT		/INTERRUPT ERROR
				/WRONG ADDRESS STORED
		/INTERRUPT TEST 5		
3032	1041	TAD K2377		/RUBOUT CHARACTER
3033	6041	ISF		
3034	6046	ILS		
3035	6041	ISF		
3036	5203	JMP *-1		
3037	7207	CLA		/FLAG IS ON
3040	1215	TAD BACK5		
3041	5002	DCA 2		
3042	1003	TAD K7776		

3043	8003	DCA 3	
3044	8001	ION	
3045	2003	ISZ 3	
3046	7402	HLT	/NO INTERRUPT
3047	8000	TOB,	.-1
3050	3051	BACK6,	.*1
3051	7440	SZA	/RETURN FROM LOC1
3052	7402	HLT	/CONFIDENCE CHECK
			/AC SHOULD BE ZERO
3053	8003	TAD 3	
3054	7440	CMA	
3055	7440	SZA	
3056	7402	HLT	/ISZ PRIOR TO
			/INTERRUPT FAILED
3057	3003	DCA 3	
3060	1200	TAD 3	
3061	7441	CIA	
3062	1247	TAD OUTD	
3063	7640	SZA CLA	
3064	7402	HLT	/INTERRUPT ERROR
			/WRONG ADDRESS STORED
		/INTERRUPT TEST 6	
3065	1241	TAD K0317	/RUBOUT CHARACTER
3066	6041	ISF	
3067	6040	ILS	
3070	6041	ISF	
3071	5270	JMP .-1	
3072	7200	CLA	/FLAG IS ON
3073	1804	TAD BACK6	
3074	3002	DCA 2	
3075	1020	TAD K7777	
3076	3003	DCA 3	
3077	6001	ION	
3100	2003	ISZ 3	
3101	7402	HLT	/NO INTERRUPT
3102	7402	HLT	
3103	3102	OUTD,	.-1
3104	3105	BACK6,	.*1
3105	7440	SZA	/RETURN FROM LOC 1
3106	7402	HLT	/CONFIDENCE CHECK
			/AC SHOULD BE ZERO
3107	8003	TAD 3	
3110	7440	SZA	
3111	7402	HLT	/ISZ PRIOR TO
			/INTERRUPT FAILED
3112	8003	DCA 3	
3113	8003	TAD 3	
3114	8003	CIA	
3115	8003	TAD OUTD	
3116	8003	SZA CLA	
3117	7402	HLT	/INTERRUPT ERROR
			/WRONG ADDRESS STORED

```

/INTERRUPT TEST 7
312  2 41      TAD K2S77      /RUBOUT CHARACTER
3121  6 41      TSP
3122  6 40      TLS
3123  1 41      TSP
3124  5 20      JMP  .-1
3125  7 20      CLA      /FLAG IS ON
3126  1 30      TAD BACK7
3127  3 42      JCA 2
3130  6 41      LON
3131  5 31      JMP  .
3132  7 42      HLT      /NO INTERRUPT
          OUT7,  .-2
          BACK7, .+1
3133  3 31
3134  3 35
3135  7 40      SZA      /RETURN FROM LOC 1
3136  7 42      HLT      /CONFIDENCE CHECK
          /AC SHOULD BE 0
          TAD 0
3137  1 41      CIA
3140  7 41      TAD OUT/
3141  1 33      SZA CLA
3142  7 40      HLT      /INTERRUPT ERROR
          /WRONG ADDRESS STORED

/INTERRUPT TEST 8
3144  1 41      TAD K2S77      /RUBOUT CHARACTER
3145  6 41      TSP
3146  5 46      TLS
3147  6 41      TSP
3150  5 47      JMP  .-1
3151  7 20      CLA      /FLAG IS ON
3152  1 30      TAD BACK8
3153  3 32      JCA 2
3154  6 41      LON
3155  4 35      JMS 3
3156  7 42      HLT      /NO INTERRUPT
          OUT8,  .-1
          BACK8, .+1
3157  3 35
3158  7 41      SZA      /RETURN FROM LOC 1
3159  7 40      HLT      /CONFIDENCE CHECK
          /AC SHOULD BE ZERO
          TAD 3
3163  7 41      CIA
3164  1 37      TAD OUTB
3165  7 40      SZA
3167  4 42      HLT      /JMS ERROR PRIOR
          /TO INTERRUPT WRONG
          /ADDRESS STORED

```

3170 1 7
3171 1 7
3172 1 64
3173 1 24
3174 1 4.2

3175 7 2
3176 7 2
3177 7 2

TAU 3
LJA
TAU K4
SFA CLA
HLT

NOP
NOP
NOP

/INTERUPT ERROR
/WRONG ADDRESS STORED

```

3200
3201 0041
3202 0042
3203 0043
3204 0044
3205 0045
3206 0046
3207 0047
3208 0048
3209 0049
3210 0050
3211 0051
3212 0052
3213 0053
3214 0054
3215 0055
3216 0056
3217 0057

3220 0058
3221 0059
3222 0060
3223 0061
3224 0062

3225 0063
3226 0064
3227 0065
3228 0066
3229 0067
3230 0068
3231 0069
3232 0070
3233 0071
3234 0072
3235 0073
3236 0074
3237 0075
3238 0076

```

```

*3200
/1 INTERRUPT TEST 9
TAD K0377 /RUBOUT CHARACTER
TSP
TSS
TSP
JMP , -1
CLA /FLAG IS ON
TAD BACK9
DCA 2
TAD K7777
ION
CLA
HLT /NO INTERRUPT
OUT9, , -1
BACK9, , +1
SZA /RETURN FROM LOC 1
CLA /CLA PRIOR TO INTERRUPT
HLT /FAILED

TAD 3
CIA
TAD OUT9
SZA CLA
HLT /INTERRUPT FAILED
/WRUNG ADDRESS STORED

/1 INTERRUPT TEST 10
TAD K2377 /RUBOUT CHARACTER
TSP
TSS
TSP
JMP , -1
CLA /FLAG IS ON
TAD BACK10
DCA 2
ION
TSP
HLT /NO INTERRUPT
HLT

```

3241	3240	OUT10, .-1	
3242	3243	BACK10, .+1	
3243	7440	SFA	/RETURN FROM LOC 1
3244	7402	HLT	/CONFIDENCE CHECK
			/AC SHOULD BE ZERO
3245	7400	TAD 0	
3246	7241	CIA	
3247	7241	TAD OUT10	
3250	7640	SZA CLA	
3251	7402	HLT	/INTERRUPT ERROR
			/WRONG ADDRESS STORED
		/INTERRUPT TEST 11	
3252	7241	TAD K0377	/RUBOUT CHARACTER
3253	6041	TSF	
3254	6046	TLS	
3255	6241	TSF	
3256	6255	JMP .-1	
3257	7200	CLA	/FLAG IS ON
3260	1317	TAD BACK11	
3261	5002	JCA 2	
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	6001	ION	
3307	6002	IOF	
3310	6001	ION	
3311	6002	IOF	
3312	6001	ION	
3313	6002	IOF	

3314	5741	TSF	
3315	7432	HLT	/WHAT HAPPENED TO MY FLAG
3316	7410	SKP	
3317	3321	BACK11, +2	
3320	7410	SKP	
3321	7432	HLT	/INTERRUPT OCCURRED DURING /ION-IOF SEQUENCE /SEE LOCATION 2000
/INTERRUPT TEST 12			
3322	6042	IOF	/CLEAR FLAG
3323	7230	CLA	
3324	1334	TAD BACK12	
3325	3002	JCA 2	
3326	6041	ION	
3327	7030	NOP	
3330	7430	NOP	
3331	7030	NOP	
3332	7034	NOP	
3333	7410	SKP	
3334	3336	BACK12, +2	
3335	7410	SKP	
3336	7422	HLT	/INTERRUPT WITH NO /FLAG,
3337	6002	IOF	
/ILLEGAL AUTO INDEX TEST1			
3340	7230	CLA	
3341	5742	JMP I ,+1	
3342	4030	AND1	
3343	4010	K4010, 4010	
	+130	*4000	
4000	5610	AND I 4010	/TEST INSTRUCTION
4001	2602	JMP I ,+1	
4002	3350	RET1	
	3350	*3350	
3350	1743	RET1, TAD I K4010	
3351	7440	SEA	
3352	7402	HLT	/ERROR, AC SHOULD BE ZERO /AND I 4010 ALTERED (4010)
3353	7200	CLA	
3354	5743	DCA I K4010	

/ILLEGAL AUTO INDEX TEST 2

3355	7200		CLA	
3356	5757		JMP I ,+1	
3357	2173		AND2	
3360	2010	K2010,	2010	
	2173	*2173		
2173	0610	AND2,	AND I 2010	/TEST INSTRUCTION
2174	5775		JMP I ,+1	
2175	3370		RET2	
	3370	*3370		
3370	1760	RET2,	TAD I K2010	
3371	7440		SZ#	
3372	7402		HLI	/ERROR, AC SHOULD BE ZERO
				/AND I 2010 ALTERED (2010)
3373	5774		JMP I ,+1	
3374	3400		3400	

/ILLEGAL AUTO INDEX TEST 3

	3400	*3400		
3400	7200		CLA	
3401	5602		JMP I ,+1	
3402	1173		AND3	
3403	1010	K1010,	10 0	
	1173	*1173		
1173	0610	AND3,	AND I 1010	/TEST INSTRUCTION
1174	5775		JMP I ,+1	
1175	3410		RET3	
	3410	*3410		
3410	1603	RET3,	TAD I K1010	
3411	7440		SZ-	
3412	7402		HLI	/ERROR, AC SHOULD BE ZERO
				/AND I 1010 ALTERED (1010)
3413	7200		CLA	
3414	3603		DC# I K1010	

/ILLEGAL AUTO INDEX TEST 4

3415 7200
 3416 5617
 3417 0574
 3420 0410

CLA
 JMP I ,+1
 AND4
 K410, 410

0574 0610
 0575 5776
 0576 3430

*574
 AND4, AND I 410
 JMP I ,+1
 REI4

/TEST INSTRUCTION

3430 1620
 3431 7440
 3432 7402

*3430
 RET4, TAD I K410
 SZA
 HLT

/ERROR, AC SHOULD BE ZERO
 /AND I 410 ALTERED (410)

3433 7200
 3434 3620

CLA
 DC- I K410

/ILLEGAL AUTO INDEX TEST 5

3435 7200
 3436 5637
 3437 0371
 3440 0210

CLA
 JM I ,+1
 AND5
 K210, 21-

0370 5374
 0371 0610
 0372 5773
 0373 3450

*370
 JMP ,+4
 AND5, AN I 210
 JMP I ,+1
 RET5

/TEST INSTRUCTION

3450 1640
 3451 7440
 3452 7402

*3450
 RET5, TAD I K210
 SZA
 HLT

/ERROR, AC SHOULD BE ZERO
 /AND I 210 ALTERED (210)

3453 7200
 3454 3640

CLA
 DCA I K210

/ILLEGAL AUTO INDEX TEST 6

3455 7200
 3456 5657
 3457 0130
 3460 0110

CLA
 JMP I .+1
 AN#6
 K110, 11#

0130 0130
 0130 0510
 0131 5532
 0132 3470

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

/TEST INSTRUCTION

3470 3470
 3470 1660
 3471 7440
 3472 7402

*3470
 RET6, TAN I K110
 SZA
 HLI

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

3473 7200
 3474 3110

CLA
 DCA 110

/ILLEGAL AUTO INDEX TEST 7

3475 7200
 3476 5677
 3477 0124
 3500 0050

CLA
 JMP I .+1
 AN#7
 K50, 50

0124 0124
 0124 0450
 0125 5526
 0126 3510

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

/TEST INSTRUCTION

3510 3510
 3510 1700
 3511 7440
 3512 7402

*3510
 RET7, TAN I K50
 SZA
 HLI

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

3513 7200
 3514 3050

CLA
 DCA 50

/ILLEGAL AUTO INDEX TEST 8

3515	7200		CLA	
3516	5717		JMP I ,+1	
3517	0120		ANUB	
3520	0030	K30,	30	
	0120	*120		
0120	0430	AND8,	AND I 30	/TEST INSTRUCTION
0121	5522		JMP I ,+1	
0122	3530		REI8	
	3530	*3530		
3530	1720	RET8,	TAD I K30	
3531	7440		SZA	
3532	7402		HLT	/ERROR, AC SHOULD BE ZERO
				/AND I 30 ALTERED (30)
3533	7200		CLA	
3534	3030		DCA 30	

/ILLEGAL AUTO INDEX TEST 9

3535	7200		CLA	
3536	3000		DCA 0	
3537	5740		JM I ,+1	
3540	0074		AND9	
	0074	*74		
0074	0400	AND9,	AND I 0	/TEST INSTRUCTION
0075	5476		JM I ,+1	
0076	3550		RET9	
	3550	*3550		
3550	1436	RET9,	TAD I K0	
3551	7440		SZ#	
3552	7402		HLI	/ERROR, AC SHOULD BE ZERO
				/AND I 0 ALTERED (0)
3553	7200		CLA	
3554	3000		DCA 0	

/ILLEGAL AUTO INDEX TEST 10

3555 7200
3556 5757
3557 0070

CLA
JMP I ,+1
ANW10

0070 0407
0071 5472
0072 3600

*70
AVJ10, ANW I 7 /TEST INSTRUCTION
JMP I ,+1
REI10

3600 1446
3601 7440
3602 7402

*3600
RET10, TAD I K0007
SZ*
HLI /ERROR, AC SHOULD BE ZERO
/AND I 7 ALTERED (7)

3603 7200
3604 3007

CL*
DCA 7

/CHECK FOR TTY BELL

3605 1223
3606 7001
3607 3223
3610 1223
3611 1224
3612 7640
3613 5622
3614 3223
3615 1225
3616 6046
3617 6041
3620 5217
3621 5622
3622 0201
3623 0000
3624 7730
3625 0207

TAW BLCNT
IAW
DCA BLCNT
TAD BLCNT
TAW RNGCNT
SZA CLA
JMP I K201
DCA BLCNT
TAW BELCOD
TL-
TSF
JMP ,=1
JMP I ,+1
K201, 201
BLCNT, 0
RNGCNT, =50
BELCOD, 207

4010 4010
4010 0000

*4010
0

4011 0000
4012 1221
4013 3001
4014 3002
4015 3003
4016 1041
4017 2211
4020 5611
4021 5402

STR, 0
TAW JMP IX
DCA 1
DCA 2
DC 3
TAD K0377
ISZ STR
JMP I STR
JMP IX, 5402

\$

THERE ARE NO ERRORS

SYMBOL TABLE

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

SYMBOL TABLE

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

SYMBOL TABLE

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

SYMBOL TABLE

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

MAINDEC EVALUATION REQUEST

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

IDENTIFICATION: MAINDEC NO. _____ Program Title _____

USAGE: Used by: Field Service Production Other _____

Frequency of Usage: Daily Weekly Monthly

SUGGESTIONS FOR IMPROVEMENT

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

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

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

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

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

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

Remarks:

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