

IDENTIFICATION

Product Code:	MAINDEC-8/I-DOIC-D
Product Name:	Instruction Test 1
Date Created:	December 10, 1969
Maintainer:	Diagnostic Group

MAINDEC-8/I-D01C-D

1. ABSTRACT

This is a diagnostic program for testing the AND, TAD, and OPERATE instructions of the PDP-8I ONLY.

2. REQUIREMENTS

2.1 Equipment

A PDP-8I equipped with Teletype.

2.2 Storage

This program uses locations 0000-4421. The Binary Loader must be stored in the last memory page.

2.3 Preliminary Programs

3. LOADING PROCEDURE

3.1 Method

The standard Binary Loader is used.

4. STARTING PROCEDURE

4.1 Control Switch Settings

SR = 7777

4.2 Starting Address

0144

4.3 Operator Action

1. Set SR to 144 and press LOAD ADDRESS.

2. Set SR to 7777 and push START.

3. Program will halt. MA=146

4. If AC = 0000 an error has occurred.

5. Push CONTINUE. Program will run until stopped or until 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

7.1 Starting Restrictions: None

7.2 Operating Restrictions: None

8. MISCELLANEOUS

8.1 Execution Time

256 program loops per second.

9. PROGRAM DESCRIPTION

The program consists of many individual tests. In most cases each test checks only one function and uses previously tested functions as a basis for the test. The program counter action is strictly sequential except for SKIPS. The only JMP instructions used are at the end of the program.

The sequence of testing is as follows:

1. Test all operate functions individually except for rotates.
2. Test TAD instruction.
3. Test ROTATE functions.
4. Group 1 operate instruction test. All possible combinations.

5. Group 2 operate instruction test. All possible combinations.

6. Test AND instruction.

The Teletype bell rings after each 128 program loops.

10. LISTING

/INSTRUCTION TEST - 1
/TAPE 1

0000	0000	*0	
0000	0000		0
0001	5001		JMP 1
0002	0002		0002
0003	0003		0003
0004	0000		0
0005	0000		0000
0006	7402	HALT,	HLT
0007	7000	NOOP,	NOP
0010	0000		0

/CONSTANTS AND VARIABLES

0020	0020	*20	
0020	0000	K0000,	0000
0021	0001	K0001,	0001
0022	0002	K0002,	0002
0023	0004	K0004,	0004
0024	0010	K0010,	0010
0025	0020	K0020,	0020
0026	0040	K0040,	0040
0027	0100	K0100,	0100
0030	0200	K0200,	0200
0031	0400	K0400,	0400
0032	1000	K1000,	1000
0033	2000	K2000,	2000
0034	4000	K4000,	4000
0035	7776	K7776,	7776
0036	7775	K7775,	7775
0037	7773	K7773,	7773
0040	7767	K7767,	7767
0041	7757	K7757,	7757
0042	7737	K7737,	7737
0043	7677	K7677,	7677
0044	7577	K7577,	7577
0045	7377	K7377,	7377
0046	6777	K6777,	6777
0047	5777	K5777,	5777
0050	3777	K3777,	3777
0051	7777	K7777,	7777
0052	5252	K5252,	5252
0053	2525	K2525,	2525
0054	6000	K6000,	6000
0055	7000	K7000,	7000
0056	7400	K7400,	7400
0057	7600	K7600,	7600
0060	7740	K7740,	7740
0061	7760	K7760,	7760
0062	7770	K7770,	7770
0063	7774	K7774,	7774
0064	0003	K0003,	0003

0065	0027	K0007,	0007
0066	0067	K0067,	0067
0067	0017	K0017,	0017
0070	0037	K0037,	0037
0071	0077	K0077,	0077
0072	0177	K0177,	0177
0073	0377	K0377,	0377
0074	0777	K0777,	0777
0075	1777	K1777,	1777
0076	7700	K7700,	7700

0144	0144	*144	
		/TAD,CLA,HLT,TEST	
0144	1051	START, TAD K7777	
0145	7200	CLA	
0146	7402	HLT	/AC SHOULD=0
			/SET SR TO 7777, CONTINUE
		/SKIP TEST	
0147	7410	SKP	
0150	7402	HLT	/SKP FAILED
		/SZA TEST 1	
0151	7200	CLA	
0152	7440	SZA	
0153	7402	HLT	/SZA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL ZERO
0154	7450	SNA	
0155	7410	SKP	
0156	7402	HLT	/SNA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL ZERO
		/SZA TEST 2	
0157	7200	CLA	
0160	1034	TAD K4000	
0161	7440	SZA	
0162	7410	SKP	
0163	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 4000
0164	7450	SNA	
0165	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 4000
		/SZA TEST 3	
0166	7200	CLA	
0167	1033	TAD K2000	
0170	7440	SZA	
0171	7410	SKP	
0172	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 2000
0173	7450	SNA	
0174	7402	HLT	/SNA SHOULD HAVE SKIPPED
0175	7000	NOP	
0176	7000	NOP	/AC SHOULD EQUAL 2000
0177	7000	NOP	

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0200      *200
          /SZA TEST 4
0200 7200      CLA
0201 1032      TAD K1000
0202 7440      SZA
0203 7410      SKP
0204 7402      HLT          /SZA SHOULD NOT HAVE SKIPPED
                              /AC SHOULD EQUAL 1000
0205 7      SNA
0206 7402      HLT          /SNA SHOULD HAVE SKIPPED
                              /AC SHOULD EQUAL 10000
          /SZA TEST 5
0207 7200      CLA
0210 1031      TAD K0400
0211 7440      SZA
0212 7410      SKP
0213 7402      HLT          /SZA SHOULD NOT HAVE SKIPPED
                              /AC SHOULD EQUAL 0400
0214 7450      SNA
0215 7402      HLT          /SNA SHOULD HAVE SKIPPED
                              /AC SHOULD EQUAL 0400
          /SZA TEST 6
0216 7200      CLA
0217 1032      TAD K0200
0220 7440      SZA
0221 7410      SKP
0222 7402      HLT          /SZA SHOULD NOT HAVE SKIPPED
                              /AC SHOULD EQUAL 0200
0223 7450      SNA
0224 7402      HLT          /SNA SHOULD HAVE SKIPPED
                              /AC SHOULD EQUAL 0200
          /SZA TEST 7
0225 7200      CLA
0226 1027      TAD K0100
0227 7440      SZA
0230 7410      SKP
0231 7402      HLT          /SZA SHOULD NOT HAVE SKIPPED
                              /AC SHOULD EQUAL 0100
0232 7450      SNA
0233 7402      HLT          /SNA SHOULD HAVE SKIPPED
                              /AC SHOULD EQUAL 0100

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      /SZA TEST 8
0234 7200      CLA
0235 1026      TAD K0040
0236 7440      SZA
0237 7410      SKP
0240 7402      HLT      /SZA SHOULD NOT HAVE SKIPPED
                        /AC SHOULD EQUAL 0040
0241 7450      SNA
0242 7402      HLT      /SNA SHOULD HAVE SKIPPED
                        /AC SHOULD EQUAL 0040

      /SZA TEST 9
0243 7200      CLA
0244 1025      TAD K0020
0245 7440      SZA
0246 7410      SKP
0247 7402      HLT      /SZA SHOULD NOT HAVE SKIPPED
                        /AC SHOULD EQUAL 0020
0250 7450      SNA
0251 7402      HLT      /SNA SHOULD HAVE SKIPPED
                        /AC SHOULD EQUAL 0020

      /SZA TEST 10
0252 7200      CLA
0253 1024      TAD K0010
0254 7440      SZA
0255 7410      SKP
0256 7402      HLT      /SZA SHOULD NOT HAVE SKIPPED
                        /AC SHOULD EQUAL 0010
0257 7450      SNA
0260 7402      HLT      /SNA SHOULD HAVE SKIPPED
                        /AC SHOULD EQUAL 0010

      /SZA TEST 11
0261 7200      CLA
0262 1023      TAD K0004
0263 7440      SZA
0264 7410      SKP
0265 7402      HLT      /SZA SHOULD NOT HAVE SKIPPED
                        /AC SHOULD EQUAL 0004
0266 7450      SNA
0267 7402      HLT      /SNA SHOULD HAVE SKIPPED
                        /AC SHOULD EQUAL 0004
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/SZA TEST 12
0270 7200      CLA
0271 1022      TAD K0002
0272 7440      SZA
0273 7410      SKP
0274 7402      HLT      /SZA SHOULD NOT HAVE SKIPPED
                          /AC SHOULD EQUAL 0002

0275 7450      SNA
0276 7402      HLT      /SNA SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 0002

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/SZA TEST 13
0277 7200      CLA
0300 1021      TAD K0001
0301 7440      SZA
0302 7410      SKP
0303 7402      HLT      /SZA SHOULD NOT HAVE SKIPPED
                          /AC SHOULD EQUAL 0001

0304 7450      SNA
0305 7402      HLT      /SNA SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 0001

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/SPA TEST 1
0306 7200      CLA
0307 1050      TAD K3777
0310 7510      SPA
0311 7402      HLT      /SPA SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 3777

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/SPA TEST 2
0312 7200      CLA
0313 1034      TAD K4000
0314 7510      SPA
0315 7410      SKP
0316 7402      HLT      /SPA SHOULD NOT HAVE SKIPPED
                          /AC SHOULD EQUAL 4000

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/SMA TEST 1
0317 7200      CLA
0320 1050      TAD K3777
0321 7500      SMA
0322 7410      SKP
0323 7402      HLT      /SMA SHOULD NOT HAVE SKIPPED
                          /AC SHOULD EQUAL 3777

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		/SMA TEST 2		
0324	7200	CLA		
0325	1034	TAD	K4000	
0326	7500	SMA		
0327	7402	HLT		/SMA SHOULD HAVE SKIPPED /AC SHOULD EQUAL 4000
		/CMA TEST 1		
0330	7200	CLA		
0331	1051	TAD	K7777	
0332	7040	CMA		
0333	7440	SZA		
0334	7402	HLT		/CMA DID NOT COMPLEMENT AC /AC SHOULD EQUAL 0000
		/CMA - TAD TEST 1		
0335	7200	CLA		
0336	1053	TAD	K2525	
0337	7040	CMA		
0340	7450	SNA		
0341	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 5252
0342	1053	TAD	K2525	
0343	7040	CMA		
0344	7440	SZA		
0345	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 0000
		/CMA - TAD TEST 2		
0346	7200	CLA		
0347	1052	TAD	K5252	
0350	7040	CMA		
0351	7450	SNA		
0352	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 2525
0353	1052	TAD	K5252	
0354	7040	CMA		
0355	7440	SZA		
0356	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 0000

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/CMA - TAD TEST 3
0357 7200      CLA
0360 1051      TAD K7777
0361 7040      CMA
0362 7440      SZA
0363 7402      HLT
                        /TAD OR CMA ERROR
                        /AC SHOULD EQUAL 0000

/IAC TEST 1
0364 7200      CLA
0365 7001      IAC
0366 7440      SZA
0367 7410      SKP
0370 7402      HLT
                        /IAC DID NOT INCREMENT
                        /AC SHOULD EQUAL 0001

/IAC TEST 2
0371 7200      CLA
0372 1051      TAD K7777
0373 7001      IAC
0374 7440      SZA
0375 7402      HLT
                        /IAC DID NOT INCREMENT
                        /AC SHOULD EQUAL 0000

0376 7000      NOP
0377 7000      NOP
*400
/IAC TEST 3
0400 7200      CLA
0401 1063      TAD K7774
0402 7001      IAC
0403 7001      IAC
0404 7001      IAC
0405 7001      IAC
0406 7440      SZA
0407 7402      HLT
                        /IAC NOT INCREMENTING
                        /AC SHOULD EQUAL 0000

/SZL TEST 1
0410 7200      CLA
0411 7100      CLL
0412 7004      RAL
0413 7430      SZL
0414 7402      HLT
                        /CLEAR LINK
                        /CLEAR LINK SAFETY
                        /SZL SHOULD HAVE SKIPPED
                        /LINK SHOULD EQUAL ZERO

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      /SZL TEST 2
0415 7200      CLA
0416 7100      CLL      /CLEAR LINK
0417 7020      CML      /COMPLEMENT LINK
0420 1034      TAD K4000
0421 7004      RAL      /SET LINK SAFETY
0422 7430      SZL
0423 7410      SKP
0424 7402      HLT      /SZL SHOULD NOT HAVE SKIPPED
                        /LINK SHOULD EQUAL ONE

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      /SNL TEST 1
0425 7200      CLA
0426 7100      CLL      /CLEAR LINK
0427 7004      RAL      /CLEAR LINK SAFETY
0430 7420      SNL
0431 7410      SKP
0432 7402      HLT      /SNL SHOULD NOT HAVE SKIPPED
                        /LINK SHOULD EQUAL ZERO

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      /SNL TEST 2
0433 7200      CLA
0434 7100      CLL      /CLEAR LINK
0435 7020      CML      /COMPLEMENT LINK
0436 1034      TAD K4000
0437 7004      RAL      /SET LINK SAFETY
0440 7420      SNL
0441 7402      HLT      /SNL SHOULD HAVE SKIPPED
                        /LINK SHOULD EQUAL ONE

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/CLL TEST 1
0442 7200      CLA
0443 1034      TAD K4000
0444 7004      RAL          /SET LINK
0445 7420      SNL
0446 5253      JMP CLL11    /CANNOT SET LINK WITH RAL
                                /TRY A CML

0447 7100      CLL1,  CLL
0450 7430      SZL
0451 7402      HLT          /CLL DID NOT CLEAR LINK
                                /LINK SHOULD EQUAL ONE

0452 5257      JMP ,+5
0453 7020      CLL11,  CML    /SET LINK
0454 7420      SNL
0455 7402      HLT          /CANNOT SET LINK WITH
                                /RAL OR CML, CANNOT
                                /PERFORM CLL TEST 1

0456 5247      JMP CLL1

/CML TEST 1
0457 7100      CMLT1,  CLL
0460 7430      SZL
0461 7402      HLT          /CLL DID NOT CLEAR LINK
0462 7020      CML
0463 7420      SNL
0464 7402      HLT          /CML DID NOT SET LINK
0465 7020      CML
0466 7430      SZL
0467 7402      HLT          /CML DID NOT RESET LINK

/CLA TEST 1 (OPERATE GROUP 2)
0470 7200      CLA
0471 1051      TAD K7777
0472 7600      7600
0473 7440      SZA
0474 7402      HLT          /CLA (7600) DID NOT CLEAR AC
                                /AC SHOULD EQUAL 0000

/OSR TEST 1
0475 7200      CLA
0476 7404      OSR
0477 7040      CMA
0500 7440      SZA
0501 7402      HLT          /OSR DID NOT SET AC TO 7777
                                /AC SHOULD=0

```

/NOP TEST 1 (OPERATE GROUP 1)

0502	7200	CLA	
0503	7100	CLL	/AC AND LINK EQUAL ZERO
0504	7000	7000	/TEST INSTRUCTION
0505	7450	SNA	
0506	7430	SZL	
0507	7402	HLT	/NOP FAILURE
			/AC AND LINK SHOULD BE ZERO

/NOP TEST 2 (OPERATE GROUP 2)

0510	7200	CLA	
0511	7100	CLL	/AC AND LINK EQUAL ZERO
0512	7400	7400	/TEST INSTRUCTION
0513	7450	SNA	
0514	7430	SZL	
0515	7402	HLT	/NOP FAILURE
			/AC AND LINK SHOULD BE ZERO

/TAD TEST 1

0516	7200	CLA	
0517	1050	TAD K3777	/OPERAND 1
0520	1034	TAD K4000	/OPERAND 2
0521	7040	CMA	
0522	7440	SZA	
0523	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000

/TAD TEST 2

0524	7200	CLA	
0525	1047	TAD K5777	/OPERAND 1
0526	1033	TAD K2000	/OPERAND 2
0527	7040	CMA	
0530	7440	SZA	
0531	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000

/TAD TEST 3

0532	7200	CLA	
0533	1046	TAD K6777	/OPERAND 1
0534	1032	TAD K1000	/OPERAND 2
0535	7040	CMA	
0536	7440	SZA	
0537	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000

/TAD TEST 4

0540	7200	CLA	
0541	1045	TAD K7377	/OPERAND 1
0542	1031	TAD K0400	/OPERAND 2
0543	7040	CMA	
0544	7440	SZA	
0545	7402	HLT	/TAD ERROR
			/AC SHOULD EQUAL 0000

/TAD TEST 5

0546	7200	CLA	
0547	1044	TAD K7277	/OPERAND 1

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0550 1030

0551 7040

0552 7440

0553 7402

TAD K0200

CMA

SZA

HLT

/OPERAND 2

/TAD ERROR
/AC SHOULD EQUAL 0000


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      /TAD TEST 6
0554 7200      CLA
0555 1043      TAD K7677      /OPERAND 1
0556 1027      TAD K0100      /OPERAND 2
0557 7040      CMA
0560 7440      SZA
0561 7402      HLT      /TAD ERROR
                        /AC SHOULD EQUAL 0000

      /TAD TEST 7
0562 7200      CLA
0563 1042      TAD K7737      /OPERAND 1
0564 1026      TAD K0040      /OPERAND 2
0565 7040      CMA
0566 7440      SZA
0567 7402      HLT      /TAD ERROR
                        /AC SHOULD EQUAL 0000

      /TAD TEST 8
0570 7200      CLA
0571 1041      TAD K7757      /OPERAND 1
0572 1025      TAD K0020      /OPERAND 2
0573 7040      CMA
0574 7440      SZA
0575 7402      HLT      /TAD ERROR
                        /AC SHOULD EQUAL 0000

0576 7000      NOP
0577 7000      NOP
      *600
      /TAD TEST 9
0600 7200      CLA
0601 1040      TAD K7767      /OPERAND 1
0602 1024      TAD K0010      /OPERAND 2
0603 7040      CMA
0604 7440      SZA
0605 7402      HLT      /TAD ERROR
                        /AC SHOULD EQUAL 0000

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0606	7200
0607	1037
0610	1023
0611	7040
0612	7440
0613	7402

CLA
TAD K7773
TAD K0004
CMA
SZA
HLT

```

/TAD ERROR
/AC SHOULD EQUAL 0000

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0614	7200
0615	1036
0616	1022
0617	7040
0620	7440
0621	7402

CLA
TAD K7775
TAD K0002
CMA
SZA
HLT

/ TAD ERROR

0622	7200
0623	1035
0624	1021
0625	7040
0626	7440
0627	7402

CLA
TAD K7776
TAD K0001
CMA
SEA
HLT

```

/TAD ERROR
/AC SHOULD EQUAL 0000

```

0630	7200
0631	7100
0632	1034
0633	1034
0634	7430
0635	7440
0636	7402

CLA
CLL
TAD K4000
TAD K4000
SZL
SZA
HLT

/TAD ERROR, AC SHOULD EQUAL 0000
 /LINK SHOULD BE EQUAL ONE,

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      /TAD TEST 14
0637 7200      CLA
0640 7100      CLL
0641 1054      TAD K6000      /OPERAND 1
0642 1033      TAD K2000      /OPERAND 2
0643 7430      SZL
0644 7440      SZA
0645 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ONE

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      /TAD TEST 15
0646 7200      CLA
0647 7100      CLL
0650 1055      TAD K7000      /OPERAND 1
0651 1032      TAD K1000      /OPERAND 2
0652 7430      SZL
0653 7440      SZA
0654 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ONE

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      /TAD TEST 16
0655 7200      CLA
0656 7100      CLL
0657 1056      TAD K7400      /OPERAND 1
0660 1031      TAD K0400      /OPERAND 2
0661 7430      SZL
0662 7440      SZA
0663 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ONE

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      /TAD TEST 17
0664 7200      CLA
0665 7100      CLL
0666 1057      TAD K7600      /OPERAND 1
0667 1030      TAD K0200      /OPERAND 2
0670 7430      SZL
0671 7440      SZA
0672 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ONE

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      /TAD TEST 18
0673 7200      CLA
0674 7100      CLL
0675 1076      TAD K7700      /OPERAND 1
0676 1027      TAD K0100      /OPERAND 2
0677 7430      SZL
0700 7440      SZA
0701 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ONE

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      /TAD TEST 19
0702 7200      CLA
0703 7100      CLL

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0704	1060	TAD K7740	/OPERAND 1
0705	1026	TAD K0040	/OPERAND 2
0706	7430	SZL	
0707	7440	SZA	
0710	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 20			
0711	7200	CLA	
0712	7100	CLL	
0713	1061	TAD K7760	/OPERAND 1
0714	1025	TAD K0020	/OPERAND 2
0715	7430	SZL	
0716	7440	SZA	
0717	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 21			
0720	7200	CLA	
0721	7100	CLL	
0722	1062	TAD K7770	/OPERAND 1
0723	1024	TAD K0010	/OPERAND 2
0724	7430	SZL	
0725	7440	SZA	
0726	7402	HLT	/TAD ERROR AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 22			
0727	7200	CLA	
0730	7100	CLL	
0731	1063	TAD K7774	/OPERAND 1
0732	1023	TAD K0004	/OPERAND 2
0733	7430	SZL	
0734	7440	SZA	
0735	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 23			
0736	7200	CLA	
0737	7100	CLL	
0740	1035	TAD K7776	/OPERAND 1
0741	1022	TAD K0002	/OPERAND 2
0742	7430	SZL	
0743	7440	SZA	
0744	7402	HLT	/TAD ERROR, AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE

/TAD TEST 24

0745	7200	CLA	
0746	7100	CLL	
0747	1051	TAD K7777	/OPERAND 1
0750	1021	TAD K0001	/OPERAND 2
0751	7430	SZL	
0752	7440	SZA	
0753	7402	HLT	

/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

/TAD TEST 25

0754	7200	CLA	
0755	7100	CLL	
0756	7020	CML	
0757	1034	TAD K4000	/OPERAND 1
0760	1034	TAD K4000	/OPERAND 2
0761	7420	SNL	
0762	7440	SZA	
0763	7402	HLT	

/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 26

0764	7200	CLA	
0765	7100	CLL	
0766	1050	TAD K3777	/OPERAND 1
0767	1033	TAD K2000	/OPERAND 2
0770	1033	TAD K2000	/OPERAND 3
0771	7040	CMA	
0772	7420	SNL	
0773	7440	SZA	
0774	7402	HLT	

/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

0775	7000	NOP	
0776	7000	NOP	
0777	7000	NOP	

*1000

/TAD TEST 27

1000	7200	CLA	
1001	7100	CLL	
1002	1047	TAD K5777	/OPERAND 1
1003	1032	TAD K1000	/OPERAND 2
1004	1032	TAD K1000	/OPERAND 3
1005	7040	CMA	
1006	7420	SNL	
1007	7440	SZA	
1010	7402	HLT	

/TAD ERROR AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 28

1011	7200	CLA	
1012	7100	CLL	
1013	1046	TAD K6777	/OPERAND 1
1014	1031	TAD K0400	/OPERAND 2
1015	1031	TAD K0400	/OPERAND 3
1016	7040	CMA	
1017	7420	SNL	
1020	7440	SZA	
1021	7402	HLT	

/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 29

1022	7200	CLA	
1023	7100	CLL	
1024	1045	TAD K7377	/OPERAND 1
1025	1030	TAD K0200	/OPERAND 2
1026	1030	TAD K0200	/OPERAND 3
1027	7040	CMA	
1030	7420	SNL	
1031	7440	SZA	
1032	7402	HLT	

/TAD ERROR, AC SOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 30

1033	7200	CLA	
1034	7100	CLL	
1035	1044	TAD K7577	/OPERAND 1
1036	1027	TAD K0100	/OPERAND 2
1037	1027	TAD K0100	/OPERAND 3
1040	7040	CMA	
1041	7420	SNL	
1042	7440	SZA	
1043	7402	HLT	

/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 31

1044	7200	CLA	
1045	7100	CLL	
1046	1043	TAD K7677	/OPERAND 1
1047	1026	TAD K0040	/OPERAND 2
1050	1026	TAD K0040	/OPERAND 3
1051	7040	CMA	
1052	7420	SNL	
1053	7440	SZA	
1054	7402	HLT	

/TAD ERROR, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/TAD TEST 32			
1055	7200	CLA	
1056	7100	CLL	
1057	1042	TAD K7737	/OPERAND 1
1060	1025	TAD K0020	/OPERAND 2
1061	1025	TAD K0020	/OPERAND 3
1062	7040	CMA	
1063	7420	SNL	
1064	7440	SZA	
1065	7402	HLT	
		/TAD ERROR, AC SHOULD EQUAL 0000	
		/LINK SHOULD EQUAL ZERO	
/TAD TEST 33			
1066	7200	CLA	
1067	7100	CLL	
1070	1041	TAD K7757	/OPERAND 1
1071	1024	TAD K0010	/OPERAND 2
1072	1024	TAD K0010	/OPERAND 3
1073	7040	CMA	
1074	7420	SNL	
1075	7440	SZA	
1076	7402	HLT	
		/TAD ERROR, AC SHOULD EQUAL 0000	
		/LINK SHOULD EQUAL ZERO	
/TAD TEST 34			
1077	7200	CLA	
1100	7100	CLL	
1101	1040	TAD K7767	/OPERAND 1
1102	1023	TAD K0004	/OPERAND 2
1103	1023	TAD K0004	/OPERAND 3
1104	7040	CMA	
1105	7420	SNL	
1106	7440	SZA	
1107	7402	HLT	
		/TAD ERROR, AC SHOULD EQUAL 0000	
		/LINK SHOULD EQUAL ZERO	
/TAD TEST 35			
1110	7200	CLA	
1111	7100	CLL	
1112	1037	TAD K7773	/OPERAND 1
1113	1022	TAD K0002	/OPERAND 2
1114	1022	TAD K0002	/OPERAND 3
1115	7040	CMA	
1116	7420	SNL	
1117	7440	SZA	
1120	7402	HLT	
		/TAD ERROR, AC SHOULD EQUAL 0000	
		/LINK SHOULD EQUAL ZERO	

```

/TAD TEST 36
1121 7200      CLA
1122 7100      CLL
1123 1036      TAD K7775      /OPERAND 1
1124 1021      TAD K0001      /OPERAND 2
1125 1021      TAD K0001      /OPERAND 3
1126 7040      CMA
1127 7420      SNL
1130 7430      SZL
1131 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO

/RAR TEST 1
1132 7200      CLA
1133 7100      CLL
1134 1021      TAD K0001      /ROTATE PATTERN
1135 7010      RAR
1136 7420      SNL
1137 7402      HLT
                        /RAR FAILED, LINK DROPPED A BIT
                        /LINK SHOULD EQUAL A ONE

/RAR TEST 2
1140 7200      CLA
1141 7100      CLL
1142 1020      TAD K0000      /ROTATE PATTERN
1143 7010      RAR
1144 7440      SZA
1145 7402      HLT
                        /RAR FAILED, AC PICKED UP A BIT
                        /A ONE IN AC EQUALS THE PICKED UP BIT

/RAR TEST 3
1146 7200      CLA
1147 7100      CLL
1150 1020      TAD K0000      /ROTATE PATTERN
1151 7010      RAR
1152 7430      SZL
1153 7402      HLT
                        /RAL FAILED, LINK PICKED UP A BIT
                        /LINK SHOULD EQUAL ZERO

```



```

1154 7200      /RAR TEST 4      CLA
1155 7100      CLL
1156 7020      CML
1157 1020      TAD K0000      /ROTATE PATTERN
1160 7010      RAR
1161 7430      SZL
1162 7402      HLT      /RAR LINK PICKED UP A BIT
                        /LINK SHOULD EQUAL ZERO

1163 7200      /RAR TEST 5      CLA
1164 7100      CLL
1165 7020      CML
1166 1051      TAD K7777      /ROTATE PATTERN
1167 7010      RAR
1170 7040      CMA
1171 7440      SZA
1172 7402      HLT      /RAR FAILED AC DROPPED A BIT
                        /A ONE IN AC EQUALS THE DROPPED BIT

1173 7000      NOP
1174 7000      NOP
1175 7000      NOP
1176 7000      NOP
1177 7000      NOP
1177 1200      *1200
1200 7200      /RAR TEST 6      CLA
1201 7100      CLL
1202 7020      CML
1203 1020      TAD K0000      /ROTATE PATTERN
1204 7010      RAR
1205 1050      TAD K5777
1206 7040      CMA
1207 7450      SNA
1210 7450      SZL
1211 7402      HLT      /RAR FAILED AC AND LINK
                        /SHOULD EQUAL 0000

1212 7200      /RAR TEST 7      CLA
1213 7100      CLL
1214 1034      TAD K4000      /ROTATE PATTERN
1215 7010      RAR
1216 1047      TAD K5777
1217 7040      CMA
1220 7450      SNA
1221 7430      SZL
1222 7402      HLT      /RAR FAILED AC AND LINK SHOULD
                        /EQUAL 0000

```

		/RAR TEST 8		
1223	7200		CLA	
1224	7100		CLL	
1225	1033		TAD K2000	/ROTATE PATTERN
1226	7010		RAR	
1227	1046		TAD K0777	
1230	7040		CMA	
1231	7450		SNA	
1232	7430		SZL	
1233	7402		HLT	/RAR FAILED AC AND LINK SHOULD /EQUAL 0000

		/RAR TEST 9		
1234	7200		CLA	
1235	7100		CLL	
1236	1032		TAD K1000	/ROTATE PATTERN
1237	7010		RAR	
1240	1045		TAD K7377	
1241	7040		CMA	
1242	7450		SNA	
1243	7430		SZL	
1244	7402		HLT	/RAR FAILED AC AND LINK SHOULD /EQUAL 0000

		/RAR TEST 10		
1245	7200		CLA	
1246	7100		CLL	
1247	1031		TAD K0000	/ROTATE PATTERN
1250	7010		RAR	
1251	1044		TAD K7577	
1252	7040		CMA	
1253	7450		SNA	
1254	7430		SZL	
1255	7402		HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

```
1256 7200      /RAR TEST 11      CLA
1257 7100      CLL
1260 1030      TAD K0200          /ROTATE PATTERN
1261 7010      RAR
1262 1043      TAD K7677
1263 7040      CMA
1264 7450      SNA
1265 7430      SZL
1266 7402      HLT              /RAR FAILED AC AND LINK
                                   /EQUAL 0000
```

```
1267 7200      /RAR TEST 12      CLA
1270 7100      CLL
1271 1027      TAD K0100          /ROTATE PATTERN
1272 7010      RAR
1273 1042      TAD K7737
1274 7040      CMA
1275 7450      SNA
1276 7430      SZL
1277 7402      HLT              /RAR FAILED AC AND LINK
                                   /SHOULD EQUAL 0000
```

```
1300 7200      /RAR TEST 13      CLA
1301 7100      CLL
1302 1026      TAD K0040          /ROTATE PATTERN
1303 7010      RAR
1304 1041      TAD K7757
1305 7040      CMA
1306 7450      SNA
1307 7430      SZL
1310 7402      HLT              /RAR FAILED AC AND LINK
                                   /SHOULD EQUAL 0000
```

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PAUSE

/INSTRUCTION TEST 1

/TAPE 2

/RAR TEST 14

1311	7200	CLA	
1312	7100	CLL	
1313	1025	TAD K0020	/ROTATE PATTERN
1314	7010	RAR	
1315	1040	TAD K7767	
1316	7040	CMA	
1317	7450	SNA	
1320	7430	SZL	
1321	7402	HLT	/RAR FAILED AC AND LINK

/SHOULD EQUAL 0000

/RAR TEST 15

1322	7200	CLA	
1323	7100	CLL	
1324	1024	TAD K0010	/ROTATE PATTERN
1325	7010	RAR	
1326	1037	TAD K7773	
1327	7040	CMA	
1330	7450	SNA	
1331	7430	SZL	
1332	7402	HLT	/RAR FAILED AC AND LINK

/SHOULD EQUAL 0000

/RAR TEST 16

1333	7200	CLA	
1334	7100	CLL	
1335	1023	TAD K0004	/ROTATE PATTERN
1336	7010	RAR	
1337	1036	TAD K7775	
1340	7040	CMA	
1341	7450	SNA	
1342	7430	SZL	
1343	7402	HLT	/RAR FAILED AC AND LINK

/SHOULD EQUAL 0000

/RAR TEST 17

1344	7200	CLA	
1345	7100	CLL	
1346	1022	TAD K0002	/ROTATE PATTERN
1347	7010	RAR	
1350	1035	TAD K7776	
1351	7040	CMA	
1352	7450	SNA	
1353	7430	SZL	
1354	7402	HLT	/RAR FAILED AC AND LINK

/SHOULD EQUAL 0000

```
/RAR TEST 18
1355 7200      CLA
1356 7100      CLL
1357 1021      TAD K0001      /ROTATE PATTERN
1360 7010      RAR
1361 1051      TAD K7777
1362 7040      CMA
1363 7450      SNA
1364 7420      SNL
1365 7402      HLT
                        /RAR FAILED AC AND LINK
                        /SHOULD EQUAL 0000

/RTR TEST 1
1366 7200      CLA
1367 7100      CLL
1370 1022      TAD K0002      /ROTATE PATTERN
1371 7012      RTR
1372 7420      SNL
1373 7402      HLT
                        /RTR FAILED LINK DROPPED
                        /A BIT LINK SHOULD EQUAL A ONE

1374 7000      NOP
1375 7000      NOP
1376 7000      NOP
1377 7000      NOP
1400 1400      *1400

/RTR TEST 2
1400 7200      CLA
1401 7100      CLL
1402 1020      TAD K0000      /ROTATE PATTERN
1403 7012      RTR
1404 7440      SZA
1405 7402      HLT
                        /RTR FAILED AC PICKED UP A BIT
                        /A ONE IN AC EQUALS THE PICKED UP BIT

/RTR TEST 3
1406 7200      CLA
1407 7100      CLL
1410 1020      TAD K0000      /ROTATE PATTERN
1411 7012      RTR
1412 7430      SZL
1413 7402      HLT
                        /RTR LINK PICKED UP A BIT
                        /LINK SHOULD EQUAL ZERO

/RTR TEST 4
1414 7200      CLA
1415 7100      CLL
1416 7020      CML
1417 1020      TAD K0000      /ROTATE PATTERN
1420 7012      RTR
1421 7430      SZL
1422 7402      HLT
                        /RTR LINK PICKED UP A BIT
                        /LINK SHOULD EQUAL ZERO
```

/RTR TEST 5

1423	7200	CLA	
1424	7100	CLL	
1425	7020	CML	
1426	1051	TAD	K7777 /ROTATE PATTERN
1427	7012	RTR	
1430	7040	CMA	
1431	7440	SZA	
1432	7402	HLT	

/RTR AC DROPPED A BIT A ONE IN
/AC EQUALS THE DROPPED BIT

/RTR TEST 6

1433	7200	CLA	
1434	7100	CLL	
1435	7020	CML	
1436	1020	TAD	K0000 /ROTATE PATTERN
1437	7012	RTR	
1440	1047	TAD	K5777
1441	7040	CMA	
1442	7450	SNA	
1443	7430	SZL	
1444	7402	HLT	

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 7

1445	7200	CLA	
1446	7100	CLL	
1447	1034	TAD	K4000 /ROTATE PATTERN
1450	7012	RTR	
1451	1046	TAD	K6777
1452	7040	CMA	
1453	7450	SNA	
1454	7430	SZL	
1455	7402	HLT	

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 8

1456	7200	CLA	
1457	7100	CLL	
1460	1033	TAD	K2000 /ROTATE PATTERN
1461	7012	RTR	
1462	1045	TAD	K7377
1463	7040	CMA	
1464	7450	SNA	
1465	7430	SZL	
1466	7402	HLT	

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

		/RTR TEST 9	
1467	7200	CLA	
1470	7100	CLL	
1471	1032	TAD K1000	/ROTATE PATTERN
1472	7012	RTR	
1473	1044	TAD K7577	
1474	7040	CMA	
1475	7450	SNA	
1476	7430	SZL	
1477	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000

		/RTR TEST 10	
1500	7200	CLA	
1501	7100	CLL	
1502	1031	TAD K0400	/ROTAATE PATTERN
1503	7012	RTR	
1504	1043	TAD K7077	
1505	7040	CMA	
1506	7450	SNA	
1507	7430	SZL	
1510	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000

		/RTR TEST 11	
1511	7200	CLA	
1512	7100	CLL	
1513	1030	TAD K0200	/ROTATE PATTERN
1514	7012	RTR	
1515	1042	TAD K7737	
1516	7040	CMA	
1517	7450	SNA	
1520	7430	SZL	
1521	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000

		/RTR TEST 12	
1522	7200	CLA	
1523	7100	CLL	
1524	1027	TAD K0100	/ROTATE PATTERN
1525	7012	RTR	
1526	1041	TAD K7757	
1527	7040	CMA	
1530	7450	SNA	
1531	7430	SZL	
1532	7402	HLT	/RTR FAILED AC AND LINK /SHOULD EQUAL 0000


```
1533 7200      /RTR TEST 13
1534 7100      CLA
1535 1026      CLL
1536 7012      TAD K0040      /ROTATE PATTERN
1537 1040      RTR
1540 7040      TAD K7767
1541 7450      CMA
1542 7430      SNA
1543 7402      SZL
                        /RTR FAILED AC AND LINK
                        /SHOULD EQUAL 0000
                        HLT
```

```
1544 7200      /RTR TEST 14
1545 7100      CLA
1546 1025      CLL
1547 7012      TAD K0020      /ROTATE PATTERN
1550 1037      RTR
1551 7040      TAD K7773
1552 7450      CMA
1553 7430      SNA
1554 7402      SZL
                        /RTR FAILED AC AND LINK
                        /SHOULD EQUAL 0000
                        HLT
```

```
1555 7200      /RTR TEST 15
1556 7100      CLA
1557 1024      CLL
1560 7012      TAD K0010      /ROTATE PATTERN
1561 1036      RTR
1562 7040      TAD K7775
1563 7450      CMA
1564 7430      SNA
1565 7402      SZL
                        /RTR FAILED AC AND LINK
                        /SHOULD EQUAL 0000
                        HLT
```

```
1566 7300      /RTR TEST 16
1567 1023      CLA CLL
1570 7012      TAD K0004      /ROTATE PATTERN
1571 1035      RTR
1572 7040      TAD K7776
1573 7450      CMA
1574 7430      SNA
1575 7402      SZL
                        /RTR FAILED AC AND LINK
                        /SHOULD EQUAL 0000
                        HLT
```

```

1576 7002      NOP
1577 7002      NOP
      1600      *1600
      /RTR TEST 17
1600 7200      CLA
1601 7100      CLL
1602 1022      TAD K0002      /ROTATE PATTERN
1603 7012      RTR
1604 7450      SNA
1605 7420      SNL
1606 7402      HLT

```

/RTR FAILED, AC SHOULD EQUAL
/0000, LINK SHOULD EQUAL ONE

```

      /RTR TEST 18
1607 7200      CLA
1610 7100      CLL
1611 1021      TAD K0001      /ROTATE PATTERN
1612 7012      RTR
1613 1050      TAD K3777
1614 7040      CMA
1615 7450      SNA
1616 7430      SZL
1617 7402      HLT

```

/RTR FAILED, AC AND LINK
/SHOULD BE ZERO

```

      /RAL TEST 1
1620 7200      CLA
1621 7100      CLL
1622 1034      TAD K4000      /ROTATE PATTERN
1623 7004      RAL
1624 7430      SZL
1625 7440      SZA
1626 7402      HLT

```

/RAL FAILED, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE,

```

      /RAL TEST 2
1627 7200      CLA
1630 7100      CLL
1631 1020      TAD K0000      /ROTATE PATTERN
1632 7004      RAL
1633 7420      SNL
1634 7440      SZA
1635 7402      HLT

```

/RAL FAILED, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

		/RAL TEST 3		
1636	7200	CLA		
1637	7100	CLL		
1640	7020	CML		
1641	1020	TAD K0000	/ROTATE PATTERN, LINK=1	
1642	7004	RAL		
1643	7430	SZL		
1644	7402	HLT	/RAL FAILURE, AC SHOULD EQUAL 0001	
			/LINK SHOULD EQUAL ZERO	
		/RAL TEST 4		
1645	7200	CLA		
1646	7100	CLL		
1647	7020	CML		
1650	1051	TAD K7777	/ROTATE PATTERN, LINK=1	
1651	7004	RAL		
1652	7040	CMA		
1653	7440	SZA		
1654	7402	HLT	/RAL FAILURE, LINK SHOULD EQUAL ONE	
			/AC SHOULD EQUAL 0000	
		/RAL TEST 5		
1655	7200	CLA		
1656	7100	CLL		
1657	1033	TAD K2000	/ROTATE PATTERN	
1660	7004	RAL		
1661	1050	TAD K5777		
1662	7040	CMA		
1663	7450	SNA		
1664	7430	SZL		
1665	7402	HLT	/RAL FAILURE, AC SHOULD EQUAL 0000	
			/LINK SHOULD EQUAL ONE	
		/RAL TEST 6		
1666	7200	CLA		
1667	7100	CLL		
1670	1032	TAD K1000	/ROTATE PATTERN	
1671	7004	RAL		
1672	1047	TAD K5777		
1673	7040	CMA		
1674	7440	SZA		
1675	7402	HLT	/RAL FAILURE, AC SHOULD EQUAL 0000	
			/LINK SHOULD EQUAL ZERO	

```

1676 7200      /RAL TEST 7
1677 7100      CLA
1700 1031      CLL
1721 7004      TAD K0400      /ROTATE PATTERN
1702 1046      RAL
1723 7040      TAD K6777
1704 7450      CMA
1725 7430      SNA
1706 7402      SZL
1726 7402      HLT

```

/RAL FAILURE, AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

1707 7200      /RAL TEST 8
1710 7100      CLA
1711 1030      CLL
1712 7004      TAD K0200      /ROTATE PATTERN
1713 1045      RAL
1714 7040      TAD K7577
1715 7450      CMA
1716 7430      SNA
1717 7402      SZL

```

/RAL FAILURE AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

```

1720 7200      /RAL TEST 9
1721 7100      CLA
1722 1027      CLL
1723 7004      TAD K0100      /ROTATE PATTERN
1724 1044      RAL
1725 7040      TAD K7577
1726 7450      CMA
1727 7430      SNA
1730 7402      SZL

```

/RAL FAILURE AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

		/RAL TEST 10	
1731	7202	CLA	
1732	7100	CLL	
1733	1026	TAD K0040	/ROTATE PATTERN
1734	7004	RAL	
1735	1043	TAD K7077	
1736	7040	CMA	
1737	7450	SNA	
1740	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
1741	7402	HLT	/LINK SHOULD EQUAL A ZERO
		/RAL TEST 11	
1742	7200	CLA	
1743	7100	CLL	
1744	1025	TAD K0020	/ROTATE PATTERN
1745	7004	RAL	
1746	1042	TAD K7737	
1747	7040	CMA	
1750	7450	SNA	
1751	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
1752	7402	HLT	/LINK SHOULD EQUAL A ZERO
		/RAL TEST 12	
1753	7200	CLA	
1754	7100	CLL	
1755	1024	TAD K0010	/ROTATE PATTERN
1756	7004	RAL	
1757	1041	TAD K7757	
1760	7040	CMA	
1761	7450	SNA	
1762	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
1763	7402	HLT	/LINK SHOULD EQUAL A ZERO

```

1764 7200 CLA
1765 7100 CLL
1766 1023 TAD K0004 /ROTATE PATTERN
1767 7004 RAL
1770 1040 TAD K7767
1771 7042 CMA
1772 7450 SNA
1773 7430 SZL /RAL FAILED AC SHOULD EQUAL 0000
1774 7442 HLT /LINK SHOULD EQUAL A ZERO
1775 7000 NOP
1776 7000 NOP
1777 7000 NOP
2000
*2000
/RAL TEST 14
2000 7200 CLA
2001 7100 CLL
2002 1022 TAD K0002 /ROTATE PATTERN
2003 7004 RAL
2004 1037 TAD K7773
2005 7042 CMA
2006 7450 SNA
2007 7430 SZL /RAL FAILED AC SHOULD EQUAL 0000
2010 7402 HLT /LINK SHOULD EQUAL A ZERO
/RAL TEST 15
2011 7200 CLA
2012 7100 CLL
2013 1021 TAD K0001 /ROTATE PATTERN
2014 7004 RAL
2015 1036 TAD K7775
2016 7042 CMA
2017 7450 SNA
2020 7430 SZL /RAL FAILED AC SHOULD EQUAL 0000
2021 7402 HLT /LINK SHOULD EQUAL ZERO
/RAL TEST 16
2222 7200 CLA
2223 7100 CLL
2224 7020 CML
2225 7004 RAL
2226 1035 TAD K7776
2227 7040 CMA
2230 7450 SNA
2331 7430 SZL
2332 7442 HLT /RAL FAILED AC SHOULD EQUAL 0000
/ LINK SHOULD EQUAL ZERO

```

```

/RTL TEST 1
2033 7200 CLA
2034 7100 CLL
2035 1033 TAD K2000
2036 7006 RTL
2037 7420 SNL
2040 7402 HLT
/RTL LINK DROPPED A BIT
/LINK SHOULD EQUAL A ONE

/RTL TEST 2
2041 7200 CLA
2042 7100 CLL
2043 1020 TAD K0000
2044 7006 RTL
2045 7440 SZA
2046 7402 HLT
/RTL AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP

/RTL TEST 3
2047 7200 CLA
2050 7100 CLL
2051 1020 TAD K0000
2052 7006 RTL
2053 7430 SZL
2054 7402 HLT
/RTL LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RTL TEST 4
2055 7200 CLA
2056 7100 CLL
2057 7020 CML
2060 1020 TAD K0000
2061 7006 RTL
2062 7430 SZL
2063 7402 HLT
/RTL FAILURE, LINK PICKED UP A BIT
/LINK SHOULD EQUAL A ZERO

```

		/RTL TEST 5	
2064	7200	CLA	
2065	7100	CLL	
2066	7020	CML	
2067	1051	TAD K7777	/ROTATE PATTERN
2070	7006	RTL	
2071	7040	CMA	
2072	7440	SZA	
2073	7402	HLT	/RTL FAILURE, DROPPED A BIT
		/RTL TEST 6	
2074	7200	CLA	
2075	7100	CLL	
2076	1034	TAD K4000	/ROTATE PATTERN
2077	7006	RTL	
2100	1035	TAD K7776	
2101	7040	CMA	
2102	7450	SNA	
2103	7430	SZL	
2104	7402	HLT	/RTL FAILED AQ AND LINK SHOULD EQUAL 0000
		/RTL TEST 7	
2105	7200	CLA	
2106	7100	CLL	
2107	1033	TAD K2000	/ROTATE PATTERN
2110	7006	RTL	
2111	7450	SNA	
2112	7420	SNL	
2113	7402	HLT	/RTL FAILED AQ AND LINK SHOULD /EQUAL 0000
		/RTL TEST 8	
2114	7200	CLA	
2115	7100	CLL	
2116	1032	TAD K1000	/ROTATE PATTERN
2117	7006	RTL	
2120	1050	TAD K3777	
2121	7040	CMA	
2122	7450	SNA	
2123	7430	SZL	
2124	7402	HLT	/RTL FAILED AQ AND LINK SHOULD /EQUAL 0000


```

2125 7200      /RTL TEST 9      CLA
2126 7100      CLL
2127 1031      TAD K0400      /ROTATE PATTERN
2130 7006      RTL
2131 1047      TAD K2777
2132 7040      CMA
2133 7450      SNA
2134 7430      SZL
2135 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL ZERO

```

```

2136 7200      /RTL TEST 10     CLA
2137 7100      CLL
2140 1030      TAD K0200      /ROTATE PATTERN
2141 7006      RTL
2142 1046      TAD K6777
2143 7040      CMA
2144 7450      SNA
2145 7430      SZL
2146 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

```

```

2147 7200      /RTL TEST 11     CLA
2150 7100      CLL
2151 1027      TAD K0100      /ROTATE PATTERN
2152 7006      RTL
2153 1045      TAD K7377
2154 7040      CMA
2155 7450      SNA
2156 7430      SZL
2157 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

```

```

2160 7200      /RTL TEST 12     CLA
2161 7100      CLL
2162 1026      TAD K0040      /ROTATE PATTERN
2163 7006      RTL
2164 1044      TAD K7377
2165 7040      CMA
2166 7450      SNA
2167 7430      SZL
2170 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

```

2171	7000	NOP	
2172	7000	NOP	
2173	7000	NOP	
2174	7000	NOP	
2175	7000	NOP	
2176	7000	NOP	
2177	7000	NOP	
	2200		
		*2200	
		/RTL TEST 13	
2200	7200	CLA	
2201	7100	CLL	
2202	1025	TAD K0020	/ROTATE PATTERN
2203	7006	RTL	
2204	1043	TAD K7677	
2205	7040	CMA	
2206	7450	SNA	
2207	7430	SZL	
2210	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000
		/RTL TEST 14	
2211	7200	CLA	
2212	7100	CLL	
2213	1024	TAD K0010	/ROTATE PATTERN
2214	7006	RTL	
2215	1042	TAD K7737	
2216	7040	CMA	
2217	7450	SNA	
2220	7430	SZL	
2221	7402	HLT	/RTL FAILED AC AND LINK SHOULD
		/RTL TEST 15	
2222	7200	CLA	
2223	7100	CLL	
2224	1023	TAD K0004	/ROTATE PATTERN
2225	7006	RTL	
2226	1041	TAD K7757	
2227	7040	CMA	
2230	7450	SNA	
2231	7430	SZL	
2232	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000
		/RTL TEST 16	
2233	7200	CLA	
2234	7100	CLL	
2235	1022	TAD K0002	/ROTATE PATTERN
2236	7006	RTL	
2237	1040	TAD K7767	
2240	7040	CMA	
2241	7450	SNA	
2242	7430	SZL	
2243	7402	HLT	/RTL FAILED AC AND LINK /SHOULD EQUAL 0000

/RTL TEST 17

2244	7200	CLA	
2245	7100	CLL	
2246	1021	TAD K0001	/ROTATE PATTERN
2247	7006	RTL	
2250	1037	TAD K7773	
2251	7040	CMA	
2252	7450	SNA	
2253	7430	SZL	
2254	7402	HLT	/RTL FAILED AC AND LINK /SHOULD EQUAL 0000

/RTL TEST 18

2255	7200	CLA	
2256	7100	CLL	
2257	7020	CML	
2260	7006	RTL	
2261	1036	TAD K7775	
2262	7040	CMA	
2263	7450	SNA	
2264	7430	SZL	
2265	7402	HLT	/RTL FAILED AC AND LINK /SHOULD EQUAL 0000

```

/GROUP 1 OPERATE TEST 1
2266 7200      CLA      /CLEAR AC
2267 7100      CLL      /CLEAR LINK
2270 7040      CMA      /AC EQUALS 7777
2271 7020      CML      /LINK EQUALS ONE
2272 7300      CLA CLL  /TEST COMBINATION
2273 7420      SNL
2274 7440      SZA
2275 7402      HLT      /CLA CLL FAILED, LINK SHOULD BE 0
                          /AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 2
2276 7200      CLA      /AC EQUALS 0000
2277 1053      TAD K2525 /AC EQUALS 2525
2300 7240      CLA CMA  /TEST COMBINATION
2301 7040      CMA
2302 7440      SZA
2303 7402      HLT      /CLA CMA ERROR, AC SHOULD
                          /BE 0000

/GROUP 1 OPERATE TEST 3
2304 7200      CLA
2305 7100      CLL
2306 7040      CMA      /AC=7777 LINK=1
2307 7140      CLL CMA  /TEST COMBINATION
2310 7420      SNL
2311 7440      SZA
2312 7402      HLT      /CLL CMA FAILED, AC AND LINK
                          /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 4
2313 7100      CLL
2314 7020      CML      /LINK=1
2315 7200      CLA
2316 7040      CMA      /AC=7777
2317 7340      CLA CMA CLL /TEST COMBINATION
2320 7040      CMA
2321 7420      SNL
2322 7440      SZA
2323 7402      HLT      /CLA CMA CLL FAILED, AC AND
                          /LINK SHOULD BE ZERO

```

```

/GROUP 1 OPERATE TEST 5
2324 7200      CLA
2325 7100      CLL          /LINK=0
2326 7040      CMA          /AC=7777
2327 7220      CLA CML      /TEST COMBINATION
2330 7430      SZL
2331 7440      SZA
2332 7402      HLT          /CLA CML FAILED, AC SHOULD EQUAL
                          /0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 6
2333 7100      CLL
2334 7020      CML          /LINK=1
2335 7120      CLL CML      /TEST COMBINATION
2336 7420      SNL
2337 7402      HLT          /CLL CML FAILED
                          /LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 7
2340 7100      CLL          /LINK=0
2341 7120      CLL CML      /TEST COMBINATION
2342 7420      SNL
2343 7402      HLT          /CLL CML FAILED,
                          /LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 8
2344 7120      CLL CML      /LINK=1
2345 7240      CLA CMA      /AC=7777
2346 7320      CLA CLL CML /TEST COMBINATION
2347 7430      SZL
2350 7440      SZA
2351 7402      HLT          /CLA CLL CML FAILED, LINK SHOULD
                          /BE 1, AC SHOULD BE ZERO

/GROUP 1 OPERATE TEST 9
2352 7340      CLA CLL CMA /LINK=0, AC=7777
2353 7320      CLA CLL CML /TEST COMBINATION
2354 7430      SZL
2355 7440      SZA
2356 7402      HLT          /CLA CLL CML FAILED, LINK SHOULD
                          /BE 1, AC SHOULD BE ZERO

```

```

/ GROUP 1 OPERATE TEST 10
2357 7340 CLA CLL CMA /AC=7777, LINK=0
2360 7060 CMA CML /TEST COMBINATION
2361 7430 SZL
2362 7440 SZA
2363 7402 HLT /CMA CML FAILED, AC SHOULD BE
/0000 LINK SHOULD EQUAL ONE.

/ GROUP 1 OPERATE TEST 11
2364 7300 CLA CLL /AC AND LINK=0
2365 1053 TAD K2525 /AC=2525
2366 7340 CLA CMA CLL /TEST COMBINATION
2367 7040 CMA
2370 7420 SNL
2371 7440 SZA
2372 7402 HLT /CLA CMA CML FAILED, AC SHOULD BE
/0000, LINK SHOULD EQUAL ZERO

2373 7000 NOP
2374 7000 NOP
2375 7000 NOP
2376 7000 NOP
2377 7000 NOP
2400
*2400
/ GROUP 1 OPERATE TEST 12
2400 7300 CLL CLA /AC AND LINK=0
2401 1053 TAD K2525 /AC=2525
2402 7160 CLL CMA CML /TEST COMBINATION
2403 1053 TAD K2525
2404 7040 CMA
2405 7430 SZL
2406 7440 SZA
2407 7402 HLT /CLL CMA CML FAILED, AC SHOULD BE
/0000, LINK SHOULD EQUAL ONE

/ GROUP 1 OPERATE TEST 13
2410 7300 CLA CLL
2411 7020 CML /AC=0000, LINK=1
2412 7160 CLL CMA CML /TEST COMBINATION
2413 7040 CMA
2414 7430 SZL
2415 7440 SZA
2416 7402 HLT /CLL CMA CML FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE ONE

```

/GROUP 1 OPERATE TEST 14

2417	7300	CLA CLL	
2420	1053	TAD K2525	/AC=2525, LINK=0
2421	7360	CLA CLL CMA CML	/TEST COMBINATION
2422	7040	CMA	
2423	7430	SZL	
2424	7440	SZA	
2425	7402	HLT	/CLA CLL CMA CML FAILED, AC SHOULD /BE 0000 LINK SHOULD EQUAL ONE,

/GROUP 1 OPERATE TEST 15

2426	7320	CLA CLL CML	
2427	1052	TAD K5252	/AC=5252, LINK=1
2430	7360	CLA CLL CMA CML	/TEST COMBINATION
2431	7040	CMA	
2432	7430	SZL	
2433	7440	SZA	
2434	7402	HLT	/CLA CLL CMA CML FAILED, AC SHOULD /BE 000, LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 16

2435	7200	CLA	
2436	1053	TAD K2525	/AC=2525
2437	7201	CLA IAC	/TEST COMBINATION
2440	1035	TAD K7776	
2441	7040	CMA	
2442	7440	SZA	
2443	7402	HLT	/CLA IAC FAILED /AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 17

2444	7320	CLL CML CLA	
2445	1035	TAD K7776	/AC=7776, LINK=1
2446	7101	CLL IAC	/TEST COMBINATION
2447	7040	CMA	
2450	7420	SNL	
2451	7440	SZA	
2452	7402	HLT	/CLL IAC FAILED, AC AND LINK /SHOULD EQUAL ZERO

```

/GROUP 1 OPERATE TEST 18
2453 7320      CLA CLL CML
2454 1053      TAD K2525      /AC=2525 LINK=1
2455 7301      CLA CLL IAC      /TEST COMBINATION
2456 1035      TAD K7776
2457 7040      CMA
2460 7420      SNL
2461 7440      SZA
2462 7402      HLT      /CLA CLL IAC FAILED, AC AND LINK
                        /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 19
2463 7300      CLA CLL      /AC=0 LINK=0
2464 7041      CMA IAC      /TEST COMBINATION
2465 7430      SZL
2466 7440      SZA
2467 7402      HLT      /CMA IAC FAILED, AC SHOULD EQUAL
                        /0000, LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 20
2470 7300      CLA CLL
2471 1053      TAD K2525      /AC=2525 LINK=0
2472 7241      CLA CMA IAC      /TEST COMBINATION
2473 7430      SZL
2474 7440      SZA
2475 7402      HLT      /CLA CMA IAC FAILED, AC SHOULD
                        /EQUAL 0000, LINK SHOULD BE ONE.

/GROUP 1 OPERATE TEST 21
2476 7320      CLL CLA CML      /AC=0000 LINK=1
2477 1021      TAD K0001      /AC=0001
2500 7141      CLL CMA IAC      /TEST COMBINATION
2501 7040      CMA
2502 7420      SNL
2503 7440      SZA
2504 7402      HLT      /CLL CMA IAC FAILED, AC SHOULD BE
                        /0000 LINK SHOULD BE 0

/GROUP 1 OPERATE TEST 22
2505 7320      CLA CLL CML
2506 1053      TAD K2525      /AC=2525 LINK=1
2507 7341      CLA CLL CMA IAC /TEST COMBINATION
2510 7430      SZL
2511 7440      SZA
2512 7402      HLT      /CLA CLL CMA IAC FAILED, AC SHOULD BE
                        /0000, LINK SHOULD BE ONE

```



```

/ GROUP 1 OPERATE TEST 23
2513 7300 CLA CLL
2514 1052 TAD K5252 /AC=5252 LINK=0
2515 7341 CLA CLL CMA IAC /TEST COMBINATION
2516 7430 SZL
2517 7440 SZA
2520 7402 HLT /CLA CLL CMA IAC FAILED AC SHOULD
/BE 0000, LINK SHOULD BE ONE

/ GROUP 1 OPERATE TEST 24
2521 7300 CLA CLL
2522 1035 TAD K7776 /AC=7776 LINK=0
2523 7021 CML IAC /TEST COMBINATION
2524 7040 CMA
2525 7430 SZL
2526 7440 SZA
2527 7402 HLT /CML IAC FAILED AC SHOULD BE
/0000, LINK SHOULD BE ONE

/ GROUP 1 OPERATE TEST 25
2530 7320 CLA CLL CML
2531 1035 TAD K7776 /AC =7776 LINK=1
2532 7021 CML IAC /TEST COMBINATION
2533 7040 CMA
2534 7420 SNL
2535 7440 SZA
2536 7402 HLT /CML IAC FAILED, AC SHOULD BE
/0000, LINK SHOULD BE ZERO

/ GROUP 1 OPERATE TEST 26
2537 7300 CLA CLL
2540 1053 TAD K2525 /AC=2525 LINK=0
2541 7221 CLA CML IAC /TEST COMBINATION
2542 1035 TAD K7776
2543 7040 CMA
2544 7430 SZL
2545 7440 SZA
2546 7402 HLT /CLA CML IAC FAILED, AC SHOULD BE
/0000, LINK SHOULD EQUAL ONE

/ GROUP 1 OPERATE TEST 27
2547 7320 CLA CLL CML /AC=0000 LINK=1
2550 1035 TAD K7776 /AC=7776
2551 7121 CLL CML IAC /TEST COMBINATION
2552 7040 CMA
2553 7430 SZL
2554 7440 SZA
2555 7402 HLT /CLL CML IAC FAILURE, AC SHOULD BE
/0000, LINK SHOULD EQUAL ONE,

```

/GROUP 1 OPERATE TEST 28

2556	7300	CLA CLL	
2557	1035	TAD K7776	/AC=7776 LINK=0
2560	7121	CLL CML IAC	/TEST COMBINATION
2561	7040	CMA	
2562	7430	SZL	
2563	7440	SZA	
2564	7402	HLT	/CLL CML IAC FAILED, AC SHOULD /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 29

2565	7300	CLA CLL	
2566	1053	TAD K2225	/AC=2225, LINK=0
2567	7321	CLA CLL CML IAC	/TEST COMBINATION
2570	1035	TAD K7776	
2571	7040	CMA	
2572	7430	SZL	
2573	7440	SZA	
2574	7402	HLT	/CLA CLL CML IAC FAILED, AC SHOULD /BE 0000, LINK SHOULD BE ONE

2575	7000	NOP	
2576	7000	NOP	
2577	7000	NOP	
	2600		

*2600

/GROUP 1 OPERATE TEST 30

2600	7320	CLA CLL CML	
2601	1053	TAD K2225	/AC=2225 LINK=1
2602	7321	CLA CLL CML IAC	/TEST COMBINATION
2603	1035	TAD K7776	
2604	7040	CMA	
2605	7430	SZL	
2606	7440	SZA	
2607	7402	HLT	/CLA CLL CML IAC FAILED, AC SHOULD /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 31

2610	7300	CLA CLL	
2611	1021	TAD K0001	/AC=0001 LINK=0
2612	7061	CMA CML IAC	/TEST COMBINATION
2613	7040	CMA	
2614	7430	SZL	
2615	7440	SZA	
2616	7402	HLT	/CMA CML IAC FAILED, AC SHOULD /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 32

2617	7320	CLA CLL CML	
2620	1021	TAD K0001	/AC=0001 LINK=1
2621	7061	CMA CML IAC	/TEST COMBINATION
2622	7040	CMA	
2623	7420	SNL	
2624	7440	SZA	
2625	7402	HLT	/CMA CML IAC FAILURE, AC SHOULD BE /0000, LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 33

2626	7300	CLA CLL	/AC=0000 LINK=0
2627	1053	TAD K2525	/AC=2525
2630	7261	CLA CMA CML IAC	/TEST COMBINATION
2631	7420	SNL	
2632	7430	SZL	
2633	7402	HLT	/CLA CMA CML IAC FAILED, AC SHOULD /BE 0000, LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 34

2634	7320	CLA CLL CML	
2635	1053	TAD K2525	/AC=2525 LINK=1
2636	7261	CLA CMA CML IAC	/TEST COMBINATION
2637	7430	SZL	
2640	7440	SZA	
2641	7402	HLT	/CLA CMA CML IAC FAILED, AC SHOULD /BE 0000, LINK SHOULD BE ONE

```

/GROUP 1 OPERATE TEST 35
2642 7300      CLA CLL
2643 1021      TAD K0001      /AC=2021 LINK=0
2644 7161      CLL CMA CML IAC /TEST COMBINATION
2645 7040      CMA
2646 7430      SZL
2647 7440      SZA
2650 7402      HLT      /CLL CMA CML IAC FAILED, AC SHOULD BE
                        /0000, LINK SHOULD BE ONE

```

```

/GROUP 1 OPERATE TEST 36
2651 7320      CLA CLL CML
2652 1021      TAD K0001      /AC=0001 LINK=1
2653 7161      CLL CMA CML IAC /TEST COMBINATION
2654 7040      CMA
2655 7430      SZL
2656 7440      SZA
2657 7402      HLT      /CLL CMA CML IAC FAILED, AC SHOULD BE
                        /0000, LINK SHOULD BE ONE

```

```

/GROUP 1 OPERATE TEST 37
2660 7300      CLA CLL
2661 1053      TAD K2525      /AC=2525 LINK=0
2662 7361      CLA CLL CMA CML IAC /TEST COMBINATION
2663 7420      SNL
2664 7440      SZA
2665 7402      HLT      /CLA CLL CMA CML IAC FAILURE AC AND
                        /LINK SHOULD EQUAL ZERO

```

```

/GROUP 1 OPERATE TEST 38
2666 7360      CLA CMA CLL CML /AC=7777 LINK=1
2667 7210      CLA RAR      /TEST COMBINATION
2670 1050      TAD K5777
2671 7040      CMA
2672 7420      SNL
2673 7440      SZA
2674 7402      HLT      /CLA RAR FAILED, LINK AND
                        /AC SHOULD EQUAL ZERO

```

```

/GROUP 1 OPERATE TEST 39
2675 7360      CLA CMA CLL CML /AC=7777 LINK=1
2676 7204      CLA RAL          /TEST COMBINATION
2677 1035      TAD K7776
2720 7040      CMA
2701 7420      SNL
2702 7440      SZA
2703 7402      HLT
                  /CLA RAL FAILED LINK AND
                  /AC SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 40
2704 7360      CLA CMA CLL CML /AC=7777 LINK =1
2705 7212      CLA RTR          /TEST COMBINATION
2706 1047      TAD K5777
2707 7040      CMA
2710 7420      SNL
2711 7440      SZA
2712 7402      HLT
                  /CLA RTR FAILED, AC AND
                  /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 41
2713 7360      CLA CMA CLL CML /AC=7777, LINK=1
2714 7206      CLA RTL          /TEST COMBINATION
2715 1036      TAD K7775
2716 7040      CMA
2717 7420      SNL
2720 7440      SZA
2721 7402      HLT
                  /CLA RTL FAILED, AC AND LINK
                  /SHOULDBE ZERO

/GROUP 1 OPERATE TEST 42
2722 7320      CLA CLL CML
2723 1026      TAD K0040          /AC=0040 LINK=1
2724 7110      CLL RAR          /TEST COMBINATION
2725 1041      TAD K7757
2726 7040      CMA
2727 7420      SNL
2730 7440      SZA
2731 7402      HLT
                  /CLL RAR FAILED, AC AND LINK
                  /SHOULD BE ZERO

```

```

2732 7320      /GROUP 1 OPERATE TEST 43
2733 1026      CLA CLL CML
2734 7104      TAD K0040      /AC=0040 LINK=1
2735 1043      CLL RAL      /TEST COMBINATION
2736 7040      TAD K7077
2737 7420      CMA
2740 7440      SNL
2741 7402      SZA
                HLT      /CLL RAL FAILED, AC AND LINK
                        /SHOULD BE ZERO

```

```

2742 7320      /GROUP 1 OPERATE TEST 44
2743 1026      CLA CLL CML
2744 7112      TAD K0040      /AC=0040 LINK=1
2745 1040      CLL RTR      /TEST COMBINATION
2746 7040      TAD K7767
2747 7420      CMA
2750 7440      SNL
2751 7402      SZA
                HLT      /CLL RTR FAILED, AC AND LINK
                        /SHOULD BE ZERO

```

```

2752 7320      /GROUP 1 OPERATE TEST 45
2753 1026      CLA CLL CML
2754 7106      TAD K0040      /AC=0040 LINK=1
2755 1044      CLL RTL      /TEST COMBINATION
2756 7040      TAD K7077
2757 7420      CMA
2760 7440      SNL
2761 7402      SZA
                HLT      /CLL RTL FAILED, AC AND LINK
                        /SHOULD BE ZERO

```

```

2762 7360      /GROUP 1 OPERATE TEST 46
2763 7010      CLA CLL CML CMA /AC=7777 LINK=1
2764 7420      CLL CLA RAR      /TEST COMBINATION
2765 7440      SNL
2766 7402      SZA
                HLT      /CLL CLA RAR FAILED AC AND
                        /LINK SHOULD BE ZERO

```

```

/GROUP 1 OPERATE TEST 47
2767 7360      CLA CMA CLL CML /AC=7777 LINK=1
2770 7304      CLL CLA RAL   /TEST COMBINATION
2771 7420      SNL
2772 7430      SZL
2773 7402      HLT           /CLL CLA RAL FAILED, AC AND
                             /LINK SHOULD BE ZERO
2774 7000      NOP
2775 7000      NOP
2776 7000      NOP
2777 7000      NOP
3000          *3000
/GROUP 1 OPERATE TEST 48
3000 7360      CLA CMA CLL CML /AC=7777 LINK=1
3001 7312      CLA CLL RTR   /TEST COMBINATION
3002 7420      SNL
3003 7440      SZA
3004 7402      HLT           /CLA CLL RTL FAILED, AC AND
                             /LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 49
3005 7360      CLA CMA CLL CML /AC=7777 LINK=1
3006 7306      CLA CLL RTL   /TEST COMBINATION
3007 7420      SNL
3010 7440      SZA
3011 7402      HLT           /CLA CLL RTL FAILED, AC AND
                             /LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 50
3012 7300      CLA CLL       /AC=0000 LINK=0
3013 7030      CML RAR       /TEST COMBINATION
3014 1050      TAD K3777
3015 7040      CMA
3016 7420      SNL
3017 7440      SZA
3020 7402      HLT           /CML RAR FAILED, AC AND LINK
                             /SHOULD BE ZERO

```

```

/GROUP 1 OPERATE TEST 51
3021 7300      CLA CLL      /AC=0000 LINK=0
3022 7024      CML RAL      /TEST COMBINATION
3023 1035      TAD K7776
3024 7040      CMA
3025 7420      SNL
3026 7440      SZA
3027 7402      HLT          /CML RAL FAILED, AC AND LINK
                          /SHOULD BE ZERO.

```

```

/GROUP 1 OPERATE TEST 52
3030 7500      CLA CLL      /AC=0000 LINK=0
3031 7032      CML RTR      /TEST COMBINATION
3032 1047      TAD K5777
3033 7040      CMA
3034 7420      SNL
3035 7440      SZA
3036 7402      HLT          /CML RTR FAILED, AC AND LINK
                          /SHOULD EQUAL ZERO

```

```

/GROUP 1 OPERATE TEST 53
3037 7300      CLA CLL      /AC=0000 LINK=0
3040 7026      CML RTL      /TEST COMBINATION
3041 1036      TAD K7775
3042 7040      CMA
3043 7420      SNL
3044 7440      SZA
3045 7402      HLT          /CML RTL FAILED, AC AND LINK
                          /SHOULD EQUAL ZERO

```

```

/GROUP 1 OPERATE TEST 54
3046 7500      CLA CLL
3047 1052      TAD K5252      /AC=5252 LINK=0
3050 7230      CLA CML RAR    /TEST COMBINATION
3051 1050      TAD K3777
3052 7040      CMA
3053 7420      SNL
3054 7440      SZA
3055 7402      HLT          /CLA CML RAR FAILED, AC AND

```

PAUSE

/INSTRUCTION TEST - 1
 /GROUP 1 OPERATE TEST 55
 /TAPE 3

3056	7300	CLA CLL	
3057	1052	TAD K5252	/AC=5252 LINK=0
3060	7224	CLA CML RAL	/TEST COMBINATION
3061	1035	TAD K7776	
3062	7040	CMA	
3063	7420	SNL	
3064	7440	SZA	
3065	7402	HLT	/CLA CML RAL FAILED, AC AND /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 56

3066	7300	CLA CLL	
3067	1052	TAD K5252	/AC=5252 LINK=0
3070	7232	CLA CML RTR	/TEST COMBINATION
3071	1047	TAD K5777	
3072	7040	CMA	
3073	7420	SNL	
3074	7440	SZA	
3075	7402	HLT	/CLA CML RTR FAILED, AC AND /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 57

3076	7300	CLA CLL	
3077	1052	TAD K5252	/AC=5252 LINK=0
3100	7226	CLA CML RTL	/TEST COMBINATION
3101	1036	TAD K7775	
3102	7040	CMA	
3103	7420	SNL	
3104	7440	SZA	
3105	7402	HLT	/CLA CML RTL FAILED, AC AND /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 58

3106	7300	CLA CLL	/AC=0000 LINK=0
3107	7130	CLL CML RAR	/TEST COMBINATION
3110	7004	RAL	
3111	7430	SZL	
3112	7440	SZA	
3113	7402	HLT	/CLL CML RAR FAILED, AC SHOULD /BE 0000 LINK SHOULD BE 1

/GROUP 1 OPERATE TEST 59

```

3114 7320      CLA CLL CML      /AC=0000 LINK=1
3115 7130      CLL CML RAR      /TEST COMBINATION
3116 7004      RAL
3117 7430      SZL
3120 7440      SZA
3121 7402      HLT              /CLL CML RAR FAILED, AC SHOULD BE
                                /0000, LINK SHOULD BE A ONE

```

/GROUP 1 OPERATE TEST 60

```

3122 7300 CLA CLL /AC=0000 LINK=0
3123 7124 CLL CML RAL /TEST COMBINATION
3124 7010 RAR
3125 7430 SZL
3126 7440 SZA
3127 7402 HLT /CLL CML RAL FAILED, AC SHOULD
/BE EQUAL 0000, LINK SHOULD BE ONE

```

/GROUP 1 OPERATE TEST 01

[illegible]

/GROUP 1 OPERATE TEST 62

[illegible]

```

/ GROUP 1 OPERATE TEST 63
3144 7320 CLA CLL CML /AC=0000 LINK=1
3145 7132 CLL CML RTR /TEST COMBINATION
3146 7006 RTL
3147 7430 SZL
3150 7440 SZA
3151 7402 HLT /CLL CML RTR FAILED, AC SHOULD
/BE 0000 LINK SHOULD BE ONE,

/ GROUP 1 OPERATE TEST 64
3152 7300 CLA CLL /AC=0000 LINK=0
3153 7126 CLL CML RTL /TEST COMBINATION
3154 7012 RTR
3155 7430 SZL
3156 7440 SZA
3157 7402 HLT /CLL CML RTL FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE A ONE

/ GROUP 1 OPERATE TEST 65
3160 7320 CLA CLL CML /AC=0000 LINK=1
3161 7126 CLL CML RTL /TEST COMBINATION
3162 7012 RTR
3163 7430 SZL
3164 7440 SZA
3165 7402 HLT /CLL CML RTL FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE A ONE,

/ GROUP 1 OPERATE TEST 66
3166 7300 CLA CLL
3167 1052 TAD K5252 /AC=5252 LINK=0
3170 7330 CLA CLL CML RAR /TEST COMBINATION
3171 7004 RAL
3172 7430 SZL
3173 7440 SZA
3174 7402 HLT /CLA CLL CML RAR FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE ONE

3175 7000 NOP
3176 7000 NOP
3177 7000 NOP
3200

*3200
/ GROUP 1 OPERATE TEST 67
3200 7320 CLA CLL CML
3201 1053 TAD K2525 /AC=2525 LINK=1
3202 7330 CLA CLL CML RAR /TEST COMBINATION
3203 7004 RAL
3204 7430 SZL
3205 7440 SZA
3206 7402 HLT /CLA CLL CML RAR FAILED, AC SHOULD
/BE 0000, LINK SHOULD BE ONE

```

```

/GROUP 1 OPERATE TEST 68
3207 7300      CLA CLL
3210 1053      TAD K2525      /AC=2525 LINK=0
3211 7324      CLA CLL CML RAL /TEST COMBINATION
3212 7410      RAR
3213 7430      SZL
3214 7440      SZA
3215 7402      HLT
                        /CLA CLL CML RAL FAILED, AC SHOULD
                        /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 69
3216 7320      CLA CLL CML
3217 1052      TAD K5252      /AC=5252 LINK=1
3220 7324      CLA CLL CML RAL /TEST COMBINATION
3221 7010      RAR
3222 7430      SZL
3223 7440      SZA
3224 7402      HLT
                        /CLA CLL CML RAL FAILED, AC SHOULD
                        /BE 0000 LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 70
3225 7300      CLA CLL
3226 1053      TAD K2525      /AC=2525 LINK=0
3227 7332      CLA CLL CML RTR /TEST COMBINATION
3230 7006      RTL
3231 7430      SZL
3232 7440      SZA
3233 7402      HLT
                        /CLA CLL CML RTR FAILED, AC SHOULD
                        /BE 0000, LINK SHOULD BE A ONE
```

```

/GROUP 1 OPERATE TEST 71
3234 7320      CLA CLL CML
3235 1052      TAD K5252          /AC=5252 LINK=1
3236 7332      CLA CLL CML RTR /TEST COMBINATION
3237 7006      RTL
3240 7430      SZL
3241 7440      SZA
3242 7402      HLT          /CLA CLL CML RTR FAILED, AC SHOULD
                          /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 72
3243 7300      CLL CLA
3244 1053      TAD K2525          /AC=2525 LINK=0
3245 7326      CLA CLL CML RTL /TEST COMBINATION
3246 7012      RTR
3247 7430      SZL
3250 7440      SZA
3251 7402      HLT          /CLA CLL CML RTL FAILED, AC SHOULD
                          /BE 0000, LINK SHOULD BE A ZERO

/GROUP 1 OPERATE TEST 73
3252 7320      CLL CLA CML
3253 1052      TAD K5252          /AC=5252 LINK=1
3254 7326      CLA CLL CML RTL /TEST COMBINATION
3255 7012      RTR
3256 7430      SZL
3257 7440      SZA
3260 7402      HLT          /CLA CLL CML RTL FAILED, AC SHOULD
                          /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 74
3261 7300      CLA CLL
3262 1051      TAD K7777          /TEST PATTERN
3263 7041      CIA          /AC EQUALS 0001
3264 1035      TAD K7776
3265 7040      CMA
3266 7420      SNL
3267 7440      SZA          /CIA FAILED AC SHOULD EQUAL 0000
3270 7402      HLT          /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 75
3271 7300      CLA CLL
3272 1035      TAD K7776          /TEST PATTERN
3273 7041      CIA          /AC EQUALS 0002
3274 1036      TAD K7775
3275 7040      CMA
3276 7420      SNL
3277 7440      SZA          /CIA FAILED AC SHOULD EQUAL 0000
3300 7402      HLT          /LINK SHOULD EQUAL A ZERO

```

```

/GROUP 1 OPERATE TEST 76
3301 7300 CLA CLL
3302 1063 TAD K7774 /TEST PATTERN
3303 7041 CIA /AC EQUALS 0004
3304 1037 TAD K7773
3305 7040 CMA
3306 7420 SNL
3307 7440 SZA /CIA FAILED AC SHOULD EQUAL 0000
3310 7402 HLT /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 77
3311 7300 CLA CLL
3312 1062 TAD K7770 /TEST PATTERN
3313 7041 CIA /AC EQUALS 0010
3314 1040 TAD K7767
3315 7040 CMA
3316 7420 SNL
3317 7440 SZA
3320 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 78
3321 7300 CLA CLL
3322 1061 TAD K7760 /TEST PATTERN
3323 7041 CIA /AC EQUALS 0020
3324 1041 TAD K7757
3325 7040 CMA
3326 7420 SNL
3327 7440 SZA
3330 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000
/ LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 79
3331 7300 CLA CLL
3332 1060 TAD K7740 /TEST PATTERN
3333 7041 CIA
3334 1042 TAD K7737 /AC EQUALS 0040
3335 7040 CMA
3336 7420 SNL
3337 7440 SZA
3340 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000
/ LINK SHOULD EQUAL ZERO

```

```

/GROUP 1 OPERATE TEST 80
3341 7300      CLA CLL
3342 1076      TAD K7700      /TEST PATTERN
3343 7041      CIA           /AC EQUALS 0100
3344 1043      TAD K7677
3345 7040      CMA
3346 7420      SNL
3347 7440      SZA
3350 7402      HLT           /CIA FAILED A SHOULD EQUAL 0000
                               /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 81
3351 7300      CLA CLL
3352 1057      TAD K7600      /TEST PATTERN
3353 7041      CIA           /AC EQUALS 0200
3354 1044      TAD K7577
3355 7040      CMA
3356 7420      SNL
3357 7440      SZA
3360 7402      HLT           /CIA FAILED AC SHOULD EQUAL 0000
                               /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 82
3361 7300      CLA CLL
3362 1056      TAD K7400      /TEST PATTERN
3363 7041      CIA           /AC EQUALS 0400
3364 1045      TAD K7377
3365 7040      CMA
3366 7420      SNL
3367 7440      SZA
3370 7402      HLT           /CIA FAILED AC SHOULD EQUAL 0000
                               /LINK SHOULD EQUAL ZERO
```

3371	7000	NOP	
3372	7000	NOP	
3373	7000	NOP	
3374	7000	NOP	
3375	7000	NOP	
3376	7000	NOP	
3377	7000	NOP	
	3400		
*3400			
/GROUP 1 OPERATE TEST 83			
3400	7300	CLA CLL	
3401	1055	TAD K7000	/TEST PATTERN
3402	7041	CIA	/AC EQUALS 1000
3403	1046	TAD K6777	
3404	7040	CMA	
3405	7420	SNL	
3406	7440	SZA	
3407	7402	HLT	/CIA FAILED AC SHOULD EQUAL 0000
			/LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 84			
3410	7300	CLA CLL	
3411	1054	TAD K0000	/TEST PATTERN
3412	7041	CIA	/AC EQUALS 2000
3413	1047	TAD K5777	
3414	7040	CMA	
3415	7420	SNL	
3416	7440	SZA	
3417	7402	HLT	/CIA FAILED AC SHOULD EQUAL 0000
			/LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 85			
3420	7300	CLA CLL	
3421	1034	TAD K4000	/TEST PATTERN
3422	7041	CIA	/AC EQUALS 4000
3423	1050	TAD K3777	
3424	7040	CMA	
3425	7420	SNL	
3426	7440	SZA	
3427	7402	HLT	/CIA FAILED AC SHOULD EQUAL 000
			/LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 86			
3430	7300	CLA CLL	
3431	1020	TAD K0000	/TEST PATTERN
3432	7041	CIA	/AC EQUALS 0000, LINK EQUALS A ONE
3433	7450	SNA	
3434	7420	SNL	
3435	7402	HLT	/CIA FAILED AC SHOULD EQUAL 0000
			/LINK SHOULD EQUAL A ONE


```

/GROUP OPERATE TEST 87
3436 7340      CLA CMA CLL      /AC=7777,L=0
3437 7311      CLA CLL IAC RAR  /AC=0,L=1
3440 7430      SZL
3441 7440      SZA
3442 7402      HLT              /ERROR: LINC NOT SET OR
                                /AC NOT 0

```

```

/GROUP 1 OPERATE TEST 88
3443 7360      CLA CMA CLL CML  /AC=7777,L=1
3444 7305      CLA CLL IAC RAL  /AC=2,L=0
3445 7430      SZL
3446 7402      HLT              /ERROR: LINC NOT 0
3447 7041      CMA IAC
3450 1022      TAD K0002
3451 7440      SZA
3452 7402      HLT              /ERROR AC NOT 2

```

```

/GROUP 1 OPERATE TEST 89
3453 7320      CLA CLL CML      /AC=0,L=1
3454 7313      CLA CLL IAC RTR  /AC=4000,L=0
3455 7430      SZL
3456 7402      HLT              /ERROR: LINC NOT 0
3457 7500      SMA
3460 7402      HLT              /ERROR: AC NOT 4000

```

```

/GROUP 1 OPERATE TEST 90
3461 7360      CLA CMA CLL CML      /AC=7777,L=1
3462 7307      CLA CLL IAC RTL      /AC=4,LINC=0
3463 7430      SZL
3464 7402      HLT              /ERROR: LINC NOT 0
3465 7041      CMA IAC
3466 1023      TAD K0004
3467 7440      SZA
3470 7402      HLT              /ERROR: AC NOT 4

```

```

/GROUP 1 OPERATE TEST 91
3471 7300      CLA CLL          /AC=0, L=0
3472 7331      CLA CLL CML IAC RAR /AC=4000, L=1
3473 7520      SMA SNL
3474 7402      HLT              /ERROR: AC NOT 4000 OR
                                /LINC NOT 1

```

```

/GROUP 1 OPERATE TEST 92
3475 7300      CLA CLL      /AC=0,L=2
3476 7345      CLA CMA CLL IAC RAL /AC=0001,L=0
3477 7430      SZL
3500 7402      HLT          /LINC NOT=0
3501 7041      CMA IAC
3502 1021      TAD K0001
3523 7440      SZA
3504 7402      HLT          /AC NOT 0001

```

```

/GROUP 1 OPERATE TEST 93
3505 7360      CLA CMA CLL CML /AC=7777,L=1
3506 7373      CLA CMA CLL CML IAC RTR /AC=0,L=0
3507 7440      SZA
3510 7402      HLT          /ERROR!
3511 7430      SZL
3512 7402      HLT          /ERROR!

```

```

/GROUP 2 OPERATE TEST 1
3513 7240      CLA CMA      /AC=7777
3514 7700      CLA SMA      /TEST COMBINATION
3515 7402      HLT          /CLA SMA DID NOT SKIP
                               /AC SHOULD BE 0000

3516 7440      SZA          /CLA SMA DID NOT CLEAR AC
3517 7402      HLT          /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 2
3520 7240      CLA CMA      /AC=7777
3521 7640      CLA SZA      /TEST COMBINATION
3522 7440      SZA          /CLA SZA SKIPPED OR AC NOT
3523 7402      HLT          /CLEARED TO 0000

/GROUP 2 OPERATE TEST 3
3524 7240      CLA CMA      /AC=7777
3525 7540      SMA SZA      /TEST COMBINATION
3526 7402      HLT          /SMA SZA SHOULD HAVE SKIPPED
                               /AC SHOULD EQUAL 7777

/GROUP 2 OPERATE TEST 4
3527 7200      CLA          /AC=0000
3530 7540      SMA SZA      /TEST COMBINATION
3531 7402      HLT          /SMA SZA SHOULD HAVE SKIPPED
                               /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 5
3532 7200      CLA          /AC=3777
3533 1050      TAD K3777     /TEST COMBINATION
3534 7540      SMA SZA
3535 7450      SNA
3536 7402      HLT          /SMA SZA SHOULD NOT HAVE SKIPPED
                               /AC SHOULD EQUAL 3777
```

```

/ GROUP 2 OPERATE TEST 6
3537 7240 CLA CMA /AC=7777
3542 7740 CLA SMA SZA /TEST COMBINATION
3541 7402 HLT /CLA SMA SZA SHOULD HAVE SKIPPED
/AC SHOULD BE 0000
3542 7440 SZA
3543 7402 HLT /AC WAS NOT CLEARED
/AC SHOULD BE 0000
/ GROUP 2 OPERATE TEST 7
3544 7200 CLA /AC=0000
3545 7740 CLA SMA SZA /TEST COMBINATION
3546 7402 HLT /CLA SMA SZA SHOULD HAVE SKIPPED
/AC SHOULD BE 0000
3547 7440 SZA
3550 7402 HLT /AC WAS NOT CLEARED
/AC SHOULD BE 0000
/ GROUP 2 OPERATE TEST 8
3551 7200 CLA
3552 1050 TAD K3777 /AC=3777
3553 7740 CLA SMA SZA /TEST COMBINATION
3554 7440 SZA
3555 7402 HLT /SMA SZA DID NOT SKIP OR AC
/NOT CLEARED TO 0000
/ GROUP 2 OPERATE TEST 9
3556 7300 CLL CLA /LINK=0
3557 1052 TAD K252 /AC=5252
3560 7620 CLA SNL /TEST COMBINATION
3561 7440 SZA
3562 7402 HLT /SNL SKIPPED OR AC NOT CLEARED
/AC AND LINK SHOULD EQUAL ZERO

```

```

/GROUP 2 OPERATE TEST 10
3563 7320      CLA CLL CML
3564 1053      TAD K2525          /AC=2525 LINK=1
3565 7620      CLA SNL          /TEST COMBINATION
3566 7402      HLT              /SNL DID NOT SKIP
                                   /LINK SHOULD EQUAL ONE
3567 7440      SZA
3570 7402      HLT              /CLA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 11
3571 7300      CLA CLL          /AC=0000 LINK=0
3572 7520      SMA SNL          /TEST COMBINATION
3573 7440      SZA
3574 7402      HLT              /SMA SNL SKIPPED, AC AND LINK
                                   /SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 12
3575 7320      CLA CLL CML      /AC=0000 LINK=1
3576 7520      SMA SNL          /TEST COMBINATION
3577 7402      HLT              /SNL SHOULD HAVE SKIPPED, LINK = 1

/GROUP 2 OPERATE TEST 13
3600 7300      CLA CLL
3601 1034      TAD K4000          /AC=4000 LINK=0
3602 7520      SMA SNL          /TEST COMBINATION
3603 7402      HLT              /SMA SHOULD HAVE SKIPPED
                                   /AC=4000

/GROUP 2 OPERATE TEST 14
3604 7320      CLA CLL CML
3605 1034      TAD K4000          /AC=4000 LINK=1
3606 7520      SMA SNL          /TEST COMBINATION
3607 7402      HLT              /SMA SNL SHOULD HAVE SKIPPED
                                   /AC=4000 LINK=1

```

```

/GROUP 2 OPERATE TEST 15
3610 7300      CLA CLL      /AC=0000 LINK=0
3611 7720      CLA SMA SNL   /TEST COMBINATION
3612 7440      SZA
3613 7402      HLT          /SMA SNL SKIPPED, AC AND LINK
                          /SHOULD BE ZERO

/GROUP 2 OPERATE TEST 16
3614 7320      CLA CLL CML   /AC=0000 LINK=1
3615 7720      CLA SMA SNL   /TEST COMBINATION
3616 7402      HLT          /SNL SHOULD HAVE SKIPPED
                          /LINK=1
3617 7440      SZA
3620 7402      HLT          /CLA SMA SNL DID NOT CLEAR AC
                          /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 17
3621 7300      CLA CLL
3622 1034      TAD K4000      /AC=4000 LINK=0
3623 7720      CLA SMA SNL   /TEST COMBINATION
3624 7402      HLT          /SMA SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 0000 LINK=0
3625 7440      SZA
3626 7402      HLT          /CLA SMA SNL DID NOT CLEAR AC
                          /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 18
3627 7320      CLA CLL CML
3630 1034      TAD K4000      /AC=4000 LINK=1
3631 7720      CLA SMA SNL   /TEST COMBINATION
3632 7402      HLT          /CLA SMA SNL SHOULD HAVE SKIPPED
                          /AC SHOULD BE 0000 LINK=1
3633 7440      SZA
3634 7402      HLT          /CLA SMA SNL DID NOT CLEAR AC
                          /AC SHOULD BE 0000 LINK=1

/GROUP 2 OPERATE TEST 19
3635 7300      CLA CLL      /AC=0000 LINK=0
3636 7460      SZA SNL       /TEST COMBINATION
3637 7402      HLT          /SZA SNL DID NOT SKIP
                          /AC=0000

/GROUP 2 OPERATE TEST 20
3640 7320      CLL CLA CML   /AC=0000 LINK=1
3641 7460      SZA SNL       /TEST COMBINATION
3642 7402      HLT          /SZA SNL DID NOT SKIP
                          /AC=0000 LINK=1

```

```

/GROUP 2 OPERATE TEST 21
3643 7300      CLA CLL
3644 1031      TAD K0400      /AC=0400 LINK=0
3645 7460      SZA SNL      /TEST COMBINATION
3646 7450      SNA
3647 7402      HLT      /SZA SNL SKIPPED
                        /AC=0400 LINK=0

/GROUP 2 OPERATE TEST 22
3650 7320      CLA CLL CML
3651 1026      TAD K0040      /AC=0040 LINK=1
3652 7460      SZA SNL      /TEST COMBINATION
3653 7402      HLT      /SZA SNL SHOULD HAVE SKIPPED
                        /LINK=1

/GROUP 2 OPERATE TEST 23
3654 7300      CLA CLL      /AC=0000 LINK=0
3655 7660      CLA SZA SNL   /TEST COMBINATION
3656 7402      HLT      /CLA SZA SNL SHOULD HAVE SKIPPED
                        /AC AND LINK SHOULD EQUAL ZERO

3657 7440      SZA
3660 7402      HLT      /CLA SZA SNL DID NOT CLEAR AC
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 24
3661 7320      CLA CLL CML   /AC=0000 LINK=1
3662 7660      CLA SZA SNL   /TEST COMBINATION
3663 7402      HLT      /CLA SZA SNL SHOULD HAVE SKIPPED
                        /AC=0000 LINK=1

3664 7440      SZA
3665 7402      HLT      /CLA SZA SNL DID NOT CLEAR AC
                        /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 25
3666 7320      CLA CLL CML
3667 1030      TAD K0200      /AC=0200 LINK=1
3670 7660      CLA SZA SNL   /TEST COMBINATION OR
3671 7402      HLT      /CLA SZA SNL SHOULD HAVE SKIPPED
                        /LINK=1

3672 7440      SZA
3673 7402      HLT      /CLA SZA SNL DID NOT CLEAR AC
                        /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 26
3674 7300      CLA CLL
3675 1033      TAD K2000      /AC=2000 LINK=0
3676 7660      CLA SZA SNL   /TEST COMBINATION
3677 7440      SZA
3700 7402      HLT      /CLA SZA SNL FAILED, AC AND
                        /LINK SHOULD EQUAL ZERO

```

```

/GROUP 2 OPERATE TEST 27
3701 7300      CLA CLL      /AC=0000 LINK=0
3702 7560      SMA SZA SNL    /TEST COMBINATION
3703 7402      HLT           /SMA SZA SNL SHOULD HAVE SKIPPED
                          /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 28
3704 7320      CLA CLL CML    /AC=3777 LINK=1
3705 1050      TAD K3777
3706 7560      SMA SZA SNL    /TEST COMBINATION
3707 7402      HLT           /SMA SZA SNL SHOULD HAVE SKIPPED
                          /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 29
3710 7300      CLA CLL
3711 1034      TAD K4000      /AC=4000 LINK=0
3712 7560      SMA SZA SNL    /TEST COMBINATION
3713 7402      HLT           /SMA SZA SNL SHOULD HAVE SKIPPED
                          /AC=4000 LINK=0

/GROUP 2 OPERATE TEST 30
3714 7300      CLA CLL
3715 1050      TAD K3777      /AC=3777 LINK=0
3716 7560      SMA SZA SNL    /TEST COMBINATION
3717 7450      SNA
3720 7402      HLT           /SMA SZA SNL SHOULD NOT HAVE
                          /SKIPPED, AC=3777 LINK=0

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/GROUP 2 OPERATE TEST 31
3721 7300      CLA CLL      /AC=0000 LINK=0
3722 7760      CLA SMA SZA SNL /TEST COMBINATION
3723 7402      HLT          /CLA SMA SZA SNL SHOULD HAVE SKIPPED
                          /AC SHOULD EQUAL 0000

3724 7440      SZA
3725 7402      HLT          /AC NOT ZERO AFTER CLA SMA SZA SNL
                          /AC SHOULD BE 0000 LINK=0

/GROUP 2 OPERATE TEST 32
3726 7320      CLA CLL CML
3727 1050      TAD K3777      /AC=3777 LINK=1
3730 7760      CLA SMA SZA SNL /TEST COMBINATION
3731 7402      HLT          /CLA SMA SZA SNL DID NOT SKIP
                          /AC SHOULD BE 0000 LINK=1

3732 7440      SZA
3733 7402      HLT          /CLA SMA SZA SNL DID NOT CLEAR AC
                          /AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 33
3734 7300      CLA CLL
3735 1034      TAD K4000      /AC=4000 LINK=0
3736 7760      CLA SMA SZA SNL /TEST COMBINATION
3737 7402      HLT          /CLA SMA SZA SNL SHOULD HAVE SKIPPED
                          /AC SHOULD BE 0000, LINK=0

3740 7440      SZA
3741 7402      HLT          /CLA SMA SZA SNL DID NOT CLEAR AC
                          /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 34
3742 7300      CLA CLL
3743 1050      TAD K3777      /AC=3777 LINK=0
3744 7760      CLA SMA SZA SNL /TEST COMBINATION
3745 7440      SZA
3746 7402      HLT          /CLA SMA SZA SNL FAILED, AC
                          /SHOULD BE ZERO, LINK=0

/GROUP 2 OPERATE TEST 35
3747 7300      CLA CLL      /AC=0000 LINK=0
3750 7410      SKP          /TEST INSTRUCTION
3751 7402      HLT          /SKIP FAILED
                          /AC AND LINK EQUAL ZERO

/GROUP 2 OPERATE TEST 36
3752 7320      CLA CLL CML   /AC=0000 LINK=1
3753 7410      SKP          /TEST INSTRUCTION
3754 7402      HLT          /SKIP FAILED
                          /AC=0000 LINK=1

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/GROUP 2 OPERATE TEST 37
3755 7320      CLA CLL CML
3756 1050      TAD K3777      /AC=3777 LINK=1
3757 7410      SKP          /TEST INSTRUCTION
3760 7402      HLT          /SKIP FAILED
                          /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 38
3761 7300      CLA CLL
3762 1050      TAD K3777      /AC=3777 LINK=0
3763 7410      SKP          /TEST INSTRUCTION
3764 7402      HLT          /SKIP FAILED
                          /AC=3777 LINK=0

/GROUP 2 OPERATE TEST 39
3765 7200      CLA
3766 1050      TAD K3777      /AC=3777
3767 7710      CLA SPA      /TEST COMBINATION
3770 7402      HLT          /CLA SPA DID NOT SKIP, AC
                          /SHOULD BE ZERO

3771 7440      SZA
3772 7402      HLT          /CLA SPA DID NOT CLEAR AC
                          /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 40
3773 7200      CLA
3774 1034      TAD K4000      /AC=4000
3775 7710      CLA SPA      /TEST COMBINATION
3776 7440      SZA
3777 7402      HLT          /CLA SPA FAILED, AC SHOULD
                          /EQUAL 0000

4000      *4000

/GROUP 2 OPERATE TEST 41
4000 7240      CLA CMA      /AC=7777
4001 7650      CLA SNA      /TEST COMBINATION
4002 7402      HLT          /CLA SNA DID NOT SKIP
                          /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 42
4003 7200      CLA          /AC=0000
4004 7650      CLA SNA      /TEST COMBINATION
4005 7440      SZA
4006 7402      HLT          /CLA SNA FAILED
                          /AC SHOULD EQUAL 0000

```

```

/GROUP 2 OPERATE TEST 43
4017 7200      CLA      /AC=0000
4018 7550      SPA SNA  /TEST COMBINATION (AND)
4019 7440      SZA
4012 7402      HLT      /SPA SNA SKIPPED
                        /AC=0000

/GROUP 2 OPERATE TEST 44
4013 7200      CLA
4014 1050      TAD K3777 /AC=3777
4015 7550      SPA SNA  /TEST COMBINATION (AND)
4016 7402      HLT      /SPA SNA FAILED TO SKIP
                        /AC=3777

/GROUP 2 OPERATE TEST 45
4017 7200      CLA
4020 1034      TAD K4000 /AC=4000
4021 7550      SPA SNA  /TEST COMBINATION (AND)
4022 7450      SNA
4023 7402      HLT      /SPA SNA SKIPPED,
                        /AC=4000

/GROUP 2 OPERATE TEST 46
4024 7200      CLA      /AC=0000
4025 7750      CLA SPA SNA /TEST COMBINATION (AND)
4026 7440      SZA
4027 7402      HLT      /CLA SPA SNA FAILED,
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 47
4030 7200      CLA
4031 1050      TAD K3777 /AC=3777
4032 7750      CLA SPA SNA /TEST COMBINATION (AND)
4033 7402      HLT      /CLA SPA SNA DID NOT SKIP
                        /AC SHOULD BE 0000

4034 7440      SZA
4035 7402      HLT      /CLA SPA SNA DID NOT CLEAR THE AC
                        /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 48
4036 7200      CLA
4037 1034      TAD K4000 /AC=4000
4040 7750      CLA SPA SNA /TEST COMBINATION (AND)
4041 7440      SZA
4042 7402      HLT      /CLA SPA SNA FAILED
                        /AC SHOULD EQUAL ZERO

```

PAUSE

/INSTRUCTION TEST - TAPE 4

/GROUP 2 OPERATE TEST 49

4243	7320	CLA CLL	
4244	1052	TAD K5252	/AC=5252 LINK=0
4245	7530	CLA SZL	/TEST COMBINATION
4246	7402	HLT	/CLA SZL DID NOT SKIP
			/AC AND LINK SHOULD BE 0
4247	7440	SZA	
4250	7402	HLT	/CLA SZL DID NOT CLEAR AC
			/AC SHOULD BE ZERO, LINK=0

/GROUP 2 OPERATE TEST 50

4251	7360	CLA CLL CML CMA	/AC=7777 LINK=1
4252	7530	CLA SZL	/TEST COMBINATION (AND)
4253	7440	SZA	
4254	7402	HLT	/CLA SZL FAILED, AC SHOULD
			/BE 2000, LINK=1

/GROUP 2 OPERATE TEST 51

4255	7320	CLA CLL	
4256	1050	TAD K3777	/AC=3777 LINK=0
4257	7530	SPA SZL	/TEST COMBINATION (AND)
4260	7402	HLT	/SPA SZL DID NOT SKIP
			/AC=3777 LINK=0

/GROUP 2 OPERATE TEST 52

4261	7320	CLA CLL CML	
4262	1050	TAD K3777	/AC=3777 LINK=1
4263	7530	SPA SZL	/TEST COMBINATION (AND)
4264	7450	SNA	
4265	7402	HLT	/SPA SZL SKIPPED
			/AC=3777 LINK=1

/GROUP 2 OPERATE TEST 53

4266	7320	CLA CLL	
4267	1034	TAD K4000	/AC=4000 LINK=0
4270	7530	SPA SZL	/TEST COMBINATION (AND)
4271	7500	SMA	
4272	7402	HLT	/SPA SZL SKIPPED
			/AC=4000 LINK=0

/GROUP 2 OPERATE TEST 54

4273	7300	CLA CLL	
4274	1050	TAD K3777	/AC=3777 LINK=0
4275	7730	CLA SPA SZL	/TEST COMBINATION (AND)
4276	7402	HLT	/CLA SPA SZL SHOULD HAVE SKIPPED
			/AC SHOULD BE 0000, LINK=0
4277	7440	SZA	
4278	7402	HLT	/CLA SPA SZL DID NOT CLEAR THE AC
			/AC SHOULD BE 0000

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/GROUP 2 OPERATE TEST 55
4101 7320      CLA CLL CML
4102 1050      TAD K3777      /AC=3777 LINK=1
4103 7730      CLA SPA SZL      /TEST COMBINATION (AND)
4104 7440      SZA
4105 7402      HLT      /CLA SPA SZL FAILED
                        /AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 56
4106 7300      CLA CLL
4107 1034      TAD K4000      /AC=4000 LINK=0
4110 7730      CLA SPA SZL      /TEST COMBINATION (AND)
4111 7440      SZA
4112 7402      HLT      /CLA SPA SZL FAILED
                        /AC SHOULD EQUAL 0000 LINK=0

/GROUP 2 OPERATE TEST 57
4113 7300      CLA CLL
4114 1034      TAD K4000      /AC=4000 LINK=0
4115 7470      SNA SZL      /TEST COMBINATION (AND)
4116 7402      HLT      /SNA SZL DID NOT SKIP
                        /AC = 4000 LINK=0

/GROUP 2 OPERATE TEST 58
4117 7320      CLA CLL CML
4120 1034      TAD K4000      /AC=4000 LINK=1
4121 7470      SNA SZL      /TEST COMBINATION (AND)
4122 7420      SNL
4123 7402      HLT      /SNA SZL SKIPPED
                        /AC=4000 LINK=1

/GROUP 2 OPERATE TEST 59
4124 7300      CLA CLL
4125 7470      SNA SZL      /AC=0000 LINK=0
4126 7430      SZL      /TEST COMBINATION (AND)
4127 7402      HLT      /SNA SZL SKIPPED
                        /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 60
4130 7320      CLA CLL CML
4131 1034      TAD K4000      /AC=4000 LINK=1
4132 7670      CLA SNA SZL      /TEST COMBINATION (AND)
4133 7440      SZA
4134 7402      HLT      /CLA SNA SZL FAILED. AC SHOULD
                        /BE 0000. LINK=1

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/GROUP 2 OPERATE TEST 61
4135 7300      CLA CLL
4136 1034      TAD K4000      /AC=4000 LINK=0
4137 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4140 7402      HLT           /CLA SNA SZL DID NOT SKIP
                               /AC SHOULD BE 0000, LINK=0

4141 7440      SZA
4142 7402      HLT           /CLA SNA SZL DID NOT CLEAR AC
                               /AC AND LINK SHOULD BE ZERO

/GROUP 2 OPERATE TEST 62
4143 7300      CLA CLL      /AC=0000 LINK=0
4144 7670      CLA SNA SZL  /TEST COMBINATION (AND)
4145 7440      SZA
4146 7402      HLT           /CLA SNA SZL FAILED. AC SHOULD
                               /BE 0000, LINK=0

/GROUP 2 OPERATE TEST 63
4147 7300      CLA CLL
4150 1050      TAD K3777     /AC=3777 LINK=0
4151 7570      SPA SNA SZL  /TEST COMBINATION (AND)
4152 7402      HLT           /SPA SNA SZL DID NOT SKIP
                               /AC=3777 LINK=0

/GROUP 2 OPERATE TEST 64
4153 7320      CLA CLL CML
4154 1050      TAD K3777     /AC=3777 LINK=1
4155 7570      SPA SNA SZL  /TEST COMBINATION (AND)
4156 7420      SNL
4157 7402      HLT           /SPA SNA SZL SKIPPED
                               /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 65
4160 7300      CLA CLL      /AC=0000 LINK=0
4161 7570      SPA SNA SZL  /TEST COMBINATION (AND)
4162 7430      SZL
4163 7402      HLT           /SPA SNA SZL SKIPPED
                               /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 66
4164 7300      CLA CLL
4165 1034      TAD K4000     /AC=4000 LINK=0
4166 7570      SPA SNA SZL  /TEST COMBINATION (AND)
4167 7430      SZL
4170 7402      HLT           /SPA SNA SZL SKIPPED
                               /AC=4000 LINK=0

```

/GROUP 2 OPERATE TEST 67

4171	7300	CLA CLL	
4172	1050	TAD K3777	/AC=3777 LINK=0
4173	7770	CLA SPA SNA SZL	/TEST COMBINATION (AND)
4174	7402	HLT	/CLA SPA SNA SZL DID NOT SKIP
			/AC AND LINK SHOULD BE ZERO
4175	7440	SZA	
4176	7402	HLT	/CLA SPA SNA SZL DID NOT CLEAR AC
			/AC AND LINK SHOULD BE ZERO
4177	7000	NOP	
4200	*4200		

/GROUP 2 OPERATE TEST 68

4200	7320	CLA CLL CML	
4201	1050	TAD K3777	/AC=3777 LINK=1
4202	7770	CLA SPA SNA SZL	/TEST COMBINATION (AND)
4203	7440	SZA	
4204	7402	HLT	/CLA SPA SNA SZL FAILED, AC SHOULD
			/BE 0000, LINK SHOULD EQUAL ONE

/GROUP 2 OPERATE TEST 69

4205	7300	CLA CLL	
4206	1034	TAD K4000	/AC=4000 LINK=0
4207	7770	CLA SPA SNA SZL	/TEST COMBINATION (AND)
4210	7440	SZA	
4211	7402	HLT	/CLA SPA SNA SZL FAILED, AC SHOULD
			/BE 0000, LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 70

4212	7300	CLA CLL	/AC=0000 LINK=0
4213	7770	CLA SPA SNA SZL	/TEST COMBINATION (AND)
4214	7440	SZA	
4215	7402	HLT	/CLA SPA SNA SZL FAILED, AC AND
			/LINK SHOULD BE ZERO.

/GROUP 2 OPERATE TEST 71

4216	7200	CLA	
4217	1052	TAD K5252	/AC=5252
4220	7604	CLA OSR	/TEST COMBINATION
4221	7040	CMA	
4222	7440	SZA	
4223	7402	HLT	/CLA OSR FAILED
			/AC SHOULD BE 0000

```

/GROUP 2 OPERATE TEST 72
4224 7200      CLA
4225 1034      TAD K4000      /AC=4000
4226 7504      SMA OSR      /TEST COMBINATION
4227 7402      HLT      /SMA OSR FAILED TO SKIP
                        /AC SHOULD BE 7777

4230 7040      CMA
4231 7440      SZA
4232 7402      HLT      /SMA OSR FAILED
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 73
4233 7200      CLA      /AC=0000
4234 7444      SZA OSR    /TEST COMBINATION
4235 7402      HLT      /SZA OSR FAILED TO SKIP
                        /AC SHOULD BE 0000

4236 7040      CMA
4237 7440      SZA
4240 7402      HLT      /SZA OSR FAILED,
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 74
4241 7320      CLL CML CLA /LINK=1
4242 7424      SNL OSR    /TEST COMBINATION
4243 7402      HLT      /SNL OSR FAILED TO SKIP
                        /AC SHOULD BE 7777

4244 7040      CMA
4245 7440      SZA
4246 7402      HLT      /SNL OSR FAILED,
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 75
4247 7500      CLA CLL
4250 1050      TAD K3777    /AC=3777 LINK=0
4251 7764      CLA SMA SZA SNL OSR /TEST COMBINATION
4252 7450      SNA
4253 7402      HLT      /CLA SMA SZA SNL OSR FAILED,
                        /AC SHOULD BE 7777. LINK=0

4254 7040      CMA
4255 7440      SZA
4256 7402      HLT      /CLA SMA SZA SNL OSR FAILED
                        /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 76
4257 7200      CLA      /AC=0000
4260 7414      SKP OSR    /TEST COMBINATION
4261 7402      HLT      /SKP OSR DID NOT SKIP
                        /AC SHOULD BE 7777

4262 7040      CMA
4263 7440      SZA
4264 7402      HLT      /SKP OSR FAILED
                        /AC SHOULD EQUAL ZERO

```



```

/GROUP 2 OPERATE TEST 77
4265 7200      CLA      /AC=0000
4266 7514      SPA OSR   /TEST COMBINATION
4267 7402      HLT      /SPA OSR DID NOT SKIP
                        /AC SHOULD EQUAL 7777

4270 7040      CMA
4271 7440      SZA
4272 7402      HLT      /SPA OSR FAILED,
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 78
4273 7200      CLA
4274 1031      TAD K0400 /AC=0400
4275 7454      SNA OSR   /TEST COMBINATION
4276 7402      HLT      /SNA OSR DID NOT SKIP
                        /AC SHOULD BE 7777

4277 7040      CMA
4300 7440      SZA
4301 7402      HLT      /SNA OSR FAILED
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 79
4302 7300      CLA CLL   /LINK=0 AC=0000
4303 7434      SZL OSR   /TEST COMBINATION
4304 7402      HLT      /SZL OSR DID NOT SKIP
                        /AC SHOULD BE 7777

4305 7040      CMA
4306 7440      SZA
4307 7402      HLT      /SZL OSR FAILED
                        /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 80
4310 7300      CLA CLL
4311 1050      TAD K3777 /AC=3777 LINK=0
4312 7774      CLA SPA SNA SZL OSR /TEST COMBINATION (AND)
4313 7402      HLT      /ABOVE MESS DID NOT SKIP
                        /AC SHOULD BE 7777

4314 7040      CMA
4315 7440      SZA
4316 7402      HLT      /CLA SPA SNA SZL OSR FAILED
                        /AC SHOULD BE 0000

```

/AND TEST 1		
4317	7200	CLA
4320	0051	AND K7777
4321	7440	SZA
4322	7402	HLT
		/AND FAILED AC SHOULD /BE 0000
/AND TEST 2		
4323	7240	CLA CMA
4324	0020	AND K0000
4325	7440	SZA
4326	7402	HLT
		/AND FAILED /AC SHOULD EQUAL 0000
/AND TEST 3		
4327	7320	CLA CLL CML
4330	1051	TAD K7777
4331	0051	AND K7777
4332	7040	CMA
4333	7430	SZL
4334	7440	SZA
4335	7402	HLT
		/AC=7777 LINK=1
		/AND FAILED, AC SHOULD BE /0000, LINK SHOULD EQUAL ONE
/AND TEST 4		
4336	7300	CLA CLL
4337	1053	TAD K2525
4340	0052	AND K2525
4341	7420	SNL
4342	7440	SZA
4343	7402	HLT
		/AC=2525 LINK=2
		/AND FAILED, AC SHOULD BE /0000, LINK SHOULD BE 0
/AND TEST 5		
4344	7300	CLA CLL
4345	1052	TAD K2525
4346	0053	AND K2525
4347	7420	SNL
4350	7440	SZA
4351	7402	HLT
		/AC=5252 LINK=0
		/AND FAILED, AC SHOULD BE /0000, LINK SHOULD BE 0

```

/AND TEST 6
4352 7300 CLA CLL
4353 1035 TAD K7776 /AC=7776 LINK=0
4354 0052 AND K5252 /TEST INSTRUCTION
4355 7041 CIA /AC=2526
4356 1052 TAD K5252 /AC=0000 LINK=1
4357 7430 SZL
4360 7440 SZA
4361 7402 HLT /AND FAILURE, AC SHOULD BE
/0000, LINK SHOULD BE ONE

```

```

/AND TEST 7
4362 7300 CLA CLL
4363 1053 TAD K2525 /AC=2525 LINK=0
4364 0053 AND K2525 /TEST INSTRUCTION
4365 7041 CIA /AC=5253
4366 1053 TAD K2525 /AC=0000 LINK = 1
4367 7430 SZL
4370 7440 SZA
4371 7402 HLT /AND FAILED, AC SHOULD BE
/0000, LINK SHOULD BE ONE,

```

```

4372 7000 NOP
4373 7000 NOP
4374 7000 NOP
4375 7000 NOP
4376 7000 NOP
4377 7000 NOP
4400

```

*4400

```

/CHECK FOR BELL
4400 7200 CLA
4401 1220 TAD BLCNT
4402 7001 IAC
4403 3220 DCA BLCNT
4404 1220 TAD BLCNT
4405 7640 SZA CLA
4406 5147 JMP START+3
4407 1221 TAD BLCNT
4410 3220 DCA BLCNT

```

```

/RING BELL
4411 1217 TAD BEL
4412 6046 TFS
4413 6041 TSF
4414 5213 JMP , -1
4415 6042 TCF
4416 5147 JMP START+3

```

```

4417 0207 BEL, 0207
4420 7600 BLCNT, -200
4421 7600 BLCNT, -200

```

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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