

IDENTIFICATION

PRODUCT CODE: MAINDEC-8/E-D0AB  
PRODUCT NAME: PDP-8/E INSTRUCTION TEST 1  
DATE CREATED: MAY 10, 1971  
MAINTAINER: DIAGNOSTIC GROUP  
AUTHOR: ED FORTMILLER

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1. ABSTRACT

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THIS IS A DIAGNOSTIC PROGRAM FOR TESTING THE AND, TAD,  
OPERATE, AND BASIC MQ, INSTRUCTIONS OF THE PDP-8/E ONLY.

2. REQUIREMENTS

2.1 EQUIPMENT

-----  
A PDP-8/E EQUIPPED WITH TELETYPE.

2.2 STORAGE

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THIS PROGRAM USES LOCATIONS 0000-5314. 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

-----  
0200

4.3 OPERATOR ACTION

- 
1. SET SR TO 200 AND PRESS LOAD ADDRESS.
  2. SET SR TO 7777 AND PUSH CLEAR AND CONTINUE
  3. PROGRAM WILL HALT. MA=147
  4. IF AC IS NOT EQUAL TO 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(S) 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

-----  
THE TELETYPE BELL RINGS AT THE END OF 1440 PROGRAM PASSES  
WHICH IS APPROXIMATELY EVERY 5 SECONDS.

9.

PROGRAM DESCRIPTION  
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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 BEGINNING AND 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. TEST "BSW" INSTRUCTION.
5. GROUP 1 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
6. GROUP 2 OPERATE INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
7. MQ INSTRUCTION TEST. ALL POSSIBLE COMBINATIONS.
8. TEST "AND" INSTRUCTION.

THE TELETYPE BELL RINGS APPROXIMATELY EVERY 5 SECONDS.

10.

LISTING  
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/PDP-8/E INSTRUCTION TEST 1 MAINDEC-8E-D0AB  
 /COPYRIGHT 1970, 1971, DIGITAL EQUIPMENT CORP., MAYNARD, MASS. 01754  
 /TAPE 1

7002	BSW=7002	/SWAP BYTES IN AC
7401	NOPE=7401	/NOP
7601	CLAE=7601	/CLEAR AC
7421	MQL=7421	/LOAD MQ FROM AC THEN CLEAR AC
7501	MQA=7501	/INCLUSIVE OR, MQ AND AC
7621	CAM=7621	/CLEAR AC AND MQ
7521	SWP=7521	/SWAP AC AND MQ
7701	ACL=7701	/LOAD AC FROM MQ, CLEAR MQ
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	0003	K3,	3
0024	0004	K0004,	0004
0025	0006	K6,	6
0026	0010	K0010,	0010
0027	0014	K14,	14
0030	0020	K0020,	0020
0031	0030	K30,	30
0032	0040	K0040,	0040
0033	0060	K60,	60
0034	0100	K0100,	0100
0035	0140	K140,	140
0036	0200	K0200,	0200
0037	0300	K300,	300
0040	0400	K0400,	0400
0041	0600	K600,	600
0042	1000	K1000,	1000
0043	1234	K1234,	1234
0044	1400	K1400,	1400
0045	2000	K2000,	2000
0046	3000	K3000,	3000
0047	3312	K3312,	3312
0050	4000	K4000,	4000
0051	7717	K7717,	7717
0052	7776	K7776,	7776
0053	7775	K7775,	7775

0054	7773	K7773,	7773
0055	7767	K7767,	7767
0056	7757	K7757,	7757
0057	7737	K7737,	7737
0060	7177	K7177,	7177
0061	7677	K7677,	7677
0062	7577	K7577,	7577
0063	7377	K7377,	7377
0064	6777	K6777,	6777
0065	5777	K5777,	5777
0066	3777	K3777,	3777
0067	7777	K7777,	7777
0070	5252	K5252,	5252
0071	2525	K2525,	2525
0072	6000	K6000,	6000
0073	7000	K7000,	7000
0074	7400	K7400,	7400
0075	7600	K7600,	7600
0076	7740	K7740,	7740
0077	7760	K7760,	7760
0100	7770	K7770,	7770
0101	7774	K7774,	7774

0102	0007	K0007,	0007
0103	0067	K0067,	0067
0104	0017	K0017,	0017
0105	0037	K0037,	0037
0106	0077	K0077,	0077
0107	0177	K0177,	0177
0110	0377	K0377,	0377
0111	0777	K0777,	0777
0112	1777	K1777,	1777
0113	7700	K7700,	7700
0114	5225	K5225,	5225
0115	2552	K2552,	2552
0116	0770	K0770,	0770
0117	7007	K7007,	7007
0120	0207	BEL,	0207
0121	5140	BLCNT,	-2640
0122	5140	BLCON,	-2640

0144	1067	*144	
0145	7200	/TAD,CLA,HLT,TEST	
0146	7402	START, TAD K7777	
		CLA	
		HLT	

0147	7410	/SKIP TEST	
0150	7402	SKP	
		HLT	
0151	7200	/SEA TEST 1	
		CLA	

/AC SHOULD=0  
/SET SR TO 7777, CONTINUE

/SKP FAILED

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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 1050      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 1045      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
                               /AC SHOULD EQUAL 2000
0175 7000      NOP
0176 7000      NOP
0177 7410      SKP          /SKIP OVER JMP START.

0200 0200      *200
0200 5144      BEGIN, JMP START /BEGINNING OF INSTRUCTION TEST 1.
/SZA TEST 4
0201 7200      CLA
0202 1042      TAD K1000
0203 7440      SZA
0204 7410      SKP
0205 7402      HLT          /SZA SHOULD NOT HAVE SKIPPED
                               /AC SHOULD EQUAL 1000

0206 7450      SNA
0207 7402      HLT          /SNA SHOULD HAVE SKIPPED
                               /AC SHOULD EQUAL 10000

/SZA TEST 5
0210 7200      CLA
0211 1040      TAD K0400
0212 7440      SZA
0213 7410      SKP
0214 7402      HLT          /SZA SHOULD NOT HAVE SKIPPED
                               /AC SHOULD EQUAL 0400

0215 7450      SNA
0216 7402      HLT          /SNA SHOULD HAVE SKIPPED
                               /AC SHOULD EQUAL 0400

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/SZA TEST 6

0217 7200 CLA  
0220 1036 TAD K0200  
0221 7440 SZA  
0222 7410 SKP  
0223 7402 HLT /SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0200  
0224 7450 SNA  
0225 7402 HLT /SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0200

/SZA TEST 7

0226 7200 CLA  
0227 1034 TAD K0100  
0230 7440 SZA  
0231 7410 SKP  
0232 7402 HLT /SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0100  
0233 7450 SNA  
0234 7402 HLT /SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0100

/SZA TEST 8

0235 7200 CLA  
0236 1032 TAD K0040  
0237 7440 SZA  
0240 7410 SKP  
0241 7402 HLT /SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0040  
0242 7450 SNA  
0243 7402 HLT /SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0040

/SZA TEST 9

0244 7200 CLA  
0245 1030 TAD K0020  
0246 7440 SZA  
0247 7410 SKP  
0250 7402 HLT /SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0020  
0251 7450 SNA  
0252 7402 HLT /SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0020

/SZA TEST 10

0253 7200 CLA  
0254 1026 TAD K0010  
0255 7440 SZA  
0256 7410 SKP  
0257 7402 HLT /SZA SHOULD NOT HAVE SKIPPED  
/AC SHOULD EQUAL 0010  
0260 7450 SNA  
0261 7402 HLT /SNA SHOULD HAVE SKIPPED  
/AC SHOULD EQUAL 0010

/SZA TEST 11

0262 7200 CLA  
0263 1024 TAD K0004

0264	7440	SZA	
0265	7410	SKP	
0266	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0004
0267	7450	SNA	
0270	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0004

/SZA TEST 12

0271	7200	CLA	
0272	1022	TAD K0002	
0273	7440	SZA	
0274	7410	SKP	
0275	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0002
0276	7450	SNA	
0277	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0002

/SZA TEST 13

0300	7200	CLA	
0301	1021	TAD K0001	
0302	7440	SZA	
0303	7410	SKP	
0304	7402	HLT	/SZA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 0001
0305	7450	SNA	
0306	7402	HLT	/SNA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0001

/SPA TEST 1

0307	7200	CLA	
0310	1066	TAD K3777	
0311	7510	SPA	
0312	7402	HLT	/SPA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 3777

/SPA TEST 2

0313	7200	CLA	
0314	1050	TAD K4000	
0315	7510	SPA	
0316	7410	SKP	
0317	7402	HLT	/SPA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 4000

/SMA TEST 1

0320	7200	CLA	
0321	1066	TAD K3777	
0322	7500	SMA	
0323	7410	SKP	
0324	7402	HLT	/SMA SHOULD NOT HAVE SKIPPED
			/AC SHOULD EQUAL 3777

/SMA TEST 2

0325	7200	CLA	
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0326	1050	TAD	K4000	
0327	7500	SMA		
0330	7402	HLT		/SMA SHOULD HAVE SKIPPED /AC SHOULD EQUAL 4000
		/CMA TEST 1		
0331	7200	CLA		
0332	1067	TAD	K7777	
0333	7040	CMA		
0334	7440	SZA		
0335	7402	HLT		/CMA DID NOT COMPLEMENT AC /AC SHOULD EQUAL 0000
		/CMA - TAD TEST 1		
0336	7200	CLA		
0337	1071	TAD	K2525	
0340	7040	CMA		
0341	7450	SNA		
0342	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 5252
0343	1071	TAD	K2525	
0344	7040	CMA		
0345	7440	SEA		
0346	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 0000
		/CMA - TAD TEST 2		
0347	7200	CLA		
0350	1070	TAD	K5252	
0351	7040	CMA		
0352	7450	SNA		
0353	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 2525
0354	1070	TAD	K5252	
0355	7040	CMA		
0356	7440	SEA		
0357	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 0000
		/CMA - TAD TEST 3		
0360	7200	CLA		
0361	1067	TAD	K7777	
0362	7040	CMA		
0363	7440	SZA		
0364	7402	HLT		/TAD OR CMA ERROR /AC SHOULD EQUAL 0000
		/IAC TEST 1		
0365	7200	CLA		
0366	7001	IAC		
0367	7440	SZA		
0370	7410	SKP		
0371	7402	HLT		/IAC DID NOT INCREMENT /AC SHOULD EQUAL 0001
		/IAC TEST 2		
0372	7200	CLA		
0373	1067	TAD	K7777	
0374	7001	IAC		

0375	7440	SZA	
0376	7402	HLT	/IAC DID NOT INCREMENT /AC SHOULD EQUAL 0000
/IAC TEST 3			
0377	7200	CLA	
0400	1101	TAD K7774	
0401	7001	IAC	
0402	7001	IAC	
0403	7001	IAC	
0404	7001	IAC	
0405	7440	SZA	
0406	7402	HLT	/IAC NOT INCREMENTING /AC SHOULD EQUAL 0000
/SZL TEST 1			
0407	7200	CLA	
0410	7100	CLL	/CLEAR LINK
0411	7004	RAL	/CLEAR LINK SAFETY
0412	7430	SZL	
0413	7402	HLT	/SZL SHOULD HAVE SKIPPED /LINK SHOULD EQUAL ZERO
/SZL TEST 2			
0414	7200	CLA	
0415	7100	CLL	/CLEAR LINK
0416	7020	CML	/COMPLEMENT LINK
0417	1050	TAD K4000	
0420	7004	RAL	/SET LINK SAFETY
0421	7430	SZL	
0422	7410	SKP	
0423	7402	HLT	/SZL SHOULD NOT HAVE SKIPPED /LINK SHOULD EQUAL ONE
/SNL TEST 1			
0424	7200	CLA	
0425	7100	CLL	/CLEAR LINK
0426	7004	RAL	/CLEAR LINK SAFETY
0427	7420	SNL	
0430	7410	SKP	
0431	7402	HLT	/SNL SHOULD NOT HAVE SKIPPED /LINK SHOULD EQUAL ZERO
/SNL TEST 2			
0432	7200	CLA	
0433	7100	CLL	/CLEAR LINK
0434	7020	CML	/COMPLEMENT LINK
0435	1050	TAD K4000	
0436	7004	RAL	/SET LINK SAFETY
0437	7420	SNL	
0440	7402	HLT	/SNL SHOULD HAVE SKIPPED /LINK SHOULD EQUAL ONE
/CLL TEST 1			
0441	7200	CLA	
0442	1050	TAD K4000	

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0443 7024      RAL          /SET LINK
0444 7420      SNL
0445 5252      JMP CLL11      /CANNOT SET LINK WITH RAL
                                     /TRY A CML
0446 7100      CLL1,    CLL
0447 7430      SZL
0450 7402      HLT          /CLL DID NOT CLEAR LINK
                                     /LINK SHOULD EQUAL ONE
0451 5256      JMP .+5
0452 7020      CLL11,   CML      /SET LINK
0453 7420      SNL
0454 7402      HLT          /CANNOT SET LINK WITH
                                     /RAL OR CML, CANNOT
                                     /PERFORM CLL TEST 1
0455 5246      JMP CLL1

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/CML TEST 1
0456 7100      CMLT1,  CLL
0457 7430      SZL
0460 7402      HLT          /CLL DID NOT CLEAR LINK
0461 7020      CML
0462 7420      SNL
0463 7402      HLT          /CML DID NOT SET LINK
0464 7020      CML
0465 7430      SZL
0466 7402      HLT          /CML DID NOT RESET LINK
/CLA TEST 1 (OPERATE GROUP 2)
0467 7200      CLA
0470 1067      TAD K7777
0471 7600      7600
0472 7440      SZA
0473 7402      HLT          /CLA (7600) DID NOT CLEAR AC
                                     /AC SHOULD EQUAL 0000

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/OSR TEST 1
0474 7200      CLA
0475 7404      OSR
0476 7040      CMA
0477 7440      SZA
0500 7402      HLT          /OSR DID NOT SET AC TO 7777
                                     /AC SHOULD=0

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/NOP TEST 1 (OPERATE GROUP 1)
0501 7200      CLA
0502 7100      CLL          /AC AND LINK EQUAL ZERO
0503 7000      7000      /TEST INSTRUCTION
0504 7450      SNA
0505 7430      SZL
0506 7402      HLT          /NOP FAILURE
                                     /AC AND LINK SHOULD BE ZERO

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/NOP TEST 2 (OPERATE GROUP 2)
0507 7200      CLA

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

/AC AND LINK SHOULD BE ZERO

## /TAD TEST 1

0515	7200	CLA	
0516	1066	TAD K3777	/OPERAND 1
0517	1050	TAD K4000	/OPERAND 2
0520	7040	CMA	
0521	7440	SZA	
0522	7402	HLT	/TAD ERROR

/AC SHOULD EQUAL 0000

## /TAD TEST 2

0523	7200	CLA	
0524	1065	TAD K5777	/OPERAND 1
0525	1045	TAD K2000	/OPERAND 2
0526	7040	CMA	
0527	7440	SZA	
0530	7402	HLT	/TAD ERROR

/AC SHOULD EQUAL 0000

## /TAD TEST 3

0531	7200	CLA	
0532	1064	TAD K6777	/OPERAND 1
0533	1042	TAD K1000	/OPERAND 2
0534	7040	CMA	
0535	7440	SZA	
0536	7402	HLT	/TAD ERROR

/AC SHOULD EQUAL 0000

## /TAD TEST 4

0537	7200	CLA	
0540	1063	TAD K7377	/OPERAND 1
0541	1040	TAD K0400	/OPERAND 2
0542	7040	CMA	
0543	7440	SZA	
0544	7402	HLT	/TAD ERROR

/AC SHOULD EQUAL 0000

## /TAD TEST 5

0545	7200	CLA	
0546	1062	TAD K7577	/OPERAND 1
0547	1036	TAD K0200	/OPERAND 2
0550	7040	CMA	
0551	7440	SZA	
0552	7402	HLT	/TAD ERROR

/AC SHOULD EQUAL 0000

## /TAD TEST 6

0553	7200	CLA	
0554	1061	TAD K7677	/OPERAND 1
0555	1034	TAD K0100	/OPERAND 2
0556	7040	CMA	
0557	7440	SZA	
0560	7402	HLT	/TAD ERROR

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                                /AC SHOULD EQUAL 0000
                                /TAD TEST 7
0561 7200          CLA
0562 1057          TAD K7737          /OPERAND 1
0563 1032          TAD K0040          /OPERAND 2
0564 7040          CMA
0565 7440          SZA
0566 7402          HLT
                                /TAD ERROR
                                /AC SHOULD EQUAL 0000
                                /TAD TEST 8
0567 7200          CLA
0570 1056          TAD K7757          /OPERAND 1
0571 1030          TAD K0020          /OPERAND 2
0572 7040          CMA
0573 7440          SZA
0574 7402          HLT
                                /TAD ERROR
                                /AC SHOULD EQUAL 0000
                                /TAD TEST 9
0575 7200          CLA
0576 1055          TAD K7767          /OPERAND 1
0577 1026          TAD K0010          /OPERAND 2
0600 7040          CMA
0601 7440          SZA
0602 7402          HLT
                                /TAD ERROR
                                /AC SHOULD EQUAL 0000
                                /TAD TEST 10
0603 7200          CLA
0604 1054          TAD K7773          /OPERAND 1
0605 1024          TAD K0004          /OPERAND 2
0606 7040          CMA
0607 7440          SZA
0610 7402          HLT
                                /TAD ERROR
                                /AC SHOULD EQUAL 0000
                                /TAD TEST 11
0611 7200          CLA
0612 1053          TAD K7775          /OPERAND 1
0613 1022          TAD K0002          /OPERAND 2
0614 7040          CMA
0615 7440          SZA
0616 7402          HLT
                                /TAD ERROR
                                /TAD TEST 12
0617 7200          CLA
0620 1052          TAD K7776          /OPERAND 1
0621 1021          TAD K0001          /OPERAND 2
0622 7040          CMA
0623 7440          SZA
0624 7402          HLT
                                /TAD ERROR
                                /AC SHOULD EQUAL 0000
                                /TAD TEST 13
0625 7200          CLA
0626 7100          CLL
0627 1050          TAD K4000          /OPERAND 1
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0630	1050	TAD K4000	/OPERAND 2
0631	7430	SZL	
0632	7440	SZA	
0633	7402	HLT	

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

/TAD TEST 14

0634	7200	CLA	
0635	7100	CLL	
0636	1072	TAD K6000	/OPERAND 1
0637	1045	TAD K2000	/OPERAND 2
0640	7430	SZL	
0641	7440	SZA	
0642	7402	HLT	

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

/TAD TEST 15

0643	7200	CLA	
0644	7100	CLL	
0645	1073	TAD K7000	/OPERAND 1
0646	1042	TAD K1000	/OPERAND 2
0647	7430	SZL	
0650	7440	SZA	
0651	7402	HLT	

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

/TAD TEST 16

0652	7200	CLA	
0653	7100	CLL	
0654	1074	TAD K7400	/OPERAND 1
0655	1040	TAD K0400	/OPERAND 2
0656	7430	SZL	
0657	7440	SZA	
0660	7402	HLT	

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

/TAD TEST 17

0661	7200	CLA	
0662	7100	CLL	
0663	1075	TAD K7600	/OPERAND 1
0664	1036	TAD K0200	/OPERAND 2
0665	7430	SZL	
0666	7440	SZA	
0667	7402	HLT	

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

/TAD TEST 18

0670	7200	CLA	
0671	7100	CLL	
0672	1113	TAD K7700	/OPERAND 1
0673	1034	TAD K0100	/OPERAND 2
0674	7430	SZL	
0675	7440	SZA	
0676	7402	HLT	

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

/TAD TEST 19

0677	7200	CLA	
0700	7100	CLL	

0701	1076	TAD K7740	/OPERAND 1
0702	1032	TAD K0040	/OPERAND 2
0703	7430	SZL	
0704	7440	SZA	
0705	7402	HLT	/TAD ERROR. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 20			
0706	7200	CLA	
0707	7100	CLL	
0710	1077	TAD K7760	/OPERAND 1
0711	1030	TAD K0020	/OPERAND 2
0712	7430	SZL	
0713	7440	SZA	
0714	7402	HLT	/TAD ERROR. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 21			
0715	7200	CLA	
0716	7100	CLL	
0717	1100	TAD K7770	/OPERAND 1
0720	1026	TAD K0010	/OPERAND 2
0721	7430	SZL	
0722	7440	SZA	
0723	7402	HLT	/TAD ERROR AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 22			
0724	7200	CLA	
0725	7100	CLL	
0726	1101	TAD K7774	/OPERAND 1
0727	1024	TAD K0004	/OPERAND 2
0730	7430	SZL	
0731	7440	SZA	
0732	7402	HLT	/TAD ERROR. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 23			
0733	7200	CLA	
0734	7100	CLL	
0735	1032	TAD K7776	/OPERAND 1
0736	1022	TAD K0002	/OPERAND 2
0737	7430	SZL	
0740	7440	SZA	
0741	7402	HLT	/TAD ERROR. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE
/TAD TEST 24			
0742	7200	CLA	
0743	7100	CLL	
0744	1067	TAD K7777	/OPERAND 1
0745	1021	TAD K0001	/OPERAND 2
0746	7430	SZL	
0747	7440	SZA	
0750	7402	HLT	/TAD ERROR. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ONE

```
      /TAD TEST 25
0751 7200      CLA
0752 7100      CLL
0753 7020      CML
0754 1050      TAD K4000      /OPERAND 1
0755 1050      TAD K4000      /OPERAND 2
0756 7420      SNL
0757 7440      SZA
0760 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 26
0761 7200      CLA
0762 7100      CLL
0763 1066      TAD K3777      /OPERAND 1
0764 1045      TAD K2000      /OPERAND 2
0765 1045      TAD K2000      /OPERAND 3
0766 7040      CMA
0767 7420      SNL
0770 7440      SZA
0771 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 27
0772 7200      CLA
0773 7100      CLL
0774 1065      TAD K5777      /OPERAND 1
0775 1042      TAD K1000      /OPERAND 2
0776 1042      TAD K1000      /OPERAND 3
0777 7040      CMA
1000 7420      SNL
1001 7440      SZA      /TAD ERROR AC SHOULD EQUAL 0000
1002 7402      HLT      /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 28
1003 7200      CLA
1004 7100      CLL
1005 1064      TAD K6777      /OPERAND 1
1006 1040      TAD K0400      /OPERAND 2
1007 1040      TAD K0400      /OPERAND 3
1010 7040      CMA
1011 7420      SNL
1012 7440      SZA
1013 7402      HLT
                        /TAD ERROR, AC SHOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

```
      /TAD TEST 29
1014 7200      CLA
1015 7100      CLL
1016 1063      TAD K7377      /OPERAND 1
1017 1036      TAD K0200      /OPERAND 2
1020 1036      TAD K0200      /OPERAND 3
1021 7040      CMA
1022 7420      SNL
1023 7440      SZA
1024 7402      HLT
                        /TAD ERROR, AC SOULD EQUAL 0000
                        /LINK SHOULD EQUAL ZERO
```

/TAD TEST 30  
1025 7200 CLA  
1026 7100 CLL  
1027 1062 TAD K7577 /OPERAND 1  
1030 1034 TAD K0100 /OPERAND 2  
1031 1034 TAD K0100 /OPERAND 3  
1032 7040 CMA  
1033 7420 SNL  
1034 7440 SEA  
1035 7402 HLT  
/TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 31  
1036 7200 CLA  
1037 7100 CLL  
1040 1061 TAD K7677 /OPERAND 1  
1041 1032 TAD K0040 /OPERAND 2  
1042 1032 TAD K0040 /OPERAND 3  
1043 7040 CMA  
1044 7420 SNL  
1045 7440 SEA  
1046 7402 HLT  
/TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 32  
1047 7200 CLA  
1050 7100 CLL  
1051 1057 TAD K7737 /OPERAND 1  
1052 1030 TAD K0020 /OPERAND 2  
1053 1030 TAD K0020 /OPERAND 3  
1054 7040 CMA  
1055 7420 SNL  
1056 7440 SEA  
1057 7402 HLT  
/TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 33  
1060 7200 CLA  
1061 7100 CLL  
1062 1056 TAD K7757 /OPERAND 1  
1063 1026 TAD K0010 /OPERAND 2  
1064 1026 TAD K0010 /OPERAND 3  
1065 7040 CMA  
1066 7420 SNL  
1067 7440 SEA  
1070 7402 HLT  
/TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 34  
1071 7200 CLA  
1072 7100 CLL  
1073 1055 TAD K7767 /OPERAND 1  
1074 1024 TAD K0004 /OPERAND 2  
1075 1024 TAD K0004 /OPERAND 3  
1076 7040 CMA  
1077 7420 SNL  
1100 7440 SEA

1101 7402 HLT /TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 35

1102 7200 CLA  
1103 7100 CLL  
1104 1054 TAD K7773 /OPERAND 1  
1105 1022 TAD K0002 /OPERAND 2  
1106 1022 TAD K0002 /OPERAND 3

1107 7040 CMA  
1110 7420 SNL  
1111 7440 SZA  
1112 7402 HLT /TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 36

1113 7200 CLA  
1114 7100 CLL  
1115 1053 TAD K7775 /OPERAND 1  
1116 1021 TAD K0001 /OPERAND 2  
1117 1021 TAD K0001 /OPERAND 3

1120 7040 CMA  
1121 7420 SNL  
1122 7430 S2L  
1123 7402 HLT /TAD ERROR. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/TAD TEST 37

/10;MB, CR.

1124 7200 CLA  
1125 7100 CLL  
1126 1021 TAD K0001 /0+1=1  
1127 1023 TAD K3 /1+3=4  
1130 1054 TAD K7773 /4+7773=7777

1131 7040 CMA /0  
1132 7420 SNL  
1133 7440 SZA  
1134 7402 HLT /TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 38.

/9; MB, CR.

1135 7200 CLA  
1136 7100 CLL  
1137 1022 TAD K0002 /0+2=2  
1140 1025 TAD K6 /2+6=10  
1141 1055 TAD K7767 /10+7767=7777

1142 7040 CMA /0  
1143 7420 SNL  
1144 7440 SZA  
1145 7402 HLT /TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 39.

/8; MB, CR.

1146 7200 CLA  
1147 7100 CLL  
1150 1024 TAD K0004 /0+4=4  
1151 1027 TAD K14 /4+14=20

1152	1056	TAD K7757	/20+7757=7777
1153	7040	CMA	/0
1154	7420	SNL	
1155	7440	SEA	
1156	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 40.

1157	7200	CLA	/7: MB, CR.
1160	7100	CLL	
1161	1026	TAD K0010	/0+10=10
1162	1031	TAD K30	/10+30=40
1163	1057	TAD K7737	/40+7737=7777
1164	7040	CMA	/0
1165	7420	SNL	
1166	7440	SEA	
1167	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 41.

1170	7200	CLA	/6: MB, CR.
1171	7100	CLL	
1172	1030	TAD K0020	/0+20=20
1173	1033	TAD K60	/20+60=100
1174	1061	TAD K7677	/100+7677=7777
1175	7040	CMA	/0
1176	7420	SNL	
1177	7440	SEA	
1200	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 42.

1201	7200	CLA	/5: MB, CR.
1202	7100	CLL	
1203	1032	TAD K0040	/0+40=40
1204	1035	TAD K140	/40+140=200
1205	1062	TAD K7577	/200+7577=7777
1206	7040	CMA	/0
1207	7420	SNL	
1210	7440	SEA	/
1211	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 43.

1212	7200	CLA	/4: MB, CR.
1213	7100	CLL	
1214	1034	TAD K0100	/0+100=100
1215	1037	TAD K300	/100+300=400
1216	1063	TAD K7377	/400+7377=7777
1217	7040	CMA	/0
1220	7420	SNL	
1221	7440	SEA	
1222	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 44.

1223	7200	CLA	/3: MB, CR.
1224	7100	CLL	
1225	1036	TAD K0200	/0+200=200
1226	1041	TAD K600	/200+600=1000

1227	1064	TAD K6777	/1000+6777=7777
1230	7040	CMA	/0
1231	7420	SNL	
1232	7440	SEA	
1233	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 45. /2; MB, CR.

1234	7200	CLA	/
1235	7100	CLL	/
1236	1040	TAD K0400	/0+400=400
1237	1044	TAD K1400	/400+1400=2000
1240	1065	TAD K5777	/2000+5777=7777
1241	7040	CMA	/0
1242	7420	SNL	
1243	7440	SEA	
1244	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 46 /1; MB, CR.

1245	7200	CLA	
1246	7100	CLL	
1247	1042	TAD K1000	/0+1000=1000
1250	1046	TAD K3000	/1000+3000=4000
1251	1066	TAD K3777	/4000+3777=7777
1252	7040	CMA	/0
1253	7420	SNL	
1254	7440	SEA	
1255	7402	HLT	/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 47 /0; MB, CR

1256	7200	CLA	
1257	7100	CLL	
1260	1045	TAD K2000	/0+2000=2000
1261	1072	TAD K6000	/2000+6000=1 0000
1262	7430	SEL	
1263	7440	SEA	
1264	7402	HLT	/TAD ERROR. LINK SHOULD = 1. AC SHOULD = 0000.

/TAD TEST 48.

1265	7200	CLA	
1266	7100	CLL	
1267	1067	TAD K7777	/0+7777=7777
1270	1021	TAD K0001	/7777+1=1 0000
1271	7430	SEL	/
1272	7440	SEA	
1273	7402	HLT	/TAD ERROR. LINK SHOULD = 1. AC SHOULD = 0000.

/TAD TEST 49. /10; AC, MB, CR.

1274	7200	CLA	
1275	7100	CLL	
1276	1023	TAD K3	/0+3=3
1277	1023	TAD K3	/3+3=6
1300	1100	TAD K7770	/6+7770=7776
1301	1021	TAD K0001	/7776+1=7777
1302	7040	CMA	/0

1303 7420  
1304 7440  
1305 7402

SNL  
SEA  
HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 50.

/9: AC, MB, CR.

1306 7200  
1307 7100  
1310 1025  
1311 1025  
1312 1077  
1313 1023  
1314 7040  
1315 7420  
1316 7440  
1317 7402

CLA  
CLL  
TAD K6  
TAD K6  
TAD K7760  
TAD K3  
CMA  
SNL  
SEA  
HLT

/0+6=6  
/6+6=14  
/14+7760=7774  
/7774+3=7777  
/0

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 51.

/8: AC, MB, CR.

1320 7200  
1321 7100  
1322 1027  
1323 1027  
1324 1076  
1325 1102  
1326 7040  
1327 7420  
1330 7440  
1331 7402

CLA  
CLL  
TAD K14  
TAD K14  
TAD K7740  
TAD K0007  
CMA  
SNL  
SEA  
HLT

/0+14=14  
/14+14=30  
/30+7740=7770  
/7770+7=7777  
/0

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 52.

/7: AC, MB, CR.

1332 7200  
1333 7100  
1334 1031  
1335 1031  
1336 1051  
1337 7040  
1340 7420  
1341 7440  
1342 7402

CLA  
CLL  
TAD K30  
TAD K30  
TAD K7717  
CMA  
SNL  
SEA  
HLT

/0+30=30  
/30+30=60  
/60+7717=7777  
/0

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 53.

/6: AC, MB, CR.

1343 7200  
1344 7100  
1345 1033  
1346 1033  
1347 1075  
1350 1105  
1351 7040  
1352 7420  
1353 7440  
1354 7402

CLA  
CLL  
TAD K60  
TAD K60  
TAD K7600  
TAD K0037  
CMA  
SNL  
SEA  
HLT

/60+60=120  
/120+7600=7720  
/7720+37=7757  
/0

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 54.

/5: AC, MB, CR

1355 7200  
1356 7100

CLA  
CLL

1357	1035	TAD K140	
1360	1035	TAD K140	/140+140=300
1361	1074	TAD K7400	/300+7400=7700
1362	1106	TAD K0077	/7700+77=7777
1363	7040	CMA	/0
1364	7420	SNL	
1365	7440	SZA	
1366	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 55. /4: AC, MB, CR.

1367	7200	CLA	
1370	7100	CLL	
1371	1037	TAD K300	/0+300=300
1372	1037	TAD K300	/300+300=600
1373	1060	TAD K7177	/600+7177=7777
1374	7040	CMA	/0
1375	7420	SNL	
1376	7440	SZA	
1377	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 56. /3: AC, MB, CR.

1400	7200	CLA	
1401	7100	CLL	
1402	1041	TAD K600	/0+600=600
1403	1041	TAD K600	/600+600=1200
1404	1072	TAD K6000	/1200+6000=7200
1405	1110	TAD K0377	/7200+377=7777
1406	7040	CMA	
1407	7420	SNL	
1410	7440	SZA	
1411	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO.

/TAD TEST 57. /2: AC, MB, CR.

1412	7200	CLA	
1413	7100	CLL	
1414	1044	TAD K1400	/0+1400=1400
1415	1044	TAD K1400	/1400+1400=3000
1416	1050	TAD K4000	/3000+4000=7000
1417	1111	TAD K0777	/7000+777=7777
1420	7040	CMA	/0
1421	7420	SNL	
1422	7440	SZA	
1423	7402	HLT	/TAD ERROR, AC AND LI K SHOULD BE ZERO.

/TAD TEST 58. /1: AC, MB, CR.

1424	7200	CLA	
1425	7100	CLL	
1426	1046	TAD K3000	/0+3000=3000
1427	1046	TAD K3000	/3000+3000=6000
1430	1112	TAD K1777	/6000+1777=7777
1431	7040	CMA	/0
1432	7420	SNL	
1433	7440	SZA	
1434	7402	HLT	/TAD ERROR, AC AND LINK SHOULD BE ZERO

1435	7200	/TAD TEST 59.	
1436	7100	CLA	/0: AC, MB, CR.
1437	1072	CLL	/
1440	1072	TAD K6000	/0+6000=6000
1441	1066	TAD K6000	/6000+6000=1 4000
1442	7040	TAD K3777	/1 4000+3777=1 7777
1443	7430	CMA	/1 0000
1444	7440	SZL	
1445	7402	SEA	
		HLT	/TAD ERROR. LINK SHOULD BE 1. AC SHOULD BE ZERO.
1446	7200	/TAD TEST 60.	/
1447	7100	CLA	
1450	1067	CLL	
1451	1067	TAD K7777	/0+7777=7777
1452	1021	TAD K7777	/7777+7777=1 7776
1453	7040	TAD K0001	/1 7776+1=1 7777
1454	7430	CMA	/1 0000
1455	7440	SZL	
1456	7402	SEA	
		HLT	/TAD ERROR. LINK SHOULD BE 1. AC SHOULD BE ZERO.
1457	7200	/RAR TEST 1	
1460	7100	CLA	
1461	1021	CLL	
1462	7010	TAD K0001	/ROTATE PATTERN
1463	7420	RAR	
1464	7402	SNL	
		HLT	/RAR FAILED. LINK DROPPED A BIT /LINK SHOULD EQUAL A ONE
1465	7200	/RAR TEST 2	
1466	7100	CLA	
1467	1020	CLL	
1470	7010	TAD K0000	/ROTATE PATTERN
1471	7440	RAR	
1472	7402	SEA	
		HLT	/RAR FAILED. AC PICKED UP A BIT /A ONE IN AC EQUALS THE PICKED UP BIT
1473	7200	/RAR TEST 3	
1474	7100	CLA	
1475	1020	CLL	
1476	7010	TAD K0000	/ROTATE PATTERN
1477	7430	RAR	
1500	7402	SEA	
		HLT	/RAL FAILED. LINK PICKED UP A BIT /LINK SHOULD EQUAL ZERO
1501	7200	/RAR TEST 4	
1502	7100	CLA	
1503	7020	CLL	
1504	1020	CML	
		TAD K0000	/ROTATE PATTERN

1505 7010 RAR  
1506 7430 SZL  
1507 7402 HLT  
/RAR LINK PICKED UP A BIT  
/LINK SHOULD EQUAL ZERO

/RAR TEST 5  
1510 7200 CLA  
1511 7100 CLL  
1512 7020 CML  
1513 1067 TAD K7777 /ROTATE PATTERN  
1514 7010 RAR  
1515 7040 CMA  
1516 7440 SZA  
1517 7402 HLT  
/RAR FAILED AC DROPPED A BIT  
/A ONE IN AC EQUALS THE DROPPED BIT

/RAR TEST 6  
1520 7200 CLA  
1521 7100 CLL  
1522 7020 CML  
1523 1020 TAD K0000 /ROTATE PATTERN  
1524 7010 RAR  
1525 1066 TAD K3777  
1526 7040 CMA  
1527 7450 SNA  
1530 7430 SZL  
1531 7402 HLT  
/RAR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RAR TEST 7  
1532 7200 CLA  
1533 7100 CLL  
1534 1050 TAD K4000 /ROTATE PATTERN  
1535 7010 RAR  
1536 1065 TAD K5777  
1537 7040 CMA  
1540 7450 SNA  
1541 7430 SZL  
1542 7402 HLT  
/RAR FAILED AC AND LINK SHOULD  
/EQUAL 0000

/RAR TEST 8  
1543 7200 CLA  
1544 7100 CLL  
1545 1045 TAD K2000 /ROTATE PATTERN  
1546 7010 RAR  
1547 1064 TAD K6777  
1550 7040 CMA  
1551 7450 SNA  
1552 7430 SZL  
1553 7402 HLT  
/RAR FAILED AC AND LINK SHOULD  
/EQUAL 0000

/RAR TEST 9  
1554 7200 CLA  
1555 7100 CLL  
1556 1042 TAD K1000 /ROTATE PATTERN

1557	7010	RAR	
1560	1063	TAD K7377	
1561	7040	CMA	
1562	7450	SNA	
1563	7430	SZL	
1564	7402	HLT	/RAR FAILED AC AND LINK SHOULD /EQUAL 0000

/RAR TEST 10			
1565	7200	CLA	
1566	7100	CLL	
1567	1040	TAD K0400	/ROTATE PATTERN
1570	7010	RAR	
1571	1062	TAD K7577	
1572	7040	CMA	
1573	7450	SNA	
1574	7430	SZL	
1575	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

/RAR TEST 11			
1576	7200	CLA	
1577	7100	CLL	
1600	1036	TAD K0200	/ROTATE PATTERN
1601	7010	RAR	
1602	1061	TAD K7677	
1603	7040	CMA	
1604	7450	SNA	
1605	7430	SZL	
1606	7402	HLT	/RAR FAILED AC AND LINK /EQUAL 0000

/RAR TEST 12			
1607	7200	CLA	
1610	7100	CLL	
1611	1034	TAD K0100	/ROTATE PATTERN
1612	7010	RAR	
1613	1057	TAD K7737	
1614	7040	CMA	
1615	7450	SNA	
1616	7430	SZL	
1617	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

/RAR TEST 13			
1620	7200	CLA	
1621	7100	CLL	
1622	1032	TAD K0040	/ROTATE PATTERN
1623	7010	RAR	
1624	1056	TAD K7757	
1625	7040	CMA	
1626	7450	SNA	
1627	7430	SZL	
1630	7402	HLT	/RAR FAILED AC AND LINK

/SHOULD EQUAL 0000

PAUSE

/INSTRUCTION TEST 1

/TAPE 2

/RAR TEST 14

1631	7200	CLA	
1632	7100	CLL	
1633	1030	TAD K0020	/ROTATE PATTERN
1634	7010	RAR	
1635	1055	TAD K7767	
1636	7040	CMA	
1637	7450	SNA	
1640	7430	SZL	
1641	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

/RAR TEST 15

1642	7200	CLA	
1643	7100	CLL	
1644	1026	TAD K0010	/ROTATE PATTERN
1645	7010	RAR	
1646	1054	TAD K7773	
1647	7040	CMA	
1650	7450	SNA	
1651	7430	SZL	
1652	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

/RAR TEST 16

1653	7200	CLA	
1654	7100	CLL	
1655	1024	TAD K0004	/ROTATE PATTERN
1656	7010	RAR	
1657	1053	TAD K7775	
1660	7040	CMA	
1661	7450	SNA	
1662	7430	SZL	
1663	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

/RAR TEST 17

1664	7200	CLA	
1665	7100	CLL	
1666	1022	TAD K0002	/ROTATE PATTERN
1667	7010	RAR	
1670	1052	TAD K7776	
1671	7040	CMA	
1672	7450	SNA	
1673	7430	SZL	
1674	7402	HLT	/RAR FAILED AC AND LINK /SHOULD EQUAL 0000

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      /RAR TEST 18
1675 7200      CLA
1676 7100      CLL
1677 1021      TAD K0001      /ROTATE PATTERN
1700 7010      RAR
1701 1067      TAD K7777
1702 7040      CMA
1703 7450      SNA
1704 7420      SNL
1705 7402      HLT
                                /RAR FAILED AC AND LINK
                                /SHOULD EQUAL 0000

      /RTR TEST 1
1706 7200      CLA
1707 7100      CLL
1710 1022      TAD K0002      /ROTATE PATTERN
1711 7012      RTR
1712 7420      SNL
1713 7402      HLT
                                /RTR FAILED LINK DROPPED
                                /A BIT LINK SHOULD EQUAL A ONE

      /RTR TEST 2
1714 7200      CLA
1715 7100      CLL
1716 1020      TAD K0000      /ROTATE PATTERN
1717 7012      RTR
1720 7440      SZA
1721 7402      HLT
                                /RTR FAILED AC PICKED UP A BIT
                                /A ONE IN AC EQUALS THE PICKED UP BIT

      /RTR TEST 3
1722 7200      CLA
1723 7100      CLL
1724 1020      TAD K0000      /ROTATE PATTERN
1725 7012      RTR
1726 7430      SZL
1727 7402      HLT
                                /RTR LINK PICKED UP A BIT
                                /LINK SHOULD EQUAL ZERO

      /RTR TEST 4
1730 7200      CLA
1731 7100      CLL
1732 7020      CML
1733 1020      TAD K0000      /ROTATE PATTERN
1734 7012      RTR
1735 7430      SZL
1736 7402      HLT
                                /RTR LINK PICKED UP A BIT
                                /LINK SHOULD EQUAL ZERO

      /RTR TEST 5
1737 7200      CLA
1740 7100      CLL
1741 7020      CML
1742 1067      TAD K7777      /ROTATE PATTERN
1743 7012      RTR
1744 7040      CMA
1745 7440      SZA
```

1746	7402	HLT	/RTR AC DROPPED A BIT A ONE IN
			/AC EQUALS THE DROPPED BIT

		/RTR TEST 6	
1747	7200	CLA	
1750	7100	CLL	
1751	7020	CML	
1752	1020	TAD K0000	/ROTATE PATTERN
1753	7012	RTR	
1754	1065	TAD K5777	
1755	7040	CMA	
1756	7450	SNA	
1757	7430	SEL	
1760	7402	HLT	/RTR FAILED AC AND LINK

		/RTR TEST 7	
1761	7200	CLA	
1762	7100	CLL	
1763	1050	TAD K4000	/ROTATE PATTERN
1764	7012	RTR	
1765	1064	TAD K6777	
1766	7040	CMA	
1767	7450	SNA	
1770	7430	SEL	
1771	7402	HLT	/RTR FAILED AC AND LINK

		/RTR TEST 8	
1772	7200	CLA	
1773	7100	CLL	
1774	1045	TAD K2000	/ROTATE PATTERN
1775	7012	RTR	
1776	1063	TAD K7377	
1777	7040	CMA	
2000	7450	SNA	
2001	7430	SEL	
2002	7402	HLT	/RTR FAILED AC AND LINK

		/RTR TEST 9	
2003	7200	CLA	
2004	7100	CLL	
2005	1042	TAD K1000	/ROTATE PATTERN
2006	7012	RTR	
2007	1062	TAD K7577	
2010	7040	CMA	
2011	7450	SNA	
2012	7430	SEL	
2013	7402	HLT	/RTR FAILED AC AND LINK

		/RTR TEST 10	
2014	7200	CLA	
2015	7100	CLL	
2016	1040	TAD K0400	/ROTAATE PATTERN
2017	7012	RTR	
2020	1061	TAD K7677	

2021 7040  
2022 7450  
2023 7430  
2024 7402

CMA  
SNA  
SZL  
HLT

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTR TEST 11

2025 7200  
2026 7100  
2027 1036  
2030 7012  
2031 1057  
2032 7040  
2033 7450  
2034 7430  
2035 7402

CLA  
CLL  
TAD K0200  
RTR  
TAD K7737  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTR TEST 12

2036 7200  
2037 7100  
2040 1034  
2041 7012  
2042 1056  
2043 7040  
2044 7450  
2045 7430  
2046 7402

CLA  
CLL  
TAD K0100  
RTR  
TAD K7757  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTR TEST 13

2047 7200  
2050 7100  
2051 1032  
2052 7012  
2053 1055  
2054 7040  
2055 7450  
2056 7430  
2057 7402

CLA  
CLL  
TAD K0040  
RTR  
TAD K7767  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTR TEST 14

2060 7200  
2061 7100  
2062 1030  
2063 7012  
2064 1054  
2065 7040  
2066 7450  
2067 7430  
2070 7402

CLA  
CLL  
TAD K0020  
RTR  
TAD K7773  
CMA  
SNA  
SZL  
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTR TEST 15

2071 7200  
2072 7100  
2073 1026

CLA  
CLL  
TAD K0010

/ROTATE PATTERN

2074	7012	RTR	
2075	1053	TAD	K7775
2076	7040	CMA	
2077	7450	SNA	
2100	7430	SZL	
2101	7402	HLT	/RTR FAILED AC AND LINK

/SHOULD EQUAL 0000

/RTR TEST 16

2102	7300	CLA	CLL	
2103	1024	TAD	K0004	/ROTATE PATTERN
2104	7012	RTR		
2105	1052	TAD	K7776	
2106	7040	CMA		
2107	7450	SNA		
2110	7430	SZL		
2111	7402	HLT		/RTR FAILED AC AND LINK

/SHOULD EQUAL 0000

/RTR TEST 17

2112	7200	CLA		
2113	7100	CLL		
2114	1022	TAD	K0002	/ROTATE PATTERN
2115	7012	RTR		
2116	7450	SNA		
2117	7420	SNL		
2120	7402	HLT		/RTR FAILED. AC SHOULD EQUAL

/0000, LINK SHOULD EQUAL ONE

/RTR TEST 18

2121	7200	CLA		
2122	7100	CLL		
2123	1021	TAD	K0001	/ROTATE PATTERN
2124	7012	RTR		
2125	1066	TAD	K3777	
2126	7040	CMA		
2127	7450	SNA		
2130	7430	SZL		
2131	7402	HLT		/RTR FAILED. AC AND LINK

/SHOULD BE ZERO

/RAL TEST 1

2132	7200	CLA		
2133	7100	CLL		
2134	1050	TAD	K4000	/ROTATE PATTERN
2135	7004	RAL		
2136	7430	SZL		
2137	7440	SZA		
2140	7402	HLT		/RAL FAILED. AC SHOULD EQUAL 0000

/LINK SHOULD EQUAL ONE.

/RAL TEST 2

2141	7200	CLA		
2142	7100	CLL		
2143	1020	TAD	K0000	/ROTATE PATTERN
2144	7004	RAL		
2145	7420	SNL		
2146	7440	SZA		

2147 7402 HLT /RAL FAILED. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/RAL TEST 3  
2150 7200 CLA  
2151 7100 CLL  
2152 7020 CML  
2153 1020 TAD K0000 /ROTATE PATTERN. LINK=1  
2154 7004 RAL  
2155 7430 SZL  
2156 7402 HLT /RAL FAILURE. AC SHOULD EQUAL 0001  
/LINK SHOULD EQUAL ZERO

/RAL TEST 4  
2157 7200 CLA  
2160 7100 CLL  
2161 7020 CML  
2162 1067 TAD K7777 /ROTATE PATTERN. LINK=1  
2163 7004 RAL  
2164 7040 CMA  
2165 7440 SZA  
2166 7402 HLT /RAL FAILURE. LINK SHOULD EQUAL ONE  
/AC SHOULD EQUAL 0000

/RAL TEST 5  
2167 7200 CLA  
2170 7100 CLL  
2171 1045 TAD K2000 /ROTATE PATTERN  
2172 7004 RAL  
2173 1066 TAD K3777  
2174 7040 CMA  
2175 7450 SNA  
2176 7430 SZL  
2177 7402 HLT /RAL FAILURE. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ONE

/RAL TEST 6  
2200 7200 CLA  
2201 7100 CLL  
2202 1042 TAD K1000 /ROTATE PATTERN  
2203 7004 RAL  
2204 1065 TAD K5777  
2205 7040 CMA  
2206 7440 SZA  
2207 7402 HLT /RAL FAILURE. AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/RAL TEST 7  
2210 7200 CLA  
2211 7100 CLL  
2212 1040 TAD K0400 /ROTATE PATTERN  
2213 7004 RAL  
2214 1064 TAD K6777  
2215 7040 CMA  
2216 7450 SNA  
2217 7430 SZL

2220	7402	HLT	/RAL FAILURE. AC SHOULD EQUAL 0000 /LINK SHOULD EQUAL ZERO
/RAL TEST 8			
2221	7200	CLA	
2222	7100	CLL	
2223	1036	TAD K0200	/ROTATE PATTERN
2224	7004	RAL	
2225	1063	TAD K7377	
2226	7040	CMA	
2227	7450	SNA	
2230	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
2231	7402	HLT	/LINK SHOULD EQUAL ZERO
/RAL TEST 9			
2232	7200	CLA	
2233	7100	CLL	
2234	1034	TAD K0100	/ROTATE PATTERN
2235	7004	RAL	
2236	1062	TAD K7577	
2237	7040	CMA	
2240	7450	SNA	
2241	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
2242	7402	HLT	/LINK SHOULD EQUAL ZERO
/RAL TEST 10			
2243	7200	CLA	
2244	7100	CLL	
2245	1032	TAD K0040	/ROTATE PATTERN
2246	7004	RAL	
2247	1061	TAD K7677	
2250	7040	CMA	
2251	7450	SNA	
2252	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
2253	7402	HLT	/LINK SHOULD EQUAL A ZERO
/RAL TEST 11			
2254	7200	CLA	
2255	7100	CLL	
2256	1030	TAD K0020	/ROTATE PATTERN
2257	7004	RAL	
2260	1057	TAD K7737	
2261	7040	CMA	
2262	7450	SNA	
2263	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
2264	7402	HLT	/LINK SHOULD EQUAL A ZERO
/RAL TEST 12			
2265	7200	CLA	
2266	7100	CLL	
2267	1026	TAD K0010	/ROTATE PATTTERN
2270	7004	RAL	
2271	1056	TAD K7757	
2272	7040	CMA	
2273	7450	SNA	
2274	7430	SZL	/RAL FAILURE AC SHOULD EQUAL 0000
2275	7402	HLT	/LINK SHOULD EQUAL A ZERO

		/RAL TEST 13	
2276	7200	CLA	
2277	7100	CLL	
2300	1024	TAD K0004	/ROTATE PATTERN
2301	7004	RAL	
2302	1055	TAD K7767	
2303	7040	CMA	
2304	7450	SNA	
2305	7430	SZL	/RAL FAILED AC SHOULD EQUAL 0000
2306	7402	HLT	/LINK SHOULD EQUAL A ZERO
		/RAL TEST 14	
2307	7200	CLA	
2310	7100	CLL	
2311	1022	TAD K0002	/ROTATE PATTERN
2312	7004	RAL	
2313	1054	TAD K7773	
2314	7040	CMA	
2315	7450	SNA	
2316	7430	SZL	/RAL FAILED AC SHOULD EQUAL 0000
2317	7402	HLT	/LINK SHOULD EQUAL A ZERO
		/RAL TEST 15	
2320	7200	CLA	
2321	7100	CLL	
2322	1021	TAD K0001	/ROTATE PATTERN
2323	7004	RAL	
2324	1093	TAD K7775	
2325	7040	CMA	
2326	7450	SNA	
2327	7430	SZL	/RAL FAILED AC SHOULD EQUAL 0000
2330	7402	HLT	/LINK SHOULD EQUAL ZERO
		/RAL TEST 16	
2331	7200	CLA	
2332	7100	CLL	
2333	7020	CML	
2334	7004	RAL	
2335	1052	TAD K7776	
2336	7040	CMA	
2337	7450	SNA	
2340	7430	SZL	/RAL FAILED AC SHOULD EQUAL 0000
2341	7402	HLT	/LINK SHOULD EQUAL ZERO
		/RTL TEST 1	
2342	7200	CLA	
2343	7100	CLL	
2344	1045	TAD K2000	
2345	7006	RTL	
2346	7420	SNL	
2347	7402	HLT	/RTL LINK DROPPED A BIT
		/RTL TEST 2	/LINK SHOULD EQUAL A ONE
2350	7200	CLA	

2351	7100	CLL	
2352	1020	TAD K0000	/ROTATE PATTERN
2353	7006	RTL	
2354	7440	SZA	
2355	7402	HLT	/RTL AC PICKED UP A BIT /A ONE IN AC EQUALS THE PICKED UP

/RTL TEST 3

2356	7200	CLA	
2357	7100	CLL	
2360	1020	TAD K0000	/ROTATE PATTERN
2361	7006	RTL	
2362	7430	SZL	
2363	7402	HLT	/RTL LINK PICKED UP A BIT /LINK SHOULD EQUAL ZERO

/RTL TEST 4

2364	7200	CLA	
2365	7100	CLL	
2366	7020	CML	
2367	1020	TAD K0000	/ROTATE PATTERN
2370	7006	RTL	
2371	7430	SZL	
2372	7402	HLT	/RTL FAILURE. LINK PICKED UP A BIT /LINK SHOULD EQUAL A ZERO

/RTL TEST 5

2373	7200	CLA	
2374	7100	CLL	
2375	7020	CML	
2376	1067	TAD K7777	/ROTATE PATTERN
2377	7006	RTL	
2400	7040	CMA	
2401	7440	SZA	
2402	7402	HLT	/RTL FAILURE. DROPPED A BIT

/RTL TEST 6

2403	7200	CLA	
2404	7100	CLL	
2405	1050	TAD K4000	/ROTATE PATTERN
2406	7006	RTL	
2407	1052	TAD K7776	
2410	7040	CMA	
2411	7450	SNA	
2412	7430	SEL	
2413	7402	HLT	/RTL FAILED AC AND LINK SHOULD EQUAL 0000

/RTL TEST 7

2414	7200	CLA	
2415	7100	CLL	
2416	1045	TAD K2000	/ROTATE PATTERN
2417	7006	RTL	
2420	7450	SNA	
2421	7420	SNL	
2422	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000

/RTL TEST 8

2423	7200	CLA	
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2424	7100	CLL	
2425	1042	TAD K1000	/ROTATE PATTERN
2426	7006	RTL	
2427	1066	TAD K3777	
2430	7040	CMA	
2431	7450	SNA	
2432	7430	SZL	
2433	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000

/RTL TEST 9

2434	7200	CLA	
2435	7100	CLL	
2436	1040	TAD K0400	/ROTATE PATTERN
2437	7006	RTL	
2440	1065	TAD K5777	
2441	7040	CMA	
2442	7450	SNA	
2443	7430	SZL	
2444	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL ZERO

/RTL TEST 10

2445	7200	CLA	
2446	7100	CLL	
2447	1036	TAD K0200	/ROTATE PATTERN
2450	7006	RTL	
2451	1064	TAD K6777	
2452	7040	CMA	
2453	7450	SNA	
2454	7430	SZL	
2455	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000

/RTL TEST 11

2456	7200	CLA	
2457	7100	CLL	
2460	1034	TAD K0100	/ROTATE PATTERN
2461	7006	RTL	
2462	1063	TAD K7377	
2463	7040	CMA	
2464	7450	SNA	
2465	7430	SZL	
2466	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000

/RTL TEST 12

2467	7200	CLA	
2470	7100	CLL	
2471	1032	TAD K0040	/ROTATE PATTERN
2472	7006	RTL	
2473	1062	TAD K7577	
2474	7040	CMA	
2475	7450	SNA	
2476	7430	SZL	
2477	7402	HLT	/RTL FAILED AC AND LINK SHOULD /EQUAL 0000

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/RTL TEST 13
2500 7200      CLA
2501 7100      CLL
2502 1030      TAD K0020      /ROTATE PATTERN
2503 7006      RTL
2504 1061      TAD K7677
2505 7040      CMA
2506 7450      SNA
2507 7430      SEL
2510 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

/RTL TEST 14
2511 7200      CLA
2512 7100      CLL
2513 1026      TAD K0010      /ROTATE PATTERN
2514 7006      RTL
2515 1057      TAD K7737
2516 7040      CMA
2517 7450      SNA
2520 7430      SEL
2521 7402      HLT      /RTL FAILED AC AND LINK SHOULD

/RTL TEST 15
2522 7200      CLA
2523 7100      CLL
2524 1024      TAD K0004      /ROTATE PATTERN
2525 7006      RTL
2526 1056      TAD K7757
2527 7040      CMA
2530 7450      SNA
2531 7430      SEL
2532 7402      HLT      /RTL FAILED AC AND LINK SHOULD
                        /EQUAL 0000

/RTL TEST 16
2533 7200      CLA
2534 7100      CLL
2535 1022      TAD K0002      /ROTATE PATTERN
2536 7006      RTL
2537 1055      TAD K7767
2540 7040      CMA
2541 7450      SNA
2542 7430      SEL
2543 7402      HLT      /RTL FAILED AC AND LINK
                        /SHOULD EQUAL 0000

/RTL TEST 17
2544 7200      CLA
2545 7100      CLL
2546 1021      TAD K0001      /ROTATE PATTERN
2547 7006      RTL
2550 1054      TAD K7773
2551 7040      CMA
2552 7450      SNA
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2553 7430  
2554 7402

SZL  
HLT

/RTL FAILED AC AND LINK  
/SHOULD EQUAL 0000

/RTL TEST 18

2555 7200  
2556 7100  
2557 7020  
2560 7006  
2561 1053  
2562 7040  
2563 7450  
2564 7430  
2565 7402

CLA  
CLL  
CML  
RTL  
TAD K7775  
CMA  
SNA  
SZL  
HLT

/RTL FAILED AC AND LINK  
/SHOULD EQUAL 0000

/BSW TEST 1

2566 7200  
2567 7100  
2570 7040  
2571 7002  
2572 7040  
2573 7420  
2574 7440  
2575 7402

CLA  
CLL  
CMA  
BSW  
CMA  
SNL  
SZA  
HLT

/AC=7777  
/SWAP BYTES AC SHOULD EQUAL 7777

/DID LINK SET?

/BSW FAILED  
/AC AND LINK SHOULD=0000

/BSW TEST 2

2576 7200  
2577 7100  
2600 7020  
2601 7002  
2602 7450  
2603 7420  
2604 7402

CLA  
CLL  
CML  
BSW  
SNA  
SNL  
HLT

/LINK=1  
/SWAP BYTES AC SHOULD EQUAL 0000

/BSW CAUSED THE LINK  
/TO ROTATE

/BSW TEST 3

2605 7200  
2606 7100  
2607 1113  
2610 7002  
2611 1113  
2612 7040  
2613 7420  
2614 7440  
2615 7402

CLA  
CLL  
TAD K7700  
BSW  
TAD K7700  
CMA  
SNL  
SZA  
HLT

/AC=7700  
/SWAP BYTES AC SHOULD EQUAL 0077  
/AC=7777  
/AC=0000

/BSW FAILED AC AND LINK  
/SHOULD=0000

/BSW TEST 4

2616 7200  
2617 7100  
2620 1106  
2621 7002  
2622 1106  
2623 7040  
2624 7420  
2625 7440

CLA  
CLL  
TAD K0077  
BSW  
TAD K0077  
CMA  
SNL  
SZA

/AC=0077  
/SWAP BYTES AC SHOULD EQUAL 7700  
/AC=7777

2626	7402	HLT		/BSW FAILED AC AND LINK /SHOULD=0000
/BSW TEST 5				
2627	7300	CLA	CLL	
2630	1116	TAD	K0770	
2631	7002	BSW		/SWAP BYTES AC SHOULD EQUAL 7007
2632	1116	TAD	K0770	
2633	7040	CMA		
2634	7420	SNL		
2635	7440	SZA		
2636	7402	HLT		/BSW FAILED AC AND LINK /SHOULD EQUAL 0000
/BSW TEST 6				
2637	7320	CLA	CLL CML	
2640	1117	TAD	K7007	
2641	7002	BSW		/SWAP BYTES AC SHOULD EQUAL 0770
2642	1117	TAD	K7007	
2643	7040	CMA		
2644	7430	SZL		
2645	7440	SZA		
2646	7402	HLT		/BSW FAILED AC /SHOULD EQUAL 0000 AND LINK=1
/BSW TEST 7				
2647	7200	CLA		
2650	7100	CLL		
2651	1114	TAD	K5225	/AC=5225
2652	7002	BSW		/SWAP BYTES AC SHOULD EQUAL 2552
2653	1114	TAD	K5225	/AC=7777
2654	7040	CMA		
2655	7420	SNL		
2656	7440	SZA		
2657	7402	HLT		/BSW FAILED AC AND LINK /SHOULD=0000
/BSW TEST 8				
2660	7200	CLA		
2661	7100	CLL		
2662	1115	TAD	K2552	/AC=2552
2663	7002	BSW		/SWAP BYTES AC SHOULD EQUAL 5225
2664	1115	TAD	K2552	/AC=7777
2665	7040	CMA		
2666	7420	SNL		
2667	7440	SZA		
2670	7402	HLT		/BSW FAILED AC AND LINK /SHOULD=0000
/GROUP 1 OPERATE TEST 1				
2671	7200	CLA		/CLEAR AC
2672	7100	CLL		/CLEAR LINK
2673	7040	CMA		/AC EQUALS 7777
2674	7020	CML		/LINK EQUALS ONE
2675	7300	CLA	CLL	/TEST COMBINATION
2676	7420	SNL		
2677	7440	SZA		
2700	7402	HLT		/CLA CLL FAILED. LINK SHOULD BE 0

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                /AC SHOULD EQUAL 0000
/GROUP 1 OPERATE TEST 2
2701 7200      CLA
2702 1071      TAD K2525
2703 7240      CLA CMA
2704 7040      CMA
2705 7440      SEA
2706 7402      HLT
                /AC EQUALS 0000
                /AC EQUALS 2525
                /TEST COMBINATION
                /CLA CMA ERROR. AC SHOULD
                /BE 0000

/GROUP 1 OPERATE TEST 3
2707 7200      CLA
2710 7100      CLL
2711 7040      CMA
2712 7140      CLL CMA
2713 7420      SNL
2714 7440      SEA
2715 7402      HLT
                /AC=7777 LINK=1
                /TEST COMBINATION
                /CLL CMA FAILED. AC AND LINK
                /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 4
2716 7100      CLL
2717 7020      CML
2720 7200      CLA
2721 7040      CMA
2722 7340      CLA CMA CLL
2723 7040      CMA
2724 7420      SNL
2725 7440      SEA
2726 7402      HLT
                /LINK=1
                /AC=7777
                /TEST COMBINATION
                /CLA CMA CLL FAILED. AC AND
                /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 5
2727 7200      CLA
2730 7100      CLL
2731 7040      CMA
2732 7220      CLA CML
2733 7430      SEL
2734 7440      SEA
2735 7402      HLT
                /LINK=0
                /AC=7777
                /TEST COMBINATION
                /CLA CML FAILED. AC SHOULD EQUAL
                /0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 6
2736 7100      CLL
2737 7020      CML
2740 7120      CLL CML
2741 7420      SNL
2742 7402      HLT
                /LINK=1
                /TEST COMBINATION
                /CLL CML FAILED
                /LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 7
2743 7100      CLL
2744 7120      CLL CML
2745 7420      SNL
2746 7402      HLT
                /LINK=0
                /TEST COMBINATION
                /CLL CML FAILED.
                /LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 8
2747 7120      CLL CML
                /LINK=1

```

2750 7240 CLA CMA /AC=7777  
 2751 7320 CLA CLL CML /TEST COMBINATION  
 2752 7430 SZL  
 2753 7440 SZA  
 2754 7402 HLT /CLA CLL CML FAILED, LINK SHOULD  
 /BE 1, AC SHOULD BE ZERO

/GROUP 1 OPERATE TEST 9

2755 7340 CLA CLL CMA /LINK=0, AC=7777  
 2756 7320 CLA CLL CML /TEST COMBINATION  
 2757 7430 SZL  
 2760 7440 SZA  
 2761 7402 HLT /CLA CLL CML FAILED, LINK SHOULD  
 /BE 1, AC SHOULD BE ZERO

/GROUP 1 OPERATE TEST 10

2762 7340 CLA CLL CMA /AC=7777, LINK=0  
 2763 7060 CMA CML /TEST COMBINATION  
 2764 7430 SZL  
 2765 7440 SZA  
 2766 7402 HLT /CMA CML FAILED, AC SHOULD BE  
 /0000 LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 11

2767 7300 CLA CLL /AC AND LINK=0  
 2770 1071 TAD K2525 /AC=2525  
 2771 7340 CLA CMA CLL /TEST COMBINATION  
 2772 7040 CMA  
 2773 7420 SNL  
 2774 7440 SZA  
 2775 7402 HLT /CLA CMA CML FAILED, AC SHOULD BE  
 /0000, LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 12

2776 7300 CLL CLA /AC AND LINK=0  
 2777 1071 TAD K2525 /AC=2525  
 3000 7160 CLL CMA CML /TEST COMBINATION  
 3001 1071 TAD K2525  
 3002 7040 CMA  
 3003 7430 SZL  
 3004 7440 SZA  
 3005 7402 HLT /CLL CMA CML FAILED, AC SHOULD BE  
 /0000, LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 13

3006 7300 CLA CLL  
 3007 7020 CML /AC=0000, LINK=1  
 3010 7160 CLL CMA CML /TEST COMBINATION  
 3011 7040 CMA  
 3012 7430 SZL  
 3013 7440 SZA  
 3014 7402 HLT /CLL CMA CML FAILED, AC SHOULD  
 /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 14

3015 7300 CLA CLL  
 3016 1071 TAD K2525 /AC=2525, LINK=0

3017 7360 CLA CLL CMA CML /TEST COMBINATION  
 3020 7040 CMA  
 3021 7430 SZL  
 3022 7440 SZA  
 3023 7402 HLT /CLA CLL CMA CML FAILED. AC SHOULD  
 /BE 0000 LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 15

3024 7320 CLA CLL CML  
 3025 1070 TAD K5252 /AC=5252, LINK=1  
 3026 7360 CLA CLL CMA CML /TEST COMBINATION  
 3027 7040 CMA  
 3030 7430 SZL  
 3031 7440 SZA  
 3032 7402 HLT /CLA CLL CMA CML FAILED. AC SHOULD  
 /BE 000, LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 16

3033 7200 CLA  
 3034 1071 TAD K2525 /AC=2525  
 3035 7201 CLA IAC /TEST COMBINATION  
 3036 1052 TAD K7776  
 3037 7040 CMA  
 3040 7440 SZA  
 3041 7402 HLT /CLA IAC FAILED  
 /AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 17

3042 7320 CLL CML CLA  
 3043 1052 TAD K7776 /AC=7776, LINK=1  
 3044 7101 CLL IAC /TEST COMBINATION  
 3045 7040 CMA  
 3046 7420 SNL  
 3047 7440 SZA  
 3050 7402 HLT /CLL IAC FAILED, AC AND LINK  
 /SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 18

3051 7320 CLA CLL CML  
 3052 1071 TAD K2525 /AC=2525 LINK=1  
 3053 7301 CLA CLL IAC /TEST COMBINATION  
 3054 1052 TAD K7776  
 3055 7040 CMA  
 3056 7420 SNL  
 3057 7440 SZA  
 3060 7402 HLT /CLA CLL IAC FAILED. AC AND LINK  
 /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 19

3061 7300 CLA CLL /AC=0 LINK=0  
 3062 7041 CMA IAC /TEST COMBINATION  
 3063 7430 SZL  
 3064 7440 SZA  
 3065 7402 HLT /CMA IAC FAILED. AC SHOULD EQUAL  
 /0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 20

3066 7300 CLA CLL  
 3067 1071 TAD K2525 /AC=2525 LINK=0

3070	7241	CLA CMA IAC	/TEST COMBINATION
3071	7430	SZL	
3072	7440	SZA	
3073	7402	HLT	/CLA CMA IAC FAILED. AC SHOULD /EQUAL 0000. LINK SHOULD BE ONE.
/GROUP 1 OPERATE TEST 21			
3074	7320	CLL CLA CML	/AC=0000 LINK=1
3075	1021	TAD K0001	/AC=0001
3076	7141	CLL CMA IAC	/TEST COMBINATION
3077	7040	CMA	
3100	7420	SNL	
3101	7440	SZA	
3102	7402	HLT	/CLL CMA IAC FAILED. AC SHOULD BE /0000 LINK SHOULD BE 0
/GROUP 1 OPERATE TEST 22			
3103	7320	CLA CLL CML	
3104	1071	TAD K2525	/AC=2525 LINK=1
3105	7341	CLA CLL CMA IAC	/TEST COMBINATION
3106	7430	SZL	
3107	7440	SZA	
3110	7402	HLT	/CLA CLL CMA IAC FAILED. AC SHOULD BE /0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 23			
3111	7300	CLA CLL	
3112	1070	TAD K5252	/AC=5252 LINK=0
3113	7341	CLA CLL CMA IAC	/TEST COMBINATION
3114	7430	SZL	
3115	7440	SZA	
3116	7402	HLT	/CLA CLL CMA IAC FAILED AC SHOULD /BE 0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 24			
3117	7300	CLA CLL	
3120	1052	TAD K7776	/AC=7776 LINK=0
3121	7021	CML IAC	/TEST COMBINATION
3122	7040	CMA	
3123	7430	SZL	
3124	7440	SZA	
3125	7402	HLT	/CML IAC FAILED AC SHOULD BE /0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 25			
3126	7320	CLA CLL CML	
3127	1052	TAD K7776	/AC =7776 LINK=1
3130	7021	CML IAC	/TEST COMBINATION
3131	7040	CMA	
3132	7420	SNL	
3133	7440	SZA	
3134	7402	HLT	/CML IAC FAILED. AC SHOULD BE /0000. LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 26			
3135	7300	CLA CLL	
3136	1071	TAD K2525	/AC=2525 LINK=0
3137	7221	CLA CML IAC	/TEST COMBINATION
3140	1052	TAD K7776	

3141	7040	CMA	
3142	7430	SZL	
3143	7440	SZA	
3144	7402	HLT	/CLA CML IAC FAILED. AC SHOULD BE /0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 27

3145	7320	CLA CLL CML	/AC=0000 LINK=1
3146	1052	TAD K7776	/AC=7776
3147	7121	CLL CML IAC	/TEST COMBINATION
3150	7040	CMA	
3151	7430	SZL	
3152	7440	SZA	
3153	7402	HLT	/CLL CML IAC FAILURE. AC SHOULD BE /0000. LINK SHOULD EQUAL ONE.

/GROUP 1 OPERATE TEST 28

3154	7300	CLA CLL	
3155	1052	TAD K7776	/AC=7776 LINK=0
3156	7121	CLL CML IAC	/TEST COMBINATION
3157	7040	CMA	
3160	7430	SZL	
3161	7440	SZA	
3162	7402	HLT	/CLL CML IAC FAILED. AC SHOULD /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 29

3163	7300	CLA CLL	
3164	1071	TAD K2525	/AC=2525. LINK=0
3165	7321	CLA CLL CML IAC	/TEST COMBINATION
3166	1052	TAD K7776	
3167	7040	CMA	
3170	7430	SZL	
3171	7440	SZA	
3172	7402	HLT	/CLA CLL CML IAC FAILED. AC SHOULD /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 30

3173	7320	CLA CLL CML	
3174	1071	TAD K2525	/AC=2525 LINK=1
3175	7321	CLA CLL CML IAC	/TEST COMBINATION
3176	1052	TAD K7776	
3177	7040	CMA	
3200	7430	SZL	
3201	7440	SZA	
3202	7402	HLT	/CLA CLL CML IAC FAILED. AC SHOULD /BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 31

3203	7300	CLA CLL	
3204	1021	TAD K0001	/AC=0001 LINK=0
3205	7061	CMA CML IAC	/TEST COMBINATION
3206	7040	CMA	
3207	7430	SZL	
3210	7440	SZA	
3211	7402	HLT	/CMA CML IAC FAILED. AC SHOULD

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                                /BE 0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 32
3212 7320      CLA CLL CML
3213 1021      TAD K0001          /AC=0001 LINK=1
3214 7061      CMA CML IAC /TEST COMBINATION
3215 7040      CMA
3216 7420      SNL
3217 7440      SZA
3220 7402      HLT
                                /CMA CML IAC FAILURE. AC SHOULD BE
                                /0000. LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 33
3221 7300      CLA CLL          /AC=0000 LINK=0
3222 1071      TAD K2525        /AC=2525
3223 7261      CLA CMA CML IAC /TEST COMBINATION
3224 7420      SNL
3225 7430      SZL
3226 7402      HLT
                                /CLA CMA CML IAC FAILED. AC SHOULD
                                /BE 0000. LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 34
3227 7320      CLA CLL CML
3230 1071      TAD K2525        /AC=2525 LINK=1
3231 7261      CLA CMA CML IAC /TEST COMBINATION
3232 7430      SZL
3233 7440      SZA
3234 7402      HLT
                                /CLA CMA CML IAC FAILED. AC SHOULD
                                /BE 0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 35
3235 7300      CLA CLL
3236 1021      TAD K0001          /AC=0001 LINK=0
3237 7161      CLL CMA CML IAC /TEST COMBINATION
3240 7040      CMA
3241 7430      SZL
3242 7440      SZA
3243 7402      HLT
                                /CLL CMA CML IAC FAILED. AC SHOULD BE
                                /0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 36
3244 7320      CLA CLL CML
3245 1021      TAD K0001          /AC=0001 LINK=1
3246 7161      CLL CMA CML IAC /TEST COMBINATION
3247 7040      CMA
3250 7430      SZL
3251 7440      SZA
3252 7402      HLT
                                /CLL CMA CML IAC FAILED. AC SHOULD BE
                                /0000. LINK SHOULD BE ONE
/GROUP 1 OPERATE TEST 37
3253 7300      CLA CLL
3254 1071      TAD K2525        /AC=2525 LINK=0
3255 7361      CLA CLL CMA CML IAC /TEST COMBINATION
3256 7420      SNL
3257 7440      SZA
3260 7402      HLT
                                /CLA CLL CMA CML IAC FAILURE AC AND
                                /LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 38
```

3261	7360	CLA CMA CLL CML	/AC=7777 LINK=1
3262	7210	CLA RAR	/TEST COMBINATION
3263	1066	TAD K3777	
3264	7040	CMA	
3265	7420	SNL	
3266	7440	SZA	
3267	7402	HLT	/CLA RAR FAILED, LINK AND /AC SHOULD EQUAL ZERO

## /GROUP 1 OPERATE TEST 39

3270	7360	CLA CMA CLL CML	/AC=7777 LINK=1
3271	7204	CLA RAL	/TEST COMBINATION
3272	1052	TAD K7776	
3273	7040	CMA	
3274	7420	SNL	
3275	7440	SZA	
3276	7402	HLT	/CLA RAL FAILED LINK AND /AC SHOULD EQUAL ZERO

## /GROUP 1 OPERATE TEST 40

3277	7360	CLA CMA CLL CML	/AC=7777 LINK =1
3300	7212	CLA RTR	/TEST COMBINATION
3301	1065	TAD K5777	
3302	7040	CMA	
3303	7420	SNL	
3304	7440	SZA	
3305	7402	HLT	/CLA RTR FAILED, AC AND /LINK SHOULD BE ZERO

## /GROUP 1 OPERATE TEST 41

3306	7360	CLA CMA CLL CML	/AC=7777, LINK=1
3307	7206	CLA RTL	/TEST COMBINATION
3310	1053	TAD K7775	
3311	7040	CMA	
3312	7420	SNL	
3313	7440	SZA	
3314	7402	HLT	/CLA RTL FAILED, AC AND LINK /SHOULDBE ZERO

## /GROUP 1 OPERATE TEST 42

3315	7320	CLA CLL CML	
3316	1032	TAD K0040	/AC=0040 LINK=1
3317	7110	CLL RAR	/TEST COMBINATION
3320	1056	TAD K7757	
3321	7040	CMA	
3322	7420	SNL	
3323	7440	SZA	
3324	7402	HLT	/CLL RAR FAILED, AC AND LINK /SHOULD BE ZERO

## /GROUP 1 OPERATE TEST 43

3325	7320	CLA CLL CML	
3326	1032	TAD K0040	/AC=0040 LINK=1
3327	7104	CLL RAL	/TEST COMBINATION
3330	1061	TAD K7677	
3331	7040	CMA	

```

3332 7420      SNL
3333 7440      SZA
3334 7402      HLT                /CLL RAL FAILED. AC AND LINK
                                   /SHOULD BE ZERO
/GROUP 1 OPERATE TEST 44
3335 7520      CLA CLL CML
3336 1032      TAD K0040                /AC=0040 LINK=1
3337 7112      CLL RTR                /TEST COMBINATION
3340 1055      TAD K7767
3341 7040      CMA
3342 7420      SNL
3343 7440      SZA
3344 7402      HLT                /CLL RTR FAILED. AC AND LINK
                                   /SHOULD BE ZERO
/GROUP 1 OPERATE TEST 45
3345 7320      CLA CLL CML
3346 1032      TAD K0040                /AC=0040 LINK=1
3347 7106      CLL RTL                /TEST COMBINATION
3350 1062      TAD K7577
3351 7040      CMA
3352 7420      SNL
3353 7440      SZA
3354 7402      HLT                /CLL RTL FAILED. AC AND LINK
                                   /SHOULD BE ZERO
/GROUP 1 OPERATE TEST 46
3355 7360      CLA CLL CML CMA /AC=7777 LINK=1
3356 7310      CLL CLA RAR          /TEST COMBINATION
3357 7420      SNL
3360 7440      SZA
3361 7402      HLT                /CLL CLA RAR FAILED AC AND
                                   /LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 47
3362 7360      CLA CMA CLL CML /AC=7777 LINK=1
3363 7304      CLL CLA RAL          /TEST COMBINATION
3364 7420      SNL
3365 7430      SEL
3366 7402      HLT                /CLL CLA RAL FAILED. AC AND
                                   /LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 48
3367 7360      CLA CMA CLL CML /AC=7777 LINK=1
3370 7312      CLA CLL RTR          /TEST COMBINATION
3371 7420      SNL
3372 7440      SZA
3373 7402      HLT                /CLA CLL RTL FAILED. AC AND
                                   /LINK SHOULD BE ZERO
/GROUP 1 OPERATE TEST 49
3374 7360      CLA CMA CLL CML /AC=7777 LINK=1
3375 7306      CLA CLL RTL          /TEST COMBINATION
3376 7420      SNL
3377 7440      SZA
3400 7402      HLT                /CLA CLL RTL FAILED. AC AND
                                   /LINK SHOULD EQUAL ZERO
/GROUP 1 OPERATE TEST 50

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```

3401 7300      CLA CLL      /AC=0000 LINK=0
3402 7030      CML RAR      /TEST COMBINATION
3403 1066      TAD K3777
3404 7040      CMA
3405 7420      SNL
3406 7440      SZA
3407 7402      HLT          /CML RAR FAILED. AC AND LINK
                          /SHOULD BE ZERO

```

## /GROUP 1 OPERATE TEST 51

```

3410 7300      CLA CLL      /AC=0000 LINK =0
3411 7024      CML RAL      /TEST COMBINATION
3412 1052      TAD K7776
3413 7040      CMA
3414 7420      SNL
3415 7440      SZA
3416 7402      HLT          /CML RAL FAILED. AC AND LINK
                          /SHOULD BE ZERO.

```

## /GROUP 1 OPERATE TEST 52

```

3417 7300      CLA CLL      /AC=0000 LINK=0
3420 7032      CML RTR      /TEST COMBINATION
3421 1065      TAD K5777
3422 7040      CMA
3423 7420      SNL
3424 7440      SZA
3425 7402      HLT          /CML RTR FAILED. AC AND LINK
                          /SHOULD EQUAL ZERO

```

## /GROUP 1 OPERATE TEST 53

```

3426 7300      CLA CLL      /AC=0000 LINK=0
3427 7026      CML RTL      /TEST COMBINATION
3430 1053      TAD K7775
3431 7040      CMA
3432 7420      SNL
3433 7440      SZA
3434 7402      HLT          /CML RTL FAILED. AC AND LINK
                          /SHOULD EQUAL ZERO

```

## /GROUP 1 OPERATE TEST 54

```

3435 7300      CLA CLL
3436 1070      TAD K5252      /AC=5252 LINK=0
3437 7230      CLA CML RAR  /TEST COMBINATION
3440 1066      TAD K3777
3441 7040      CMA
3442 7420      SNL
3443 7440      SZA
3444 7402      HLT          /CLA CML RAR FAILED. AC AND

```

PAUSE

## /INSTRUCTION TEST - 1

## /GROUP 1 OPERATE TEST 55

## /TAPE 3

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3445 7300      CLA CLL
3446 1070      TAD K5252      /AC=5252 LINK=0
3447 7224      CLA CML RAL  /TEST COMBINATION

```

```

3450 1052      TAD K7776
3451 7040      CMA
3452 7420      SNL
3453 7440      SZA
3454 7402      HLT                /CLA CML RAL FAILED. AC AND
                                   /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 56
3455 7300      CLA CLL
3456 1070      TAD K5252                /AC=5252 LINK=0
3457 7232      CLA CML RTR    /TEST COMBINATION
3460 1065      TAD K5777
3461 7040      CMA
3462 7420      SNL
3463 7440      SZA
3464 7402      HLT                /CLA CML RTR FAILED. AC AND
                                   /LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 57
3465 7300      CLA CLL
3466 1070      TAD K5252                /AC=5252 LINK=0
3467 7226      CLA CML RTL    /TEST COMBINATION
3470 1053      TAD K7775
3471 7040      CMA
3472 7420      SNL
3473 7440      SZA
3474 7402      HLT                /CLA CML RTL FAILED, AC AND
                                   /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 58
3475 7300      CLA CLL                /AC=0000 LINK=0
3476 7130      CLL CML RAR    /TEST COMBINATION
3477 7004      RAL
3500 7430      SZL
3501 7440      SZA
3502 7402      HLT                /CLL CML RAR FAILED. AC SHOULD
                                   /BE 0000 LINK SHOULD BE 1

/GROUP 1 OPERATE TEST 59
3503 7320      CLA CLL CML    /AC=0000 LINK=1
3504 7130      CLL CML RAR    /TEST COMBINATION
3505 7004      RAL
3506 7430      SZL
3507 7440      SZA
3510 7402      HLT                /CLL CML RAR FAILED. AC SHOULD BE
                                   /0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 60
3511 7300      CLA CLL                /AC=0000 LINK=0
3512 7124      CLL CML RAL    /TEST COMBINATION
3513 7010      RAR
3514 7430      SZL
3515 7440      SZA
3516 7402      HLT                /CLL CML RAL FAILED. AC SHOULD
                                   /EQUAL 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 61
3517 7320      CLA CLL CML    /AC=0000 LINK=1
3520 7124      CLL CML RAL    /TEST COMBINATION

```

```

3521 7010      RAR
3522 7430      SZL
3523 7440      SZA
3524 7402      HLT
                /CLL CML RAL FAILED. AC SHOULD
                /EQUAL 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 62
3525 7300      CLA CLL      /AC=0000 LINK=0
3526 7132      CLL CML RTR /TEST COMBINATION
3527 7006      RTL
3530 7430      SZL
3531 7440      SZA
3532 7402      HLT
                /CLL CML RTR FAILED. AC SHOULD
                /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 63
3533 7320      CLA CLL CML /AC=0000 LINK=1
3534 7132      CLL CML RTR /TEST COMBINATION
3535 7006      RTL
3536 7430      SZL
3537 7440      SZA
3540 7402      HLT
                /CLL CML RTR FAILED. AC SHOULD
                /BE 0000 LINK SHOULD BE ONE.

/GROUP 1 OPERATE TEST 64
3541 7300      CLA CLL      /AC=0000 LINK=0
3542 7126      CLL CML RTL /TEST COMBINATION
3543 7012      RTR
3544 7430      SZL
3545 7440      SZA
3546 7402      HLT
                /CLL CML RTL FAILED. AC SHOULD
                /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 65
3547 7320      CLA CLL CML /AC=0000 LINK=1
3550 7126      CLL CML RTL /TEST COMBINATION
3551 7012      RTR
3552 7430      SZL
3553 7440      SZA
3554 7402      HLT
                /CLL CML RTL FAILED. AC SHOULD
                /BE 0000, LINK SHOULD BE A ONE.

/GROUP 1 OPERATE TEST 66
3555 7300      CLA CLL
3556 1070      TAD K5252      /AC=5252 LINK=0
3557 7330      CLA CLL CML RAR /TEST COMBINATION
3560 7004      RAL
3561 7430      SZL
3562 7440      SZA
3563 7402      HLT
                /CLA CLL CML RAR FAILED. AC SHOULD
                /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 67
3564 7320      CLA CLL CML
3565 1071      TAD K2525      /AC=2525 LINK=1
3566 7330      CLA CLL CML RAR /TEST COMBINATION
3567 7004      RAL
3570 7430      SZL
3571 7440      SZA

```

3572 7402 HLT /CLA CLL CML RAR FAILED. AC SHOULD  
/BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 68  
3573 7300 CLA CLL  
3574 1071 TAD K2525 /AC=2525 LINK=0  
3575 7324 CLA CLL CML RAL /TEST COMBINATION  
3576 7010 RAR  
3577 7430 SZL  
3600 7440 SZA  
3601 7402 HLT /CLA CLL CML RAL FAILED. AC SHOULD  
/BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 69  
3602 7320 CLA CLL CML  
3603 1070 TAD K5252 /AC=5252 LINK=1  
3604 7324 CLA CLL CML RAL /TEST COMBINATION  
3605 7010 RAR  
3606 7430 SZL  
3607 7440 SZA  
3610 7402 HLT /CLA CLL CML RAL FAILED. AC SHOULD  
/BE 0000 LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 70  
3611 7300 CLA CLL  
3612 1071 TAD K2525 /AC=2525 LINK=0  
3613 7332 CLA CLL CML RTR /TEST COMBINATION  
3614 7006 RTL  
3615 7430 SZL  
3616 7440 SZA  
3617 7402 HLT /CLA CLL CML RTR FAILED. AC SHOULD  
/BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 71  
3620 7320 CLA CLL CML  
3621 1070 TAD K5252 /AC=5252 LINK=1  
3622 7332 CLA CLL CML RTR /TEST COMBINATION  
3623 7006 RTL  
3624 7430 SZL  
3625 7440 SZA  
3626 7402 HLT /CLA CLL CML RTR FAILED. AC SHOULD  
/BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 72  
3627 7300 CLL CLA  
3630 1071 TAD K2525 /AC=2525 LINK=0  
3631 7326 CLA CLL CML RTL /TEST COMBINATION  
3632 7012 RTR  
3633 7430 SZL  
3634 7440 SZA  
3635 7402 HLT /CLA CLL CML RTL FAILED. AC SHOULD  
/BE 0000, LINK SHOULD BE A ZERO

/GROUP 1 OPERATE TEST 73  
3636 7320 CLL CLA CML  
3637 1070 TAD K5252 /AC=5252 LINK=1  
3640 7326 CLA CLL CML RTL /TEST COMBINATION

3641 7012 RTR  
 3642 7430 SZL  
 3643 7440 SEA  
 3644 7402 HLT /CLA CLL CML RTL FAILED. AC SHOULD  
 /BE 0000, LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 74

3645 7300 CLA CLL  
 3646 1067 TAD K7777 /TEST PATTERN  
 3647 7041 CIA /AC EQUALS 0001  
 3650 1052 TAD K7776  
 3651 7040 CMA  
 3652 7420 SNL  
 3653 7440 SEA /CIA FAILED AC SHOULD EQUAL 0000  
 3654 7402 HLT /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 75

3655 7300 CLA CLL  
 3656 1052 TAD K7776 /TEST PATTERN  
 3657 7041 CIA /AC EQUALS 0002  
 3660 1053 TAD K7775  
 3661 7040 CMA  
 3662 7420 SNL  
 3663 7440 SEA /CIA FAILED AC SHOULD EQUAL 0000  
 3664 7402 HLT /LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 76

3665 7300 CLA CLL  
 3666 1101 TAD K7774 /TEST PATTERN  
 3667 7041 CIA /AC EQUALS 0004  
 3670 1054 TAD K7773  
 3671 7040 CMA  
 3672 7420 SNL  
 3673 7440 SEA /CIA FAILED AC SHOULD EQUAL 0000  
 3674 7402 HLT /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 77

3675 7300 CLA CLL  
 3676 1100 TAD K7770 /TEST PATTERN  
 3677 7041 CIA /AC EQUALS 0010  
 3700 1055 TAD K7767  
 3701 7040 CMA  
 3702 7420 SNL  
 3703 7440 SEA  
 3704 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 78

3705 7300 CLA CLL  
 3706 1077 TAD K7760 /TEST PATTERN  
 3707 7041 CIA /AC EQUALS 0020  
 3710 1056 TAD K7757  
 3711 7040 CMA  
 3712 7420 SNL  
 3713 7440 SEA  
 3714 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000  
 /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 79

3715 7300 CLA CLL

3716 1076 TAD K7740 /TEST PATTERN  
3717 7041 CIA  
3720 1057 TAD K7737 /AC EQUALS 0040  
3721 7040 CMA  
3722 7420 SNL  
3723 7440 SZA  
3724 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 80

3725 7300 CLA CLL  
3726 1113 TAD K7700 /TEST PATTERN  
3727 7041 CIA /AC EQUALS 0100  
3730 1061 TAD K7677  
3731 7040 CMA  
3732 7420 SNL  
3733 7440 SZA  
3734 7402 HLT /CIA FAILED A SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 81

3735 7300 CLA CLL  
3736 1075 TAD K7600 /TEST PATTERN  
3737 7041 CIA /AC EQUALS 0200  
3740 1062 TAD K7577  
3741 7040 CMA  
3742 7420 SNL  
3743 7440 SZA  
3744 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 82

3745 7300 CLA CLL  
3746 1074 TAD K7400 /TEST PATTERN  
3747 7041 CIA /AC EQUALS 0400  
3750 1063 TAD K7377  
3751 7040 CMA  
3752 7420 SNL  
3753 7440 SZA  
3754 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 83

3755 7300 CLA CLL  
3756 1073 TAD K7000 /TEST PATTERN  
3757 7041 CIA /AC EQUALS 1000  
3760 1064 TAD K6777  
3761 7040 CMA  
3762 7420 SNL  
3763 7440 SZA  
3764 7402 HLT /CIA FAILED AC SHOULD EQUAL 0000  
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 84

3765 7300 CLA CLL  
3766 1072 TAD K6000 /TEST PATTERN

```

3767 7041      CIA      /AC EQUALS 2000
3770 1065      YAD K5777
3771 7040      CMA
3772 7420      SNL
3773 7440      SZA
3774 7402      HLT      /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL ZERO
    
```

/GROUP 1 OPERATE TEST 85

```

3775 7300      CLA CLL
3776 1050      YAD K4000      /TEST PATTERN
3777 7041      CIA      /AC EQUALS 4000
4000 1066      YAD K3777
4001 7040      CMA
4002 7420      SNL
4003 7440      SZA
4004 7402      HLT      /CIA FALED AC SHOULD EQUUA 000
                                   /LINK SHOULD EQUALL ZERO
    
```

/GROUP 1 OPERATE TEST 86

```

4005 7300      CLA CLL
4006 1020      YAD K0000      /TEST PATTERN
4007 7041      CIA      /AC EQUALS 0000, LINK EQUALS A ONE
4010 7450      SNA
4011 7420      SNL
4012 7402      HLT      /CIA FAILED AC SHOULD EQUAL 0000
                                   /LINK SHOULD EQUAL A ONE
    
```

/GROUP OPERATE TEST 87

```

4013 7340      CLA CMA CLL      /AC=7777,L=0
4014 7311      CLA CLL IAC RAR /AC=0,L=1
4015 7430      S2L
4016 7440      SZA
4017 7402      HLT      /ERROR; LINC NOT SET OR
                                   /AC NOT 0
    
```

/GROUP 1 OPERATE TEST 88

```

4020 7360      CLA CMA CLL CML /AC=7777,L=1
4021 7305      CLA CLL IAC RAL /AC=2,L=0
4022 7430      S2L
4023 7402      HLT      /ERROR; LINC NOT 0
4024 7041      CMA IAC
4025 1022      YAD K0002
4026 7440      SZA
4027 7402      HLT      /ERROR AC NOT=2
    
```

/GROUP 1 OPERATE TEST 89

```

4030 7320      CLA CLL CML      /AC=0,L=1
4031 7313      CLA CLL IAC RTR /AC=4000,L=0
4032 7430      S2L
4033 7402      HLT      /ERROR; LINC NOT 0
4034 7500      SMA
4035 7402      HLT      /ERROR; AC NOT 4000
    
```

/GROUP 1 OPERATE TEST 90

```

4036 7360      CLA CMA CLL CML      /AC=7777,L=1
    
```

```

4037 7307      CLA CLL IAC RTL      /AC=4,LINC=0
4040 7430      SZL
4041 7402      HLT              /ERROR: LINC NOT 0
4042 7041      CMA IAC
4043 1024      TAD K0004
4044 7440      SZA
4045 7402      HLT              /ERROR: AC NOT 4

```

/GROUP 1 OPERATE TEST 91

```

4046 7300      CLA CLL      /AC=0, L=0
4047 7331      CLA CLL CML IAC RAR  /AC=4000, L=1
4050 7520      SMA SNL
4051 7402      HLT              /ERROR: AC NOT 4000 OR
                        /LINC NOT 1

```

/GROUP 1 OPERATE TEST 92

```

4052 7300      CLA CLL      /AC=0,L=0
4053 7345      CLA CMA CLL IAC RAL  /AC=0001,L=0
4054 7430      SZL
4055 7402      HLT              /LINC NOT=0
4056 7041      CMA IAC
4057 1021      TAD K0001
4060 7440      SZA
4061 7402      HLT              /AC NOT 0001

```

/GROUP 1 OPERATE TEST 93

```

4062 7360      CLA CMA CLL CML  /AC=7777,L=1
4063 7373      CLA CMA CLL CML IAC RTR /AC=0,L=0
4064 7440      SZA
4065 7402      HLT              /ERROR:
4066 7430      SZL
4067 7402      HLT              /ERROR:

```

/GROUP 1 OPERATE TEST 94

```

4070 7332      CLA CLL CML RTR      /L=0 AC=2000
4071 7006      RTL              /L=1 AC=0000
4072 7430      SZL
4073 7440      SZA
4074 7402      HLT              /CLA CLL CML RTR OR RTL FAILED

```

/GROUP 1 OPERATE TEST 95

```

4075 7360      CLA CMA CLL CML
4076 7342      CLA CLL CMA BSW/AC=7777 LINK=0
4077 7040      CMA
4100 7420      SNL
4101 7440      SZA
4102 7402      HLT              /7742 FAILED

```

/GROUP 1 OPERATE TEST 96

```

4103 7360      CLA CMA CLL CML
4104 7303      CLA CLL IAC BSW /AC=0100 LINK=0
4105 1061      TAD      K7677  /AC=7777
4106 7040      CMA              /AC=0000

```

4107 7420 SNL  
4110 7440 SZA  
4111 7402 HLT /7703 FAILED

/GROUP 1 OPERATE TEST 97

4112 7360 CLA CMA CLL CML  
4113 7343 CLA CLL CMA IAC BSW /AC=0000 LINK=1  
4114 7430 SZL  
4115 7440 SZA  
4116 7402 HLT /7743 FAILED

/GROUP 1 OPERATE TEST 98

4117 7360 CLA CMA CLL CML  
4120 7363 CLA CLL CMA CML IAC BSW /AC=0000 LINK=0  
4121 7420 SNL  
4122 7440 SZA  
4123 7402 HLT /7763 FAILED

/GROUP 1 OPERATE TEST 99

4124 7300 CLA CLL  
4125 1043 TAD K1234  
4126 7063 CMA CML IAC BSW /AC=4465 L=1  
4127 1047 TAD K3312  
4130 7040 CMA  
4131 7430 SZL  
4132 7440 SZA  
4133 7402 HLT /7063 FAILED

/GROUP 1 OPERATE TEST 100

4134 7332 CLA CLL CML RTR /AC=2000 L=1  
4135 7063 CMA CML IAC BSW /AC=0060 L=1  
4136 1051 TAD K7717 /AC=7777 L=1  
4137 7040 CMA  
4140 7430 SZL  
4141 7440 SZA  
4142 7402 HLT /7063 FAILED

/GROUP 2 OPERATE TEST 1

4143 7240 CLA CMA /AC=7777  
4144 7700 CLA SMA /TEST COMBINATION  
4145 7402 HLT /CLA SMA DID NOT SKIP  
/AC SHOULD BE 0000  
4146 7440 SZA  
4147 7402 HLT /CLA SMA DID NOT CLEAR AC  
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 2

4150 7240 CLA CMA /AC=7777  
4151 7640 CLA SZA /TEST COMBINATION  
4152 7440 SZA  
4153 7402 HLT /CLA SZA SKIPPED OR AC NOT  
/CLEARED TO 0000

/GROUP 2 OPERATE TEST 3

4154 7240 CLA CMA /AC=7777

4155	7540	SMA SZA	/TEST COMBINATION
4156	7402	HLT	/SMA SZA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 7777
		/GROUP 2 OPERATE TEST 4	
4157	7200	CLA	/AC=0000
4160	7540	SMA SZA	/TEST COMBINATION
4161	7402	HLT	/SMA SZA SHOULD HAVE SKIPPED
			/AC SHOULD EQUAL 0000
		/GROUP 2 OPERATE TEST 5	
4162	7200	CLA	
4163	1066	TAD K3777	/AC=3777
4164	7540	SMA SZA	/TEST COMBINATION
4165	7450	SNA	
4166	7402	HLT	/SMA SZA SHOULD NOT HAVE SKPPED
			/AC SHOULD EQUAL 3777
		/GROUP 2 OPERATE TEST 6	
4167	7240	CLA CMA	/AC=7777
4170	7740	CLA SMA SZA	/TEST COMBINATION
4171	7402	HLT	/CLA SMA SZA SHOULD HAVE SKIPPED
			/AC SHOULD BE 0000
4172	7440	SZA	
4173	7402	HLT	/AC WAS NOT CLEARED
			/AC SHOULD BE 0000
		/GROUP 2 OPERATE TEST 7	
4174	7200	CLA	/AC=0000
4175	7740	CLA SMA SZA	/TEST COMBINATION
4176	7402	HLT	/CLA SMA SZA SHOULD HAVE SKIPPED
			/AC SHOULD BE 0000
4177	7440	SZA	
4200	7402	HLT	/AC WAS NOT CLEARED
			/AC SHOULD BE 0000
		/GROUP 2 OPERATE TEST 8	
4201	7200	CLA	
4202	1066	TAD K3777	/AC=3777
4203	7740	CLA SMA SZA	/TEST COMBINATION
4204	7440	SZA	
4205	7402	HLT	/SMA SZA DID NOT SKIP OR AC
			/NOT CLEARED TO 0000
		/GROUP 2 OPERATE TEST 9	
4206	7300	CLL CLA	/LINK=0
4207	1070	TAD K5252	/AC=5252
4210	7620	CLA SNL	/TEST COMBINATION
4211	7440	SZA	
4212	7402	HLT	/SNL SKIPPED OR AC NOT CLEARED
			/AC AND LINK SHOULD EQUAL ZERO
		/GROUP 2 OPERATE TEST 10	
4213	7320	CLA CLL CML	
4214	1071	TAD K2525	/AC=2525 LINK=1
4215	7620	CLA SNL	/TEST COMBINATION
4216	7402	HLT	/SNL DID NOT SKIP

```

4217 7440          SZA          /LINK SHOULD EQUAL ONE
4220 7402          HLT          /CLA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 11
4221 7300          CLA CLL          /AC=0000 LINK=0
4222 7520          SMA SNL          /TEST COMBINATION
4223 7440          SZA
4224 7402          HLT          /SMA SNL SKIPPED. AC AND LINK
                                   /SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 12
4225 7320          CLA CLL CML        /AC=0000 LINK=1
4226 7520          SMA SNL          /TEST COMBINATION
4227 7402          HLT          /SNL SHOULD HAVE SKIPPED. LINK = 1

/GROUP 2 OPERATE TEST 13
4230 7300          CLA CLL
4231 1050          TAD K4000          /AC=4000 LINK=0
4232 7520          SMA SNL          /TEST COMBINATION
4233 7402          HLT          /SMA SHOULD HAVE SKIPPED
                                   /AC=4000

/GROUP 2 OPERATE TEST 14
4234 7320          CLA CLL CML
4235 1050          TAD K4000          /AC=4000 LINK=1
4236 7520          SMA SNL          /TEST COMBINATION
4237 7402          HLT          /SMA SNL SHOULD HAVE SKIPPED
                                   /AC=4000 LINK=1

/GROUP 2 OPERATE TEST 15
4240 7300          CLA CLL          /AC=0000 LINK=0
4241 7720          CLA SMA SNL        /TEST COMBINATION
4242 7440          SZA
4243 7402          HLT          /SMA SNL SKIPPED. AC AND LINK
                                   /SHOULD BE ZERO

/GROUP 2 OPERATE TEST 16
4244 7320          CLA CLL CML        /AC=0000 LINK=1
4245 7720          CLA SMA SNL        /TEST COMBINATION
4246 7402          HLT          /SNL SHOULD HAVE SKIPPED
                                   /LINK=1
4247 7440          SZA
4250 7402          HLT          /CLA SMA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 17
4251 7300          CLA CLL
4252 1050          TAD K4000          /AC=4000 LINK=0
4253 7720          CLA SMA SNL        /TEST COMBINATION
4254 7402          HLT          /SMA SHOULD HAVE SKIPPED
                                   /AC SHOULD EQUAL 0000 LINK=0
4255 7440          SZA
4256 7402          HLT          /CLA SMA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 18
4257 7320          CLA CLL CML
4260 1050          TAD K4000          /AC=4000 LINK=1

```

```

4261 7720          CLA SMA SNL      /TEST COMBINATION
4262 7402          HLT              /CLA SMA SNL SHOULD HAVE SKIPPED
                                   /AC SHOULD BE 0000 LINK=1

4263 7440          SZA
4264 7402          HLT              /CLA SMA SNL DID NOT CLEAR AC
                                   /AC SHOULD BE 0000 LINK=1

/GROUP 2 OPERATE TEST 19
4265 7300          CLA CLL          /AC=0000 LINK=0
4266 7460          SZA SNL         /TEST COMBINATION
4267 7402          HLT              /SZA SNL DID NOT SKIP
                                   /AC=0000

/GROUP 2 OPERATE TEST 20
4270 7320          CLL CLA CML      /AC=0000 LINK=1
4271 7460          SZA SNL         /TEST COMBINATION
4272 7402          HLT              /SZA SNL DID NOT SKIP
                                   /AC=0000 LINK=1

/GROUP 2 OPERATE TEST 21
4273 7300          CLA CLL
4274 1040          TAD K0400        /AC=0400 LINK=0
4275 7460          SZA SNL         /TEST COMBINATION
4276 7450          SNA
4277 7402          HLT              /SZA SNL SKIPPED
                                   /AC=0400 LINK=0

/GROUP 2 OPERATE TEST 22
4300 7320          CLA CLL CML      /AC=0040 LINK=1
4301 1032          TAD K0040
4302 7460          SZA SNL         /TEST COMBINATION
4303 7402          HLT              /SZA SNL SHOULD HAVE SKIPPED
                                   /LINK=1

/GROUP 2 OPERATE TEST 23
4304 7300          CLA CLL          /AC=0000 LINK=0
4305 7660          CLA SZA SNL      /TEST COMBINATION
4306 7402          HLT              /CLA SZA SNL SHOULD HAVE SKIPPED
                                   /AC AND LINK SHOULD EQUAL ZERO

4307 7440          SZA
4310 7402          HLT              /CLA SZA SNL DID NOT CLEAR AC
                                   /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 24
4311 7320          CLA CLL CML      /AC=0000 LINK=1
4312 7660          CLA SZA SNL      /TEST COMBINATION
4313 7402          HLT              /CLA SZA SNL SHOULD HAVE SKIPPED
                                   /AC=0000 LINK=1

4314 7440          SZA
4315 7402          HLT              /CLA SZA SNL DID NOT CLEAR AC
                                   /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 25
4316 7320          CLA CLL CML      /AC=0200 LINK=1
4317 1036          TAD K0200
4320 7660          CLA SZA SNL      /TEST COMBINATION OR
4321 7402          HLT              /CLA SZA SNL SHOULD HAVE SKIPPED
                                   /LINK=1

4322 7440          SZA
4323 7402          HLT              /CLA SZA SNL DID NOT CLEAR AC

```

```

/AC SHOULD EQUAL 0000
/GROUP 2 OPERATE TEST 26
4324 7300 CLA CLL
4325 1045 TAD K2000 /AC=2000 LINK=0
4326 7660 CLA SZA SNL /TEST COMBINATION
4327 7440 SZA
4330 7402 HLT /CLA SZA SNL FAILED. AC AND
/ LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 27
4331 7300 CLA CLL /AC=0000 LINK=0
4332 7560 SMA SZA SNL /TEST COMBINATION
4333 7402 HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=0000 LINK=0

/GROUP 2 OPERATE TEST 28
4334 7320 CLA CLL CML
4335 1066 TAD K3777 /AC=3777 LINK=1
4336 7560 SMA SZA SNL /TEST COMBINATION
4337 7402 HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=3777 LINK=1

/GROUP 2 OPERATE TEST 29
4340 7300 CLA CLL
4341 1050 TAD K4000 /AC=4000 LINK=0
4342 7560 SMA SZA SNL /TEST COMBINATION
4343 7402 HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=4000 LINK=0

/GROUP 2 OPERATE TEST 30
4344 7300 CLA CLL
4345 1066 TAD K3777 /AC=3777 LINK=0
4346 7560 SMA SZA SNL /TEST COMBINATION
4347 7450 SNA
4350 7402 HLT /SMA SZA SNL SHOULD NOT HAVE
/ SKIPPED. AC=3777 LINK=0

/GROUP 2 OPERATE TEST 31
4351 7300 CLA CLL /AC=0000 LINK=0
4352 7760 CLA SMA SZA SNL /TEST COMBINATION
4353 7402 HLT /CLA SMA SZA SNL SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0000

4354 7440 SZA
4355 7402 HLT /AC NOT ZERO AFTER CLA SMA SZA SNL
/AC SHOULD BE 0000 LINK=0

/GROUP 2 OPERATE TEST 32
4356 7320 CLA CLL CML
4357 1066 TAD K3777 /AC=3777 LINK=1
4360 7760 CLA SMA SZA SNL /TEST COMBINATION
4361 7402 HLT /CLA SMA SZA SNL DID NOT SKIP
/AC SHOULD BE 0000 LINK=1

4362 7440 SZA
4363 7402 HLT /CLA SMA SZA SNL DID NOT CLEAR AC
/AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 33
4364 7300 CLA CLL
```

```

4365 1050      TAD K4000      /AC=4000 LINK=0
4366 7760      CLA SMA SZA SNL /TEST COMBINATION
4367 7402      HLT          /CLA SMA SZA SNL SHOULD HAVE SKIPPED
                          /AC SHOULD BE 0000. LINK=0

4370 7440      SZA
4371 7402      HLT          /CLA SMA SZA SNL DID NOT CLEAR AC
                          /AC SHOULD EQUAL 0000

```

/GROUP 2 OPERATE TEST 34

```

4372 7300      CLA CLL
4373 1066      TAD K3777      /AC=3777 LINK=0
4374 7760      CLA SMA SZA SNL /TEST COMBINATION
4375 7440      SZA
4376 7402      HLT          /CLA SMA SZA SNL FAILED, AC
                          /SHOULD BE ZERO, LINK=0

```

/GROUP 2 OPERATE TEST 35

```

4377 7300      CLA CLL      /AC=0000 LINK=0
4400 7410      SKP          /TEST INSTRUCTION
4401 7402      HLT          /SKIP FAILED
                          /AC AND LINK EQUAL ZERO

```

/GROUP 2 OPERATE TEST 36

```

4402 7320      CLA CLL CML /AC=0000 LINK=1
4403 7410      SKP          /TEST INSTRUCTION
4404 7402      HLT          /SKIP FAILED
                          /AC=0000 LINK=1

```

/GROUP 2 OPERATE TEST 37

```

4405 7320      CLA CLL CML
4406 1066      TAD K3777      /AC=3777 LINK=1
4407 7410      SKP          /TEST INSTRUCTION
4410 7402      HLT          /SKIP FAILED
                          /AC=3777 LINK=1

```

/GROUP 2 OPERATE TEST 38

```

4411 7300      CLA CLL
4412 1066      TAD K3777      /AC=3777 LINK=0
4413 7410      SKP          /TEST INSTRUCTION
4414 7402      HLT          /SKIP FAILED
                          /AC=3777 LINK=0

```

/GROUP 2 OPERATE TEST 39

```

4415 7200      CLA
4416 1066      TAD K3777      /AC=3777
4417 7710      CLA SPA      /TEST COMBINATION
4420 7402      HLT          /CLA SPA DID NOT SKIP, AC
                          /SHOULD BE ZERO

4421 7440      SZA
4422 7402      HLT          /CLA SPA DID NOT CLEAR AC
                          /AC SHOULD EQUAL ZERO

```

/GROUP 2 OPERATE TEST 40

```

4423 7200      CLA
4424 1050      TAD K4000      /AC=4000
4425 7710      CLA SPA      /TEST COMBINATION
4426 7440      SZA
4427 7402      HLT          /CLA SPA FAILED, AC SHOULD
                          /EQUAL 0000

```

/GROUP 2 OPERATE TEST 41



PAUSE

/INSTRUCTION TEST - TAPE 4

/GROUP 2 OPERATE TEST 49

4473	7300	CLA CLL	
4474	1070	TAD K5252	/AC=5252 LINK=0
4475	7630	CLA SZL	/TEST COMBINATION
4476	7402	HLT	/CLA SZL DID NOT SKIP
			/AC AND LINK SHOULD BE 0
4477	7440	SZA	
4500	7402	HLT	/CLA SZL DID NOT CLEAR AC
			/AC SHOULD BE ZERO. LINK=0

/GROUP 2 OPERATE TEST 50

4501	7360	CLA CLL CML CMA	/AC=7777 LINK=1
4502	7630	CLA SZL	/TEST COMBINATION (AND)
4503	7440	SZA	
4504	7402	HLT	/CLA SZL FAILED. AC SHOULD
			/BE 0000. LINK=1

/GROUP 2 OPERATE TEST 51

4505	7300	CLA CLL	
4506	1066	TAD K3777	/AC=3777 LINK=0
4507	7530	SPA SZL	/TEST COMBINATION (AND)
4510	7402	HLT	/SPA SZL DID NOT SKIP
			/AC=3777 LINK=0

/GROUP 2 OPERATE TEST 52

4511	7320	CLA CLL CML	
4512	1066	TAD K3777	/AC=3777 LINK=1
4513	7530	SPA SZL	/TEST COMBINATION (AND)
4514	7450	SNA	
4515	7402	HLT	/SPA SZL SKIPPED
			/AC=3777 LINK=1

/GROUP 2 OPERATE TEST 53

4516	7300	CLA CLL	
4517	1050	TAD K4000	/AC=4000 LINK=0
4520	7530	SPA SZL	/TEST COMBINATION (AND)
4521	7500	SMA	
4522	7402	HLT	/SPA SZL SKIPPED
			/AC=4000 LINK=0

/GROUP 2 OPERATE TEST 54

4523	7300	CLA CLL	
4524	1066	TAD K3777	/AC=3777 LINK=0
4525	7730	CLA SPA SZL	/TEST COMBINATION (AND)
4526	7402	HLT	/CLA SPA SZL SHOULD HAVE SKIPPED
			/AC SHOULD BE 0000. LINK=0
4527	7440	SZA	
4530	7402	HLT	/CLA SPA SZL DID NOT CLEAR THE AC
			/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 55

4531	7320	CLA CLL CML	
4532	1066	TAD K3777	/AC=3777 LINK=1
4533	7730	CLA SPA SZL	/TEST COMBINATION (AND)

```

4534 7440      SZA
4535 7402      HLT                /CLA SPA SZL FAILED
                                   /AC SHOULD EQUAL 0000 LINK=1

/GROUP 2 OPERATE TEST 56
4536 7300      CLA CLL
4537 1050      TAD K4000                /AC=4000 LINK=0
4540 7730      CLA SPA SZL    /TEST COMBINATION (AND)
4541 7440      SZA
4542 7402      HLT                /CLA SPA SZL FAILED
                                   /AC SHOULD EQUAL 0000 LINK=0

/GROUP 2 OPERATE TEST 57
4543 7300      CLA CLL
4544 1050      TAD K4000                /AC=4000 LINK=0
4545 7470      SNA SZL        /TEST COMBINATION (AND)
4546 7402      HLT                /SNA SZL DID NOT SKIP
                                   /AC = 4000 LINK=0

/GROUP 2 OPERATE TEST 58
4547 7320      CLA CLL CML
4550 1050      TAD K4000                /AC=4000 LINK=1
4551 7470      SNA SZL        /TEST COMBINATION (AND)
4552 7420      SNL
4553 7402      HLT                /SNA SZL SKIPPED
                                   /AC=4000 LINK=1

/GROUP 2 OPERATE TEST 59
4554 7300      CLA CLL        /AC=0000 LINK=0
4555 7470      SNA SZL        /TEST COMBINATION (AND)
4556 7430      SZL
4557 7402      HLT                /SNA SZL SKIPPED
                                   /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 60
4560 7320      CLA CLL CML
4561 1050      TAD K4000                /AC=4000 LINK=1
4562 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4563 7440      SZA
4564 7402      HLT                /CLA SNA SZL FAILED, AC SHOULD
                                   /BE 0000, LINK=1

/GROUP 2 OPERATE TEST 61
4565 7300      CLA CLL
4566 1050      TAD K4000                /AC=4000 LINK=0
4567 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4570 7402      HLT                /CLA SNA SZL DID NOT SKIP
                                   /AC SHOULD BE 0000, LINK=0

4571 7440      SZA
4572 7402      HLT                /CLA SNA SZL DID NOT CLEAR AC
                                   /AC AND LINK SHOULD BE ZERO

/GROUP 2 OPERATE TEST 62
4573 7300      CLA CLL        /AC=0000 LINK=0
4574 7670      CLA SNA SZL    /TEST COMBINATION (AND)
4575 7440      SZA
4576 7402      HLT                /CLA SNA SZL FAILED, AC SHOULD
                                   /BE 0000, LINK=0

/GROUP 2 OPERATE TEST 63
4577 7300      CLA CLL

```

4600 1066 TAD K3777 /AC=3777 LINK=0  
 4601 7570 SPA SNA SZL /TEST COMBINATION (AND)  
 4602 7402 HLT /SPA SNA SZL DID NOT SKIP  
 /AC=3777 LINK=0

/GROUP 2 OPERATE TEST 64

4603 7320 CLA CLL CML  
 4604 1066 TAD K3777 /AC=3777 LINK=1  
 4605 7570 SPA SNA SZL /TEST COMBINATION (AND)  
 4606 7420 SNL  
 4607 7402 HLT /SPA SNA SZL SKIPPED  
 /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 65

4610 7300 CLA CLL /AC=0000 LINK=0  
 4611 7570 SPA SNA SZL /TEST COMBINATION (AND)  
 4612 7430 SZL  
 4613 7402 HLT /SPA SNA SZL SKIPPED  
 /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 66

4614 7300 CLA CLL  
 4615 1050 TAD K4000 /AC=4000 LINK=0  
 4616 7570 SPA SNA SZL /TEST COMBINATION (AND)  
 4617 7430 SZL  
 4620 7402 HLT /SPA SNA SZL SKIPPED  
 /AC=4000 LINK=0

/GROUP 2 OPERATE TEST 67

4621 7300 CLA CLL  
 4622 1066 TAD K3777 /AC=3777 LINK=0  
 4623 7770 CLA SPA SNA SZL /TEST COMBINATION (AND)  
 4624 7402 HLT /CLA SPA SNA SZL DID NOT SKIP  
 /AC AND LINK SHOULD BE ZERO  
 4625 7440 SZA  
 4626 7402 HLT /CLA SPA SNA SZL DID NOT CLEAR AC  
 /AC AND LINK SHOULD BE ZERO

/GROUP 2 OPERATE TEST 68

4627 7320 CLA CLL CML  
 4630 1066 TAD K3777 /AC=3777 LINK=1  
 4631 7770 CLA SPA SNA SZL /TEST COMBINATION (AND)  
 4632 7440 SZA  
 4633 7402 HLT /CLA SPA SNA SZL FAILED. AC SHOULD  
 /BE 0000, LINK SHOULD EQUAL ONE

/GROUP 2 OPERATE TEST 69

4634 7300 CLA CLL  
 4635 1050 TAD K4000 /AC=4000 LINK=0  
 4636 7770 CLA SPA SNA SZL /TEST COMBINATION (AND)  
 4637 7440 SZA  
 4640 7402 HLT /CLA SPA SNA SZL FAILED. AC SHOULD  
 /BE 0000, LINK SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 70

4641 7300 CLA CLL /AC=0000 LINK=0  
 4642 7770 CLA SPA SNA SZL /TEST COMBINATION (AND)  
 4643 7440 SZA  
 4644 7402 HLT /CLA SPA SNA SZL FAILED. AC AND

```

                                /LINK SHOULD BE ZERO.
/GROUP 2 OPERATE TEST 71
4645 7200          CLA
4646 1070         TAD K5252          /AC=5252
4647 7604         CLA OSR          /TEST COMBINATION
4650 7040         CMA
4651 7440         SZA
4652 7402         HLT          /CLA OSR FAILED
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 72
4653 7200          CLA
4654 1050         TAD K4000          /AC=4000
4655 7504         SMA OSR          /TEST COMBINATION
4656 7402         HLT          /SMA OSR FAILED TO SKIP
                                /AC SHOULD BE 7777

4657 7040         CMA
4660 7440         SZA
4661 7402         HLT          /SMA OSR FAILED
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 73
4662 7200          CLA          /AC=0000
4663 7444         SZA OSR          /TEST COMBINATION
4664 7402         HLT          /SZA OSR FAILED TO SKIP
                                /AC SHOULD BE 0000

4665 7040         CMA
4666 7440         SZA
4667 7402         HLT          /SZA OSR FAILED.
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 74
4670 7320         CLL CML CLA      /LINK=1
4671 7424         SNL OSR          /TEST COMBINATION
4672 7402         HLT          /SNL OSR FAILED TO SKIP
                                /AC SHOULD BE 7777

4673 7040         CMA
4674 7440         SZA
4675 7402         HLT          /SNL OSR FAILED.
                                /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 75
4676 7300         CLA CLL
4677 1066         TAD K3777          /AC=3777 LINK=0
4700 7764         CLA SMA SZA SNL OSR /TEST COMBINATION
4701 7450         SNA
4702 7402         HLT          /CLA SMA SZA SNL OSR FAILED.
                                /AC SHOULD BE 7777. LINK=0

4703 7040         CMA
4704 7440         SZA
4705 7402         HLT          /CLA SMA SZA SNL OSR FAILED
                                /AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 76
4706 7200         CLA          /AC=0000
4707 7414         SKP OSR          /TEST COMBINATION
4710 7402         HLT          /SKP OSR DID NOT SKIP
                                /AC SHOULD BE 7777

```

4711	7040	CMA	
4712	7440	SZA	
4713	7402	HLT	/SKP OSR FAILED /AC SHOULD EQUAL ZERO
/GROUP 2 OPERATE TEST 77			
4714	7200	CLA	/AC=0000
4715	7514	SPA OSR	/TEST COMBINATION
4716	7402	HLT	/SPA OSR DID NOT SKIP /AC SHOULD EQUAL 7777
4717	7040	CMA	
4720	7440	SZA	
4721	7402	HLT	/SPA OSR FAILED. /AC SHOULD BE 0000
/GROUP 2 OPERATE TEST 78			
4722	7200	CLA	
4723	1040	TAD K0400	/AC=0400
4724	7454	SNA OSR	/TEST COMBINATION
4725	7402	HLT	/SNA OSR DID NOT SKIP /AC SHOULD BE 7777
4726	7040	CMA	
4727	7440	SZA	
4730	7402	HLT	/SNA OSR FAILED /AC SHOULD BE 0000
/GROUP 2 OPERATE TEST 79			
4731	7300	CLA CLL	/LINK=0 AC=0000
4732	7434	SZL OSR	/TEST COMBINATION
4733	7402	HLT	/SZL OSR DID NOT SKIP /AC SHOULD BE 7777
4734	7040	CMA	
4735	7440	SZA	
4736	7402	HLT	/SZL OSR FAILED /AC SHOULD BE 0000
/GROUP 2 OPERATE TEST 80			
4737	7300	CLA CLL	
4740	1066	TAD K3777	/AC=3777 LINK=0
4741	7774	CLA SPA SNA SZL OSR	/TEST COMBINATION (AND)
4742	7402	HLT	/ABOVE MESS DID NOT SKIP /AC SHOULD BE 7777
4743	7040	CMA	
4744	7440	SZA	
4745	7402	HLT	/CLA SPA SNA SZL OSR FAILED /AC SHOULD BE 0000
/MQ OPERATE TEST 1			
4746	7360	CLA CMA CLL CML	/AC=7777 LINK=1
4747	7601	CLAE	/AC=0000 LINK=1
4750	7430	SZL	
4751	7440	SZA	
4752	7402	HLT	/7601 FAILED
/MQ OPERATE TEST 2			
4753	7360	CLA CLL CMA CML	/AC=7777 L=1

4754	7401	NOPE	/AC=7777 L=1 (NOP)
4755	7040	CMA	
4756	7430	SZL	
4757	7440	SZA	
4760	7402	HLT	/7401 FAILED
/MQ OPERATE TEST 3			
4761	7360	CLA CMA CLL CML	/AC=7777 LINK=1
4762	7421	MQL	/AC=0000 LINK=1
4763	7430	SZL	
4764	7440	SZA	
4765	7402	HLT	/MQL DID NOT CLEAR AC
/MQ OPERATE TEST 4			
4766	7300	CLA CLL	
4767	7421	MQL	/MQ=0000, AC=0000
4770	7040	CMA	/AC=7777
4771	7501	MQA	/AC=7777, MQ=0000
4772	7040	CMA	/AC=0000
4773	7420	SNL	
4774	7440	SZA	
4775	7402	HLT	/MQ DID NOT EQUAL 0000 OR MQA FAILED
/MQ OPERATE TEST 5			
4776	7340	CLA CMA CLL	
4777	7421	MQL	/MQ=7777, AC=0000
5000	7501	MQA	/AC=7777, MQ=7777
5001	7040	CMA	
5002	7420	SNL	
5003	7440	SZA	
5004	7402	HLT	/MQ DID NOT EQUAL 7777 OR MQA FAILED
/MQ OPERATE TEST 6			
5005	7601	CLAE	/CLEAR AC
5006	1070	TAD K5252	
5007	7421	MQL	/MQ=5252, AC=0000
5010	1071	TAD K2525	
5011	7501	MQA	/AC=7777, MQ=5252
5012	7040	CMA	
5013	7440	SZA	
5014	7402	HLT	/MQ DID NOT EQUAL 5252 OR MQA FAILED
/MQ OPERATE TEST 7			
5015	7360	CLA CMA CLL CML	
5016	7421	MQL	/MQ=7777, AC=0000
5017	7040	CMA	/AC=7777
5020	7621	CAM	/AC AND MQ.=0000
5021	7440	SZA	
5022	7402	HLT	/AC SHOULD EQUAL 0000
5023	7501	MQA	/AC=0000, MQ=0000
5024	7430	SZL	
5025	7440	SZA	
5026	7402	HLT	/CAM DID NOT CLEAR MQ /OR LINK WAS CLEARED

		/MQ OPERATE TEST 8	
5027	7601	CLAE	/CLEAR AC
5030	7421	MQL	/MQ=0000 AC=0000
5031	7040	CMA	
5032	7701	ACL	/AC=0000 MQ=0000
5033	7440	SZA	
5034	7402	HLT	/ACL FAILED
5035	7501	MQA	/AC=0000 MQ=0000
5036	7440	SZA	
5037	7402	HLT	/MQ SHOULD EQUAL 0000

		/MQ OPERATE TEST 9	
5040	7240	CLA CMA	
5041	7421	MQL	/MQ=7777 AC=0000
5042	7701	ACL	/AC=7777 MQ=7777
5043	7040	CMA	
5044	7440	SZA	
5045	7402	HLT	/ACL FAILED
5046	7501	MQA	/AC=7777, MQ=7777
5047	7040	CMA	
5050	7440	SZA	
5051	7402	HLT	/MQ SHOULD EQUAL 7777

		/MQ OPERATE TEST 10	
5052	7601	CLAE	/CLEAR AC
5053	1070	TAD K5252	
5054	7421	MQL	/MQ=5252 AC=0000
5055	1071	TAD K2525	
5056	7701	ACL	/AC=5252 MQ=5252
5057	1071	TAD K2525	
5060	7040	CMA	
5061	7440	SZA	
5062	7402	HLT	/ACL FAILED
5063	7501	MQA	/AC=5252 MQ=5252
5064	1071	TAD K2525	
5065	7040	CMA	
5066	7440	SZA	
5067	7402	HLT	/MQ SHOULD EQUAL 5252

		/MQ OPERATE TEST 11	
5070	7601	CLAE	/CLEAR AC
5071	1071	TAD K2525	
5072	7421	MQL	/MQ=2525 AC=0000
5073	1070	TAD K5252	
5074	7701	ACL	/AC=2525 MQ=2525
5075	1070	TAD K5252	
5076	7040	CMA	
5077	7440	SZA	
5100	7402	HLT	/ACL FAILED
5101	7501	MQA	/AC=2525 MQ=2525
5102	1070	TAD K5252	
5103	7040	CMA	
5104	7440	SZA	
5105	7402	HLT	/MQ SHOULD EQUAL 2525

```
      /MQ OPERATE TEST 12
5106 7621      CAM      /MQ=0000 AC=0000
5107 7040      CMA      /AC=7777
5110 7521      SWP      /MQ=7777 AC=0000
5111 7440      SZA
5112 7402      HLT      /AC SHOULD EQUAL 0000
5113 7701      ACL      /AC=7777 MQ=7777
5114 7040      CMA
5115 7440      SZA
5116 7402      HLT      /MQ SHOULD EQUAL 7777
```

```
      /MQ OPERATE TEST 13
5117 7621      CAM      /MQ=0000 AC=0000
5120 7040      CMA
5121 7421      MQL      /MQ=7777 AC=0000
5122 7521      SWP      /MQ=0000 AC=7777
5123 7040      CMA
5124 7440      SZA
5125 7402      HLT
5126 7701      ACL      /AC=0000 MQ=0000
5127 7440      SZA
5130 7402      HLT      /MQ SHOULD EQUAL 0000
```

```
      /MQ OPERATE TEST 14
5131 7621      CAM      /MQ=0000 AC=0000
5132 1070      TAD K5252
5133 7421      MQL      /MQ=5252 AC=0000
5134 1071      TAD K2525
5135 7521      SWP      /MQ=2525 AC=5252
5136 1071      TAD K2525
5137 7040      CMA
5140 7440      SZA
5141 7402      HLT      /SWP FAILED
5142 7701      ACL      /AC=2525 MQ=2525
5143 1070      TAD K5252
5144 7040      CMA
5145 7440      SZA
5146 7402      HLT      /SWP FAILED MQ SHOULD EQUAL 2525
```

```
      /MQ OPERATE TEST 15
5147 7621      CAM      /MQ=0000 AC=0000
5150 1071      TAD K2525
5151 7421      MQL      /MQ=2525 AC=0000
5152 1070      TAD K5252      /AC=5252
5153 7521      SWP      /MQ=5252 AC=2525
5154 1070      TAD K5252
5155 7040      CMA
5156 7440      SZA
5157 7402      HLT      /SWP FAILED
5160 7701      ACL      /AC=5252 MQ=5252
5161 1071      TAD K2525
5162 7040      CMA
5163 7440      SZA
```

5164	7402	HLT	/SWP FAILED MQ SHOULD EQUAL 5252
/MQ OPERATE TEST 16			
5165	7621	CAM	/MQ=0000 AC=0000
5166	7040	CMA	/AC=7777
5167	7721	CLAE SWP	/AC=0000 MQ=0000
5170	7440	SZA	
5171	7402	HLT	/CLAE SWP FAILED AC SHOULD EQUAL 0000
5172	7701	ACL	/AC=0000 MQ=0000
5173	7440	SZA	
5174	7402	HLT	/CLAE SWP FAILED MQ SHOULD EQUAL 0000
/MQ OPERATE TEST 17			
5175	7621	CAM	/MQ=0000 AC=0000
5176	7040	CMA	
5177	7421	ACL	/MQ=7777 AC=0000
5200	7721	CLAE SWP	/AC=7777 MQ=0000
5201	7040	CMA	
5202	7440	SZA	
5203	7402	HLT	/CLAE SWP FAILED
5204	7701	ACL	/AC=0000 MQ=0000
5205	7440	SZA	
5206	7402	HLT	/CLAE SWP FAILED MQ SHOULD EQUAL 0000
/MQ OPERATE TEST 18			
5207	7621	CAM	/MQ=0000 AC=0000
5210	1071	TAD K2525	
5211	7421	ACL	/MQ=2525 MQ=0000
5212	1070	TAD K5252	/AC=5252
5213	7721	CLAE SWP	/AC=2525 MQ=0000
5214	1070	TAD K5252	
5215	7040	CMA	
5216	7440	SZA	
5217	7402	HLT	/CLAE FAILED
5220	7701	ACL	/AC=0000 MQ=0000
5221	7440	SZA	
5222	7402	HLT	/CLAE FAILED MQ SHOULD EQUAL 0000
/AND TEST 1			
5223	7200	CLA	
5224	0067	AND K7777	
5225	7440	SZA	
5226	7402	HLT	/AND FAILED AC SHOULD /BE 0000
/AND TEST 2			
5227	7240	CLA CMA	
5230	0020	AND K0000	
5231	7440	SZA	
5232	7402	HLT	/AND FAILED /AC SHOULD EQUAL 0000
/AND TEST 3			
5233	7320	CLA CLL CML	

```

5234 1067      TAD K7777      /AC=7777 LINK=1
5235 0067      AND K7777
5236 7040      CMA
5237 7430      SZL
5240 7440      SZA
5241 7402      HLT

```

```

/AND FAILED. AC SHOULD BE
/0000. LINK SHOULD EQUAL ONE

```

## /AND TEST 4

```

5242 7300      CLA CLL
5243 1071      TAD K2525      /AC=2525 LINK=0
5244 0070      AND K5252
5245 7420      SNL
5246 7440      SZA
5247 7402      HLT

```

```

/AND FAILED. AC SHOULD BE
/0000. LINK SHOULD BE 0

```

## /AND TEST 5

```

5250 7300      CLA CLL
5251 1070      TAD K5252      /AC=5252 LINK=0
5252 0071      AND K2525
5253 7420      SNL
5254 7440      SZA
5255 7402      HLT

```

```

/AND FAILED. AC SHOULD BE
/0000. LINK SHOULD BE 0

```

## /AND TEST 6

```

5256 7300      CLA CLL
5257 1052      TAD K7776      /AC=7776 LINK=0
5260 0070      AND K5252      /TEST INSTRUCTION
5261 7041      CIA           /AC=2526
5262 1070      TAD K5252      /AC=0000 LINK=1
5263 7430      SZL
5264 7440      SZA
5265 7402      HLT

```

```

/AND FAILURE. AC SHOULD BE
/0000. LINK SHOULD BE ONE

```

## /AND TEST 7

```

5266 7300      CLA CLL
5267 1071      TAD K2525      /AC=2525 LINK=0
5270 0071      AND K2525      /TEST INSTRUCTION
5271 7041      CIA           /AC=5253
5272 1071      TAD K2525      /AC=0000 LINK = 1
5273 7430      SZL
5274 7440      SZA
5275 7402      HLT

```

```

/AND FAILED. AC SHOULD BE
/0000. LINK SHOULD BE ONE.

```

## /CHECK FOR BELL

```

5276 7200      CLA
5277 1121      TAD BLCNT
5300 7001      IAC
5301 3121      OCA BLCNT
5302 1121      TAD BLCNT
5303 7640      SZA CLA
5304 5147      JMP START+3
5305 1122      TAD BLCNT

```

5306 3121

DCA BLCNT

/RING BELL

5307 1120

TAD BEL

5310 6046

TLS

5311 6041

TSF

5312 5311

JMP .-1

5313 6042

TCF

5314 5147

JMP START+3

5





ACL	7701	K600	0041
BEGIN	0200	K6000	0072
BEL	0120	K6777	0064
BLCNT	0121	K7000	0073
BLCON	0122	K7007	0117
BSW	7002	K7177	0060
CAM	7621	K7377	0063
CLAE	7601	K7400	0074
CLL1	0446	K7577	0062
CLL11	0452	K7600	0075
CMLT1	0456	K7677	0061
HALT	0006	K7700	0113
K0000	0020	K7717	0051
K0001	0021	K7737	0057
K0002	0022	K7740	0076
K0004	0024	K7757	0056
K0007	0102	K7760	0077
K0010	0026	K7767	0055
K0017	0104	K7770	0100
K0020	0030	K7773	0054
K0037	0105	K7774	0101
K0040	0032	K7775	0053
K0067	0103	K7776	0052
K0077	0106	K7777	0067
K0100	0034	MQA	7501
K0177	0107	MQL	7421
K0200	0036	NOOP	0007
K0377	0110	NOPE	7401
K0400	0040	START	0144
K0770	0116	SWP	7521
K0777	0111		
K1000	0042		
K1234	0043		
K14	0027		
K140	0035		
K1400	0044		
K1777	0112		
K2000	0045		
K2525	0071		
K2552	0115		
K3	0023		
K30	0031		
K300	0037		
K3000	0046		
K3312	0047		
K3777	0066		
K4000	0050		
K5225	0114		
K5252	0070		
K5777	0065		
K6	0025		
K60	0033		

ERRORS DETECTED: 0

LINKS GENERATED: 2

RUN-TIME: 30 SECONDS

2K CORE USED