

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

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

2. REQUIREMENTS

2.1 EQUIPMENT

A PDP-8/E EQUIPPED WITH TELETYPE.

2.2 STORAGE

THIS PROGRAM USES LOCATIONS 0000-5514. 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

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

/PDP-8/E INSTRUCTION TEST 1 MAINDEC-8E-00AB
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/TAPE 1

7002	BSW=7002	/SWAP BYTES IN AC
7401	NOPE=7401	/NOP
7601	CLAE=7601	/CLEAR AC
7421	MOLE=7421	/LOAD MO FROM AC THEN CLEAR AC
7501	MOA=7501	/INCLUSIVE OR, MO AND AC
7621	CAM=7621	/CLEAR AC AND MO
7521	SWP=7521	/SWAP AC AND MO
7701	ACL=7701	/LOAD AC FROM MO, CLEAR MO

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

/CONSTANTS AND VARIABLES

0020	0020	*20
0021	0001	K0000, 0000
0022	0002	K0001, 0001
0023	0003	K0002, 0002
0024	0004	K3, 3
0025	0006	K0004, 0004
0026	0010	K6, 6
0027	0014	K0010, 0010
0030	0020	K14, 14
0031	0030	K0020, 0020
0032	0040	K30, 30
0033	0060	K0040, 0040
0034	0100	K60, 60
0035	0140	K0100, 0100
0036	0200	K140, 140
0037	0300	K0200, 0200
0040	0400	K300, 300
0041	0600	K0400, 0400
0042	1000	K600, 600
0043	1234	K1000, 1000
0044	1400	K1234, 1234
0045	2000	K1400, 1400
0046	3000	K2000, 2000
0047	3312	K3000, 3000
0050	4000	K3312, 3312
0051	7717	K4000, 4000
0052	7776	K7717, 7717
0053	7775	K7776, 7776
		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	DEL,	0207
0121	5140	BLCNT,	-2640
0122	5140	BLCNT,	-2640

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

0147	7410	/SKIP TEST
0150	7402	SKP
0151	7200	HLT
		/SET SR TO 7777, CONTINUE
		/SKP FAILED
		CLA

```

0152 7440 SZA
0153 7402 HLT
/SEA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL ZERO

0154 7450 SNA
0155 7410 SKP
0156 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL ZERO

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/SEA TEST 2
0157 7200 CLA
0160 1050 TAD K4000
0161 7440 SZA
0162 7410 SKP
0163 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 4000

0164 7450 SNA
0165 7402 HLT
/SEA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 4000

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/SEA TEST 3
0166 7200 CLA
0167 1045 TAD K2000
0170 7440 SZA
0171 7410 SKP
0172 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 2000

0173 7450 SNA
0174 7402 HLT
0175 7000 NOP
0176 7000 NOP
0177 7410 SKP
/SEA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 2000

/SKIP OVER JMP START.

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

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

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/SEA TEST 5
0210 7200 CLA
0211 1040 TAD K0400
0212 7440 SZA
0213 7410 SKP
0214 7402 HLT

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0215 7450 SNA
0216 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0400

/SEA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0400

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/SEA TEST 6

0217 7200 CLA
0220 1036 TAD K0200
0221 7440 SEA
0222 7410 SKP
0223 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0200

0224 7450 SNA
0225 7402 HLT
/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0200

/SEA TEST 7
0226 7200 CLA
0227 1034 TAD K0100
0230 7440 SEA
0231 7410 SKP
0232 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0100

0233 7450 SNA
0234 7402 HLT
/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0100

/SEA TEST 8
0235 7200 CLA
0236 1032 TAD K0040
0237 7440 SEA
0240 7410 SKP
0241 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0040

0242 7450 SNA
0243 7402 HLT
/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0040

/SEA TEST 9
0244 7200 CLA
0245 1030 TAD K0020
0246 7440 SEA
0247 7410 SKP
0250 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0020

0251 7450 SNA
0252 7402 HLT
/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0020

/SEA TEST 10
0253 7200 CLA
0254 1026 TAD K0010
0255 7440 SEA
0256 7410 SKP
0257 7402 HLT
/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0010

0260 7450 SNA
0261 7402 HLT
/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0010

/SEA TEST 11
0262 7200 CLA
0263 1024 TAD K0004

0264 7440 SEA
0265 7410 SKP
0266 7402 HLT

0267 7450 SNA
0270 7402 HLT

/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0004

/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0004

/SEA TEST 12
0271 7200 CLA
0272 1022 TAD K0002
0273 7440 SEA
0274 7410 SKP
0275 7402 HLT

0276 7450 SNA
0277 7402 HLT

/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0002

/SNA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0002

/SEA TEST 13
0300 7200 CLA
0301 1021 TAD K0001
0302 7440 SEA
0303 7410 SKP
0304 7402 HLT

0305 7450 SNA
0306 7402 HLT

/SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 0001

/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

0326 1050 TAD K4000
0327 7500 SMA
0330 7402 HLT
/SMA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 4000

0331 7200 /CMA TEST 1
0332 1067 CLA
0333 7040 TAD K7777
0334 7440 CMA
0335 7402 SEA
HLT
/CMA DID NOT COMPLEMENT AC
/AC SHOULD EQUAL 0000

0336 7200 /CMA - TAD TEST 1
0337 1071 CLA
0340 7040 TAD K2525
0341 7450 CMA
0342 7402 SNA
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

0347 7200 /CMA - TAD TEST 2
0350 1070 CLA
0351 7040 TAD K5252
0352 7450 CMA
0353 7402 SNA
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

0360 7200 /CMA - TAD TEST 3
0361 1067 CLA
0362 7040 TAD K7777
0363 7440 CMA
0364 7402 SEA
HLT
/TAD OR CMA ERROR
/AC SHOULD EQUAL 0000

0365 7200 /IAC TEST 1
0366 7001 CLA
0367 7440 IAC
0370 7410 SEA
0371 7402 SKP
HLT
/IAC DID NOT INCREMENT
/AC SHOULD EQUAL 0001

0372 7200 /IAC TEST 2
0373 1067 CLA
0374 7001 TAD K7777
IAC

0375 7440 SEA
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 SEA
0406 7402 HLT

/IAC NOT INCREMENTING
/AC SHOULD EQUAL 0000

/SEL TEST 1

0407 7200 CLA
0410 7100 CLL
0411 7004 RAL
0412 7430 SEL
0413 7402 HLT

/CLEAR LINK
/CLEAR LINK SAFETY
/SEL SHOULD HAVE SKIPPED
/LINK SHOULD EQUAL ZERO

/SEL TEST 2

0414 7200 CLA
0415 7100 CLL
0416 7020 CML
0417 1050 TAD K4000
0420 7004 RAL
0421 7430 SEL
0422 7410 SKP
0423 7402 HLT

/CLEAR LINK
/COMPLEMENT LINK
/SET LINK SAFETY

/SNL TEST 1

0424 7200 CLA
0425 7100 CLL
0426 7004 RAL
0427 7420 SNL
0430 7410 SKP
0431 7402 HLT

/SNL SHOULD NOT HAVE SKIPPED
/LINK SHOULD EQUAL ONE
/CLEAR LINK
/CLEAR LINK SAFETY
/SNL SHOULD NOT HAVE SKIPPED
/LINK SHOULD EQUAL ZERO

/SNL TEST 2

0432 7200 CLA
0433 7100 CLL
0434 7020 CML
0435 1050 TAD K4000
0436 7004 RAL
0437 7420 SNL
0440 7402 HLT

/CLEAR LINK
/COMPLEMENT LINK
/SET LINK SAFETY
/SNL SHOULD HAVE SKIPPED
/LINK SHOULD EQUAL ONE

/CLL TEST 1

0441 7200 CLA
0442 1050 TAD K4000

0443 7024 RAL /SET LINK
 0444 7420 SNL
 0445 5252 JMP CLL11 /CANNOT SET LINK WITH RAL

0446 7100 CLL1, /TRY A CML
 0447 7430 CLL
 0450 7402 SEL
 HLT /CLL DID NOT CLEAR LINK
 /LINK SHOULD EQUAL ONE

0451 5256 JMP .+5 /SET LINK
 0452 7020 CLL11, CML
 0453 7420 SNL
 0454 7402 HLT /CANNOT SET LINK WITH
 /RAL OR CML. CANNOT
 /PERFORM CLL TEST 1

0455 5246 JMP CLL1

/CML TEST 1
 0456 7100 CLL
 0457 7430 CMLT1, CLL
 0460 7402 SEL
 0461 7020 HLT
 0462 7420 CML
 0463 7402 SNL
 0464 7020 HLT
 0465 7430 CML
 0466 7402 SEL
 HLT /CML DID NOT SET LINK

/CLA TEST 1 (OPERATE GROUP 2)
 0467 7200 CLA
 0470 1067 TAD K7777
 0471 7600
 0472 7440 SEA
 0473 7402 HLT
 /CML DID NOT RESET LINK

/OSR TEST 1
 0474 7200 CLA
 0475 7404 OSR
 0476 7040 CMA
 0477 7440 SZA
 0500 7402 HLT
 /CLA (7600) DID NOT CLEAR AC
 /AC SHOULD EQUAL 0000

/OSR DID NOT SET AC TO 7777
 /AC SHOULD=0

/NOP TEST 1 (OPERATE GROUP 1)

0501 7200 CLA
 0502 7100 CLL
 0503 7000 7000
 0504 7450 SNA
 0505 7430 SEL
 0506 7402 HLT
 /AC AND LINK EQUAL ZERO
 /TEST INSTRUCTION

/NOP FAILURE
 /AC AND LINK SHOULD BE ZERO

/NOP TEST 2 (OPERATE GROUP 2)

0507 7200 CLA

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

/TAD TEST 1
0515 7200 CLA /OPERAND 1
0516 1066 TAD K3777 /OPERAND 2
0517 1050 TAD K4000
0520 7040 CMA
0521 7440 SEA
0522 7402 HLT
/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 2
0523 7200 CLA /OPERAND 1
0524 1065 TAD K5777 /OPERAND 2
0525 1045 TAD K2000
0526 7040 CMA
0527 7440 SEA
0530 7402 HLT
/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 3
0531 7200 CLA /OPERAND 1
0532 1064 TAD K6777 /OPERAND 2
0533 1042 TAD K1000
0534 7040 CMA
0535 7440 SEA
0536 7402 HLT
/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 4
0537 7200 CLA /OPERAND 1
0540 1063 TAD K7377 /OPERAND 2
0541 1040 TAD K0400
0542 7040 CMA
0543 7440 SEA
0544 7402 HLT
/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 5
0545 7200 CLA /OPERAND 1
0546 1062 TAD K7577 /OPERAND 2
0547 1036 TAD K0200
0550 7040 CMA
0551 7440 SEA
0552 7402 HLT
/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 6
0553 7200 CLA /OPERAND 1
0554 1061 TAD K7677 /OPERAND 2
0555 1034 TAD K0100
0556 7040 CMA
0557 7440 SEA
0560 7402 HLT
/TAD ERROR

/TAD TEST 7

0561 7200 CLA
0562 1057 TAD K7737
0563 1032 TAD K0040
0564 7040 CMA
0565 7440 SEA
0566 7402 HLT

/AC SHOULD EQUAL 0000

/OPERAND 1
/OPERAND 2

/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 8

0567 7200 CLA
0570 1056 TAD K7757
0571 1030 TAD K0020
0572 7040 CMA
0573 7440 SEA

/OPERAND 1
/OPERAND 2

/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 9

0575 7200 CLA
0576 1055 TAD K7767
0577 1026 TAD K0010
0600 7040 CMA
0601 7440 SEA
0602 7402 HLT

/OPERAND 1
/OPERAND 2

/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 10

0603 7200 CLA
0604 1054 TAD K7773
0605 1024 TAD K0004
0606 7040 CMA
0607 7440 SEA
0610 7402 HLT

/OPERAND 1
/OPERAND 2

/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 11

0611 7200 CLA
0612 1053 TAD K7775
0613 1022 TAD K0002
0614 7040 CMA
0615 7440 SEA
0616 7402 HLT

/OPERAND 1
/OPERAND 2

/TAD ERROR

/TAD TEST 12

0617 7200 CLA
0620 1052 TAD K7776
0621 1021 TAD K0001
0622 7040 CMA
0623 7440 SEA
0624 7402 HLT

/OPERAND 1
/OPERAND 2

/TAD ERROR
/AC SHOULD EQUAL 0000

/TAD TEST 13

0625 7200 CLA
0626 7100 CLL
0627 1050 TAD K4000

/OPERAND 1

0630 1050 TAD K4000
0631 7430 SEL
0632 7440 SEA
0633 7402 HLT

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

/TAD TEST 14
CLA
0634 7200
0635 7100 CLL
0636 1072 TAD K6000
0637 1045 TAD K2000
0640 7430 SEL
0641 7440 SEA
0642 7402 HLT

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

/TAD TEST 15
CLA
0643 7200
0644 7100 CLL
0645 1073 TAD K7000
0646 1042 TAD K1000
0647 7430 SEL
0650 7440 SEA
0651 7402 HLT

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

/TAD TEST 16
CLA
0652 7200
0653 7100 CLL
0654 1074 TAD K7400
0655 1040 TAD K0400
0656 7430 SEL
0657 7440 SEA
0660 7402 HLT

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

/TAD TEST 17
CLA
0661 7200
0662 7100 CLL
0663 1075 TAD K7600
0664 1036 TAD K0200
0665 7430 SEL
0666 7440 SEA
0667 7402 HLT

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

/TAD TEST 18
CLA
0670 7200
0671 7100 CLL
0672 1113 TAD K7700
0673 1034 TAD K0100
0674 7430 SEL
0675 7440 SEA
0676 7402 HLT

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

/TAD TEST 19
CLA
0677 7200
0700 7100 CLL


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0701 1076      TAD K7740      /OPERAND 1
0702 1032      TAD K0040      /OPERAND 2
0703 7430      SEL
0704 7440      SEA
0705 7402      HLT
/TAD ERROR. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

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/TAD TEST 20
0706 7200      CLA
0707 7100      CLL
0710 1077      TAD K7760      /OPERAND 1
0711 1030      TAD K0020      /OPERAND 2
0712 7430      SEL
0713 7440      SEA
0714 7402      HLT
/TAD ERROR. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

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/TAD TEST 21
0715 7200      CLA
0716 7100      CLL
0717 1100      TAD K7770      /OPERAND 1
0720 1026      TAD K0010      /OPERAND 2
0721 7430      SEL
0722 7440      SEA
0723 7402      HLT
/TAD ERROR AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

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/TAD TEST 22
0724 7200      CLA
0725 7100      CLL
0726 1101      TAD K7774      /OPERAND 1
0727 1024      TAD K0004      /OPERAND 2
0730 7430      SEL
0731 7440      SEA
0732 7402      HLT
/TAD ERROR. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

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/TAD TEST 23
0733 7200      CLA
0734 7100      CLL
0735 1032      TAD K7776      /OPERAND 1
0736 1022      TAD K0002      /OPERAND 2
0737 7430      SEL
0740 7440      SEA
0741 7402      HLT
/TAD ERROR. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

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/TAD TEST 24
0742 7200      CLA
0743 7100      CLL
0744 1067      TAD K7777      /OPERAND 1
0745 1021      TAD K0001      /OPERAND 2
0746 7430      SEL
0747 7440      SEA
0750 7402      HLT
/TAD ERROR. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

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/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	SEA	
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	SEA	
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	SEA	
1002	7402	HLT	

/TAD ERROR AC SHOULD EQUAL 0000
/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	SEA	
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	SEA	
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 K7797	/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
1103 7100
1104 1054
1105 1022
1106 1022
1107 7040
1110 7420
1111 7440
1112 7402

CLA

CLL

TAD K7773

TAD K0002

TAD K0002

CMA

SNL

SEA

HLT

/OPERAND 1

/OPERAND 2

/OPERAND 3

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

/TAD TEST 36

1113 7200
1114 7100
1115 1053
1116 1021
1117 1021
1120 7040
1121 7420
1122 7430
1123 7402

CLA

CLL

TAD K7775

TAD K0001

TAD K0001

CMA

SNL

SEL

HLT

/OPERAND 1

/OPERAND 2

/OPERAND 3

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

/TAD TEST 37

1124 7200
1125 7100
1126 1021
1127 1023
1130 1054
1131 7040
1132 7420
1133 7440
1134 7402

CLA

CLL

TAD K0001

TAD K3

TAD K7773

CMA

SNL

SEA

HLT

/10;MB, CR.

/0+1=1
/1+3=4
/4+7773=7777
/0

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 38.

1135 7200
1136 7100
1137 1022
1140 1025
1141 1055
1142 7040
1143 7420
1144 7440
1145 7402

CLA

CLL

TAD K0002

TAD K6

TAD K7767

CMA

SNL

SEA

HLT

/9; MB, CR.

/0+2=2
/2+6=10
/10+7767=7777
/0

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 39.

1146 7200
1147 7100
1150 1024
1151 1027

CLA

CLL

TAD K0004

TAD K14

/8; MB, CR.

/0+4=4
/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.
CLA
CLL

1157 7200
1160 7100 TAD K0010 /0+10=10
1161 1026 TAD K30 /10+30=40
1162 1031 TAD K7757 /40+7757=7777
1163 1057 CMA /0
1164 7040 SNL
1165 7420 SEA
1166 7440
1167 7402 HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 41.
CLA
CLL

1170 7200
1171 7100 TAD K0020 /0+20=20
1172 1030 TAD K60 /20+60=100
1173 1033 TAD K7677 /100+7677=7777
1174 1061 CMA /0
1175 7040 SNL
1176 7420 SEA
1177 7440
1200 7402 HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 42.
CLA
CLL

1201 7200
1202 7100 TAD K0040 /0+40=40
1203 1032 TAD K140 /40+140=200
1204 1035 TAD K7577 /200+7577=7777
1205 1062 CMA /0
1206 7040 SNL
1207 7420 SEA
1210 7440
1211 7402 HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 43.
CLA
CLL

1212 7200
1213 7100 TAD K0100 /0+100=100
1214 1034 TAD K300 /100+300=400
1215 1037 TAD K7577 /400+7577=7777
1216 1063 CMA /0
1217 7040 SNL
1220 7420 SEA
1221 7440
1222 7402 HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 44.
CLA
CLL

1223 7200
1224 7100 TAD K0200 /0+200=200
1225 1036 TAD K600 /200+600=1000
1226 1041

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 K5777 /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 K760
TAD K3
CMA
SNL
SEA
HLT

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/TAD TEST 51.

/0: 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

/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

/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

/TAD ERROR. AC AND LINK SHOULD BE ZERO.

/60+60=140
/140+7600=7740
/7740+37=7777
/0

/TAD TEST 54.

/5: AC, MB, CR.

1355 7200
1356 7100

CLA
CLL

1357 1035 TAD K140 /140+140=300
1360 1035 TAD K140 /300+7400=7700
1361 1074 TAD K7400 /7700+77=7777
1362 1106 TAD K0077 /0
1363 7040 CMA
1364 7420 SNL
1365 7440 SEA
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
1375 7420 SNL
1376 7440 SEA
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=1400
1404 1072 TAD K6000 /1400+6000=7400
1405 1110 TAD K0377 /7400+377=7777
1406 7040 CMA
1407 7420 SNL
1410 7440 SEA
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
1421 7420 SNL
1422 7440 SEA
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
1432 7420 SNL
1433 7440 SEA
1434 7402 HLT
/TAD ERROR, AC AND LINK SHOULD BE ZERO

/TAD TEST 59.

1435 7200
1436 7100
1437 1072
1440 1072
1441 1066
1442 7040
1443 7430
1444 7440
1445 7402

/01 AC, MB, CR.

/0+6000=6000
/6000+6000=1 4000
/1 4000+3777=1 7777
/1 0000

/TAD ERROR. LINK SHOULD BE 1. AC SHOULD BE ZERO.

/TAD TEST 60.

1446 7200
1447 7100
1450 1067
1451 1067
1452 1021
1453 7040
1454 7430
1455 7440
1456 7402

/

/0+7777=7777
/7777+7777=1 7776
/1 7776+1=1 7777
/1 0000

/TAD ERROR. LINK SHOULD BE 1. AC SHOULD BE ZERO.

/RAR TEST 1

1457 7200
1460 7100
1461 1021
1462 7010
1463 7420
1464 7402

/ROTATE PATTERN

/RAR FAILED. LINK DROPPED A BIT
/LINK SHOULD EQUAL A ONE

/RAR TEST 2

1465 7200
1466 7100
1467 1020
1470 7010
1471 7440
1472 7402

/ROTATE PATTERN

/RAR FAILED. AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP BIT

/RAR TEST 3

1473 7200
1474 7100
1475 1020
1476 7010
1477 7430
1500 7402

/ROTATE PATTERN

/RAL FAILED. LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RAR TEST 4

1501 7200
1502 7100
1503 7020
1504 1020

/ROTATE PATTERN

1505 7010
1506 7430
1507 7402

RAR
SEL
HLT

/RAR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RAR TEST 5

1510 7200
1511 7100
1512 7020
1513 1067
1514 7010
1515 7040
1516 7440
1517 7402

CLA
CLL
CML
TAD K7777
RAR
CMA
SEA
HLT

/ROTATE PATTERN

/RAR FAILED AC DROPPED A BIT
/A ONE IN AC EQUALS THE DROPPED BIT

/RAR TEST 6

1520 7200
1521 7100
1522 7020
1523 1020
1524 7010
1525 1066
1526 7040
1527 7450
1530 7430
1531 7402

CLA
CLL
CML
TAD K0000
RAR
TAD K3777
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 7

1532 7200
1533 7100
1534 1050
1535 7010
1536 1065
1537 7040
1540 7450
1541 7430
1542 7402

CLA
CLL
TAD K4000
RAR
TAD K3777
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK SHOULD
/EQUAL 0000

/RAR TEST 8

1543 7200
1544 7100
1545 1045
1546 7010
1547 1064
1550 7040
1551 7450
1552 7430
1553 7402

CLA
CLL
TAD K2000
RAR
TAD K6777
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK SHOULD
/EQUAL 0000

/RAR TEST 9

1554 7200
1555 7100
1556 1042

CLA
CLL
TAD K1000

/ROTATE PATTERN

1557 7010 RAR
1560 1063 TAD K7377
1561 7040 CMA
1562 7450 SNA
1563 7430 SEL
1564 7402 HLT

/RAR FAILED AC AND LINK SHOULD
/EQUAL 0000

/RAR TEST 10

1565 7200 CLA
1566 7100 CLL
1567 1040 TAD K0400
1570 7010 RAR
1571 1062 TAD K7377
1572 7040 CMA
1573 7450 SNA
1574 7430 SEL
1575 7402 HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 11

1576 7200 CLA
1577 7100 CLL
1600 1036 TAD K0200
1601 7010 RAR
1602 1061 TAD K7677
1603 7040 CMA
1604 7450 SNA
1605 7430 SEL
1606 7402 HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/EQUAL 0000

/RAR TEST 12

1607 7200 CLA
1610 7100 CLL
1611 1034 TAD K0100
1612 7010 RAR
1613 1057 TAD K7737
1614 7040 CMA
1615 7450 SNA
1616 7430 SEL
1617 7402 HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 13

1620 7200 CLA
1621 7100 CLL
1622 1032 TAD K0040
1623 7010 RAR
1624 1056 TAD K7737
1625 7040 CMA
1626 7450 SNA
1627 7430 SEL
1630 7402 HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK

PAUSE

/INSTRUCTION TEST 1
/TAPE 2
/RAR TEST 14

1631 7200
1632 7100
1633 1030
1634 7010
1635 1055
1636 7040
1637 7450
1640 7430
1641 7402
CLA
CLL
TAD K0020
RAR
TAD K7767
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 15

1642 7200
1643 7100
1644 1026
1645 7010
1646 1054
1647 7040
1650 7450
1651 7430
1652 7402
CLA
CLL
TAD K0010
RAR
TAD K7773
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 16

1653 7200
1654 7100
1655 1024
1656 7010
1657 1053
1660 7040
1661 7450
1662 7430
1663 7402
CLA
CLL
TAD K0004
RAR
TAD K7775
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 17

1664 7200
1665 7100
1666 1022
1667 7010
1670 1052
1671 7040
1672 7450
1673 7430
1674 7402
CLA
CLL
TAD K0002
RAR
TAD K7776
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RAR TEST 18

```

1675 7200
1676 7100
1677 1021
1700 7010
1701 1067
1702 7040
1703 7450
1704 7420
1705 7402
CLA
CLL
TAD K0001
RAR
TAD K7777
CMA
SNA
SNL
HLT

```

/RAR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 1

```

1706 7200
1707 7100
1710 1022
1711 7012
1712 7420
1713 7402
CLA
CLL
TAD K0002
RTR
SNL
HLT

```

/ROTATE PATTERN

/RTR FAILED LINK DROPPED
/A BIT LINK SHOULD EQUAL A ONE

/RTR TEST 2

```

1714 7200
1715 7100
1716 1020
1717 7012
1720 7440
1721 7402
CLA
CLL
TAD K0000
RTR
SEA
HLT

```

/ROTATE PATTERN

/RTR FAILED AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP BIT

/RTR TEST 3

```

1722 7200
1723 7100
1724 1020
1725 7012
1726 7430
1727 7402
CLA
CLL
TAD K0000
RTR
SEL
HLT

```

/ROTATE PATTERN

/RTR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RTR TEST 4

```

1730 7200
1731 7100
1732 7020
1733 1020
1734 7012
1735 7430
1736 7402
CLA
CLL
CML
TAD K0000
RTR
SEL
HLT

```

/ROTATE PATTERN

/RTR LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RTR TEST 5

```

1737 7200
1740 7100
1741 7020
1742 1067
1743 7012
1744 7040
1745 7440
CLA
CLL
CML
TAD K7777
RTR
CMA
SEA

```

/ROTATE PATTERN

1746 7402

HLT

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

/RTR TEST 6

CLA
1747 7200
1750 7100
1751 7020
1752 1020
1753 7012
1754 1065
1755 7040
1756 7450
1757 7430
1760 7402
CML
TAD K0000
RTR
TAD K5777
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 7

CLA
1761 7200
1762 7100
1763 1050
1764 7012
1765 1064
1766 7040
1767 7450
1770 7430
1771 7402
CML
TAD K4000
RTR
TAD K6777
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 8

CLA
1772 7200
1773 7100
1774 1045
1775 7012
1776 1065
1777 7040
2000 7450
2001 7430
2002 7402
CML
TAD K2000
RTR
TAD K7377
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 9

CLA
2003 7200
2004 7100
2005 1042
2006 7012
2007 1062
2010 7040
2011 7450
2012 7430
2013 7402
CML
TAD K1000
RTR
TAD K7377
CMA
SNA
SEL
HLT

/ROTATE PATTERN

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 10

CLA
2014 7200
2015 7100
2016 1040
2017 7012
2020 1061
CML
TAD K0400
RTR
TAD K7677

/ROTATE PATTERN

2021 7040
2022 7450
2023 7430
2024 7402

CMA
SNA
SEL
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
SEL
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
SEL
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
SEL
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
SEL
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 SEL
2101 7402 HLT

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 16
2102 7300 CLA CLL
2103 1024 TAD K0004
2104 7012 RTR
2105 1052 TAD K7776
2106 7040 CMA
2107 7450 SNA
2110 7430 SEL
2111 7402 HLT

/RTR FAILED AC AND LINK
/SHOULD EQUAL 0000

/RTR TEST 17
2112 7200 CLA
2113 7100 CLL
2114 1022 TAD K0002
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
2124 7012 RTR
2125 1066 TAD K3777
2126 7040 CMA
2127 7450 SNA
2130 7430 SEL
2131 7402 HLT

/ROTATE PATTERN

/RTR FAILED. AC AND LINK
/SHOULD BE ZERO

/RAL TEST 1
2132 7200 CLA
2133 7100 CLL
2134 1050 TAD K4000
2135 7004 RAL
2136 7430 SEL
2137 7440 SEA
2140 7402 HLT

/ROTATE PATTERN

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

/RAL TEST 2
2141 7200 CLA
2142 7100 CLL
2143 1020 TAD K0000
2144 7004 RAL
2145 7420 SNL
2146 7440 SEA

/ROTATE PATTERN

2147 7402

HLT

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

/RAL TEST 3

2150 7200
2151 7100
2152 7020
2153 1020
2154 7004
2155 7430
2156 7402

CLA
CLL
CML
TAD K0000
RAL
SEL
HLT

/ROTATE PATTERN. LINK=1

/RAL FAILURE. AC SHOULD EQUAL 0001
/LINK SHOULD EQUAL ZERO

/RAL TEST 4

2157 7200
2160 7100
2161 7020
2162 1067
2163 7004
2164 7040
2165 7440
2166 7402

CLA
CLL
CML
TAD K7777
RAL
CMA
SEA
HLT

/ROTATE PATTERN. LINK=1

/RAL FAILURE. LINK SHOULD EQUAL ONE
/AC SHOULD EQUAL 0000

/RAL TEST 5

2167 7200
2170 7100
2171 1045
2172 7004
2173 1066
2174 7040
2175 7450
2176 7430
2177 7402

CLA
CLL
TAD K2000
RAL
TAD K3777
CMA
SMA
SEL
HLT

/ROTATE PATTERN

/RAL FAILURE. AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ONE

/RAL TEST 6

2200 7200
2201 7100
2202 1042
2203 7004
2204 1065
2205 7040
2206 7440
2207 7402

CLA
CLL
TAD K1000
RAL
TAD K5777
CMA
SEA
HLT

/ROTATE PATTERN

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

/RAL TEST 7

2210 7200
2211 7100
2212 1040
2213 7004
2214 1064
2215 7040
2216 7450
2217 7430

CLA
CLL
TAD K0400
RAL
TAD K6777
CMA
SMA
SEL

/ROTATE PATTERN

2220 7402

HLT

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

/RAL TEST 8

2221 7200
2222 7100
2223 1036
2224 7004
2225 1063
2226 7040
2227 7450
2230 7430
2231 7402

/ROTATE PATTERN

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

/RAL TEST 9

2232 7200
2233 7100
2234 1034
2235 7004
2236 1062
2237 7040
2240 7450
2241 7430
2242 7402

/ROTATE PATTERN

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

/RAL TEST 10

2243 7200
2244 7100
2245 1032
2246 7004
2247 1061
2250 7040
2251 7450
2252 7430
2253 7402

/ROTATE PATTERN

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

/RAL TEST 11

2254 7200
2255 7100
2256 1030
2257 7004
2260 1057
2261 7040
2262 7450
2263 7430
2264 7402

/ROTATE PATTERN

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

/RAL TEST 12

2265 7200
2266 7100
2267 1026
2270 7004
2271 1056
2272 7040
2273 7450
2274 7430
2275 7402

/ROTATE PATTERN

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

/RAL TEST 13

2276 7200
2277 7100
2300 1024
2301 7004
2302 1055
2303 7040
2304 7450
2305 7430
2306 7402

/ROTATE PATTERN

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

/RAL TEST 14

2307 7200
2310 7100
2311 1022
2312 7004
2313 1054
2314 7040
2315 7450
2316 7430
2317 7402

/ROTATE PATTERN

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

/RAL TEST 15

2320 7200
2321 7100
2322 1021
2323 7004
2324 1053
2325 7040
2326 7450
2327 7430
2330 7402

/ROTATE PATTERN

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

/RAL TEST 16

2331 7200
2332 7100
2333 7020
2334 7004
2335 1052
2336 7040
2337 7450
2340 7430
2341 7402

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

/RTL TEST 1

2342 7200
2343 7100
2344 1045
2345 7006
2346 7420
2347 7402

K2000

/RTL LINK DROPPED A BIT
/LINK SHOULD EQUAL A ONE

/RTL TEST 2

2350 7200

CLA

2351 7100 CCL
2352 1020 TAD K0000
2353 7006 RTL
2354 7440 SEA
2355 7402 HLT
/ROTATE PATTERN

/RTL AC PICKED UP A BIT
/A ONE IN AC EQUALS THE PICKED UP

/RTL TEST 3
2356 7200 CLA
2357 7100 CCL
2360 1020 TAD K0000
2361 7006 RTL
2362 7430 SEL
2363 7402 HLT

/ROTATE PATTERN

/RTL LINK PICKED UP A BIT
/LINK SHOULD EQUAL ZERO

/RTL TEST 4
2364 7200 CLA
2365 7100 CCL
2366 7020 CML
2367 1020 TAD K0000
2370 7006 RTL
2371 7430 SEL
2372 7402 HLT

/ROTATE PATTERN

/RTL FAILURE. LINK PICKED UP A BIT
/LINK SHOULD EQUAL A ZERO

/RTL TEST 5
2373 7200 CLA
2374 7100 CCL
2375 7020 CML
2376 1067 TAD K7777
2377 7006 RTL
2400 7040 CMA
2401 7440 SEA
2402 7402 HLT

/ROTATE PATTERN

/RTL FAILURE. DROPPED A BIT

/RTL TEST 6
2403 7200 CLA
2404 7100 CCL
2405 1050 TAD K4000
2406 7006 RTL
2407 1052 TAD K7776
2410 7040 CMA
2411 7450 SNA
2412 7430 SEL
2413 7402 HLT

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD EQUAL 0000

/RTL TEST 7
2414 7200 CLA
2415 7100 CCL
2416 1045 TAD K2000
2417 7006 RTL
2420 7450 SNA
2421 7420 SNL
2422 7402 HLT

/ROTATE PATTERN

/RTL TEST 8
2423 7200 CLA

/RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

2424 7100 CLL
2425 1042 TAD K1000
2426 7006 RTL
2427 1066 TAD K3777
2430 7040 CMA
2431 7450 SNA
2432 7430 SEL
2433 7402 HLT

/RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

/RTL TEST 9
2434 7200 CLA
2435 7100 CLL
2436 1040 TAD K0400
2437 7006 RTL
2440 1065 TAD K5777
2441 7040 CMA
2442 7450 SNA
2443 7430 SEL
2444 7402 HLT

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD
/EQUAL ZERO

/RTL TEST 10
2445 7200 CLA
2446 7100 CLL
2447 1036 TAD K0200
2450 7006 RTL
2451 1064 TAD K6777
2452 7040 CMA
2453 7450 SNA
2454 7430 SEL
2455 7402 HLT

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

/RTL TEST 11
2456 7200 CLA
2457 7100 CLL
2460 1034 TAD K0100
2461 7006 RTL
2462 1063 TAD K7377
2463 7040 CMA
2464 7450 SNA
2465 7430 SEL
2466 7402 HLT

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

/RTL TEST 12
2467 7200 CLA
2470 7100 CLL
2471 1032 TAD K0040
2472 7006 RTL
2473 1062 TAD K7577
2474 7040 CMA
2475 7450 SNA
2476 7430 SEL
2477 7402 HLT

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD
/EQUAL 0000

/RTL TEST 13

2500 7200
 2501 7100
 2502 1030
 2503 7006
 2504 1061
 2505 7040
 2506 7450
 2507 7430
 2510 7402

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD
 /EQUAL 0000

/RTL TEST 14

2511 7200
 2512 7100
 2513 1026
 2514 7006
 2515 1057
 2516 7040
 2517 7450
 2520 7430
 2521 7402

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD

/RTL TEST 15

2522 7200
 2523 7100
 2524 1024
 2525 7006
 2526 1036
 2527 7040
 2530 7450
 2531 7430
 2532 7402

/ROTATE PATTERN

/RTL FAILED AC AND LINK SHOULD
 /EQUAL 0000

/RTL TEST 16

2533 7200
 2534 7100
 2535 1022
 2536 7006
 2537 1035
 2540 7040
 2541 7450
 2542 7430
 2543 7402

/ROTATE PATTERN

/RTL FAILED AC AND LINK
 /SHOULD EQUAL 0000

/RTL TEST 17

2544 7200
 2545 7100
 2546 1021
 2547 7006
 2550 1034
 2551 7040
 2552 7450

/ROTATE PATTERN

2553 7430
2594 7402

SEL
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
SEL
HLT

/RTL FAILED AC AND LINK
/SHOULD EQUAL 0000

/BSM TEST 1

2566 7200
2567 7100
2570 7040
2571 7002
2572 7040
2573 7420
2574 7440
2575 7402
CLA
CLL
CMA
BSM
CMA
SNL
SEA
HLT

/AC=7777
/SNAP BYTES AC SHOULD EQUAL 7777
/DID LINK SET?
/BSM FAILED
/AC AND LINK SHOULD=0000

/BSM TEST 2

2576 7200
2577 7100
2600 7020
2601 7002
2602 7450
2603 7420
2604 7402
CLA
CLL
CML
BSM
SNA
SNL
HLT

/LINK=1
/SNAP BYTES AC SHOULD EQUAL 0000
/BSM CAUSED THE LINK
/TO ROTATE

/BSM TEST 3

2605 7200
2606 7100
2607 1113
2610 7002
2611 1113
2612 7040
2613 7420
2614 7440
2615 7402
CLA
CLL
TAD K7700
BSM
TAD K7700
CMA
SNL
SEA
HLT

/AC=7700
/SNAP BYTES AC SHOULD EQUAL 0077
/AC=7777
/AC=0000
/BSM FAILED AC AND LINK
/SHOULD=0000

/BSM TEST 4

2616 7200
2617 7100
2620 1106
2621 7002
2622 1106
2623 7040
2624 7420
2625 7440
CLA
CLL
TAD K0077
BSM
TAD K0077
CMA
SNL
SEA

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

2626 7402

HLT

/BSM FAILED AC AND LINK
/SHOULD=0000

/BSM TEST 5

CLA CLL

K0770

/SWAP BYTES AC SHOULD EQUAL 7007

TAD

K0770

BSM

TAD

CMA

SNL

/BSM FAILED AC AND LINK
/SHOULD EQUAL 0000

2627 7300
2630 1116
2631 7002
2632 1116
2633 7040
2634 7420
2635 7440
2636 7402

/BSM TEST 6

CLA CLL CML

K7007

/SWAP BYTES AC SHOULD EQUAL 0770

TAD

K7007

BSM

TAD

CMA

SEL

/BSM FAILED AC
/SHOULD EQUAL 0000 AND LINK=1

2637 7320
2640 1117
2641 7002
2642 1117
2643 7040
2644 7430
2645 7440
2646 7402

/BSM TEST 7

CLA

CLL

TAD

BSM

K5225

/AC=5225
/SWAP BYTES AC SHOULD EQUAL 2552
/AC=7777

2647 7200
2650 7100
2651 1114
2652 7002
2653 1114
2654 7040
2655 7420
2656 7440
2657 7402

/BSM TEST 8

CLA

CLL

TAD

BSM

K2552

/AC=2552
/SWAP BYTES AC SHOULD EQUAL 5225
/AC=7777

2660 7200
2661 7100
2662 1115
2663 7002
2664 1115
2665 7040
2666 7420
2667 7440
2670 7402

/BSM FAILED AC AND LINK
/SHOULD=0000

CLA
CLL
TAD K2552
BSM
TAD K2552
CMA
SNL
SEA
HLT

/GROUP 1 OPERATE TEST 1

CLA

CLL

CMA

CML

CLA

SEA

HLT

/CLEAR AC
/CLEAR LINK
/AC EQUALS 7777
/LINK EQUALS ONE
/TEST COMBINATION

2671 7200
2672 7100
2673 7040
2674 7020
2675 7300
2676 7420
2677 7440
2700 7402

/CLA CLL FAILED. LINK SHOULD BE 0


```

2701 7200
2702 1071
2703 7240
2704 7040
2705 7440
2706 7402

/CLL CMA ERROR. AC SHOULD
/BE 0000
/AC SHOULD EQUAL 0000
/AC EQUALS 2525
/TEST COMBINATION

```

```

2707 7200
2710 7100
2711 7040
2712 7140
2713 7420
2714 7440
2715 7402

/CLL CMA FAILED. AC AND LINK
/SHOULD BE ZERO
/AC=7777 LINK=1
/TEST COMBINATION

```

```

2716 7100
2717 7020
2720 7200
2721 7040
2722 7340
2723 7040
2724 7420
2725 7440
2726 7402

/CLL CMA CLL FAILED. AC AND
/LINK SHOULD BE ZERO
/AC=7777
/TEST COMBINATION

```

```

2727 7200
2730 7100
2731 7040
2732 7220
2733 7430
2734 7440
2735 7402

/CLL CMA CLL FAILED. AC SHOULD EQUAL
/0000. LINK SHOULD BE A ONE
/AC=7777
/TEST COMBINATION

```

```

2736 7100
2737 7020
2740 7120
2741 7420
2742 7402

/CLL CMA CLL FAILED. AC SHOULD EQUAL
/0000. LINK SHOULD BE A ONE
/AC=7777
/TEST COMBINATION

```

/GROUP 1 OPERATE TEST 7

```

2743 7100
2744 7120
2745 7420
2746 7402

/CLL CMA CLL FAILED. AC AND LINK
/SHOULD BE A ONE
/AC=7777
/TEST COMBINATION

```

/GROUP 1 OPERATE TEST 8

```

2747 7120

/CLL CMA CLL FAILED. AC AND LINK
/SHOULD BE A ONE
/AC=7777
/TEST COMBINATION

```

2750 7240 CLA CMA /AC=7777
 2751 7320 CLA CLL CML /TEST COMBINATION
 2752 7430 SEL
 2753 7440 SEA
 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 SEL
 2760 7440 SEA
 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 SEL
 2765 7440 SEA
 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 SEA
 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 SEL
 3004 7440 SEA
 3005 7402 HLT

/CLL CMA CML FAILED, AC SHOULD BE
 /0000, LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 13
 3006 7300 CLA CLL /AC=0000, LINK=1
 3007 7020 CML /TEST COMBINATION
 3010 7160 CLL CMA CML
 3011 7040 CMA
 3012 7430 SEL
 3013 7440 SEA
 3014 7402 HLT

/CLL CMA CML FAILED, AC SHOULD
 /BE 0000, LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 14
 3015 7300 CLA CLL /AC=2525, LINK=0
 3016 1071 TAD K2525

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

/GROUP 1 OPERATE TEST 15
 CLA CLL CML /AC=5252, LINK=1
 TAD K5252
 CLA CLL CMA CML /TEST COMBINATION
 CMA
 SEL
 SEA
 HLT
 /CLA CLL CMA CML FAILED. AC SHOULD
 /BE 0000 LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 16
 CLA /AC=2525
 TAD K2525 /TEST COMBINATION
 CLA IAC
 TAD K7776
 CMA
 SEA
 HLT
 /CLA IAC FAILED
 /AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 17
 CLL CML CLA /AC=7776, LINK=1
 TAD K7776 /TEST COMBINATION
 CLL IAC
 CMA
 SNL
 SEA
 HLT
 /CLL IAC FAILED. AC AND LINK
 /SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 18
 CLA CLL CML /AC=2525 LINK=1
 TAD K2525 /TEST COMBINATION
 CLA CLL IAC
 TAD K7776
 CMA
 SNL
 SEA
 HLT
 /CLA CLL IAC FAILED. AC AND LINK
 /SHOULD BE ZERO

/GROUP 1 OPERATE TEST 19
 CLA CLL /AC=0 LINK=0
 CMA IAC /TEST COMBINATION
 SEL
 SEA
 HLT
 /CMA IAC FAILED. AC SHOULD EQUAL
 /0000. LINK SHOULD EQUAL ONE

/GROUP 1 OPERATE TEST 20
 CLA CLL /AC=2525 LINK=0
 TAD K2525

3070 7241
3071 7430
3072 7440
3073 7402

CLA CMA IAC /TEST COMBINATION
SEL
SEA
HLT

/CLA CMA IAC FAILED. AC SHOULD
/EQUAL 0000. LINK SHOULD BE ONE.

3074 7320
3075 1021
3076 7141
3077 7040
3100 7420
3101 7440
3102 7402

/GROUP 1 OPERATE TEST 21
CLL CLA CML /AC=0000 LINK=1
TAD K0001 /AC=0001
CLL CMA IAC /TEST COMBINATION
CMA
SNL
SEA
HLT

/CLL CMA IAC FAILED. AC SHOULD BE
/0000 LINK SHOULD BE 0

3103 7320
3104 1071
3105 7341
3106 7430
3107 7440
3110 7402

/GROUP 1 OPERATE TEST 22
CLA CLL CML /AC=2525 LINK=1
TAD K2525
CLA CLL CMA IAC /TEST COMBINATION
SEL
SEA
HLT

/CLA CLL CMA IAC FAILED. AC SHOULD BE
/0000. LINK SHOULD BE ONE

3111 7300
3112 1070
3113 7341
3114 7430
3115 7440
3116 7402

/GROUP 1 OPERATE TEST 23
CLA CLL
TAD K5252 /AC=5252 LINK=0
CLA CLL CMA IAC /TEST COMBINATION
SEL
SEA
HLT

/CLA CLL CMA IAC FAILED AC SHOULD
/BE 0000. LINK SHOULD BE ONE

3117 7300
3120 1052
3121 7021
3122 7040
3123 7430
3124 7440
3125 7402

/GROUP 1 OPERATE TEST 24
CLA CLL
TAD K7776 /AC=7776 LINK=0
CML IAC /TEST COMBINATION
CMA
SEL
SEA
HLT

/CML IAC FAILED AC SHOULD BE
/0000. LINK SHOULD BE ONE

3126 7320
3127 1052
3130 7021
3131 7040
3132 7420
3133 7440
3134 7402

/GROUP 1 OPERATE TEST 25
CLA CLL CML /AC =7776 LINK=1
TAD K7776 /TEST COMBINATION
CML IAC
CMA
SNL
SEA
HLT

/CML IAC FAILED. AC SHOULD BE
/0000. LINK SHOULD BE ZERO

3135 7300
3136 1071
3137 7221
3140 1052

/GROUP 1 OPERATE TEST 26
CLA CLL
TAD K2525 /AC=2525 LINK=0
CLA CML IAC /TEST COMBINATION
TAD K7776

3141 7040 CMA
3142 7430 SEL
3143 7440 SEA
3144 7402 HLT

/CLA CML IAC FAILED. AC SHOULD BE
/0000. LINK SHOULD EQUAL ONE

3145 7520 /GROUP 1 OPERATE TEST 27
3146 1052 CLA CLL CML
3147 7121 TAD K7776
3150 7040 CML CML IAC
3151 7430 CMA
3152 7440 SEL
3153 7402 HLT

/AC=0000 LINK=1
/AC=7776
/TEST COMBINATION
/CML CML IAC FAILURE. AC SHOULD BE
/0000. LINK SHOULD EQUAL ONE.

3154 7300 /GROUP 1 OPERATE TEST 28
3155 1052 CLA CLL
3156 7121 TAD K7776
3157 7040 CML CML IAC
3160 7430 CMA
3161 7440 SEL
3162 7402 HLT

/AC=7776 LINK=0
/TEST COMBINATION
/CML CML IAC FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

3163 7300 /GROUP 1 OPERATE TEST 29
3164 1071 CLA CLL
3165 7321 TAD K2525
3166 1052 CLA CML CML IAC
3167 7040 TAD K7776
3170 7430 CMA
3171 7440 SEL
3172 7402 HLT

/AC=2525 LINK=0
/TEST COMBINATION
/CLA CML CML IAC FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

3173 7320 /GROUP 1 OPERATE TEST 30
3174 1071 CLA CML CML
3175 7321 TAD K2525
3176 1052 CLA CML CML IAC
3177 7040 TAD K7776
3200 7430 CMA
3201 7440 SEL
3202 7402 HLT

/AC=2525 LINK=1
/TEST COMBINATION
/CLA CML CML IAC FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

3203 7300 /GROUP 1 OPERATE TEST 31
3204 1021 CLA CML
3205 7061 TAD K0001
3206 7040 CMA CML IAC
3207 7430 CMA
3210 7440 SEL
3211 7402 HLT

/AC=0001 LINK=0
/TEST COMBINATION
/CMA CML IAC FAILED. AC SHOULD

/GROUP 1 OPERATE TEST 32 /BE 0000. LINK SHOULD BE ONE

3212 7320
3213 1021
3214 7061
3215 7040
3216 7420
3217 7440
3220 7402
CLA CLL CML
TAD K0001
CMA CML IAC
CMA
SNL
SEA
HLT

/CMA CML IAC FAILURE. AC SHOULD BE
/0000. LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 33

3221 7300
3222 1071
3223 7261
3224 7420
3225 7430
3226 7402
CLA CLL
TAD K2525
CLA CMA CML IAC
SNL
SEL
HLT

/AC=0000 LINK=0

/AC=2525

/TEST COMBINATION

/GROUP 1 OPERATE TEST 34

3227 7320
3230 1071
3231 7261
3232 7430
3233 7440
3234 7402
CLA CLL CML
TAD K2525
CLA CMA CML IAC
SEL
SEA
HLT

/AC=2525 LINK=1

/TEST COMBINATION

/CLA CMA CML IAC FAILURE. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 35

3235 7300
3236 1021
3237 7161
3240 7040
3241 7430
3242 7440
3243 7402
CLA CLL
TAD K0001
CLL CMA CML IAC
CMA
SEL
SEA
HLT

/AC=0001 LINK=0

/TEST COMBINATION

/GROUP 1 OPERATE TEST 36

3244 7320
3245 1021
3246 7161
3247 7040
3250 7430
3251 7440
3252 7402
CLA CLL CML
TAD K0001
CLL CMA CML IAC
CMA
SEL
SEA
HLT

/AC=0001 LINK=1

/TEST COMBINATION

/GROUP 1 OPERATE TEST 37

3253 7300
3254 1071
3255 7361
3256 7420
3257 7440
3260 7402
CLA CLL
TAD K2525
CLA CLL CMA CML IAC
SNL
SEA
HLT

/AC=2525 LINK=0

/TEST COMBINATION

/GROUP 1 OPERATE TEST 38

/CLA CLL CMA CML IAC FAILURE AC AND
/LINK SHOULD EQUAL ZERO

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 SEA
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 SEA
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 SEA
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 SEA
3314 7402 HLT
/CLA RTL FAILED. AC AND LINK
/SHOULD BE ZERO

/GROUP 1 OPERATE TEST 42
3315 7320 CLA CLL CML
3316 1032 TAD K0040
3317 7110 CLL RAR /AC=0040 LINK=1
3320 1056 TAD K7757 /TEST COMBINATION
3321 7040 CMA
3322 7420 SNL
3323 7440 SEA
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
3327 7104 CLL RAL /AC=0040 LINK=1
3330 1061 TAD K7677 /TEST COMBINATION
3331 7040 CMA

3332 7420 SNL
3333 7440 SEA
3334 7402 HLT
/CCL RAL FAILED. AC AND LINK
/SHOULD BE ZERO

/GROUP 1 OPERATE TEST 44

3335 7320 CLA CLL CML /AC=0040 LINK=1
3336 1032 TAD K0040 /TEST COMBINATION
3337 7112 CLL RTR
3340 1055 TAD K7767
3341 7040 CMA
3342 7420 SNL
3343 7440 SEA
3344 7402 HLT
/CCL RTR FAILED. AC AND LINK
/SHOULD BE ZERO

/GROUP 1 OPERATE TEST 45

3345 7320 CLA CLL CML /AC=0040 LINK=1
3346 1032 TAD K0040 /TEST COMBINATION
3347 7106 CLL RTL
3350 1062 TAD K7577
3351 7040 CMA
3352 7420 SNL
3353 7440 SEA
3354 7402 HLT
/CCL 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 SEA
3361 7402 HLT
/CCL 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
/CCL 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 SEA
3373 7402 HLT
/CCL CLL RTR 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 SEA
3400 7402 HLT
/CCL CLL RTL FAILED. AC AND
/LINK SHOULD BE 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 SEA
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 SEA
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 SEA
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 SEA
3434 7402 HLT /CML RTL FAILED. AC AND LINK
/SHOULD EQUAL ZERO

```

```

/GROUP 1 OPERATE TEST 54
3435 7300 CLA CLL /AC=5252 LINK=0
3436 1070 TAD K5252 /TEST COMBINATION
3437 7230 CLA CML RAR
3440 1066 TAD K3777
3441 7040 CMA
3442 7420 SNL
3443 7440 SEA
3444 7402 HLT /CLA CML RAR FAILED. AC AND

```

PAUSE

```

/INSTRUCTION TEST - 1
/GROUP 1 OPERATE TEST 55
/TAPE 3
3445 7300 CLA CLL /AC=5252 LINK=0
3446 1070 TAD K5252
3447 7224 CLA CML RAL /TEST COMBINATION

```

3450 1052
3451 7040
3452 7420
3453 7440
3454 7402

TAD K7776
CMA
SNL
SEA
HLT

/CLA CML RAL FAILED. AC AND
/LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 56

3455 7300
3456 1070
3457 7232
3460 1065
3461 7040
3462 7420
3463 7440
3464 7402

CLA CLL
TAD K5252
CLA CML RTR
TAD K5777
CMA
SNL
SEA
HLT

/CLA CML RTR FAILED. AC AND
/LINK SHOULD BE ZERO

/GROUP 1 OPERATE TEST 57

3465 7300
3466 1070
3467 7226
3470 1053
3471 7040
3472 7420
3473 7440
3474 7402

CLA CLL
TAD K5252
CLA CML RTL
TAD K7775
CMA
SNL
SEA
HLT

/CLA CML RTL FAILED. AC AND
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 58

3475 7300
3476 7130
3477 7004
3500 7430
3501 7440
3502 7402

CLA CLL
CLL CML RAR
RAL
SEL
SEA
HLT

/CLA CML RAR FAILED. AC SHOULD
/BE 0000 LINK SHOULD BE 1

/GROUP 1 OPERATE TEST 59

3503 7320
3504 7130
3505 7004
3506 7430
3507 7440
3510 7402

CLA CLL CML
CLL CML RAR
RAL
SEL
SEA
HLT

/CLL CML RAR FAILED. AC SHOULD BE
/0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 60

3511 7300
3512 7124
3513 7010
3514 7430
3515 7440
3516 7402

CLA CLL
CLL CML RAL
RAR
SEL
SEA
HLT

/AC=0000 LINK=0
/TEST COMBINATION
/CLL CML RAL FAILED. AC SHOULD
/EQUAL 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 61

3517 7520
3520 7124

CLA CLL CML
CLL CML RAL

/AC=0000 LINK=1
/TEST COMBINATION

3521 7010
3522 7430
3523 7440
3524 7402

RAR
SEL
SEA
HLT

/CCL CML RAL FAILED. AC SHOULD
/EQUAL 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 62

3525 7300
3526 7132
3527 7006
3530 7430
3531 7440
3532 7402

CLA CCL
CCL CML RTR
RTL
SEL
SEA
HLT

/AC=0000 LINK=0
/TEST COMBINATION

/CCL CML RTR FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 63

3533 7320
3534 7132
3535 7006
3536 7430
3537 7440
3540 7402

CLA CCL CML
CCL CML RTR
RTL
SEL
SEA
HLT

/AC=0000 LINK=1
/TEST COMBINATION

/CCL CML RTR FAILED. AC SHOULD
/BE 0000 LINK SHOULD BE ONE.

/GROUP 1 OPERATE TEST 64

3541 7300
3542 7126
3543 7012
3544 7430
3545 7440
3546 7402

CLA CCL
CCL CML RTL
RTR
SEL
SEA
HLT

/AC=0000 LINK=0
/TEST COMBINATION

/CCL CML RTL FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 65

3547 7320
3550 7126
3551 7012
3552 7430
3553 7440
3554 7402

CLA CCL CML
CCL CML RTL
RTR
SEL
SEA
HLT

/AC=0000 LINK=1
/TEST COMBINATION

/CCL CML RTL FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ONE.

/GROUP 1 OPERATE TEST 66

3555 7300
3556 7070
3557 7330
3560 7004
3561 7430
3562 7440
3563 7402

CLA CCL
TAD K5252
CLA CCL CML RAR
RAL
SEL
SEA
HLT

/AC=5252 LINK=0
/TEST COMBINATION

/CLA CCL CML RAR FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 67

3564 7320
3565 7071
3566 7330
3567 7004
3570 7430
3571 7440

CLA CCL CML
TAD K2525
CLA CCL CML RAR
RAL
SEL
SEA

/AC=2525 LINK=1
/TEST COMBINATION

3572 7402

HLT

/CLA CLL CML RAR FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 68

3573 7300
3574 1071
3575 7324
3576 7010
3577 7430
3600 7440
3601 7402

CLA CLL
TAD K2525
CLA CLL CML RAL /TEST COMBINATION
RAR
SEL
SEA
HLT

/CLA CLL CML RAL FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE ONE

/GROUP 1 OPERATE TEST 69

3602 7320
3603 1070
3604 7324
3605 7010
3606 7430
3607 7440
3610 7402

CLA CLL CML
TAD K5252
CLA CLL CML RAL /TEST COMBINATION
RAR
SEL
SEA
HLT

/CLA CLL CML RAL FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 70

3611 7300
3612 1071
3613 7332
3614 7006
3615 7430
3616 7440
3617 7402

CLA CLL
TAD K2525
CLA CLL CML RTR /TEST COMBINATION
RTL
SEL
SEA
HLT

/CLA CLL CML RTR FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 71

3620 7320
3621 1070
3622 7332
3623 7006
3624 7430
3625 7440
3626 7402

CLA CLL CML
TAD K5252
CLA CLL CML RTR /TEST COMBINATION
RTL
SEL
SEA
HLT

/CLA CLL CML RTR FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 72

3627 7300
3630 1071
3631 7326
3632 7012
3633 7430
3634 7440
3635 7402

CLA CLL
TAD K2525
CLA CLL CML RTL /TEST COMBINATION
RTR
SEL
SEA
HLT

/CLA CLL CML RTL FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ZERO

/GROUP 1 OPERATE TEST 73

3636 7320
3637 1070
3640 7326

CLA CLL CML
TAD K5252
CLA CLL CML RTL /TEST COMBINATION

/AC=5252 LINK=1

3641 7012
3642 7430
3643 7440
3644 7402

RTR
SEL
SEA
HLT

/CLA CLL CML RTL FAILED. AC SHOULD
/BE 0000. LINK SHOULD BE A ONE

/GROUP 1 OPERATE TEST 74

3645 7300
3646 1067
3647 7041
3650 1052
3651 7040
3652 7420
3653 7440
3654 7402

CLA CLL
TAD K7777
CIA
TAD K7776
CMA
SNL
SEA
HLT

/TEST PATTERN
/AC EQUALS 0001
/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 75

3655 7300
3656 1052
3657 7041
3660 1053
3661 7040
3662 7420
3663 7440
3664 7402

CLA CLL
TAD K7776
CIA
TAD K7775
CMA
SNL
SEA
HLT

/TEST PATTERN
/AC EQUALS 0002
/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL A ZERO

/GROUP 1 OPERATE TEST 76

3665 7300
3666 1101
3667 7041
3670 1054
3671 7040
3672 7420
3673 7440
3674 7402

CLA CLL
TAD K7774
CIA
TAD K7773
CMA
SNL
SEA
HLT

/TEST PATTERN
/AC EQUALS 0004
/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 77

3675 7300
3676 1100
3677 7041
3700 1055
3701 7040
3702 7420
3703 7440
3704 7402

CLA CLL
TAD K7770
CIA
TAD K7767
CMA
SNL
SEA
HLT

/TEST PATTERN
/AC EQUALS 0010
/CIA FAILED AC SHOULD EQUAL 0000

/GROUP 1 OPERATE TEST 78

3705 7300
3706 1077
3707 7041
3710 1056
3711 7040
3712 7420
3713 7440
3714 7402

CLA CLL
TAD K7760
CIA
TAD K7757
CMA
SNL
SEA
HLT

/TEST PATTERN
/AC EQUALS 0020
/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 SEA
3724 7402 HLT
/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 80
3725 7300 CLA CL
3726 1113 TAD K7700 /TEST PATTERN
3727 7041 CIA /AC EQUALS 0100
3730 1061 TAD K7677
3731 7040 CMA
3732 7420 SNL
3733 7440 SEA
3734 7402 HLT
/CIA FAILED A SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 81
3735 7300 CLA CL
3736 1075 TAD K7600 /TEST PATTERN
3737 7041 CIA /AC EQUALS 0200
3740 1062 TAD K7577
3741 7040 CMA
3742 7420 SNL
3743 7440 SEA
3744 7402 HLT
/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 82
3745 7300 CLA CL
3746 1074 TAD K7400 /TEST PATTERN
3747 7041 CIA /AC EQUALS 0400
3750 1063 TAD K7377
3751 7040 CMA
3752 7420 SNL
3753 7440 SEA
3754 7402 HLT
/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 83
3755 7300 CLA CL
3756 1073 TAD K7000 /TEST PATTERN
3757 7041 CIA /AC EQUALS 1000
3760 1064 TAD K6777
3761 7040 CMA
3762 7420 SNL
3763 7440 SEA
3764 7402 HLT

/CIA FAILED AC SHOULD EQUAL 0000
/LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 84
3765 7300 CLA CL
3766 1072 TAD K6000 /TEST PATTERN

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

/GROUP 1 OPERATE TEST 85
 CLA CL /TEST PATTERN
 TAD K4000 /AC EQUALS 4000
 CIA
 TAD K3777
 CMA
 4001 7040 SNL
 4002 7420 SEA
 4003 7440 HLT /CIA FAILED AC SHOULD EQUUA 000
 /LINK SHOULD EQUAL ZERO

/GROUP 1 OPERATE TEST 86
 CLA CL /TEST PATTERN
 TAD K0000 /AC EQUALS 0000, LINK EQUALS A ONE
 CIA
 SNA
 SNL
 HLT /CIA FAILED AC SHOULD EQUAL 0000
 /LINK SHOULD EQUAL A ONE

/GROUP OPERATE TEST 87
 CLA CMA CLL /AC=7777,L=0
 CLA CLL IAC RAR /AC=0,L=1
 SEL
 SEA
 HLT /ERROR; LINC NOT SET OR
 /AC NOT 0

/GROUP 1 OPERATE TEST 88
 CLA CMA CLL CML /AC=7777,L=1
 CLA CLL IAC RAL /AC=2,L=0
 SEL
 HLT /ERROR; LINC NOT 0
 CMA IAC
 TAD K0002
 SEA
 HLT /ERROR AC NOT=2

/GROUP 1 OPERATE TEST 89
 CLA CLL CML /AC=0,L=1
 CLA CLL IAC RTR /AC=4000,L=0
 SEL
 HLT /ERROR; LINC NOT 0
 SMA
 HLT /ERROR; AC NOT 4000

/GROUP 1 OPERATE TEST 90
 CLA CMA CLL CML /AC=7777,L=1

4037 7307 CLA CLL IAC RTL /AC=4,LINC=0
4040 7430 SEL
4041 7402 HLT /ERROR: LINC NOT 0
4042 7041 CMA IAC
4043 1024 TAD K0004
4044 7440 SEA
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 SEL
4055 7402 HLT /LINC NOT=0
4056 7041 CMA IAC
4057 1021 TAD K0001
4060 7440 SEA
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 SEA
4065 7402 HLT /ERROR:
4066 7430 SEL
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 SEL
4073 7440 SEA
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 BSM/AC=7777 LINC=0
4077 7040 CMA
4100 7420 SNL
4101 7440 SEA
4102 7402 HLT /7742 FAILED

/GROUP 1 OPERATE TEST 96
4103 7360 CLA CMA CLL CML
4104 7303 CLA CLL IAC BSM /AC=0100 LINC=0
4105 1061 TAD K7677 /AC=7777
4106 7040 CMA /AC=0000

4107 7420 SNL
4110 7440 SEA
4111 7462 HLT
/7703 FAILED

/GROUP 1 OPERATE TEST 97

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

/GROUP 1 OPERATE TEST 98

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

/GROUP 1 OPERATE TEST 99

4124 7300 CLA CLL
4125 1043 TAD K1234
4126 7063 CMA CML IAC BSM /AC=4465 L=1
4127 1047 TAD K3312
4130 7040 CMA
4131 7430 SEL
4132 7440 SEA
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 BSM /AC=0060 L=1
4136 1051 TAD K7717 /AC=7777 L=1
4137 7040 CMA
4140 7430 SEL
4141 7440 SEA
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 SEA
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 SEA /TEST COMBINATION
4152 7440 SEA
4153 7402 HLT
/CLA SEA SKIPPED OR AC NOT
/Cleared TO 0000

/GROUP 2 OPERATE TEST 3

4154 7240 CLA CMA /AC=7777

4155 7540
4156 7402

SMA SEA /TEST COMBINATION
HLT /SMA SEA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 7777

4157 7200
4160 7540
4161 7402

/GROUP 2 OPERATE TEST 4
CLA /AC=0000
SMA SEA /TEST COMBINATION
HLT /SMA SEA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0000

4162 7200
4163 1066
4164 7540
4165 7450
4166 7402

/GROUP 2 OPERATE TEST 5
CLA /AC=3777
TAD K3777 /TEST COMBINATION
SMA SEA /TEST COMBINATION
HLT /SMA SEA SHOULD NOT HAVE SKIPPED
/AC SHOULD EQUAL 3777

4167 7240
4170 7740
4171 7402

/GROUP 2 OPERATE TEST 6
CLA CMA /AC=7777
CLA SMA SEA /TEST COMBINATION
HLT /CLA SMA SEA SHOULD HAVE SKIPPED
/AC SHOULD BE 0000

4172 7440
4173 7402

SEA /AC WAS NOT CLEARED
HLT /AC SHOULD BE 0000

4174 7200
4175 7740
4176 7402

/GROUP 2 OPERATE TEST 7
CLA /AC=0000
CLA SMA SEA /TEST COMBINATION
HLT /CLA SMA SEA SHOULD HAVE SKIPPED
/AC SHOULD BE 0000

4177 7440
4200 7402

SEA /AC WAS NOT CLEARED
HLT /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 8

4201 7200
4202 1066
4203 7740
4204 7440
4205 7402

CLA /AC=3777
TAD K3777 /TEST COMBINATION
CLA SMA SEA /TEST COMBINATION
SEA /SMA SEA DID NOT SKIP OR AC
HLT /NOT CLEARED TO 0000

/GROUP 2 OPERATE TEST 9

4206 7300
4207 1070
4210 7620
4211 7440
4212 7402

CLL CLA /LINK=0
TAD K5252 /AC=5252
CLA SNL /TEST COMBINATION
SEA /SNL SKIPPED OR AC NOT CLEARED
HLT /AC AND LINK SHOULD EQUAL ZERO

4213 7320
4214 1071
4215 7620
4216 7402

/GROUP 2 OPERATE TEST 10
CLA CLL CML /AC=2525 LINK=1
TAD K2525 /TEST COMBINATION
CLA SNL /SNL DID NOT SKIP

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

/GROUP 2 OPERATE TEST 11
CLA CLL /AC=0000 LINK=0
SMA SNL /TEST COMBINATION
SEA
HLT /SMA SNL SKIPPED. AC AND LINK
/SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 12
CLA CLL CML /AC=0000 LINK=1
SMA SNL /TEST COMBINATION
HLT /SNL SHOULD HAVE SKIPPED. LINK = 1
/GROUP 2 OPERATE TEST 13

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

/GROUP 2 OPERATE TEST 14
CLA CLL CML /AC=4000 LINK=1
TAD K4000 /TEST COMBINATION
SMA SNL /SMA SNL SHOULD HAVE SKIPPED
HLT /AC=4000 LINK=1

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

/GROUP 2 OPERATE TEST 16
4244 7320 /AC=0000 LINK=1
4245 7720 /TEST COMBINATION
4246 7402 CLA SMA SNL
HLT /SNL SHOULD HAVE SKIPPED
/LINK=1

4247 7440
4250 7402 SEA
HLT /CLA SMA SNL DID NOT CLEAR AC
/AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 17
4251 7300 /AC=4000 LINK=0
4252 1050 TAD K4000
4253 7720 /TEST COMBINATION
4254 7402 CLA SMA SNL
HLT /SMA SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0000 LINK=0

4255 7440
4256 7402 SEA
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 SEA
 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 SEA SNL /TEST COMBINATION
 4267 7402 HLT /SEA SNL DID NOT SKIP
 /AC=0000

/GROUP 2 OPERATE TEST 20
 4270 7520 CLL CLA CML /AC=0000 LINK=1
 4271 7460 SEA SNL /TEST COMBINATION
 4272 7402 HLT /SEA SNL DID NOT SKIP
 /AC=0000 LINK=1

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

/GROUP 2 OPERATE TEST 22
 4300 7520 CLA CLL CML /AC=0040 LINK=1
 4301 1032 TAD K0040 /TEST COMBINATION
 4302 7460 SEA SNL /SEA SNL SHOULD HAVE SKIPPED
 4303 7402 HLT /LINK=1

/GROUP 2 OPERATE TEST 23
 4304 7300 CLA CLL /AC=0000 LINK=0
 4305 7660 CLA SEA SNL /TEST COMBINATION
 4306 7402 HLT /CLA SEA SNL SHOULD HAVE SKIPPED
 /AC AND LINK SHOULD EQUAL ZERO
 4307 7440 SEA
 4310 7402 HLT /CLA SEA 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 SEA SNL /TEST COMBINATION
 4313 7402 HLT /CLA SEA SNL SHOULD HAVE SKIPPED
 /AC=0000 LINK=1
 4314 7440 SEA
 4315 7402 HLT /CLA SEA 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 /TEST COMBINATION OR
 4320 7660 CLA SEA SNL /CLA SEA SNL SHOULD HAVE SKIPPED
 4321 7402 HLT /LINK=1

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

4324 7300
4325 1045
4326 7660
4327 7440
4330 7402

/GROUP 2 OPERATE TEST 26
CLA CLL
TAD K2000 /AC=2000 LINK=0
CLA SZA SNL /TEST COMBINATION
SZA
HLT /CLA SZA SNL FAILED. AC AND
/LINK SHOULD EQUAL ZERO

4331 7300
4332 7560
4333 7402

/GROUP 2 OPERATE TEST 27
CLA CLL
SMA SZA SNL /AC=0000 LINK=0
HLT /TEST COMBINATION
/SMA SZA SNL SHOULD HAVE SKIPPED
/AC=0000 LINK=0

4334 7320
4335 1066
4336 7560
4337 7402

/GROUP 2 OPERATE TEST 28
CLA CLL CML
TAD K3777 /AC=3777 LINK=1
SMA SZA SNL /TEST COMBINATION
HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=3777 LINK=1

4340 7300
4341 1050
4342 7560
4343 7402

/GROUP 2 OPERATE TEST 29
CLA CLL
TAD K4000 /AC=4000 LINK=0
SMA SZA SNL /TEST COMBINATION
HLT /SMA SZA SNL SHOULD HAVE SKIPPED
/AC=4000 LINK=0

4344 7300
4345 1066
4346 7560
4347 7450
4350 7402

/GROUP 2 OPERATE TEST 30
CLA CLL
TAD K3777 /AC=3777 LINK=0
SMA SZA SNL /TEST COMBINATION
SNA
HLT /SMA SZA SNL SHOULD NOT HAVE
/SKIPPED. AC=3777 LINK=0

4351 7300
4352 7760
4353 7402
4354 7440
4355 7402

/GROUP 2 OPERATE TEST 31
CLA CLL
CLA SZA SZA SNL /AC=0000 LINK=0
HLT /TEST COMBINATION
/CLA SZA SZA SNL SHOULD HAVE SKIPPED
/AC SHOULD EQUAL 0000
SZA
HLT /AC NOT ZERO AFTER CLA SZA SZA SNL
/AC SHOULD BE 0000 LINK=0

4356 7320
4357 1066
4360 7760
4361 7402
4362 7440
4363 7402

/GROUP 2 OPERATE TEST 32
CLA CLL CML
TAD K3777 /AC=3777 LINK=1
CLA SZA SZA SNL /TEST COMBINATION
HLT /CLA SZA SZA SNL DID NOT SKIP
/AC SHOULD BE 0000 LINK=1
SZA
HLT /CLA SZA SZA SNL DID NOT CLEAR AC
/AC SHOULD EQUAL 0000 LINK=1

4364 7300

/GROUP 2 OPERATE TEST 33
CLA CLL

4365 1050 TAD K4000 /AC=4000 LINK=0
 4366 7760 CLA SMA SEA SNL /TEST COMBINATION
 4367 7402 HLT /CLA SMA SEA SNL SHOULD HAVE SKIPPED
 /AC SHOULD BE 0000. LINK=0
 4370 7440 SEA
 4371 7402 HLT /CLA SMA SEA SNL DID NOT CLEAR AC
 /AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 34
 CLA CLL
 TAD K3777 /AC=3777 LINK=0
 CLA SMA SEA SNL /TEST COMBINATION
 SEA
 HLT /CLA SMA SEA SNL FAILED. AC
 /SHOULD BE ZERO. LINK=0

4372 7300
 4373 1066
 4374 7760
 4375 7440
 4376 7402
 /GROUP 2 OPERATE TEST 35
 CLA CLL
 SKP /AC=0000 LINK=0
 HLT /TEST INSTRUCTION
 /SKIP FAILED
 /AC AND LINK EQUAL ZERO

4402 7320
 4403 7410
 4404 7402
 /GROUP 2 OPERATE TEST 36
 CLA CLL CML /AC=0000 LINK=1
 SKP /TEST INSTRUCTION
 HLT /SKIP FAILED
 /AC=0000 LINK=1

4405 7320
 4406 1066
 4407 7410
 4410 7402
 /GROUP 2 OPERATE TEST 37
 CLA CLL CML /AC=3777 LINK=1
 TAD K3777 /TEST INSTRUCTION
 SKP /SKIP FAILED
 HLT /AC=3777 LINK=1

4411 7300
 4412 1066
 4413 7410
 4414 7402
 /GROUP 2 OPERATE TEST 38
 CLA CLL /AC=3777 LINK=0
 TAD K3777 /TEST INSTRUCTION
 SKP /SKIP FAILED
 HLT /AC=3777 LINK=0

4415 7200
 4416 1066
 4417 7710
 4420 7402
 /GROUP 2 OPERATE TEST 39
 CLA /AC=3777
 TAD K3777 /TEST COMBINATION
 CLA SPA /CLA SPA DID NOT SKIP. AC
 HLT /SHOULD BE ZERO
 SEA
 HLT /CLA SPA DID NOT CLEAR AC
 /AC SHOULD EQUAL ZERO

4421 7440
 4422 7402
 /GROUP 2 OPERATE TEST 40
 CLA
 TAD K4000 /AC=4000
 CLA SPA /TEST COMBINATION
 SEA
 HLT /CLA SPA FAILED. AC SHOULD
 /EQUAL 0000

/GROUP 2 OPERATE TEST 41

4430 7240
4431 7650
4432 7402

CLA CMA
CLA SNA
HLT

/AC=7777
/TEST COMBINATION
/CLA SNA DID NOT SKIP
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 42

4433 7200
4434 7650
4435 7440
4436 7402

CLA
CLA SNA
SEA
HLT

/AC=0000
/TEST COMBINATION
/CLA SNA FAILED
/AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 43

4437 7200
4440 7550
4441 7440
4442 7402

CLA
SPA SNA
SEA
HLT

/AC=0000
/TEST COMBINATION (AND)
/SPA SNA SKIPPED
/AC=0000

/GROUP 2 OPERATE TEST 44

4443 7200
4444 1066
4445 7550
4446 7402

CLA
TAD K3777
SPA SNA
HLT

/AC=3777
/TEST COMBINATION (AND)
/SPA SNA FAILED TO SKIP
/AC=3777

/GROUP 2 OPERATE TEST 45

4447 7200
4450 1050
4451 7550
4452 7450
4453 7402

CLA
TAD K4000
SPA SNA
SNA
HLT

/AC=4000
/TEST COMBINATION (AND)
/SPA SNA SKIPPED.
/AC=4000

/GROUP 2 OPERATE TEST 46

4454 7200
4455 7750
4456 7440
4457 7402

CLA
CLA SPA SNA
SEA
HLT

/AC=0000
/TEST COMBINATION (AND)
/CLA SPA SNA FAILED.
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 47

4460 7200
4461 1066
4462 7750
4463 7402

CLA
TAD K3777
CLA SPA SNA
HLT

/AC=3777
/TEST COMBINATION (AND)
/CLA SPA SNA DID NOT SKIP
/AC SHOULD BE 0000

4464 7440
4465 7402

SEA
HLT

/CLA SPA SNA DID NOT CLEAR THE AC
/AC SHOULD EQUAL 0000

/GROUP 2 OPERATE TEST 48

4466 7200
4467 1050
4470 7750
4471 7440
4472 7402

CLA
TAD K4000
CLA SPA SNA
SEA
HLT

/AC=4000
/TEST COMBINATION (AND)
/CLA SPA SNA FAILED
/AC SHOULD EQUAL ZERO

PAUSE

/INSTRUCTION TEST - TAPE 4
/GROUP 2 OPERATE TEST 49

```

4473 7320 /AC=5252 LINK=0
4474 1070 /TEST COMBINATION
4475 7630 /CLA SEL DID NOT SKIP
4476 7402 /AC AND LINK SHOULD BE 0
4477 7440 /CLA SEL DID NOT CLEAR AC
4500 7402 /AC SHOULD BE ZERO. LINK=0
SZA
HLT

```

/GROUP 2 OPERATE TEST 50

```

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

```

/GROUP 2 OPERATE TEST 51

```

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

```

/GROUP 2 OPERATE TEST 52

```

4511 7320 /AC=3777 LINK=1
4512 1066 /TEST COMBINATION (AND)
4513 7530 SPA SEL
4514 7450 SNA
4515 7402 /SPA SEL SKIPPED
/AC=3777 LINK=1
HLT

```

/GROUP 2 OPERATE TEST 53

```

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

```

/GROUP 2 OPERATE TEST 54

```

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

```

/GROUP 2 OPERATE TEST 55

```

4531 7320 /AC=3777 LINK=1
4532 1066 /TEST COMBINATION (AND)
4533 7730 CLA SPA SEL

```


4534 7440
4535 7402

SEA
HLT
/CLA SPA SZL FAILED
/AC SHOULD EQUAL 0000 LINK=1

4536 7300
4537 1050
4540 7730
4541 7440
4542 7402

/GROUP 2 OPERATE TEST 56
CLA CLL
TAD K4000
CLA SPA SZL
SEA
HLT
/AC=4000 LINK=0
/TEST COMBINATION (AND)
/CLA SPA SZL FAILED
/AC SHOULD EQUAL 0000 LINK=0

4543 7300
4544 1050
4545 7470
4546 7402

/GROUP 2 OPERATE TEST 57
CLA CLL
TAD K4000
SNA SEL
HLT
/AC=4000 LINK=0
/TEST COMBINATION (AND)
/SNA SEL DID NOT SKIP
/AC = 4000 LINK=0

4547 7320
4550 1050
4551 7470
4552 7420
4553 7402

/GROUP 2 OPERATE TEST 58
CLA CLL CML
TAD K4000
SNA SEL
SNL
HLT
/AC=4000 LINK=1
/TEST COMBINATION (AND)
/SNA SEL SKIPPED
/AC=4000 LINK=1

4554 7300
4555 7470
4556 7430
4557 7402

/GROUP 2 OPERATE TEST 59
CLA CLL
SNA SZL
SEL
HLT
/AC=0000 LINK=0
/TEST COMBINATION (AND)
/SNA SZL SKIPPED
/AC=0000 LINK=0

4560 7320
4561 1050
4562 7670
4563 7440
4564 7402

/GROUP 2 OPERATE TEST 60
CLA CLL CML
TAD K4000
CLA SNA SZL
SEA
HLT
/AC=4000 LINK=1
/TEST COMBINATION (AND)
/CLA SNA SZL FAILED. AC SHOULD
/BE 0000. LINK=1

4565 7300
4566 1050
4567 7670
4570 7402

/GROUP 2 OPERATE TEST 61
CLA CLL
TAD K4000
CLA SNA SZL
HLT
/AC=4000 LINK=0
/TEST COMBINATION (AND)
/CLA SNA SZL DID NOT SKIP
/AC SHOULD BE 0000. LINK=0

4571 7440
4572 7402

SEA
HLT
/CLA SNA SZL DID NOT CLEAR AC
/AC AND LINK SHOULD BE ZERO

4573 7300
4574 7670
4575 7440
4576 7402

/GROUP 2 OPERATE TEST 62
CLA CLL
CLA SNA SZL
SEA
HLT
/AC=0000 LINK=0
/TEST COMBINATION (AND)
/CLA SNA SZL FAILED. AC SHOULD
/BE 0000. LINK=0

4577 7300

/GROUP 2 OPERATE TEST 63
CLA CLL

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

/GROUP 2 OPERATE TEST 64

4603 7520 CLA CLL CML /AC=3777 LINK=1
 4604 1066 TAD K3777 /TEST COMBINATION (AND)
 4605 7570 SPA SNA SEL
 4606 7420 SNL
 4607 7402 HLT

/SPA SNA SEL SKIPPED
 /AC=3777 LINK=1

/GROUP 2 OPERATE TEST 65

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

/SPA SNA SEL SKIPPED
 /AC=0000 LINK=0

/GROUP 2 OPERATE TEST 66

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

/SPA SNA SEL SKIPPED
 /AC=4000 LINK=0

/GROUP 2 OPERATE TEST 67

4621 7300 CLA CLL /AC=3777 LINK=0
 4622 1066 TAD K3777 /TEST COMBINATION (AND)
 4623 7770 CLA SPA SNA SEL /CLA SPA SNA SEL DID NOT SKIP
 4624 7402 HLT

/AC AND LINK SHOULD BE ZERO

4625 7440 SZA
 4626 7402 HLT

/CLA SPA SNA SEL DID NOT CLEAR AC
 /AC AND LINK SHOULD BE ZERO

/GROUP 2 OPERATE TEST 68

4627 7320 CLA CLL CML /AC=3777 LINK=1
 4630 1066 TAD K3777 /TEST COMBINATION (AND)
 4631 7770 CLA SPA SNA SEL
 4632 7440 SZA
 4633 7402 HLT

/CLA SPA SNA SEL FAILED. AC SHOULD
 /BE 0000. LINK SHOULD EQUAL ONE

/GROUP 2 OPERATE TEST 69

4634 7300 CLA CLL /AC=4000 LINK=0
 4635 1050 TAD K4000 /TEST COMBINATION (AND)
 4636 7770 CLA SPA SNA SEL
 4637 7440 SZA
 4640 7402 HLT

/CLA SPA SNA SEL 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 SEL /TEST COMBINATION (AND)
 4643 7440 SZA
 4644 7402 HLT

/CLA SPA SNA SEL FAILED. AC AND

/GROUP 2 OPERATE TEST 71 /LINK SHOULD BE ZERO.
 4645 7200
 4646 1070 /AC=5252
 4647 7604 /TEST COMBINATION
 4650 7040 CMA
 4651 7440 SEA
 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 SEA
 4661 7402 HLT /SMA OSR FAILED
 /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 73
 4662 7200 CLA
 4663 7444 SEA OSR /AC=0000
 4664 7402 HLT /TEST COMBINATION
 /SEA OSR FAILED TO SKIP
 /AC SHOULD BE 0000
 4665 7040 CMA
 4666 7440 SEA
 4667 7402 HLT /SEA 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 SEA
 4675 7402 HLT /SNL OSR FAILED.
 /AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 75
 4676 7300 CLA CLL /AC=3777 LINK=0
 4677 1066 TAD K3777 /TEST COMBINATION
 4700 7764 CLA SMA SEA SNL OSR
 4701 7450 SMA
 4702 7402 HLT /CLA SMA SEA SNL OSR FAILED.
 /AC SHOULD BE 7777. LINK=0
 4703 7040 CMA
 4704 7440 SEA
 4705 7402 HLT /CLA SMA SEA 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
4712 7440
4713 7402

CMA
SEA
HLT

/SKP OSR FAILED
/AC SHOULD EQUAL ZERO

/GROUP 2 OPERATE TEST 77

4714 7200
4715 7514
4716 7402

CLA
SPA OSR
HLT

/AC=0000
/TEST COMBINATION
/SPA OSR DID NOT SKIP
/AC SHOULD EQUAL 7777

4717 7040
4720 7440
4721 7402

CMA
SEA
HLT

/SPA OSR FAILED.
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 78

4722 7200
4723 1040
4724 7454
4725 7402

CLA
TAD K0400
SNA OSR
HLT

/AC=0400
/TEST COMBINATION
/SNA OSR DID NOT SKIP
/AC SHOULD BE 7777

4726 7040
4727 7440
4730 7402

CMA
SEA
HLT

/SNA OSR FAILED
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 79

4731 7300
4732 7434
4733 7402

CLA CLL
SEL OSR
HLT

/LINK=0 AC=0000
/TEST COMBINATION
/SEL OSR DID NOT SKIP
/AC SHOULD BE 7777

4734 7040
4735 7440
4736 7402

CMA
SEA
HLT

/SEL OSR FAILED
/AC SHOULD BE 0000

/GROUP 2 OPERATE TEST 80

4737 7300
4740 1066
4741 7774
4742 7402

CLA CLL
TAD K3777
CLA SPA SNA SEL
HLT

/AC=3777 LINK=0
/TEST COMBINATION (AND)
/ABOVE MESS DID NOT SKIP
/AC SHOULD BE 7777

4743 7040
4744 7440
4745 7402

CMA
SEA
HLT

/CLA SPA SNA SEL OSR FAILED
/AC SHOULD BE 0000

/MO OPERATE TEST 1

4746 7360
4747 7601
4750 7430
4751 7440
4752 7402

CLA CMA CLL CML
CLAE
SEL
SEA
HLT

/AC=7777 LINK=1
/AC=0000 LINK=1
/7601 FAILED

/MO OPERATE TEST 2

4753 7360

CLA CLL CMA CML

/AC=7777 L=1

4754 7401
4755 7040
4756 7430
4757 7440
4760 7402

NOPE
CMA
SEL
SEA
HLT

/AC=7777 L=1 (NOP)

/7401 FAILED

4761 7360
4762 7421
4763 7430
4764 7440
4765 7402

/MO OPERATE TEST 3
CLA CMA CLL CML

/AC=7777 LINK=1
/AC=0000 LINK=1

/MQL DID NOT CLEAR AC

4766 7300
4767 7421
4770 7040
4771 7501
4772 7040
4773 7420
4774 7440
4775 7402

/MO OPERATE TEST 4
CLA CLL

/MO=0000, AC=0000
/AC=7777
/AC=7777, MO=0000
/AC=0000

/MO DID NOT EQUAL 0000 OR MQA FAILED

4776 7340
4777 7421
5000 7501
5001 7040
5002 7420
5003 7440
5004 7402

/MO OPERATE TEST 5
CLA CMA CLL

/MO=7777, AC=0000
/AC=7777, MO=7777

/MO DID NOT EQUAL 7777 OR MQA FAILED

5005 7601
5006 1070
5007 7421
5010 1071
5011 7501
5012 7040
5013 7440
5014 7402

/MO OPERATE TEST 6
CLAE
TAD K5252
MQL
TAD K2525
MQA
CMA
SEA
HLT

/CLEAR AC
/MO=5252, AC=0000
/AC=7777, MO=5252

/MO DID NOT EQUAL 5252 OR MQA FAILED

5015 7360
5016 7421
5017 7040
5020 7621
5021 7440
5022 7402
5023 7501
5024 7430
5025 7440
5026 7402

/MO OPERATE TEST 7
CLA CMA CLL CML

/MO=7777, AC=0000
/AC=7777
/AC AND MO.=0000
/AC SHOULD EQUAL 0000
/AC=0000, MO=0000

/CAM DID NOT CLEAR MO
/OR LINK WAS CLEARED

/MQ OPERATE TEST 8

5027	7601	/CLEAR AC
5030	7421	/MQ=0000 AC=0000
5031	7040	
5032	7701	/AC=0000 MQ=0000
5033	7440	
5034	7402	/ACL FAILED
5035	7501	/AC=0000 MQ=0000
5036	7440	
5037	7402	/MQ SHOULD EQUAL 0000

/MQ OPERATE TEST 9

5040	7240	/MQ=7777 AC=0000
5041	7421	/AC=7777 MQ=7777
5042	7701	
5043	7040	
5044	7440	/ACL FAILED
5045	7402	/AC=7777, MQ=7777
5046	7501	
5047	7040	
5050	7440	
5051	7402	

/MQ SHOULD EQUAL 7777

/MQ OPERATE TEST 10

5052	7601	/CLEAR AC
5053	1070	
5054	7421	/MQ=5252 AC=0000
5055	1071	
5056	7701	/AC=5252 MQ=5252
5057	1071	
5060	7040	
5061	7440	
5062	7402	
5063	7501	
5064	1071	
5065	7040	
5066	7440	
5067	7402	

/ACL FAILED
/AC=5252 MQ=5252

/MQ SHOULD EQUAL 5252

/MQ OPERATE TEST 11

5070	7601	/CLEAR AC
5071	1071	
5072	7421	/MQ=2525 AC=0000
5073	1070	
5074	7701	/AC=2525 MQ=2525
5075	1070	
5076	7040	
5077	7440	
5100	7402	
5101	7501	
5102	1070	
5103	7040	
5104	7440	
5105	7402	

/ACL FAILED
/AC=2525 MQ=2525

/MQ SHOULD EQUAL 2525

/MQ OPERATE TEST 12

5106	7621	/MQ=0000 AC=0000
5107	7040	/AC=7777
5110	7521	/MQ=7777 AC=0000
5111	7440	
5112	7402	/AC SHOULD EQUAL 0000
5113	7701	/AC=7777 MQ=7777
5114	7040	
5115	7440	
5116	7402	/MQ SHOULD EQUAL 7777

/MQ OPERATE TEST 13

5117	7621	/MQ=0000 AC=0000
5120	7040	
5121	7421	/MQ=7777 AC=0000
5122	7521	/MQ=0000 AC=7777
5123	7040	
5124	7440	
5125	7402	
5126	7701	/AC=0000 MQ=0000
5127	7440	
5130	7402	/MQ SHOULD EQUAL 0000

/MQ OPERATE TEST 14

5131	7621	/MQ=0000 AC=0000
5132	1070	
5133	7421	/MQ=5252 AC=0000
5134	1071	
5135	7521	/MQ=2525 AC=5252
5136	1071	
5137	7040	
5140	7440	
5141	7402	
5142	7701	/SMP FAILED
5143	1070	/AC=2525 MQ=2525
5144	7040	
5145	7440	
5146	7402	

/SMP FAILED MQ SHOULD EQUAL 2525

/MQ OPERATE TEST 15

5147	7621	/MQ=0000 AC=0000
5150	1071	
5151	7421	/MQ=2525 AC=0000
5152	1070	/AC=5252
5153	7521	/MQ=5252 AC=2525
5154	1070	
5155	7040	
5156	7440	
5157	7402	
5160	7701	
5161	1071	
5162	7040	
5163	7440	

/SMP FAILED
/AC=5252 MQ=5252

5164 7402 HLT /SMP FAILED MQ SHOULD EQUAL 5252

5165 7621 /MQ OPERATE TEST 16
CAM
5166 7040 CMA /MQ=0000 AC=0000
5167 7721 CMA /AC=7777
5170 7440 CLAE SMP /AC=0000 MQ=0000
5171 7402 SEA /CLAE SMP FAILED AC SHOULD EQUAL 0000
5172 7402 HLT /AC=0000 MQ=0000
5173 7440 ACL /CLAE SMP FAILED MQ SHOULD EQUAL 0000
5174 7402 SZA
HLT

5175 7621 /MQ OPERATE TEST 17
CAM
5176 7040 CMA /MQ=0000 AC=0000
5177 7421 MOL /MQ=7777 AC=0000
5200 7721 CLAE SMP /AC=7777 MQ=0000
5201 7040 CMA
5202 7440 SEA
5203 7402 HLT /CLAE SMP FAILED
5204 7701 ACL /AC=0000 MQ=0000
5205 7440 SZA
5206 7402 HLT /CLAE SMP FAILED MQ SHOULD EQUAL 0000

5207 7621 /MQ OPERATE TEST 18
CAM
5210 1071 TAD K2525 /MQ=0000 AC=0000
5211 7421 MOL /MQ=2525 MQ=0000
5212 1070 TAD K5252 /AC=5252
5213 7721 CLAE SMP /AC=2525 MQ=0000
5214 1070 TAD K5252
5215 7040 CMA
5216 7440 SEA
5217 7402 HLT /CLAE FAILED
5220 7701 ACL /AC=0000 MQ=0000
5221 7440 SZA
5222 7402 HLT /CLAE FAILED MQ SHOULD EQUAL 0000

5223 7200 /AND TEST 1
CLA
5224 0067 AND K7777
5225 7440 SEA
5226 7402 HLT /AND FAILED AC SHOULD
/BE 0000

5227 7240 /AND TEST 2
CLA CMA
5230 0020 AND K0000
5231 7440 SEA
5232 7402 HLT /AND FAILED
/AC SHOULD EQUAL 0000

5233 7520 /AND TEST 3
CLA CLL CML

5234 1067 TAD K7777 /AC=7777 LINK=1
 5235 0067 AND K7777
 5236 7040 CMA
 5237 7430 SEL
 5240 7440 SEA
 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 SEA
 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 SEA
 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 SEL
 5264 7440 SEA
 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 SEL
 5274 7440 SEA
 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 SEA CLA
 5304 5147 JMP START+3
 5305 1122 TAD BLCNT

5306 3121

DCA BLCNT

/RING BELL

5307 1120
5310 6046
5311 6041
5312 5311
5313 6042
5314 5147

TAD BEL
TLS
TSF
JMP .-1
TCF
JMP START+3

5

[illegible]

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	M0A	7501
K0177	0107	M0L	7421
K0200	0036	N00P	0007
K0377	0110	N0PE	7401
K0400	0040	START	0144
K0770	0116	SMP	7521
K0777	0111		
K1000	0042		
K1234	0043		
K14	0027		
K140	0035		
K1400	0044		
K1777	0112		
K2000	0045		
K2525	0071		
K2952	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: 2

LINKS GENERATED: 2

RUN-TIME: 30 SECONDS

2K CORE USED