

IDENTIFICATION

PRODUCT CODE: MAINDEC-8E-D0IB-D
PRODUCT NAME: BASIC JMP-JMS TEST
DATE CREATED: JUNE 11, 1971
MAINTAINER: DIAGNOSTICS GROUP
AUTHOR: BRUCE HANSEN

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1. ABSTRACT

THIS IS A DIAGNOSTIC PROGRAM FOR TESTING THE JMP AND JMS INSTRUCTIONS OF THE PDP-8E.

2. REQUIREMENTS

2.1 EQUIPMENT

A PDP-8E EQUIPPED WITH TELETYPE.

2.2 STORAGE

THIS PROGRAM USES MOST OF MEMORY. THE BINARY LOADER MUST BE STORED IN THE LAST MEMORY PAGE.

2.3 PRELIMINARY PROGRAMS

MAINDEC-8E-D0A(N) AND MAINDEC-8E-D0B(N)

3. LOADING PROCEDURE

3.1 METHOD

THE STANDARD BINARY LOADER IS USED.

4. STARTING PROCEDURE

4.1 CONTROL SWITCH SETTINGS (NONE)

4.2 STARTING ADDRESS

200

4.3 RESTART ADDRESSES

600
704

4.4 OPERATOR ACTION

A. SET SR TO 200 AND PRESS LOAD ADDRESS.

B. PUSH CLEAR AND THEN CONTINUE. THE PROGRAM WILL STORE PARTS OF THE RIM AND BINARY LOADERS THAT WILL BE DESTROYED, AND THEN JMP TO 4200 TO BEGIN TESTING.

5. OPERATING PROCEDURES

5.1 PROGRAM RESTARTS

SINCE THE LOADERS ARE ALREADY STORED, A PROGRAM RESTART SHOULD BEGIN AT 600 NOT 200.

5.2 PROGRAM END

TO RESTORE THE LOADERS AT THE CONCLUSION OF THE TEST, START AT 704. WHEN THE PROGRAM HALTS, RESTORATION IS COMPLETED (PC=736),

6. ERRORS

6.1 ERROR HALTS AND DESCRIPTION

SEE SECTION 9.

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 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 THE RANDOM JMP TEST, MAINDEC-8E-D0HC, OR RANDOM JMP-JMS TEST, MAINDEC-8E-D0JC.

7. RESTRICTIONS (NONE)

8. MISCELLANEOUS

8.1 EXECUTION TIME

THREE HUNDRED AND FORTY-FIVE PROGRAM LOOPS PER SECOND. A BELL IS SOUNDED EVERY 10 SECONDS, WHICH EQUALS 3456 PROGRAM LOOPS.

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. CHECK 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. JMP'S OR JMS'S 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 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 A 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.

TEST 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. JMS TESTS 1 THROUGH 12 ARE TESTS FOR THE SAME PAGE USING DIRECT ADDRESSING. JMS TESTS 13 THROUGH 35 TEST JMS IN THE SAME MANNER AS JMP IS TESTED IN TEST 20 THROUGH 45.

THE TELETYPE BELL IS SOUNDED EVERY 10 SECONDS (3456 PROGRAM CYCLES).

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/BASIC JMP-JMS TEST

0000	0000	*0	
0000	0000		0
0001	5001		JMP 1
0002	0002		2
0003	0003		3
0004	0000		0
0005	0000		0
0006	7402		HLT
0007	7402		HLT
0010	7402		HLT
0011	7402		HLT
0012	7402		HLT
0013	7402		HLT
0014	7402		HLT
0015	7402		HLT
0016	7402		HLT
0017	7402		HLT
0020	7402		HLT
0021	7402		HLT

	0022	*22	
0022	0000	K0,	0
0023	0001	K1,	1
0024	0002	K2,	2
0025	0004	K4,	4
0026	0010	K10,	10
0027	0020	K20,	20
0030	0040	K40,	40
0031	0100	K100,	100
0032	0200	K200,	200
0033	0400	K400,	400
0034	1000	K1000,	1000
0035	2000	K2000,	2000
0036	4000	K4000,	4000
0037	3777	K3777,	3777
	0042	*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
	0102	*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	3230	K3230,	3230
0157	3260	K3260,	3260
0160	3310	K3310,	3310
0161	3340	K3340,	3340
0162	3400	K3400,	3400
0163	3430	K3430,	3430
0164	3460	K3460,	3460
0165	3510	K3510,	3510
0166	3540	K3540,	3540

	0170	*170	
0170	0000	DO,	0
0171	1175		TAD K7402
0172	3410		DCA I 10
0173	1010		TAD 10
0174	5570		JMP I DO
0175	7402	K7402,	7402

	0200	*200	
0200	5601		JMP I SAVER
0201	0600	SAVER,	SAVE

/STORE LOADER INSTRUCTIONS
/THAT WILL BE DESTROYED

0600 *600

0600	7200	SAVE,	CLA
0601	1493		TAD I K7775
0602	3343		DCA STOR
0603	1452		TAD I K7773
0604	3344		DCA STOR+1
0605	1736		TAD I K74
0606	3345		DCA STOR+2
0607	1451		TAD I K7767
0610	3346		DCA STOR+3
0611	1737		TAD I K70
0612	3347		DCA STOR+4
0613	1450		TAD I K7757
0614	3350		DCA STOR+5
0615	1740		TAD I K60
0616	3351		DCA STOR+6
0617	1447		TAD I K7737
0620	3352		DCA STOR+7
0621	1741		TAD I K740
0622	3353		DCA STOR+10

0623	1446		TAD I K7677
0624	3354		DCA STOR+11
0625	1742		TAD I K00
0626	3355		DCA STOR+12
0627	1455		TAD I K7777
0630	3356		DCA STOR+13
0631	7300	HALT1,	CLA CLL
0632	1264		TAD K175
0633	3010		DCA 10
0634	4170		JMS DO
0635	1265		TAD M577
0636	7640		SZA CLA
0637	5234		JMP .-3
0640	1266	HALT2,	TAD K756
0641	3010		DCA 10
0642	4170		JMS DO
0643	1267		TAD M1777
0644	7640		SZA CLA
0645	5242		JMP .-3
0646	1270	HALT3,	TAD K3572
0647	3010		DCA 10
0650	4170		JMS DO
0651	1271		TAD M4177
0652	7640		SZA CLA
0653	5250		JMP .-3
0654	1272	HALT4,	TAD K5451
0655	3010		DCA 10
0656	4170		JMS DO
0657	1273		TAD M7600
0660	7640		SZA CLA
0661	5256		JMP .-3
0662	5300		JMP RESTAR
0663	4200		BEGIN
0664	0175	K175,	175
0665	7201	M577,	-577
0666	0756	K756,	756
0667	6001	M1777,	-1777
0670	3572	K3572,	3572
0671	3601	M4177,	-4177
0672	5451	K5451,	5451
0673	0200	M7600,	-7600

/RESTORE LOADER INSTRUCTIONS

0700	*700		
0700	1303	RESTAR,	TAD RENEW
0701	3200		DCA SAVE
0702	5303		JMP RENEW
0703	5663	RENEW,	JMP I HALT4+7
0704	7200	REFILL,	CLA
0705	1343		TAD STOR
0706	3453		DCA I K7775
0707	1344		TAD STOR+1
0710	3452		DCA I K7773

0711	1345	TAD	STOR+2
0712	3736	DCA	I K74
0713	1346	TAD	STOR+3
0714	3451	DCA	I K7767
0715	1347	TAD	STOR+4
0716	3737	DCA	I K70
0717	1350	TAD	STOR+5
0720	3450	DCA	I K7757
0721	1351	TAD	STOR+6
0722	3740	DCA	I K60
0723	1352	TAD	STOR+7
0724	3447	DCA	I K7737
0725	1353	TAD	STOR+10
0726	3741	DCA	I K740
0727	1354	TAD	STOR+11
0730	3446	DCA	I K7677
0731	1355	TAD	STOR+12
0732	3742	DCA	I K00
0733	1356	TAD	STOR+13
0734	3455	DCA	I K7777
0735	7402	HLT	

/CONSTANTS

0736	7774	K74,	7774	
0737	7770	K70,	7770	
0740	7760	K60,	7760	
0741	7740	K740,	7740	
0742	7700	K00,	7700	
0743	0000	STOR,	0	/STORE LOC 7775
0744	0000		0	/+1 STORE LOC 7773
0745	0000		0	/+2 STORE LOC 7774
0746	0000		0	/+3 STORE LOC 7767
0747	1742		-6036	/+4 STORE LOC 7770
0750	0000		0	/+5 STORE LOC 7757
0751	0000		0	/+6 STORE LOC 7760
0752	0000		0	/+7 STORE LOC 7737
0753	0000		0	/+10 STORE LOC 7740
0754	0000		0	/+11 STORE LOC 7677
0755	0000		0	/+12 STORE LOC 7700
0756	0000		0	/+13 STORE LOC 7777

4200	4200	*4200	
4200	7200	BEGIN,	CLA
4201	3136		DCA PNTCNT

4202	5203	/JUMP TEST 0	COUNTER=0
4203	1136	JMP	+.1
4204	7440	TAD	PNTCNT
4205	7402	SZA	/CHECK COUNTER
4206	1136	HLT	/JMP COUNTER WRONG
		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 /JMP 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

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/JUMP TEST 4 COUNTER=4
4247 5254 JMP .+5
4250 7402 HLT /JMP 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          /JMP 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 *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	

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

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

4446 5253      /JUMP TEST 14 COUNTER=16
4447 7402      JMP ,+5
4448 7402      HLT          /JMP FAILED
4449 7402      HLT          /
4451 7402      HLT          /
4452 7402      HLT          /
4453 1136      TAD PNTCNT
4454 1130      TAD M16
4455 7440      SEA          /CHECK COUNTER
4456 7402      HLT          /JMP COUNTER WRONG
4457 1136      TAD PNTCNT
4460 7001      IAC          /ADVANCE COUNTER
4461 3136      DCA PNTCNT

4462 5270      /JUMP TEST 15 COUNTER=17
4463 7402      JMP ,+6
4464 7402      HLT          /JMP FAILED
4465 7402      HLT          /
4466 7402      HLT          /
4467 7402      HLT          /
4470 1136      TAD PNTCNT
4471 1131      TAD M17
4472 7440      SEA          /CHECK COUNTER
4473 7402      HLT          /JMP COUNTER WRONG
4474 1136      TAD PNTCNT
4475 7001      IAC          /ADVANCE COUNTER
4476 3136      DCA PNTCNT
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/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      SEA          /CHECK COUNTER
4511 7402      HLT          /JMP COUNTER WRONG
4512 1136      TAD PNTCNT
4513 7001      IAC          /ADVANCE COUNTER
4514 3136      DCA PNTCNT

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/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

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

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/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      SEA          /CHECK COUNTER
4550 7402      HLT          /JMP COUNTER WRONG
4551 1136      TAD PNTCNT
4552 7001      IAC          /ADVANCE COUNTER
4553 3136      DCA PNTCNT

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/JMP 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		SEA		/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		
/JMP TEST 20 COUNTER=24					
4600	1205		TAD	PK1	
4601	3495		DCA	I K7777	
4602	1206		TAD	PK2	
4603	3482		DCA	I K0	
4604	5495		JMP	I K7777	
4605	5422	PK1,	JMP	I K0	
4606	5496	PK2,	JMP	I K4620	
*4620					
4620	1136		TAD	PNTCNT	
4621	1236		TAD	M24	
4622	7440		SEA		/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	5494		JMP	I K7776	
4634	5423	PK3,	JMP	I K1	
4635	5497	PK4,	JMP	I K4640	
4636	7754	M24,	-24		
*4640					
4640	1136		TAD	PNTCNT	
4641	1256		TAD	M25	
4642	7440		SEA		/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	3424	PK5,	JMP I K2	
4655	5660	PK6,	JMP I 4660	
4656	7753	M25,	-25	
	4660	*4660		
4660	1136		TAD PNTCNT	
4661	1276		TAD M26	
4662	7440		SEA	/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		
4700	1136		TAD PNTCNT	
4701	1316		TAD M27	
4702	7440		SEA	/CHECK COUNTER
4703	7402		HLT	/JMP COUNTER WRONG
4704	1136		TAD PNTCNT	
4705	7001		IAC	/ADVANCE COUNTER
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		
4720	1136		TAD PNTCNT	

4721	1336	TAD M30	
4722	7440	SEA	/CHECK COUNTER
4723	7402	HLT	/JMP COUNTER WRONG
4724	1136	TAD PNTCNT	
4725	7001	IAC	/ADVANCE COUNTER
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	5490	JMP I K7757	
4734	5427	PK11, JMP I K20	
4735	5463	PK12, JMP I K4740	
4736	7750	M30, -30	

4740 *4740

4740	1136	TAD PNTCNT	
4741	1356	TAD M31	
4742	7440	SEA	/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	5430	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

4760	1136	TAD PNTCNT	
4761	1376	TAD M32	
4762	7440	SEA	/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		
5000	1136		TAD	PNTCNT
5001	1216		TAD	M33
5002	7440		SEA	/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		SEA	/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	1236		TAD	M35
5042	7440		SEA	/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		
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		
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		
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	

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

                    *5140
5140 1136          TAD PNTCNT
5141 1356          TAD M41
5142 7440          SEA          /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 5494          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          SEA          /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          SEA          /CHECK COUNTER
5203 7402          HLT          /JMP COUNTER WRONG
5204 1136          TAD PNTCNT

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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	SEA	/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	SEA	/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	SEA	/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	JMP I K7737	
5275	5504	JMP I K5300	
5276	7732	M46,	-46

PK39,
PK40,
M46,

5300

*5300

5300	1136	TAD PNTCNT	
5301	1316	TAD M47	
5302	7440	SEA	/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	JMP I K7677	
5315	5505	JMP I K5320	
5316	7731	M47,	-47

PK41,
PK42,
M47,

5320

*5320

5320	1136	TAD PNTCNT	
5321	1336	TAD M50	
5322	7440	SEA	/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	JMP I K7577	
5335	5506	JMP I K5340	
5336	7730	M50,	-50

PK43,
PK44,
M50,

	5340	*5340	
5340	1136		TAD PNTCNT
5341	1356		TAD M51
5342	7440		SEA /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	3433		JMP I K400
5354	3444	PK45,	JMP I K7377
5355	5507	PK46,	JMP I K5360
5356	7727	M51,	-51
	5360	*5360	
5360	1136		TAD PNTCNT
5361	1376		TAD M52
5362	7440		SEA /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	3434		JMP I K1000
5374	3443	PK47,	JMP I K6777
5375	5510	PK48,	JMP I K5400
5376	7726	M52,	-52
	5400	*5400	
5400	1136		TAD PNTCNT
5401	1216		TAD M53
5402	7440		SEA /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	3435		JMP I K2000
5414	5442	PK49,	JMP I K5777

5415	5511	PK50,	JMP I K5420
5416	7725	M53,	-53
	5420	*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	3436		JMP I K4000
5434	3437	PK51,	JMP I K3777
5435	5512	PK52,	JMP I K5440
5436	7724	M54,	-54
	5440	*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	
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

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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      SEA           /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      SEA           /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

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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	/CHECK COUNTER
2134	7402		HLT	/JMP COUNTER WRONG
2135	1347		TAD AFRM4	
2136	7041		CIA	
2137	1330		TAD T04	
2140	7440		SZA	/CHECK STORED ADDRESS
2141	7402		HLT	/JMS FAILED
2142	3330		DCA T04	/CLEAR STORED PC
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	

				/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	/CHECK COUNTER

2162	7402		HLT	/JMP COUNTER WRONG
2163	1375		TAD AFRM5	
2164	7041		CIA	
2165	1356		TAD T05	
2166	7440		SZA	/CHECK STORED ADDRESS
2167	7402		HLT	/JMS FAILED
2170	3356		DCA T05	/CLEAR STORED PC
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	

PAUSE

/TAPE # 2
2200 *2200

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

2224	4226		/JMS TEST 8 COUNTER=65	
2225	7402	FRM7,	JMS T07	
2226	5226	T07,	HLT	
2227	1136		JMP .	
2230	1245		TAD PNTCNT	
2231	7440		TAD M65	
2232	7402		SZA	/CHECK COUNTER
2233	1247		HLT	/JMP COUNTER WRONG
2234	7041		TAD AFRM7	
2235	1226		CIA	
			TAD T07	

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2236 7440          SEA          /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

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                /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          SEA          /CHECK COUNTER
2257 7402          HLT          /JMP COUNTER WRONG
2260 1253          TAD T08
2261 7041          CIA
2262 1272          TAD AFRM8
2263 7440          SEA          /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

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                /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          SEA          /CHECK COUNTER
2305 7402          HLT          /JMP COUNTER WRONG
2306 1301          TAD T09
2307 7041          CIA
2310 1320          TAD AFRM9
2311 7440          SEA          /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

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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		SEA	/CHECK COUNTER
2334	7402		HLT	/JMP COUNTER WRONG
2335	1330		TAD T010	
2336	7041		CIA	
2337	1347		TAD AFRM10	
2340	7440		SEA	/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		SEA	/CHECK COUNTER
2362	7402		HLT	/JMP COUNTER WRONG
2363	1356		TAD T011	
2364	7041		CIA	
2365	1375		TAD AFRM11	
2366	7440		SEA	/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 *2400

/JMS TEST 12 COUNTER=72

2400	1205	TAD RK1
2401	3495	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

2410	1136	TAD PNTCNT	
2411	1233	TAD M72	
2412	7440	SEA	/CHECK COUNTER
2413	7402	HLT	/JMP COUNTER WRONG
2414	1454	TAD I K7776	
2415	1054	TAD K7776	
2416	7440	SEA	/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

2440	1136	TAD PNTCNT	
2441	1203	TAD M73	
2442	7440	SEA	/CHECK COUNTER
2443	7402	HLT	/JMP COUNTER WRONG
2444	1453	TAD I K7775	
2445	1053	TAD K7775	
2446	7440	SEA	/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
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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	
2470	1136		TAD PNTCNT
2471	1313		TAD M74
2472	7440		SEA /CHECK COUNTER
2473	7402		HLT /JMP COUNTER WRONG
2474	1452		TAD I K7773
2475	1052		TAD K7773
2476	7440		SEA /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	
2520	1136		TAD PNTCNT
2521	1343		TAD M75
2522	7440		SEA /CHECK COUNTER
2523	7402		HLT /JMP COUNTER WRONG
2524	1451		TAD I K7767
2525	1051		TAD K7767
2526	7440		SEA /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 5243 RK9, JMP I K2600
 2542 4450 RK10, JMS I K7757
 2543 7703 M75, -75
 2544 7760 K7760, 7760

2600 2600 *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 3400 DCA I K7757 /CLEAR STORED ADDRESS
 2611 1136 TAD PNTCNT
 2612 7001 IAC /ADVANCE COUNTER
 2613 3136 DCA PNTCNT

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

2630 2630 *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

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

	2660	*2660	
2660	1136		TAD PNTCNT
2661	1303		TAD M100
2662	7440		SEA /CHECK COUNTER
2663	7402		HLT /JMS COUNTER WRONG
2664	1446		TAD I K7677
2665	1046		TAD K7677
2666	7440		SEA /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	3432		JMP I K200
2701	3546	RK15,	JMP I K2710
2702	4445	RK16,	JMS I K7577
2703	7700	M100,	-100
2704	7600	K7600,	7600
	2710	*2710	
2710	1136		TAD PNTCNT
2711	1333		TAD M101
2712	7440		SEA /CHECK COUNTER
2713	7402		HLT /JMP COUNTER WRONG
2714	1445		TAD I K7577
2715	1045		TAD K7577
2716	7440		SEA /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	3433		JMP I K400
2731	3547	RK17,	JMP I K2740
2732	4444	RK18,	JMS I K7377
2733	7677	M101,	-101
2734	7400	K7400,	7400
	2740	*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	JMP	I K3000	
2762	4443	JMS	I K6777	
2763	7676	M102,	-102	
2764	7000	K7000,	7000	

RK19,
RK20,
M102,
K7000,

3000 *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	JMP	I K3030	
3022	4442	JMS	I K5777	
3023	7675	M103,	-103	
3024	6000	K6000,	6000	

RK21,
RK22,
M103,
K6000,

3030 *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	3054	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

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/ 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 5556      JMP I K3230
3222 4432      RK31,  JMS I K200
3223 7670      RK32,
3224 0201      M110,  -110
              K201,  201

              *3230
3230 1136      TAD PNTCNT
3231 1253      TAD M111
3232 7440      SEA          /CHECK COUNTER
3233 7402      HLT          /JMP COUNTER WRONG
3234 1432      TAD I K200
3235 1032      TAD K200
3236 7440      SEA          /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 5557      JMP I K3260
3252 4431      RK33,  JMS I K100
3253 7667      RK34,
3254 0101      M111,  -111
              K101,  101

              *3260
3260 1136      TAD PNTCNT
3261 1303      TAD M112
3262 7440      SEA          /CHECK COUNTER
3263 7402      HLT          /JMP COUNTER WRONG
3264 1431      TAD I K100
3265 1031      TAD K100
3266 7440      SEA          /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

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3277	3447		DCA I K7737
3300	5447		JMP I K7737
3301	5560	RK35,	JMP I K3310
3302	4430	RK36,	JMS I K40
3303	7666	M112,	-112
3304	0041	K41,	41
	3310	*3310	
3310	1136		TAD PNTCNT
3311	1333		TAD M113
3312	7440		SEA /CHECK COUNTER
3313	7402		HLT /JMP COUNTER WRONG
3314	1430		TAD I K40
3315	1030		TAD K40
3316	7440		SEA /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	5561	RK37,	JMP I K3340
3332	4427	RK38,	JMS I K20
3333	7665	M113,	-113
3334	0021	K21,	21

3340 *3340

3340	1136		TAD PNTCNT
3341	1363		TAD M114
3342	7440		SEA /CHECK COUNTER
3343	7402		HLT /JMP COUNTER WRONG
3344	1427		TAD I K20
3345	1027		TAD K20
3346	7440		SEA /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	5562	RK39,	JMP I K3400

3362	4426	RK40,	JMS I K10	
3363	7664	M114,	-114	
3364	0011	K11,	11	
	3400	*3400		
3400	1136		TAD PNTCNT	
3401	1223		TAD M115	
3402	7440		SEA	/CHECK COUNTER
3403	7402		HLT	/JMP COUNTER WRONG
3404	1426		TAD I K10	
3405	1026		TAD K10	
3406	7440		SEA	/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	3492		DCA I K7773	
3420	5452		JMP I K7773	
3421	5563	RK41,	JMP I K3430	
3422	4425	RK42,	JMS I K4	
3423	7663	M115,	-115	
3424	0005	K5,	5	
	3430	*3430		
3430	1136		TAD PNTCNT	
3431	1253		TAD M116	
3432	7440		SEA	/CHECK COUNTER
3433	7402		HLT	/JMP COUNTER WRONG
3434	1425		TAD I K4	
3435	1025		TAD K4	
3436	7440		SEA	/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	5564	RK43,	JMP I K3460	
3452	4424	RK44,	JMS I K2	
3453	7662	M116,	-116	
3454	0003	K3,	3	

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3460 1136 *3460 TAD PNTCNT
3461 1303 TAD M117
3462 7440 SEA /CHECK COUNTER
3463 7402 HLT /JMP COUNTER WRONG
3464 1424 TAD I K2
3465 1024 TAD K2
3466 7440 SEA /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

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/JMS TEST 34 COUNTER=120
3474 1301 TAD RK45
3475 3424 DCA I K2
3476 1302 TAD RK46
3477 3494 DCA I K7776
3500 5454 JMP I K7776
3501 5565 RK45, JMP I K3510
3502 4423 RK46, JMS I K1
3503 7661 M117, -117

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3510 1136 *3510 TAD PNTCNT
3511 1333 TAD M120
3512 7440 SEA /CHECK COUNTER
3513 7402 HLT /JMP COUNTER WRONG
3514 1423 TAD I K1
3515 1023 TAD K1
3516 7440 SEA /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

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

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3527 3495 DCA I K7777
3530 5455 JMP I K7777
3531 5566 RK47, JMP I K3540
3532 4422 RK48, JMS I K0
3533 7660 M120, -120

```

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3540 1136 *3540 TAD PNTCNT
3541 1370 TAD M121
3542 7440 SEA /CHECK COUNTER
3543 7402 HLT /JMP COUNTER WRONG

```

3544	1422	TAD I K0	
3545	1022	TAD K0	
3546	7440	SZA	/CHECK STORED ADDRESS
3547	7402	HLT	/JMS FAILED
3550	3422	DCA I K0	/CLEAR STORED ADDRESS
3551	1371	TAD BLCNT	
3552	7001	IAC	
3553	3371	DCA BLCNT	
3554	1371	TAD BLCNT	
3555	1372	TAD LIMIT	
3556	7640	SZA CLA	
3557	5766	JMP I BEL-1	
3560	3371	DCA BLCNT	
3561	1367	TAD BEL	
3562	6046	TLB	
3563	6041	TBF	
3564	5363	JMP .-1	
3565	5766	JMP I .+1	
3566	4200	4200	
3567	0207	BEL,	207
3570	7657	M121,	-121
3571	0000	BLCNT,	0
3572	1200	LIMIT,	-6600

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