

MAINDEC 08-D03A-D

IDENTIFICATION

Product Code: MAINDEC 08-D03A-D

Product Name: Basic JMP-JMS Test

Date Created: April 1, 1967

Maintainer: Diagnostics Group

Author: R. Green



1. ABSTRACT

This is a diagnostic program for testing the JMP and JMS instructions of the PDP-8.

2. REQUIREMENTS

2.1 Equipment

A PDP-8 equipped with Teletype.

2.2 Storage

This program uses all memory. The Binary Loader must be stored in the last memory page.

2.3 Preliminary Programs

MAINDEC 08-D01(n) and MAINDEC 08-D02(n).

3. LOADING PROCEDURE

3.1 Method

The standard Binary Loader is used. There are actually two programs on the binary tape. The loading sequence is as follows:

- a. Place 7777 in the SR (SWITCH REGISTER); press LOAD ADDRESS.
- b. Start the Binary Loader. The program loads from the paper tape reader. When the first program on the tape is loaded, the loader program halts.
- c. Place 0002 in the SWITCH REGISTER; press LOAD ADDRESS. Set SR to the Binary Loader starting configuration (7777 or 3777), then push START. HLT orders are deposited throughout all unused core; then control is returned to the Binary Loader and the diagnostic program is loaded.

4. STARTING PROCEDURE

4.1 Control Switch Settings

(None)

4.2 Starting Address

600

4.3 Restart Address

4200

4.4 Operator Action

- a. Set SR to 600 and press LOAD ADDRESS.
- b. Push START. The program will store parts of the RIM and Binary Loaders that will be destroyed.
- c. The program halts, the loader is stored (program counter = 632).
- d. Push CONTINUE. Program jumps to 4200 and testing begins.

5. OPERATING PROCEDURES

5.1 Program Restarts

Since the loaders are already stored, a program restart should begin at 4200, not 600.

5.2 Program End

To restore the loaders at the conclusion of the test, start at 700. When the program halts, restoration is completed (PC=732).

6. ERRORS

6.1 Error Halts and Description

See listing, section 10.

6.2 Error Recovery

In most cases it is possible to insert a JMP instruction in the error halt position to return the program to the failing test. This forms a program loop on the failing test and allows the problem to be investigated with an oscilloscope. In most cases where a scope mode loop cannot be maintained due to the instability of the JMP or JMS instruction and its failing condition, it will probably be advantageous to simulate this same problem using Random JMP Test, MAINDEC 08-D04(n), or Random JMS Test, MAINDEC 08-D05(n).

7. RESTRICTIONS

(None)

## 8. MISCELLANEOUS

### 8.1 Execution Time

315 complete program loops per second.

## 9. PROGRAM DESCRIPTION

The program is made up of 82 individual tests for JMP and JMS. An octal counter located at memory location 0136 always holds the number of the present test. For test 1, location 0136 contains 0000 and for test 82, 0136 contains 0121. Each test performs the following functions:

- a. Checks location 0136 for proper test number.
- b. Performs additional checking such as verification of the stored PC (program counter) on a JMS.
- c. Advances test counter.
- d. Sets up for next test.
- e. JMPs or JMSs to the next test. These JMP and JMS instructions are the ones being tested.

If the PC does not arrive at the proper place after performing the steps above, it either falls into the background field of HLTS or into another area of the program. If the field of HLTS is encountered, the program halts immediately. If a program field is entered, it is most likely that the program will halt when the test counter check is made (location 136 equals the test count). In a few remote cases it is possible for the test counter to be advanced by one, following the erroneous JMP or JMS and before the halt. It is also possible for the program, on an error condition, to enter the loaders stored in the last memory page. All of these possibilities should be kept in mind when analyzing an error.

Tests 0 through 19 are tests for same page jumping using direct addressing. Tests 20 through 45 test the JMP instruction with indirect addressing. In these cases the address that the program jumps to is always the complement of its present address. Tests 46 through 57 are JMS tests for the same page using direct addressing. Tests 58 through 81 test JMS in the same manner as JMP is tested in test 20 through 45.

An "03" is printed after every 4096 program loops.

@@

@L1           0001  
L10           0010  
L16           0016  
L17           0017  
L20           0020  
L4            0004  
D



@@@@@@@@@@@@@@@@

@ADD	3573
AFM	2024
AFRM	5451
AFRM1	2050
AFRM10	2347
AFRM11	2375
AFRM2	2073
AFRM3	2121
AFRM4	2147
AFRM5	2175
AFRM7	2247
AFRM8	2272
AFRM9	2320
AT06	2223
BLCNT	3572
FRM	2002
FRM1	2026
FRM10	2324
FRM11	2353
FRM2	2052
FRM3	2077
FRM4	2125
FRM5	2153
FRM7	2225
FRM8	2251
FRM9	2276
K0	0022
K00	0736
K1	0023
K10	0026
K100	0031
K1000	0034
K1001	3134
K101	3254
K11	3364
K2	0024
K20	0027
K200	0032
K2000	0035
K2001	3104
K201	3224
K21	3334
K2410	0137
K2440	0140
K2470	0141
K2520	0142
K2600	0143
K2630	0144
K2660	0145
K2710	0146
K2740	0147
K3	3454
K3000	0150
K3030	0151
K3060	0152
K3110	0153
K3140	0154
K3200	0155
K3230	0157
K3260	0160

K3310	0161
K3340	0162
K3400	0163
K3430	0164
K3460	0165
K3510	0166
K3537	0167
K3777	0037
K4	0025
K40	0030
K400	0033
K4000	0036
K4001	3054
K401	3164
K41	3304
K4620	0056
K4640	0057
K4660	0060
K4700	0061
K4720	0062
K4740	0063
K4760	0064
K5	3424
K5000	0065
K5020	0066
K5040	0067
K5060	0070
K5100	0071
K5120	0072
K5140	0073
K5160	0074
K5200	0075
K5220	0076
K5240	0102
K5260	0103
K5300	0104
K5320	0105
K5340	0106
K5360	0107
K5400	0110
K5420	0111
K5440	0112
K5777	0042
K60	0734
K6000	3024
K6777	0043
K70	0733
K7000	2764
K7377	0044
K74	0732
K740	0735
K7400	2734
K7577	0045
K7600	2704
K7677	0046
K7700	2654
K7737	0047
K7740	2624
K7757	0050
K7760	2544

K7767	0051
K7770	2514
K7773	0052
K7774	2464
K7775	0053
K7776	0054
K7777	0055
M1	0113
M10	0122
M100	2703
M101	2733
M102	2763
M103	3023
M104	3053
M105	3103
M106	3133
M107	3163
M11	0123
M110	3223
M111	3253
M112	3303
M113	3333
M114	3363
M115	3423
M116	3453
M117	3503
M12	0124
M120	3533
M121	3571
M13	0125
M14	0126
M15	0127
M16	0130
M17	0131
M2	0114
M20	0132
M21	0133
M22	0134
M23	0135
M24	4636
M25	4656
M26	4676
M263	0156
M27	4716
M3	0115
M30	4736
M31	4756
M32	4776
M33	5016
M34	5036
M35	5056
M36	5076
M37	5116
M4	0116
M40	5136
M41	5156
M42	5176
M43	5216
M44	5236
M45	5256

M46 5276  
M47 5316  
M5 0117  
M50 5336  
M51 5356  
M52 5376  
M53 5416  
M54 5436  
M55 5450  
M56 2022  
M57 2046  
M6 0120  
M60 2075

M61 2123  
M62 2151  
M63 2177  
M64 2221  
M65 2245  
M66 2274  
M67 2322  
M7 0121  
M70 2351  
M71 2377  
M72 2433  
M73 2463  
M74 2513  
M75 2543  
M76 2623  
M77 2653  
PK1 4605  
PK10 4715  
PK11 4734  
PK12 4735  
PK13 4754  
PK14 4755  
PK15 4774  
PK16 4775  
PK17 5014  
PK18 5015  
PK19 5034  
PK2 4606  
PK20 5035  
PK21 5054  
PK22 5055  
PK23 5074  
PK24 5075  
PK25 5114  
PK26 5115  
PK27 5134  
PK28 5135  
PK29 5154  
PK3 4634  
PK30 5155  
PK31 5174  
PK32 5175  
PK33 5214  
PK34 5215  
PK35 5234  
PK36 5235

PK37 5254  
PK38 5255  
PK39 5274  
PK4 4635  
PK40 5275  
PK41 5314  
PK42 5315  
PK43 5334  
PK44 5335  
PK45 5354  
PK46 5355  
PK47 5374  
PK48 5375  
PK49 5414  
PK5 4654  
PK50 5415  
PK51 5434  
PK52 5435  
PK6 4655

PK7 4674  
PK8 4675  
PK9 4714  
PNTCNT 0136  
PRINT 3560  
RK1 2405  
RK10 2542  
RK11 2621  
RK12 2622  
RK13 2651  
RK14 2652  
RK15 2701  
RK16 2702  
RK17 2731  
RK18 2732  
RK19 2761  
RK2 2406  
RK20 2762  
RK21 3021  
RK22 3022  
RK23 3051  
RK24 3052  
RK25 3101  
RK26 3102  
RK27 3131  
RK28 3132  
RK29 3161  
RK3 2431  
RK30 3162  
RK31 3221  
RK32 3222  
RK33 3251  
RK34 3252  
RK35 3301  
RK36 3302  
RK37 3331  
RK38 3332  
RK39 3361  
RK4 2432  
RK40 3362

RK41 3421  
RK42 3422  
RK43 3451  
RK44 3452  
RK45 3501  
RK46 3502  
RK47 3531  
RK48 3532  
RK5 2461  
RK6 2462  
RK7 2511  
RK8 2512  
RK9 2541  
STOR 0737  
T0 2003  
T01 2027  
T010 2330  
T011 2356  
T02 2054  
T03 2102  
T04 2130  
T05 2156  
T06 2202  
T07 2226  
T08 2253

T09 2301  
D

## \* 22

\* 42

0042	5777	K5777,	5777
0043	6777	K6777,	6777
0044	7377	K7377,	7377
0045	7577	K7577,	7577
0046	7677	K7677,	7677
0047	7737	K7737,	7737
0050	7757	K7757,	7757
0051	7767	K7767,	7767
0052	7773	K7773,	7773
0053	7775	K7775,	7775
0054	7776	K7776,	7776
0055	7777	K7777,	7777
0056	4620	K4620,	4620
0057	4640	K4640,	4640
0060	4660	K4660,	4660
0061	4700	K4700,	4700
0062	4720	K4720,	4720
0063	4740	K4740,	4740
0064	4760	K4760,	4760
0065	5000	K5000,	5000
0066	5020	K5020,	5020
0067	5040	K5040,	5040

0070	5060	K5060,	5060
0071	5100	K5100,	5100
0072	5120	K5120,	5120
0073	5140	K5140,	5140
0074	5160	K5160,	5160
0075	5200	K5200,	5200
0076	5220	K5220,	5220
		*102	
0102	5240	K5240,	5240
0103	5260	K5260,	5260
0104	5300	K5300,	5300
0105	5320	K5320,	5320
0106	5340	K5340,	5340
0107	5360	K5360,	5360
0110	5400	K5400,	5400
0111	5420	K5420,	5420
0112	5440	K5440,	5440
0113	7777	M1,	-1
0114	7776	M2,	-2
0115	7775	M3,	-3
0116	7774	M4,	-4
0117	7773	M5,	-5
0120	7772	M6,	-6
0121	7771	M7,	-7
0122	7770	M10,	-10
0123	7767	M11,	-11
0124	7766	M12,	-12
0125	7765	M13,	-13
0126	7764	M14,	-14
0127	7763	M15,	-15
0130	7762	M16,	-16
0131	7761	M17,	-17
0132	7760	M20,	-20
0133	7757	M21,	-21
0134	7756	M22,	-22
0135	7755	M23,	-23
0136	0000	PNTCNT,	0
0137	2410	K2410,	2410
0140	2440	K2440,	2440
0141	2470	K2470,	2470
0142	2520	K2520,	2520
0143	2600	K2600,	2600
0144	2630	K2630,	2630
0145	2660	K2660,	2660
0146	2710	K2710,	2710
0147	2740	K2740,	2740
0150	3000	K3000,	3000
0151	3030	K3030,	3030
0152	3060	K3060,	3060
0153	3110	K3110,	3110
0154	3140	K3140,	3140
0155	3200	K3200,	3200
0156	7515	M263,	-263

Ø157	3230	K3230,	3230
Ø160	3260	K3260,	3260
Ø161	3310	K3310,	3310
Ø162	3340	K3340,	3340
Ø163	3400	K3400,	3400
Ø164	3430	K3430,	3430
Ø165	3460	K3460,	3460
Ø166	3510	K3510,	3510
Ø167	3537	K3537,	3537

/STORE LOADER INSTRUCTIONS  
/THAT WILL BE DESTROYED

\*600

0600	7200	CLA
0601	1453	TAD I K7775
0602	3337	DCA STOR
0603	1452	TAD I K7773
0604	3340	DCA STOR+1
0605	1732	TAD I K74
0606	3341	DCA STOR+2
0607	1451	TAD I K7767
0610	3342	DCA STOR+3
0611	1733	TAD I K70
0612	3343	DCA STOR+4
0613	1450	TAD I K7757
0614	3344	DCA STOR+5
0615	1734	TAD I K60
0616	3345	DCA STOR+6
0617	1447	TAD I K7737
0620	3346	DCA STOR+7
0621	1735	TAD I K740
0622	3347	DCA STOR+10
0623	1446	TAD I K7677
0624	3350	DCA STOR+11
0625	1736	TAD I K00
0626	3351	DCA STOR+12
0627	1455	TAD I K7777
0630	3352	DCA STOR+13
0631	7402	HLT
0632	5633	JMP I .+1
0633	4200	4200

/RESTORE LOADER INSTRUCTIONS

\*700

0700	7200	CLA
0701	1337	TAD STOR
0702	3453	DCA I K7775
0703	1340	TAD STOR+1
0704	3452	DCA I K7773
0705	1341	TAD STOR+2
0706	3732	DCA I K74
0707	1342	TAD STOR+3
0710	3451	DCA I K7767
0711	1343	TAD STOR+4
0712	3733	DCA I K70
0713	1344	TAD STOR+5
0714	3450	DCA I K7757
0715	1345	TAD STOR+6
0716	3734	DCA I K60
0717	1346	TAD STOR+7
0720	3447	DCA I K7737
0721	1347	TAD STOR+10
0722	3735	DCA I K740
0723	1350	TAD STOR+11
0724	3446	DCA I K7677
0725	1351	TAD STOR+12
0726	3736	DCA I K00
0727	1352	TAD STOR+13
0730	3455	DCA I K7777
0731	7402	HLT

/CONSTANTS

0732	7774	K74,	7774
0733	7770	K70,	7770
0734	7760	K60,	7760
0735	7740	K740,	7740
0736	7700	K00,	7700
0737	0000	STOR,	0
0740	0000	0	
0741	0000	0	
0742	0000	0	
0743	1742	-6036	
0744	0000	0	
0745	0000	0	
0746	0000	0	
0747	0000	0	
0750	0000	0	
0751	0000	0	
0752	0000	0	

/STORE LOC 7775

/+1	STORE	LOC	7773
/+2	STORE	LOC	7774
/+3	STORE	LOC	7767
/+4	STORE	LOC	7770
/+5	STORE	LOC	7757
/+6	STORE	LOC	7760
/+7	STORE	LOC	7737
/+10	STORE	LOC	7740
/+11	STORE	LOC	7677
/+12	STORE	LOC	7700
/+13	STORE	LOC	7777

```

*4200
4200 7200 CLA
4201 3136 DCA PNTCNT

/JUMP TEST 0 COUNTER=0
4202 5203 JMP .+1
4203 1136 TAD PNTCNT
4204 7440 SZA /CHECK COUNTER
4205 7402 HLT /JMP COUNTER WRONG
4206 1136 TAD PNTCNT
4207 7001 IAC /ADVANCE COUNTER
4210 3136 DCA PNTCNT

/JUMP TEST 1 COUNTER=1
4211 5213 JMP .+2
4212 7402 HLT /JMP FAILED
4213 1136 TAD PNTCNT
4214 1113 TAD M1
4215 7440 SZA /CHECK COUNTER
4216 7402 HLT /JMP COUNTER WRONG
4217 1136 TAD PNTCNT
4220 7001 IAC /ADVANCE COUNTER
4221 3136 DCA PNTCNT

/JUMP TEST 2 COUNTER=2
4222 5225 JMP .+3
4223 7402 HLT /JMP FAILED
4224 7402 HLT
4225 1136 TAD PNTCNT
4226 1114 TAD M2
4227 7440 SZA /CHECK COUNTER
4230 7402 HLT /JMP COUNTER WRONG
4231 1136 TAD PNTCNT
4232 7001 IAC
4233 3136 DCA PNTCNT

```

```

/JUMP TEST 3 COUNTER=3
4234 5240 JMP .+4
4235 7402 HLT /JUMP FAILED
4236 7402 HLT /
4237 7402 HLT /
4240 1136 TAD PNTCNT
4241 1115 TAD M3
4242 7440 SZA /CHECK COUNTER
4243 7402 HLT /JMP COUNTER WRONG
4244 1136 TAD PNTCNT
4245 7001 IAC /ADVANCE COUNTER
4246 3136 DCA PNTCNT

/JUMP TEST 4 COUNTER=4
4247 5254 JMP .+5
4250 7402 HLT /JUMP FAILED
4251 7402 HLT /
4252 7402 HLT /
4253 7402 HLT /
4254 1136 TAD PNTCNT
4255 1116 TAD M4
4256 7440 SZA /CHECK COUNTER
4257 7402 HLT /JMP COUNTER WRONG
4260 1136 TAD PNTCNT
4261 7001 IAC /ADVANCE COUNTER
4262 3136 DCA PNTCNT

/JUMP TEST 5 COUNTER=5
4263 5271 JMP .+6
4264 7402 HLT /JUMP FAILED
4265 7402 HLT /
4266 7402 HLT /
4267 7402 HLT /
4270 7402 HLT /
4271 1136 TAD PNTCNT
4272 1117 TAD M5
4273 7440 SZA /CHECK COUNTER
4274 7402 HLT /JMP COUNTER WRONG
4275 1136 TAD PNTCNT
4276 7001 IAC /ADVANCE COUNTER
4277 3136 DCA PNTCNT

```

```

/JUMP TEST 6 COUNTER=6
4300 5307 JMP .+7
4301 7402 HLT /JMP FAILED
4302 7402 HLT /
4303 7402 HLT /
4304 7402 HLT /
4305 7402 HLT /
4306 7402 HLT /
4307 1136 TAD PNTCNT
4310 1120 TAD M6
4311 7440 SZA /CHECK COUNTER
4312 7402 HLT /JMP COUNTER WRONG
4313 1136 TAD PNTCNT
4314 7001 IAC /ADVANCE COUNTER
4315 3136 DCA PNTCNT

/JUMP TEST 7 COUNTER=7
4316 5326 JMP .+10
4317 7402 HLT /JMP FAILED
4320 7402 HLT /
4321 7402 HLT /
4322 7402 HLT /
4323 7402 HLT /
4324 7402 HLT /
4325 7402 HLT /
4326 1136 TAD PNTCNT
4327 1121 TAD M7
4330 7440 SZA /CHECK COUNTER
4331 7402 HLT /JMP COUNTER WRONG
4332 1136 TAD PNTCNT
4333 7001 IAC /ADVANCE COUNTER
4334 3136 DCA PNTCNT

/JUMP TEST 8 COUNTER=10
4335 5346 JMP .+11
4336 7402 HLT /JMP FAILED
4337 7402 HLT /
4340 7402 HLT /
4341 7402 HLT /
4342 7402 HLT /
4343 7402 HLT /
4344 7402 HLT /
4345 7402 HLT /
4346 1136 TAD PNTCNT
4347 1122 TAD M10
4350 7440 SZA /CHECK COUNTER
4351 7402 HLT /JMP COUNTER WRONG
4352 1136 TAD PNTCNT
4353 7001 IAC /ADVANCE COUNTER
4354 3136 DCA PNTCNT

```

```

/JUMP TEST 9 COUNTER=11
4355 5367 JMP .+12
4356 7402 HLT /JMP FAILED
4357 7402 HLT /
4360 7402 HLT /
4361 7402 HLT /
4362 7402 HLT /
4363 7402 HLT /
4364 7402 HLT /
4365 7402 HLT /
4366 7402 HLT /
4367 1136 TAD PNTCNT
4370 1123 TAD M11
4371 7440 SZA /CHECK COUNTER
4372 7402 HLT /JMP COUNTER WRONG
4373 1136 TAD PNTCNT
4374 7001 IAC /ADVANCE COUNTER
4375 3136 DCA PNTCNT
4376 7000 NOP
4377 7000 NOP

```

```

*4400
/JUMP TEST 10 COUNTER=12
4400 5201 JMP .+1
4401 1136 TAD PNTCNT
4402 1124 TAD M12
4403 7440 SZA /CHECK COUNTER
4404 7402 HLT /JMP COUNTER WRONG
4405 1136 TAD PNTCNT
4406 7001 IAC /ADVANCE COUNTER
4407 3136 DCA PNTCNT

/JUMP TEST 11 COUNTER=13
4410 5212 JMP .+2
4411 7402 HLT /JMP FAILED
4412 1136 TAD PNTCNT
4413 1125 TAD M13
4414 7440 SZA /CHECK COUNTER
4415 7402 HLT /JMP COUNTER WRONG
4416 1136 TAD PNTCNT
4417 7001 IAC /ADVANCE COUNTER
4420 3136 DCA PNTCNT

/JUMP TEST 12 COUNTER=14
4421 5224 JMP .+3
4422 7402 HLT /JMP FAILED
4423 7402 HLT /
4424 1136 TAD PNTCNT
4425 1126 TAD M14
4426 7440 SZA /CHECK COUNTER
4427 7402 HLT /JMP COUNTER WRONG
4430 1136 TAD PNTCNT
4431 7001 IAC /ADVANCE COUNTER
4432 3136 DCA PNTCNT

/JUMP TEST 13 COUNTER=15
4433 5237 JMP .+4
4434 7402 HLT /JMP FAILED
4435 7402 HLT /
4436 7402 HLT /
4437 1136 TAD PNTCNT
4440 1127 TAD M15
4441 7440 SZA /CHECK COUNTER
4442 7402 HLT /JMP COUNTER WRONG
4443 1136 TAD PNTCNT
4444 7001 IAC /ADVANCE COUNTER
4445 3136 DCA PNTCNT

```

```

/JUMP TEST 14 COUNTER=16
4446 5253 JMP .+5
4447 7402 HLT /JMP FAILED
4450 7402 HLT /
4451 7402 HLT /
4452 7402 HLT /
4453 1136 TAD PNTCNT
4454 1130 TAD M16
4455 7440 SZA /CHECK COUNTER
4456 7402 HLT /JMP COUNTER WRONG
4457 1136 TAD PNTCNT
4460 7001 IAC /ADVANCE COUNTER
4461 3136 DCA PNTCNT

/JUMP TEST 15 COUNTER=17
4462 5270 JMP .+6
4463 7402 HLT /JMP FAILED
4464 7402 HLT /
4465 7402 HLT /
4466 7402 HLT /
4467 7402 HLT /
4470 1136 TAD PNTCNT
4471 1131 TAD M17
4472 7440 SZA /CHECK COUNTER
4473 7402 HLT /JMP COUNTER WRONG
4474 1136 TAD PNTCNT
4475 7001 IAC /ADVANCE COUNTER
4476 3136 DCA PNTCNT

/JUMP TEST 16 COUNTER =20
4477 5306 JMP .+7
4500 7402 HLT /JMP FAILED
4501 7402 HLT /
4502 7402 HLT /
4503 7402 HLT /
4504 7402 HLT /
4505 7402 HLT /
4506 1136 TAD PNTCNT
4507 1132 TAD M20
4510 7440 SZA /CHECK COUNTER
4511 7402 HLT /JMP COUNTER WRONG
4512 1136 TAD PNTCNT
4513 7001 IAC /ADVANCE COUNTER
4514 3136 DCA PNTCNT

/JUMP TEST 17 COUNTER=21
4515 5325 JMP .+10
4516 7402 HLT /JMP FAILED
4517 7402 HLT /
4520 7402 HLT
4521 7402 HLT
4522 7402 HLT
4523 7402 HLT
4524 7402 HLT

```

```

4525 1136 TAD PNTCNT
4526 1133 TAD M21
4527 7440 SZA /CHECK COUNTER
4530 7402 HLT /JMP COUNTER WRONG
4531 1136 TAD PNTCNT
4532 7001 IAC /ADVANCE COUNTER
4533 3136 DCA PNTCNT

```

/JUMP TEST 18 COUNTER=22

```

4534 5345 JMP .+11
4535 7402 HLT /JMP FAILED
4536 7402 HLT /
4537 7402 HLT /
4540 7402 HLT /
4541 7402 HLT /
4542 7402 HLT /
4543 7402 HLT /
4544 7402 HLT /
4545 1136 TAD PNTCNT
4546 1134 TAD M22
4547 7440 SZA /CHECK COUNTER
4550 7402 HLT /JMP COUNTER WRONG
4551 1136 TAD PNTCNT
4552 7001 IAC /ADVANCE COUNTER
4553 3136 DCA PNTCNT

```

/JUMP TEST 19 COUNTER=23

```

4554 5366 JMP .+12
4555 7402 HLT /JMP FAILED
4556 7402 HLT /
4557 7402 HLT /
4560 7402 HLT /
4561 7402 HLT /
4562 7402 HLT /
4563 7402 HLT /
4564 7402 HLT /
4565 7402 HLT /
4566 1136 TAD PNTCNT
4567 1135 TAD M23
4570 7440 SZA /CHECK COUNTER
4571 7402 HLT /JMP COUNTER WRONG
4572 1136 TAD PNTCNT
4573 7001 IAC /ADVANCE COUNTER
4574 3136 DCA PNTCNT
4575 7000 NOP
4576 7000 NOP
4577 7000 NOP

```

/JUMP TEST 20 COUNTER=24

```

4600 1205 TAD PK1
4601 3455 DCA I K7777
4602 1206 TAD PK2
4603 3422 DCA I K0
4604 5455 JMP I K7777
4605 5422 PK1, JMP I K0
4606 5456 PK2, JMP I K4620

```

```

*4620
4620 1136 TAD PNTCNT
4621 1236 TAD M24
4622 7440 SZA /CHECK COUNTER
4623 7402 HLT /JMP COUNTER WRONG
4624 1136 TAD PNTCNT
4625 7001 IAC /ADVANCE COUNTER
4626 3136 DCA PNTCNT

/JMP TEST 21 COUNTER=25
4627 1234 TAD PK3
4630 3454 DCA I K7776
4631 1235 TAD PK4
4632 3423 DCA I K1
4633 5454 JMP I K7776
4634 5423 PK3, JMP I K1
4635 5457 PK4, JMP I K4640
4636 7754 M24, -24

*4640
4640 1136 TAD PNTCNT
4641 1256 TAD M25
4642 7440 SZA /CHECK COUNTER
4643 7402 HLT /JMP COUNTER WRONG
4644 1136 TAD PNTCNT
4645 7001 IAC /ADVANCE COUNTER
4646 3136 DCA PNTCNT

/JMP TEST 22 COUNTER=26
4647 1254 TAD PK5
4650 3453 DCA I K7775
4651 1255 TAD PK6
4652 3424 DCA I K2
4653 5453 JMP I K7775
4654 5424 PK5, JMP I K2
4655 5660 PK6, JMP I 4660
4656 7753 M25, -25

*4660
4660 1136 TAD PNTCNT
4661 1276 TAD M26
4662 7440 SZA /CHECK COUNTER
4663 7402 HLT /JMP COUNTER WRONG
4664 1136 TAD PNTCNT
4665 7001 IAC /ADVANCE COUNTER
4666 3136 DCA PNTCNT

```

```

/JMP TEST 23  COUNTER=27
4667 1274 TAD PK7
4670 3452 DCA I K7773
4671 1275 TAD PK8
4672 3425 DCA I K4
4673 5452 JMP I K7773
4674 5425 PK7,      JMP I K4
4675 5461 PK8,      JMP I K4700
4676 7752 M26,      -26

*4700
4700 1136 TAD PNTCNT
4701 1316 TAD M27
4702 7440 SZA
4703 7402 HLT
4704 1136 TAD PNTCNT
4705 7001 IAC
4706 3136 DCA PNTCNT

/JMP TEST 24  COUNTER=30
4707 1314 TAD PK9
4710 3451 DCA I K7767
4711 1315 TAD PK10
4712 3426 DCA I K10
4713 5451 JMP I K7767
4714 5426 PK9,      JMP I K10
4715 5462 PK10,     JMP I K4720
4716 7751 M27,      -27

*4720
4720 1136 TAD PNTCNT
4721 1336 TAD M30
4722 7440 SZA
4723 7402 HLT
4724 1136 TAD PNTCNT
4725 7001 IAC
4726 3136 DCA PNTCNT

/JMP TEST 25  COUNTER=31
4727 1334 TAD PK11
4730 3450 DCA I K7757
4731 1335 TAD PK12
4732 3427 DCA I K20
4733 5450 JMP I K7757
4734 5427 PK11,     JMP I K20
4735 5463 PK12,     JMP I K4740
4736 7750 M30,      -30

```

```

*4740
4740 1136 TAD PNTCNT
4741 1356 TAD M31
4742 7440 SZA /CHECK COUNTER
4743 7402 HLT /JMP COUNTER WRONG
4744 1136 TAD PNTCNT
4745 7001 IAC /ADVANCE COUNTER
4746 3136 DCA PNTCNT

/JMP TEST 26 COUNTER=32
4747 1354 TAD PK13
4750 3447 DCA I K7737
4751 1355 TAD PK14
4752 3430 DCA I K40
4753 5447 JMP I K7737
4754 5430 PK13, JMP I K40
4755 5464 PK14, JMP I K4760
4756 7747 M31, -31

*4760
4760 1136 TAD PNTCNT
4761 1376 TAD M32
4762 7440 SZA /CHECK COUNTER
4763 7402 HLT /JMP COUNTER WRONG
4764 1136 TAD PNTCNT
4765 7001 IAC /ADVANCE COUNTER
4766 3136 DCA PNTCNT

/JMP TEST 27 COUNTER=33
4767 1374 TAD PK15
4770 3446 DCA I K7677
4771 1375 TAD PK16
4772 3431 DCA I K100
4773 5446 JMP I K7677
4774 5431 PK15, JMP I K100
4775 5465 PK16, JMP I K5000
4776 7746 M32, -32

*5000
5000 1136 TAD PNTCNT
5001 1216 TAD M33
5002 7440 SZA /CHECK COUNTER
5003 7402 HLT /JMP COUNTER WRONG
5004 1136 TAD PNTCNT
5005 7001 IAC /ADVANCE COUNTER
5006 3136 DCA PNTCNT

```

```

/JMP TEST 28  COUNTER=34
5007  1214      TAD PK17
5010  3445      DCA I K7577
5011  1215      TAD PK18
5012  3432      DCA I K200
5013  5445      JMP I K7577
5014  5432      PK17,      JMP I K200
5015  5466      PK18,      JMP I K5020
5016  7745      M33,      -33

*5020
5020  1136      TAD PNTCNT
5021  1236      TAD M34
5022  7440      SZA                      /CHECK COUNTER
5023  7402      HLT                      /JMP COUNTER WRONG
5024  1136      TAD PNTCNT
5025  7001      IAC                      /ADVANCE COUNTER
5026  3136      DCA PNTCNT

/JMP TEST 29  COUNTER=35
5027  1234      TAD PK19
5030  3444      DCA I K7377
5031  1235      TAD PK20
5032  3433      DCA I K400
5033  5444      JMP I K7377
5034  5433      PK19,      JMP I K400
5035  5467      PK20,      JMP I K5040
5036  7744      M34,      -34

*5040
5040  1136      TAD PNTCNT
5041  1256      TAD M35
5042  7440      SZA                      /CHECK COUNTER
5043  7402      HLT                      /JMP COUNTER WRONG
5044  1136      TAD PNTCNT
5045  7001      IAC                      /ADVANCE COUNTER
5046  3136      DCA PNTCNT

/JMP TEST 30  COUNTER=36
5047  1254      TAD PK21
5050  3443      DCA I K6777
5051  1255      TAD PK22
5052  3434      DCA I K1000
5053  5443      JMP I K6777
5054  5434      PK21,      JMP I K1000
5055  5470      PK22,      JMP I K5060
5056  7743      M35,      -35

```

```

*5060
5060 1136 TAD PNTCNT
5061 1276 TAD M36
5062 7440 SZA /CHECK COUNTER
5063 7402 HLT /JMP COUNTER WRONG
5064 1136 TAD PNTCNT
5065 7001 IAC /ADVANCE COUNTER
5066 3136 DCA PNTCNT

/JMP TEST 31 COUNTER=37
5067 1274 TAD PK23
5070 3442 DCA I K5777
5071 1275 TAD PK24
5072 3435 DCA I K2000
5073 5442 JMP I K5777
5074 5435 PK23, JMP I K2000
5075 5471 PK24, JMP I K5100
5076 7742 M36, -36

*5100
5100 1136 TAD PNTCNT
5101 1316 TAD M37
5102 7440 SZA /CHECK COUNTER
5103 7402 HLT /JMP COUNTER WRONG
5104 1136 TAD PNTCNT
5105 7001 IAC /ADVANCE COUNTER
5106 3136 DCA PNTCNT

/JMP TEST 32 COUNTER=40
5107 1314 TAD PK25
5110 3437 DCA I K3777
5111 1315 TAD PK26
5112 3436 DCA I K4000
5113 5437 JMP I K3777
5114 5436 PK25, JMP I K4000
5115 5472 PK26, JMP I K5120
5116 7741 M37, -37

*5120
5120 1136 TAD PNTCNT
5121 1336 TAD M40
5122 7440 SZA /CHECK COUNTER
5123 7402 HLT /JMP COUNTER WRONG
5124 1136 TAD PNTCNT
5125 7001 IAC /ADVANCE COUNTER
5126 3136 DCA PNTCNT

```

```

                                /JMP TEST 33  COUNTER=41
5127  1334      TAD PK27
5130  3422      DCA I K0
5131  1335      TAD PK28
5132  3455      DCA I K7777
5133  5422      JMP I K0
5134  5455      PK27,          JMP I K7777
5135  5473      PK28,          JMP I K5140
5136  7740      M40,           -40

                                *5140
5140  1136      TAD PNTCNT
5141  1356      TAD M41
5142  7440      SZA                                /CHECK COUNTER
5143  7402      HLT                                /JMP COUNTER WRONG
5144  1136      TAD PNTCNT
5145  7001      IAC                                /ADVANCE COUNTER
5146  3136      DCA PNTCNT

                                /JMP TEST 34  COUNTER=42
5147  1354      TAD PK29
5150  3423      DCA I K1
5151  1355      TAD PK30
5152  3454      DCA I K7776
5153  5423      JMP I K1
5154  5454      PK29,          JMP I K7776
5155  5474      PK30,          JMP I K5160
5156  7737      M41,           -41

                                *5160
5160  1136      TAD PNTCNT
5161  1376      TAD M42
5162  7440      SZA                                /CHECK COUNTER
5163  7402      HLT                                /JMP COUNTER WRONG
5164  1136      TAD PNTCNT
5165  7001      IAC                                /ADVANCE COUNTER
5166  3136      DCA PNTCNT

                                /JMP TEST 35  COUNTER=43
5167  1374      TAD PK31
5170  3424      DCA I K2
5171  1375      TAD PK32
5172  3453      DCA I K7775
5173  5424      JMP I K2
5174  5453      PK31,          JMP I K7775
5175  5475      PK32,          JMP I K5200
5176  7736      M42,           -42

```

```

*5200
5200 1136 TAD PNTCNT
5201 1216 TAD M43
5202 7440 SZA /CHECK COUNTER
5203 7402 HLT /JMP COUNTER WRONG
5204 1136 TAD PNTCNT
5205 7001 IAC /ADVANCE COUNTER
5206 3136 DCA PNTCNT

/JMP TEST 36 COUNTER=44
5207 1214 TAD PK33
5210 3425 DCA I K4
5211 1215 TAD PK34
5212 3452 DCA I K7773
5213 5425 JMP I K4
5214 5452 PK33, JMP I K7773
5215 5476 PK34, JMP I K5220
5216 7735 M43, -43

*5220
5220 1136 TAD PNTCNT
5221 1236 TAD M44
5222 7440 SZA /CHECK COUNTER
5223 7402 HLT /JMP COUNTER WRONG
5224 1136 TAD PNTCNT
5225 7001 IAC /ADVANCE COUNTER
5226 3136 DCA PNTCNT

/JMP TEST 37 COUNTER=45
5227 1234 TAD PK35
5230 3426 DCA I K10
5231 1235 TAD PK36
5232 3451 DCA I K7767
5233 5426 JMP I K10
5234 5451 PK35, JMP I K7767
5235 5502 PK36, JMP I K5240
5236 7734 M44, -44

*5240
5240 1136 TAD PNTCNT
5241 1256 TAD M45
5242 7440 SZA /CHECK COUNTER
5243 7402 HLT /JMP COUNTER WRONG
5244 1136 TAD PNTCNT
5245 7001 IAC /ADVANCE COUNTER
5246 3136 DCA PNTCNT

/JMP TEST 3 COUNTER=46
5247 1254 TAD PK37
5250 3427 DCA I K20
5251 1255 TAD PK38
5252 3450 DCA I K7757
5253 5427 JMP I K20
5254 5450 PK37, JMP I K7757
5255 5503 PK38, JMP I K5260
5256 7733 M45, -45

```

```

*5260
5260 1136 TAD PNTCNT
5261 1276 TAD M46
5262 7440 SZA /CHECK COUNTER
5263 7402 HLT /JMP COUNTER WRONG
5264 1136 TAD PNTCNT
5265 7001 IAC /ADVANCE COUNTER
5266 3136 DCA PNTCNT

/JMP TEST 39 COUNTER=47
5267 1274 TAD PK39
5270 3430 DCA I K40
5271 1275 TAD PK40
5272 3447 DCA I K7737
5273 5430 JMP I K40
5274 5447 PK39, JMP I K7737
5275 5504 PK40, JMP I K5300
5276 7732 M46, -46

*5300
5300 1136 TAD PNTCNT
5301 1316 TAD M47
5302 7440 SZA /CHECK COUNTER
5303 7402 HLT /JMP COUNTER WRONG
5304 1136 TAD PNTCNT
5305 7001 IAC /ADVANCE COUNTER
5306 3136 DCA PNTCNT

/JMP TEST 40 COUNTER=50
5307 1314 TAD PK41
5310 3431 DCA I K100
5311 1315 TAD PK42
5312 3446 DCA I K7677
5313 5431 JMP I K100
5314 5446 PK41, JMP I K7677
5315 5505 PK42, JMP I K5320
5316 7731 M47, -47

```

```

*5320
5320 1136 TAD PNTCNT
5321 1336 TAD M50
5322 7440 SZA /CHECK COUNTER
5323 7402 HLT /JMP COUNTER WRONG
5324 1136 TAD PNTCNT
5325 7001 IAC /ADVANCE COUNTER
5326 3136 DCA PNTCNT

/JMP TEST 41 COUNTER=51
5327 1334 TAD PK43
5330 3432 DCA I K200
5331 1335 TAD PK44
5332 3445 DCA I K7577
5333 5432 JMP I K200
5334 5445 PK43, JMP I K7577
5335 5506 PK44, JMP I K5340
5336 7730 M50, -50

*5340
5340 1136 TAD PNTCNT
5341 1356 TAD M51
5342 7440 SZA /CHECK COUNTER
5343 7402 HLT /JMP COUNTER WRONG
5344 1136 TAD PNTCNT
5345 7001 IAC /ADVANCE COUNTER
5346 3136 DCA PNTCNT

/JMP TEST 42 COUNTER=52
5347 1354 TAD PK45
5350 3433 DCA I K400
5351 1355 TAD PK46
5352 3444 DCA I K7377
5353 5433 JMP I K400
5354 5444 PK45, JMP I K7377
5355 5507 PK46, JMP I K5360
5356 7727 M51, -51

*5360
5360 1136 TAD PNTCNT
5361 1376 TAD M52
5362 7440 SZA /CHECK COUNTER
5363 7402 HLT /JMP COUNTER WRONG
5364 1136 TAD PNTCNT
5365 7001 IAC /ADVANCE COUNTER
5366 3136 DCA PNTCNT

```

```

/JMP TEST 43  COUNTER=53
5367 1374 TAD PK47
5370 3434 DCA I K1000
5371 1375 TAD PK48
5372 3443 DCA I K6777
5373 5434 JMP I K1000
5374 5443 PK47, JMP I K6777
5375 5510 PK48, JMP I K5400
5376 7726 M52, -52

*5400
5400 1136 TAD PNTCNT
5401 1216 TAD M53
5402 7440 SZA /CHECK COUNTER
5403 7402 HLT /JMP COUNTER WRONG
5404 1136 TAD PNTCNT
5405 7001 IAC /ADVANCE COUNTER
5406 3136 DCA PNTCNT

/JMP TEST 44  COUNTER=54
5407 1214 TAD PK49
5410 3435 DCA I K2000
5411 1215 TAD PK50
5412 3442 DCA I K5777
5413 5435 JMP I K2000
5414 5442 PK49, JMP I K5777
5415 5511 PK50, JMP I K5420
5416 7725 M53, -53

*5420
5420 1136 TAD PNTCNT
5421 1236 TAD M54
5422 7440 SZA /CHECK COUNTER
5423 7402 HLT /JMP COUNTER WRONG
5424 1136 TAD PNTCNT
5425 7001 IAC /ADVANCE COUNTER
5426 3136 DCA PNTCNT

/JMP TEST 45  COUNTER=55
5427 1234 TAD PK51
5430 3436 DCA I K4000
5431 1235 TAD PK52
5432 3437 DCA I K3777
5433 5436 JMP I K4000
5434 5437 PK51, JMP I K3777
5435 5512 PK52, JMP I K5440
5436 7724 M54, -54

```

```

*5440
5440 1136 TAD PNTCNT
5441 1250 TAD M55
5442 7440 SZA /CHECK COUNTER
5443 7402 HLT /JMP COUNTER WRONG
5444 1136 TAD PNTCNT
5445 7001 IAC /ADVANCE COUNTER
5446 3136 DCA PNTCNT

/JMS TEST 1 COUNTER=56
5447 5651 JMP I AFRM
5450 7723 M55, -55
5451 2002 AFRM, FRM

*2002
2002 4203 FRM, JMS TO
2003 5203 TO, JMP .
2004 1136 TAD PNTCNT
2005 1222 TAD M56
2006 7440 SZA /CHECK COUNTER
2007 7402 HLT /JMP COUNTER WRONG
2010 1224 TAD AFM
2011 7041 CIA
2012 1203 TAD TO
2013 7440 SZA /CHECK STORED ADDRESS
2014 7402 HLT /JMS FAILED
2015 3203 DCA TO /CLEAR STORED PC
2016 1136 TAD PNTCNT
2017 7001 IAC
2020 3136 DCA PNTCNT
2021 7410 SKP
2022 7722 M56, -56
2023 7410 SKP
2024 2003 AFM, FRM+1

/JMS TEST 2 COUNTER=57
2025 4227 JMS T01
2026 7402 FRM1, HLT
2027 5227 T01, JMP .
2030 1136 TAD PNTCNT
2031 1246 TAD M57
2032 7440 SZA /CHECK COUNTER
2033 7402 HLT /JMP COUNTER WRONG
2034 1250 TAD AFRM1
2035 7041 CIA
2036 1227 TAD T01
2037 7440 SZA /CHECK STORED ADDRESS
2040 7402 HLT /JMS FAILED
2041 3227 DCA T01 /CLEAR STORED PC
2042 1136 TAD PNTCNT
2043 7001 IAC
2044 3136 DCA PNTCNT
2045 7410 SKP

```

```

2046 7721 M57,      -57
2047 7410     SKP
2050 2026 AFRM1,    FRM1

```

```

                /JMS TEST 3 COUNTER=60
2051 4254     JMS T02
2052 7402 FRM2,      HLT
2053 7402     HLT
2054 5254 T02,       JMP .
2055 1136     TAD PNTCNT
2056 1275     TAD M60
2057 7440     SZA                      /CHECK COUNTER
2060 7402     HLT                      /JMP COUNTER WRONG
2061 1273     TAD AFRM2
2062 7041     CIA
2063 1254     TAD T02
2064 7440     SZA                      /CHECK STORED ADDRESS
2065 7402     HLT                      /JMS FAILED
2066 3254     DCA T02                  /CLEAR STORED PC
2067 1136     TAD PNTCNT
2070 7001     IAC
2071 3136     DCA PNTCNT
2072 7410     SKP
2073 2052 AFRM2,      FRM2
2074 7410     SKP
2075 7720 M60,      -60

```

```

                /JMS TEST 4 COUNTER=61
2076 4302     JMS T03
2077 7402 FRM3,      HLT
2100 7402     HLT
2101 7402     HLT
2102 5302 T03,       JMP .
2103 1136     TAD PNTCNT
2104 1323     TAD M61
2105 7440     SZA                      /CHECK COUNTER
2106 7402     HLT                      /JMP COUNTER WRONG
2107 1321     TAD AFRM3
2110 7041     CIA
2111 1302     TAD T03
2112 7440     SZA                      /CHECK STORED ADDRESS
2113 7402     HLT                      /JMS FAILED
2114 3302     DCA T03                  /CLEAR STORED PC
2115 1136     TAD PNTCNT
2116 7001     IAC
2117 3136     DCA PNTCNT
2120 7410     SKP
2121 2077 AFRM3,      FRM3
2122 7410     SKP
2123 7717 M61,      -61

```

```

                /JMS TEST 5 COUNTER=62
2124 4330      JMS T04
2125 7402      FRM4,          HLT
2126 7402      HLT
2127 7402      HLT
2130 5330      T04,          JMP .
2131 1136      TAD PNTCNT
2132 1351      TAD M62
2133 7440      SZA
2134 7402      HLT
2135 1347      TAD AFRM4
2136 7041      CIA
2137 1330      TAD T04
2140 7440      SZA
2141 7402      HLT
2142 3330      DCA T04
2143 1136      TAD PNTCNT
2144 7001      IAC
2145 3136      DCA PNTCNT
2146 7410      SKP
2147 2125      AFRM4,          FRM4
2150 7410      SKP
2151 7716      M62,          -62

```

```

/CHECK COUNTER
/JMP COUNTER WRONG

```

```

/CHECK STORED ADDRESS
/JMS FAILED
/CLEAR STORED PC

```

```

                /JMS TEST 6 COUNTER=63
2152 4356      JMS T05
2153 7402      FRM5,          HLT
2154 7402      HLT
2155 7402      HLT
2156 5356      T05,          JMP .
2157 1136      TAD PNTCNT
2160 1377      TAD M63
2161 7440      SZA
2162 7402      HLT
2163 1375      TAD AFRM5
2164 7041      CIA
2165 1356      TAD T05
2166 7440      SZA
2167 7402      HLT
2170 3356      DCA T05
2171 1136      TAD PNTCNT
2172 7001      IAC
2173 3136      DCA PNTCNT
2174 7410      SKP
2175 2153      AFRM5,          FRM5
2176 7410      SKP
2177 7715      M63,          -63

```

```

/CHECK COUNTER
/JMP COUNTER WRONG

```

```

/CHECK STORED ADDRESS
/JMS FAILED
/CLEAR STORED PC

```

```

??@          PAUSE

              /TAPE # 2
              *2200

              /JMS TEST 7 COUNTER=64
2200  7000    NOP
2201  4202    JMS T06
2202  5202    T06,          JMP .
2203  1136    TAD PNTCNT
2204  1221    TAD M64
2205  7440    SZA          /CHECK COUNTER
2206  7402    HLT          /JMP COUNTER WRONG
2207  1202    TAD T06
2210  7041    CIA
2211  1223    TAD AT06
2212  7440    SZA          /CHECK STORED ADDRESS
2213  7402    HLT          /JMS FAILED
2214  3202    DCA T06      /CLEAR STORED PC
2215  1136    TAD PNTCNT
2216  7001    IAC
2217  3136    DCA PNTCNT
2220  7410    SKP
2221  7714    M64,          -64
2222  7410    SKP
2223  2202    AT06,        T06

              /JMS TEST 8 COUNTER=65
2224  4226    JMS T07
2225  7402    FRM7,        HLT
2226  5226    T07,          JMP .
2227  1136    TAD PNTCNT
2230  1245    TAD M65
2231  7440    SZA          /CHECK COUNTER
2232  7402    HLT          /JMP COUNTER WRONG
2233  1247    TAD AFRM7
2234  7041    CIA
2235  1226    TAD T07
2236  7440    SZA          /CHECK STORED ADDRESS
2237  7402    HLT          /JMS FAILED
2240  3226    DCA T07      /CLEAR STORED PC
2241  1136    TAD PNTCNT
2242  7001    IAC
2243  3136    DCA PNTCNT
2244  7410    SKP
2245  7713    M65,          -65
2246  7410    SKP
2247  2225    AFRM7,        FRM7

```

```

                /JMS TEST 9 COUNTER=66
2250  4253      JMS T08
2251  7402      FRM8,          HLT
2252  7402      HLT
2253  5253      T08,          JMP .
2254  1136      TAD PNTCNT
2255  1274      TAD M66
2256  7440      SZA                      /CHECK COUNTER
2257  7402      HLT                      /JMP COUNTER WRONG
2260  1253      TAD T08
2261  7041      CIA
2262  1272      TAD AFRM8
2263  7440      SZA                      /CHECK STORED ADDRESS
2264  7402      HLT                      /JMS FAILED
2265  3253      DCA T08                      /CLEAR STORED PC
2266  1136      TAD PNTCNT
2267  7001      IAC
2270  3136      DCA PNTCNT
2271  7410      SKP
2272  2251      AFRM8,          FRM8
2273  7410      SKP
2274  7712      M66,          -66

                /JMS TEST 10 COUNTER=67
2275  4301      JMS T09
2276  7402      FRM9,          HLT
2277  7402      HLT
2300  7402      HLT
2301  5301      T09,          JMP .
2302  1136      TAD PNTCNT
2303  1322      TAD M67
2304  7440      SZA                      /CHECK COUNTER
2305  7402      HLT                      /JMP COUNTER WRONG
2306  1301      TAD T09
2307  7041      CIA
2310  1320      TAD AFRM9
2311  7440      SZA                      /CHECK STORED ADDRESS
2312  7402      HLT                      /JMS FAILED
2313  3301      DCA T09                      /CLEAR STORED PC
2314  1136      TAD PNTCNT
2315  7001      IAC
2316  3136      DCA PNTCNT
2317  7410      SKP
2320  2276      AFRM9,          FRM9
2321  7410      SKP
2322  7711      M67,          -67

                /JMS TEST 11 COUNTER =70
2323  4330      JMS T010
2324  7402      FRM10,         HLT
2325  7402      HLT
2326  7402      HLT
2327  7402      HLT

```

2330	5330	T010,	JMP .	
2331	1136	TAD	PNTCNT	
2332	1351	TAD	M70	
2333	7440	SZA		/CHECK COUNTER
2334	7402	HLT		/JMP COUNTER WRONG
2335	1330	TAD	T010	
2336	7041	CIA		
2337	1347	TAD	AFRM10	
2340	7440	SZA		/CHECK STORED ADDRESS
2341	7402	HLT		/JMS FAILED
2342	3330	DCA	T010	/CLEAR STORED PC
2343	1136	TAD	PNTCNT	
2344	7001	IAC		
2345	3136	DCA	PNTCNT	
2346	7410	SKP		
2347	2324	AFRM10,	FRM10	
2350	7410	SKP		
2351	7710	M70,	-70	
		/JMS TEST 11 COUNTER=71		
2352	4356	JMS	T011	
2353	7402	FRM11,	HLT	
2354	7402	HLT		
2355	7402	HLT		
2356	5356	T011,	JMP .	
2357	1136	TAD	PNTCNT	
2360	1377	TAD	M71	
2361	7440	SZA		/CHECK COUNTER
2362	7402	HLT		/JMP COUNTER WRONG
2363	1356	TAD	T011	
2364	7041	CIA		
2365	1375	TAD	AFRM11	
2366	7440	SZA		/CHECK STORED ADDRESS
2367	7402	HLT		/JMS FAILED
2370	3356	DCA	T011	/CLEAR STORED PC
2371	1136	TAD	PNTCNT	
2372	7001	IAC		
2373	3136	DCA	PNTCNT	
2374	7410	SKP		
2375	2353	AFRM11,	FRM11	
2376	7410	SKP		
2377	7707	M71,	-71	

\*2400

/JMS TEST 12 COUNTER=72

2400	1205	TAD RK1	
2401	3455	DCA I K7777	
2402	1206	TAD RK2	
2403	3423	DCA I K1	
2404	5423	JMP I K1	
2405	5537	RK1,	JMP I K2410
2406	4454	RK2,	JMS I K7776

\*2410

2410	1136	TAD PNTCNT	
2411	1233	TAD M72	
2412	7440	SZA	/CHECK COUNTER
2413	7402	HLT	/JMP COUNTER WRONG
2414	1454	TAD I K7776	
2415	1054	TAD K7776	
2416	7440	SZA	/CHECK STORED ADDRESS
2417	7402	HLT	/JMS FAILED
2420	3454	DCA I K7776	/CLEAR STORED ADDRESS
2421	1136	TAD PNTCNT	
2422	7001	IAC	/ADVANCE COUNTER
2423	3136	DCA PNTCNT	

/JMS TEST 13 COUNTER=73

2424	1231	TAD RK3	
2425	3454	DCA I K7776	
2426	1232	TAD RK4	
2427	3424	DCA I K2	
2430	5424	JMP I K2	
2431	5540	RK3,	JMP I K2440
2432	4453	RK4,	JMS I K7775
2433	7706	M72,	-72

```

*2440
2440 1136 TAD PNTCNT
2441 1263 TAD M73
2442 7440 SZA /CHECK COUNTER
2443 7402 HLT /JMP COUNTER WRONG
2444 1453 TAD I K7775
2445 1053 TAD K7775
2446 7440 SZA /CHECK STORED ADDRESS
2447 7402 HLT /JMS FAILED
2450 3453 DCA I K7775 /CLEAR STORED ADDRESS
2451 1136 TAD PNTCNT
2452 7001 IAC /ADVANCE COUNTER
2453 3136 DCA PNTCNT

/JMS TEST 14 COUNTER=74
2454 1261 TAD RK5
2455 3664 DCA I K7774
2456 1262 TAD RK6
2457 3425 DCA I K4
2460 5425 JMP I K4
2461 5541 RK5, JMP I K2470
2462 4452 RK6, JMS I K7773
2463 7705 M73, -73
2464 7774 K7774, 7774

```

```

*2470
2470 1136 TAD PNTCNT
2471 1313 TAD M74
2472 7440 SZA /CHECK COUNTER
2473 7402 HLT /JMP COUNTER WRONG
2474 1452 TAD I K7773
2475 1052 TAD K7773
2476 7440 SZA /CHECK STORED ADDRESS
2477 7402 HLT /JMS FAILED
2500 3452 DCA I K7773 /CLEAR STORED ADDRESS
2501 1136 TAD PNTCNT
2502 7001 IAC /ADVANCE COUNTER
2503 3136 DCA PNTCNT

/JMS TEST 15 COUNTER=75
2504 1311 TAD RK7
2505 3714 DCA I K7770
2506 1312 TAD RK8
2507 3426 DCA I K10
2510 5426 JMP I K10
2511 5542 RK7, JMP I K2520
2512 4451 RK8, JMS I K7767
2513 7704 M74, -74
2514 7770 K7770, 7770

*2520
2520 1136 TAD PNTCNT
2521 1343 TAD M75
2522 7440 SZA /CHECK COUNTER
2523 7402 HLT /JMP COUNTER WRONG
2524 1451 TAD I K7767
2525 1051 TAD K7767
2526 7440 SZA /CHECK STORED ADDRESS
2527 7402 HLT /JMS FAILED
2530 3451 DCA I K7767 /CLEAR STORED ADDRESS
2531 1136 TAD PNTCNT
2532 7001 IAC /ADVANCE COUNTER
2533 3136 DCA PNTCNT

/JMS TEST 16 COUNTER=76
2534 1341 TAD RK9
2535 3744 DCA I K7760
2536 1342 TAD RK10
2537 3427 DCA I K20
2540 5427 JMP I K20
2541 5543 RK9, JMP I K2600
2542 4450 RK10, JMS I K7757
2543 7703 M75, -75
2544 7760 K7760, 7760

```

```

*2600
2600 1136 TAD PNTCNT
2601 1223 TAD M76
2602 7440 SZA /CHECK COUNTER
2603 7402 HLT /JMP COUNTER WRONG
2604 1450 TAD I K7757
2605 1050 TAD K7757
2606 7440 SZA /CHECK STORED ADDRESS
2607 7402 HLT /JMS FAILED
2610 3450 DCA I K7757 /CLEAR STORED ADDRESS
2611 1136 TAD PNTCNT
2612 7001 IAC /ADVANCE COUNTER
2613 3136 DCA PNTCNT

/JMS TEST 17 COUNTER=77
2614 1221 TAD RK11
2615 3624 DCA I K7740
2616 1222 TAD RK12
2617 3430 DCA I K40
2620 5430 JMP I K40
2621 5544 RK11, JMP I K2630
2622 4447 RK12, JMS I K7737
2623 7702 M76, -76
2624 7740 K7740, 7740

*2630
2630 1136 TAD PNTCNT
2631 1253 TAD M77
2632 7440 SZA /CHECK COUNTER
2633 7402 HLT /JMP COUNTER WRONG
2634 1447 TAD I K7737
2635 1047 TAD K7737
2636 7440 SZA /CHECK STORED ADDRESS
2637 7402 HLT /JMS FAILED
2640 3447 DCA I K7737 /CLEAR STORED ADDRESS
2641 1136 TAD PNTCNT
2642 7001 IAC /ADVANCE COUNTER
2643 3136 DCA PNTCNT

/JMS TEST 18 COUNTER=100
2644 1251 TAD RK13
2645 3654 DCA I K7700
2646 1252 TAD RK14
2647 3431 DCA I K100
2650 5431 JMP I K100
2651 5545 RK13, JMP I K2660
2652 4446 RK14, JMS I K7677
2653 7701 M77, -77
2654 7700 K7700, 7700

```

```

*2660
2660 1136 TAD PNTCNT
2661 1303 TAD M100
2662 7440 SZA /CHECK COUNTER
2663 7402 HLT /JMS COUNTER WRONG
2664 1446 TAD I K7677
2665 1046 TAD K7677
2666 7440 SZA /CHECK STORED ADDRESS
2667 7402 HLT /JMS FAILED
2670 3446 DCA I K7677 /CLEAR STORED ADDRESS
2671 1136 TAD PNTCNT
2672 7001 IAC /ADVANCE COUNTER
2673 3136 DCA PNTCNT

/JMS TEST 19 COUNTER=101
2674 1301 TAD RK15
2675 3704 DCA I K7600
2676 1302 TAD RK16
2677 3432 DCA I K200
2700 5432 JMP I K200
2701 5546 RK15, JMP I K2710
2702 4445 RK16, JMS I K7577
2703 7700 M100, -100
2704 7600 K7600, 7600

*2710
2710 1136 TAD PNTCNT
2711 1333 TAD M101
2712 7440 SZA /CHECK COUNTER
2713 7402 HLT /JMP COUNTER WRONG
2714 1445 TAD I K7577
2715 1045 TAD K7577
2716 7440 SZA /CHECK STORED ADDRESS
2717 7402 HLT /JMS FAILED
2720 3445 DCA I K7577 /CLEAR STORED ADDRESS
2721 1136 TAD PNTCNT
2722 7001 IAC /ADVANCE COUNTER
2723 3136 DCA PNTCNT

/JMS TEST 20 COUNTER=102
2724 1331 TAD RK17
2725 3734 DCA I K7400
2726 1332 TAD RK18
2727 3433 DCA I K400
2730 5433 JMP I K400
2731 5547 RK17, JMP I K2740
2732 4444 RK18, JMS I K7377
2733 7677 M101, -101
2734 7400 K7400, 7400

```

```

#2740
2740 1136 TAD PNTCNT
2741 1363 TAD M102
2742 7440 SZA /CHECK COUNTER
2743 7402 HLT /JMP COUNTER WRONG
2744 1444 TAD I K7377
2745 1044 TAD K7377
2746 7440 SZA /CHECK STORED ADDRESS
2747 7402 HLT /JMS FAILED
2750 3444 DCA I K7377 /CLEAR STORED ADDRESS
2751 1136 TAD PNTCNT
2752 7001 IAC /ADVANCE COUNTER
2753 3136 DCA PNTCNT

/JMS TEST 21 COUNTER=103
2754 1361 TAD RK19
2755 3764 DCA I K7000
2756 1362 TAD RK20
2757 3434 DCA I K1000
2760 5434 JMP I K1000
2761 5550 RK19, JMP I K3000
2762 4443 RK20, JMS I K6777
2763 7676 M102, -102
2764 7000 K7000, 7000

#3000
3000 1136 TAD PNTCNT
3001 1223 TAD M103
3002 7440 SZA /CHECK COUNTER
3003 7402 HLT /JMP COUNTER WRONG
3004 1443 TAD I K6777
3005 1043 TAD K6777
3006 7440 SZA /CHECK STORED ADDRESS
3007 7402 HLT /JMS FAILED
3010 3443 DCA I K6777 /CLEAR STORED ADDRESS
3011 1136 TAD PNTCNT
3012 7001 IAC /ADVANCE COUNTER
3013 3136 DCA PNTCNT

/JMS TEST 22 COUNTER=104
3014 1221 TAD RK21
3015 3624 DCA I K6000
3016 1222 TAD RK22
3017 3435 DCA I K2000
3020 5435 JMP I K2000
3021 5551 RK21, JMP I K3030
3022 4442 RK22, JMS I K5777
3023 7675 M103, -103
3024 6000 K6000, 6000

```

```

*3030
3030 1136 TAD PNTCNT
3031 1253 TAD M104
3032 7440 SZA /CHECK COUNTER
3033 7402 HLT /JMP COUNTER WRONG
3034 1442 TAD I K5777
3035 1042 TAD K5777
3036 7440 SZA /CHECK STORED ADDRESS
3037 7402 HLT /JMS FAILED
3040 3442 DCA I K5777 /CLEAR STORED ADDRESS
3041 1136 TAD PNTCNT
3042 7001 IAC /ADVANCE COUNTER
3043 3136 DCA PNTCNT

/JMS TEST 23 COUNTER=105
3044 1251 TAD RK23
3045 3654 DCA I K4001
3046 1252 TAD RK24
3047 3437 DCA I K3777
3050 5437 JMP I K3777
3051 5552 RK23, JMP I K3060
3052 4436 RK24, JMS I K4000
3053 7674 M104, -104
3054 4001 K4001, 4001

*3060
3060 1136 TAD PNTCNT
3061 1303 TAD M105
3062 7440 SZA /CHECK COUNTER
3063 7402 HLT /JMP COUNTER WRONG
3064 1436 TAD I K4000
3065 1036 TAD K4000
3066 7440 SZA /CHECK STORED ADDRESS
3067 7402 HLT /JMS FAILED
3070 3436 DCA I K4000 /CLEAR STORED ADDRESS
3071 1136 TAD PNTCNT
3072 7001 IAC /ADVANCE COUNTER
3073 3136 DCA PNTCNT

/JMS TEST 24 COUNTER=106
3074 1301 TAD RK25
3075 3704 DCA I K2001
3076 1302 TAD RK26
3077 3442 DCA I K5777
3100 5442 JMP I K5777
3101 5553 RK25, JMP I K3110
3102 4435 RK26, JMS I K2000
3103 7673 M105, -105
3104 2001 K2001, 2001

```

```

*3110
3110 1136 TAD PNTCNT
3111 1333 TAD M106
3112 7440 SZA /CHECK COUNTER
3113 7402 HLT /JMP COUNTER WRONG
3114 1435 TAD I K2000
3115 1035 TAD K2000
3116 7440 SZA /CHECK STORED ADDRESS
3117 7402 HLT /JMS FAILED
3120 3435 DCA I K2000 /CLEAR STORED ADDRESS
3121 1136 TAD PNTCNT
3122 7001 IAC /ADVANCE COUNTER
3123 3136 DCA PNTCNT

/JMS TEST 25 COUNTER=107
3124 1331 TAD RK27
3125 3734 DCA I K1001
3126 1332 TAD RK28
3127 3443 DCA I K6777
3130 5443 JMP I K6777
3131 5554 RK27, JMP I K3140
3132 4434 RK28, JMS I K1000
3133 7672 M106, -106
3134 1001 K1001, 1001

*3140
3140 1136 TAD PNTCNT
3141 1363 TAD M107
3142 7440 SZA /CHECK COUNTER
3143 7402 HLT /JMP COUNTER WRONG
3144 1434 TAD I K1000
3145 1034 TAD K1000
3146 7440 SZA /CHECK STORED ADDRESS
3147 7402 HLT /JMS FAILED
3150 3434 DCA I K1000 /CLEAR STORED ADDRESS
3151 1136 TAD PNTCNT
3152 7001 IAC /ADVANCE COUNTER
3153 3136 DCA PNTCNT

/JMS TEST 26 COUNTER=110
3154 1361 TAD RK29
3155 3764 DCA I K401
3156 1362 TAD RK30
3157 3444 DCA I K7377
3160 5444 JMP I K7377
3161 5555 RK29, JMP I K3200
3162 4433 RK30, JMS I K400
3163 7671 M107, -107
3164 0401 K401, 401

```

```

*3200
3200 1136 TAD PNTCNT
3201 1223 TAD M110
3202 7440 SZA /CHECK COUNTER
3203 7402 HLT /JMP COUNTER WRONG
3204 1433 TAD I K400
3205 1033 TAD K400
3206 7440 SZA /CHECK STORED ADDRESS
3207 7402 HLT /JMS FAILED
3210 3433 DCA I K400 /CLEAR STORED ADDRESS
3211 1136 TAD PNTCNT
3212 7001 IAC /ADVANCE COUNTER
3213 3136 DCA PNTCNT

/JMS TEST 27 COUNTER=111
3214 1221 TAD RK31
3215 3624 DCA I K201
3216 1222 TAD RK32
3217 3445 DCA I K7577
3220 5445 JMP I K7577
3221 5557 RK31, JMP I K3230
3222 4432 RK32, JMS I K200
3223 7670 M110, -110
3224 0201 K201, 201

*3230
3230 1136 TAD PNTCNT
3231 1253 TAD M111
3232 7440 SZA /CHECK COUNTER
3233 7402 HLT /JMP COUNTER WRONG
3234 1432 TAD I K200
3235 1032 TAD K200
3236 7440 SZA /CHECK STORED ADDRESS
3237 7402 HLT /JMS FAILED
3240 3432 DCA I K200 /CLEAR STORED ADDRESS
3241 1136 TAD PNTCNT
3242 7001 IAC /ADVANCE COUNTER
3243 3136 DCA PNTCNT

/JMS TEST 28 COUNTER =112
3244 1251 TAD RK33
3245 3654 DCA I K101
3246 1252 TAD RK34
3247 3446 DCA I K7677
3250 5446 JMP I K7677
3251 5560 RK33, JMP I K3260
3252 4431 RK34, JMS I K100
3253 7667 M111, -111
3254 0101 K101, 101

```

```

*3260
3260 1136 TAD PNTCNT
3261 1303 TAD M112
3262 7440 SZA /CHECK COUNTER
3263 7402 HLT /JMP COUNTER WRONG
3264 1431 TAD I K100
3265 1031 TAD K100
3266 7440 SZA /CHECK STORED ADDRESS
3267 7402 HLT /JMS FAILED
3270 3431 DCA I K100 /CLEAR STORED ADDRESS
3271 1136 TAD PNTCNT
3272 7001 IAC /ADVANCE COUNTER
3273 3136 DCA PNTCNT

/JMS TEST 29 COUNTER=113
3274 1301 TAD RK35
3275 3704 DCA I K41
3276 1302 TAD RK36
3277 3447 DCA I K7737
3300 5447 JMP I K7737
3301 5561 RK35, JMP I K3310
3302 4430 RK36, JMS I K40
3303 7666 M112, -112
3304 0041 K41, 41

*3310
3310 1136 TAD PNTCNT
3311 1333 TAD M113
3312 7440 SZA /CHECK COUNTER
3313 7402 HLT /JMP COUNTER WRONG
3314 1430 TAD I K40
3315 1030 TAD K40
3316 7440 SZA /CHECK STORED ADDRESS
3317 7402 HLT /JMS FAILED
3320 3430 DCA I K40 /CLEAR STORED ADDRESS
3321 1136 TAD PNTCNT
3322 7001 IAC /ADVANCE COUNTER
3323 3136 DCA PNTCNT

/JMS TEST 30 COUNTER=114
3324 1331 TAD RK37
3325 3734 DCA I K21
3326 1332 TAD RK38
3327 3450 DCA I K7757
3330 5450 JMP I K7757
3331 5562 RK37, JMP I K3340
3332 4427 RK38, JMS I K20
3333 7665 M113, -113
3334 0021 K21, 21

```

```

*3340
3340 1136 TAD PNTCNT
3341 1363 TAD M114
3342 7440 SZA /CHECK COUNTER
3343 7402 HLT /JMP COUNTER WRONG
3344 1427 TAD I K20
3345 1027 TAD K20
3346 7440 SZA /CHECK STORED ADDRESS
3347 7402 HLT /JMS FAILED
3350 3427 DCA I K20 /CLEAR STORED ADDRESS
3351 1136 TAD PNTCNT
3352 7001 IAC /ADVANCE COUNTER
3353 3136 DCA PNTCNT

/JMS TEST 31 COUNTER=115
3354 1361 TAD RK39
3355 3764 DCA I K11
3356 1362 TAD RK40
3357 3451 DCA I K7767
3360 5451 JMP I K7767
3361 5563 RK39, JMP I K3400
3362 4426 RK40, JMS I K10
3363 7664 M114, -114
3364 0011 K11, 11

*3400
3400 1136 TAD PNTCNT
3401 1223 TAD M115
3402 7440 SZA /CHECK COUNTER
3403 7402 HLT /JMP COUNTER WRONG
3404 1426 TAD I K10
3405 1026 TAD K10
3406 7440 SZA /CHECK STORED ADDRESS
3407 7402 HLT /JMS FAILED
3410 3426 DCA I K10 /CLEAR STORED ADDRESS
3411 1136 TAD PNTCNT
3412 7001 IAC /ADVANCE COUNTER
3413 3136 DCA PNTCNT

/JMS TEST 32 COUNTER=116
3414 1221 TAD RK41
3415 3624 DCA I K5
3416 1222 TAD RK42
3417 3452 DCA I K7773
3420 5452 JMP I K7773
3421 5564 RK41, JMP I K3430
3422 4425 RK42, JMS I K4
3423 7663 M115, -115
3424 0005 K5, 5

```

```

*3430
3430 1136 TAD PNTCNT
3431 1253 TAD M116
3432 7440 SZA /CHECK COUNTER
3433 7402 HLT /JMP COUNTER WRONG
3434 1425 TAD I K4
3435 1025 TAD K4
3436 7440 SZA /CHECK STORED ADDRESS
3437 7402 HLT /JMS FAILED
3440 3425 DCA I K4 /CLEAR STORED ADDRESS
3441 1136 TAD PNTCNT
3442 7001 IAC /ADVANCE COUNTER
3443 3136 DCA PNTCNT

```

```

/JMS TEST 33 COUNTER=117
3444 1251 TAD RK43
3445 3654 DCA I K3
3446 1252 TAD RK44
3447 3453 DCA I K7775
3450 5453 JMP I K7775
3451 5565 RK43, JMP I K3460
3452 4424 RK44, JMS I K2
3453 7662 M116, -116
3454 0003 K3, 3

```

```

*3460
3460 1136 TAD PNTCNT
3461 1303 TAD M117
3462 7440 SZA /CHECK COUNTER
3463 7402 HLT /JMP COUNTER WRONG
3464 1424 TAD I K2
3465 1024 TAD K2
3466 7440 SZA /CHECK STORED ADDRESS
3467 7402 HLT /JMS FAILED
3470 3424 DCA I K2 /CLEAR STORED ADDRESS
3471 1136 TAD PNTCNT
3472 7001 IAC /ADVANCE COUNTER
3473 3136 DCA PNTCNT

```

```

/JMS TEST 34 COUNTER=120
3474 1301 TAD RK45
3475 3424 DCA I K2
3476 1302 TAD RK46
3477 3454 DCA I K7776
3500 5454 JMP I K7776
3501 5566 RK45, JMP I K3510
3502 4423 RK46, JMS I K1
3503 7661 M117, -117

```

```

*3510
3510 1136 TAD PNTCNT
3511 1333 TAD M120
3512 7440 SZA /CHECK COUNTER
3513 7402 HLT /JMP COUNTER WRONG
3514 1423 TAD I K1
3515 1023 TAD K1
3516 7440 SZA /CHECK STORED ADDRESS
3517 7402 HLT /JMS FAILED
3520 3423 DCA I K1 /CLEAR STORED ADDRESS
3521 1136 TAD PNTCNT
3522 7001 IAC /ADVANCE COUNTER
3523 3136 DCA PNTCNT

/JMS TEST 35 COUNTER=121
3524 1331 TAD RK47
3525 3423 DCA I K1
3526 1332 TAD RK48

3527 3455 DCA I K7777
3530 5455 JMP I K7777
3531 5567 RK47, JMP I K3537
3532 4422 RK48, JMS I K0
3533 7660 M120, -120

*3537
3537 1136 TAD PNTCNT
3540 1371 TAD M121
3541 7440 SZA /CHECK COUNTER
3542 7402 HLT /JMP COUNTER WRONG
3543 1422 TAD I K0
3544 1022 TAD K0
3545 7440 SZA /CHECK STORED ADDRESS
3546 7402 HLT /JMS FAILED
3547 3422 DCA I K0 /CLEAR STORED ADDRESS

3550 1372 TAD RLCNT
3551 7001 IAC
3552 3372 DCA RLCNT
3553 1372 TAD RLCNT
3554 7640 SZA CLA
3555 5770 JMP I M121-1
3556 1373 TAD ADD
3557 3015 DCA 15
3560 1415 PRINT, TAD I 15
3561 6046 TLS
3562 6041 TSF
3563 5362 JMP .-1
3564 1156 TAD M263
3565 7640 SZA CLA
3566 5360 JMP PRINT
3567 5770 JMP I .+1
3570 4200 4200

```

3571 7657 M121, -121  
3572 0000 BLCNT, 0

3573 3573 ADD, .  
3574 0215 215 /CR  
3575 0212 212 /LF  
3576 0260 260 /0  
3577 0263 263 /3

0000000000000000

@ADD 3573  
AFM 2024  
AFRM 5451  
AFRM1 2050  
AFRM10 2347  
AFRM11 2375  
AFRM2 2073  
AFRM3 2121  
AFRM4 2147  
AFRM5 2175  
AFRM7 2247  
AFRM8 2272  
AFRM9 2320  
AT06 2223  
BLCNT 3572  
FRM 2002  
FRM1 2026  
FRM10 2324  
FRM11 2353  
FRM2 2052  
FRM3 2077  
FRM4 2125  
FRM5 2153  
FRM7 2225  
FRM8 2251  
FRM9 2276  
K0 0022  
K00 0736  
K1 0023  
K10 0026  
K100 0031  
K1000 0034  
K1001 3134  
K101 3254  
K11 3364  
K2 0024  
K20 0027  
K200 0032  
K2000 0035  
K2001 3104  
K201 3224  
K21 3334  
K2410 0137  
K2440 0140  
K2470 0141  
K2520 0142  
K2600 0143  
K2630 0144  
K2660 0145  
K2710 0146

K2740 0147  
K3 3454  
K3000 0150  
  
K3030 0151  
K3060 0152  
K3110 0153  
K3140 0154  
K3200 0155  
K3230 0157  
K3260 0160  
K3310 0161  
K3340 0162  
K3400 0163  
K3430 0164  
K3460 0165  
K3510 0166  
K3537 0167  
K3777 0037  
K4 0025  
K40 0030  
K400 0033  
K4000 0036  
K4001 3054  
K401 3164  
K41 3304  
K4620 0056  
K4640 0057  
K4660 0060  
K4700 0061  
K4720 0062  
K4740 0063  
K4760 0064  
K5 3424  
K5000 0065  
K5020 0066  
K5040 0067  
K5060 0070  
K5100 0071  
K5120 0072  
K5140 0073  
K5160 0074  
K5200 0075  
K5220 0076  
K5240 0102  
K5260 0103  
K5300 0104  
K5320 0105  
K5340 0106  
K5360 0107

K5400 0110  
K5420 0111  
K5440 0112  
K5777 0042  
K60 0734  
K6000 3024  
K6777 0043  
K70 0733  
K7000 2764  
K7377 0044  
K74 0732  
K740 0735  
K7400 2734  
K7577 0045  
K7600 2704  
K7677 0046  
K7700 2654  
K7737 0047  
K7740 2624  
  
K7757 0050  
K7760 2544  
K7767 0051  
K7770 2514  
K7773 0052  
K7774 2464  
K7775 0053  
K7776 0054  
K7777 0055  
M1 0113  
M10 0122  
M100 2703  
M101 2733  
M102 2763  
M103 3023  
M104 3053  
M105 3103  
M106 3133  
M107 3163  
M11 0123  
M110 3223  
M111 3253  
M112 3303  
M113 3333  
M114 3363  
M115 3423  
M116 3453  
M117 3503  
M12 0124  
M120 3533

M121	3571	M76	2623	RK12	2622
M13	0125	M77	2653	RK13	2651
M14	0126	PK1	4605	RK14	2652
M15	0127	PK10	4715	RK15	2701
M16	0130	PK11	4734	RK16	2702
M17	0131	PK12	4735	RK17	2731
M2	0114	PK13	4754	RK18	2732
M20	0132	PK14	4755	RK19	2761
M21	0133	PK15	4774	RK2	2406
M22	0134	PK16	4775	RK20	2762
M23	0135	PK17	5014	RK21	3021
M24	4636	PK18	5015	RK22	3022
M25	4656	PK19	5034	RK23	3051
M26	4676	PK2	4606	RK24	3052
M263	0156	PK20	5035	RK25	3101
M27	4716	PK21	5054	RK26	3102
M3	0115	PK22	5055	RK27	3131
M30	4736	PK23	5074	RK28	3132
M31	4756	PK24	5075	RK29	3161
M32	4776	PK25	5114	RK3	2431
M33	5016	PK26	5115	RK30	3162
M34	5036	PK27	5134	RK31	3221
M35	5056	PK28	5135	RK32	3222
M36	5076	PK29	5154	RK33	3251
M37	5116	PK3	4634	RK34	3252
M4	0116	PK30	5155	RK35	3301
M40	5136	PK31	5174	RK36	3302
M41	5156	PK32	5175	RK37	3331
M42	5176	PK33	5214	RK38	3332
M43	5216	PK34	5215	RK39	3361
M44	5236	PK35	5234	RK4	2432
M45	5256	PK36	5235	RK40	3362
M46	5276	PK37	5254	RK41	3421
M47	5316	PK38	5255	RK42	3422
M5	0117	PK39	5274	RK43	3451
		PK4	4635	RK44	3452
M50	5336	PK40	5275	RK45	3501
M51	5356	PK41	5314	RK46	3502
M52	5376	PK42	5315	RK47	3531
M53	5416	PK43	5334	RK48	3532
M54	5436	PK44	5335	RK5	2461
M55	5450			RK6	2462
M56	2022	PK45	5354	RK7	2511
M57	2046	PK46	5355	RK8	2512
M6	0120	PK47	5374	RK9	2541
M60	2075	PK48	5375	STOR	0737
M61	2123	PK49	5414	T0	2003
M62	2151	PK5	4654		
M63	2177	PK50	5415	T01	2027
M64	2221	PK51	5434	T010	2330
M65	2245	PK52	5435	T011	2356
M66	2274	PK6	4655	T02	2054
M67	2322	PK7	4674	T03	2102
M7	0121	PK8	4675	T04	2130
M70	2351	PK9	4714	T05	2156
M71	2377	PNTCNT	0136	T06	2202
M72	2433	PRINT	3560	T07	2226
M73	2463	RK1	2405	T08	2253
M74	2513	RK10	2542	T09	2301
M75	2543	RK11	2621	U	

