

Toggle in Programs

Group 1 Microinstructions

200/7200 CLA 0000
 201/7100 CLL 0000
 202/7040 CMA 0777
 203/7020 CML 1777
 204/7020 CML 0777
 205/7010 RAR 1377
 206/7004 RAL 0777
 207/7012 RTR 1577
 210/7006 RTL 0777
 211/7001 IAC 10000
 212/7001 IAC 10001
 213/7002 BSW 10100
 214/7402 HLT 10100

Final HLT the AC = 0100
 LINK = 1

Operate Instructions

0200/7240 CLA CMA
 201/7001 IAC by 0202
 202/7640 SZA, CLA
 203/7402 ERROR HLT - should not halt
 204/7120 Set lnk to 1
 205/7010 RAR AC = 4000
 206/7510 SKIP if AC bit 0 = 0
 207/7410 SKP
 210/7402 HLT - should not halt
 211/7001 IAC + 1
 212/7002 BSW AC = 0140
 213/1202 Add 7640 to 0140
 214/7420 SKP if lnk = 1
 215/7402 HLT on error
 216/7402 Good HLT AC = 0000

This program should halt at
 loc 00216 (addr. should read 0217)
 AC = 0000

Group 2 Microinstructions

200/7300 CLA CLL
 201/7440 SZA
 202/7402 HLT
 203/7430 SZL
 204/7402 HLT
 205/7020 CML 10000
 206/7420 SNL
 207/7402 HLT
 210/7001 IAC 10001
 211/7450 SNA
 212/7402 HLT
 213/7510 SPA
 214/7402 HLT
 215/7410 SKP
 216/7402 HLT
 217/7012 RTR 06000
 220/7500 SMA
 221/7402 HLT
 222/7404 CSR 06001
 223/7402 HLT

LA 200 SR = 0001

ISZ Instructions - W

200/7500
 201/3300
 202/7001
 203/2300
 204/5202
 205/7440
 206/7402
 207/7402

This program halts at
 loc 00207 (addr. read 00210)
 AC = 0000

JMS Instruction = w

200/ 7300 Clear AC Clear link
201/ 3300 Zero pass counter
202/ 3204 Zero entry
203/ 4204 JMS
204/ 0000 Return addr. written here
205/ 1204 Get return addr.
206/ 7041 Complement and index AC
207/ 1215 Add to known good addr.
210/ 7440 SKp on AC=0
211/ 7402 Error halt
212/ 2300 Inc pass counter
213/ 5202 do again
214/ 7402 Good HLT
215/ 0204 constant

This program halts at 00214(addr read 00215) AC=0000

JMP Instruction

200/ 5210 JMP 210
201/ 7402 ERROR HLT
202/ 5206 JMP 206
203/ 7402 ERROR HLT
204/ 5212 JMP 212
205/ 7402 ERROR HLT
206/ 5204 JMP 204
207/ 7402 ERROR HLT
210/ 5204 JMP 202
211/ 7402 ERROR HLT
212/ 2300 LOOP TO DO 4096
213/ 5200 START PROG. AGAIN
214/ 7402 GOOD HLT AFTER 4096 TIMES

This program tests jump, it halts at 00215

* Run this test twice

Increment AC

200/ 7300 200/ 7001 = w
201/ 7001 201/ 2300
202/ 2207 202/ ~~5004~~ 5201
203/ 5202 OR 203/ 5200
204/ 2210
205/ 5204
206/ 5201

Visibly see AC increment

WRITE ZERO'S - CLEAR MEM

0004/ 1007
0005/ 3410
0006/ 5004
0007/ 0000
0010/ 0011
7300
3410
5000
CLEARS 1 FIELD
@ A TIME

* Change loc 0007 to any desired loc of contents

Checker board = w

7777/ 0000 0020/ 7300
0000/ 7300 0021/ 7020
0001/ 1007 0022/ 7420
0002/ 7040 0023/ 5025
0003/ 3007 0024/ 5027
0004/ 1007 0025/ 1032
0005/ 3410 OR 0026/ 7410
0006/ 5000 0027/ 1033
0007/ 0000 0030/ 3410
0010/ 0011 0031/ 5021
0032/ 5252
0033/ 2525
0010/ 0035

The MD reg alternates between 0000 and 7777

The MD reg alternates between 5252 and 2525

Print Character in Switch Reg (bit 04-11)

0000/ 7604
6046
6041
5002
5000

Deposit SR into Corresponding Address

0000/ 7604
3005
1005
3405
5000

* Deposit contents of switch register
into corresponding address.

4K Core Transfer (8K or more)

7600/ 6201	Change data field to 0 (specifies source field)
1670	TAD I 7670
6211	Change data field to 1 (specifies destination field)
3670	LCA I 7670
2270	Inc loc 7670
5300	JMP -5
7402	Halt
0000	

Console Print Test = w

0000/7001
6046
6041
5002
5000

LP05 Printer

<u>ECHO</u>	<u>PRINT</u>
200/6031	200/7001
201/5200	201/6666
202/6036	202/6661
203/6666	203/5202
204/5200	204/5200

Paper Tape - PC04

200/7001	200/7300
6026	201/6016
202/6031	202/6011
203/5202	203/5202
204/5200	204/5200

Punches alternating
1's and 0's

Reads the
tape

Echo Test for : = w

1 terminal

0000/6032
1/6031
2/5001
3/6036
4/6046
5/6041
6/5005
7/5001

1-4 terminals (KL8A-M8319)

200/7300
201/1205
202/6412
203/6401
204/5203
205/0210
206/6406
207/5203
210/7000
211/7000
212/7000
213/5206
214/7000
215/7000
216/7000
217/6405
220/6404
221/5203

DecTape - TC01/TC08 Bootstrap

7613/6774	200/7606
7614/1222	6766
7615/6766	6771
7616/6771	5202
7617/5216	5200
7620/1223	7754/7577
7621/5215	7577
7622/0600	LA 200 SR=0600
3/0220	CONT SR=0220
7754/7577	LA 7600 - REBOOT
7577	

TD8E SR Control Routine

0000/7300 CLA CLL
0001/7604 LAS
0002/6774 SDLC (Load TD Comm.)
0003/5201
SR 0 = unit
SR 1 = fwd/rev.
SR 2 = stop/go
SR 3 = read/write