

PROGRAM

Tag	Instruction	Remarks
3000	spc11 c22 <del>si10</del> <u>spc17</u>	Print title

PROGRAM

Tag	Instruction	Remarks
C17,	ca 1 td C10 ad 1 tr 3500 ca 0 <del>tr</del> 1C2 tr 4C2 tr 2C2 tr  <u>sp C10-1</u>	START PROGRAM'S OVER  r12 → 3500  } reset indicator

PROGRAM		
Tag	Instruction	Remarks
C10,	ca 2 clc — cp C41 ----- ad C10 su 1C1 cp C10-1 ----- <del>ca 2</del> ca 6 C2 cp C18 -----	goto 1 select program index P.C, <u>1 clc 14</u>
10C10	sp C11 C20 -----	print Test Complete print select program
C12,	ca C12 tr 40 tr 3500 sp C19 <del>sp</del>	CM → GR9
C13,	sp C17	tr select 1st program

PROGRAM		
Tag	Instruction	Remarks
c41,	ca c10	<u>Select program</u>
	md 2c1	si 17
	mh 12c1	x si 2000
	slh 17	
	ad 13c1	si 6000
	tz 1c3	
	ca 7c2	Program on AD or BD?
	cp c42	→ on BD
	ca 1c3	} on AD
	si 703	
c43,	ca 12c1	
	bi 40	
	ck 14c1	

PROGRAM		
Tag	Instruction	Remarks
3C43,	ca 1736 dm 23c1 dmo cp C44 <u>sp C50</u>	Is there a program in this position? no → print "no program"
C44,	ca 1735 dm 22c1 dmo cp C45 <u>sp C50</u>	no yes



PROGRAM		
Tag	Instruction	Remarks
C45,	ca 1737 cp C47 ----- su 0 cp C49 -----	→ program uses BP  → program uses AD  → program does not use any drums
4C45 →	ca 15C1 tr C46 ca 16C1 tr 1C46	Xfer line #'s
C46,	0 0  ao 1C46 ao C46 su 17C1 cp C46 ----- spc 11 si 2000	→ ca 1740. → tr 3740        Print title

PROGRAM		
Tag	Instruction	Remarks
10C46	CA0 T26C2 CA24C1 T2C16 CA0 T22C2 T21C2 T24C2  APC19 <u>AP400</u>	} program has been selected } reset line counter reset indicators  CM → GR9

PROGRAM		
Tag	Instruction	Remarks
C47,	<del>ca 7c2</del> cp 4c45	BD to AD? no!
	ca 10c1 tr 2c3	yes
C48,	ca 2c3	
	si 713	
	ca 12c1	<u>si 2000</u>
	bi 40	
	ck 14c1	check
	ca 2c3	
	si 707	AD
	ca 12c1	<u>(si 2000)</u>
	bo 40	
ck 14c1		
	set 7c2 + ?	



PROGRAM		
Tag	Instruction	Remarks
12C48	ca 2c3 ad 12c1 tr 2c3 su 20c1 cpc48 <del>tr 7c2</del> <u>sp c43-2</u>	<u>1212000</u> <u>10136000</u> bring in program again

PROGRAM		
Tag	Instruction	Remarks
C49,	ca 7c2	AD to BD ?
	cp 4c 45	no!
	ca 10c1	} yes Address of 1st program store X for fact in 2c3
	tr 2c3	
	ca 2c3	} XFER info from AD to BD
	si 703	
	ca 12c1	
	bi 40	
	ck 14c1	
	ca 2c3	
	si 717	
	ca 12c1	
	bo 40	
	ck 14c1	
	ca 2c3	} set indicator
	ad 12c1	
	tr 2c3	

DL. 1080

su 20c1  
 cp 4c49  
 sp C42

C20 ✓  
 tr 7c2

PROGRAM

Tag	Instruction	Remarks
C42,	CALC3 N 713 <u>SPC43</u>	me BD

PROGRAM		
Tag	Instruction	Remarks
C50,	sp C11 C23 ca C10 ad 21C1 ts 6C50 sp C11 0 sp C11 C25 sp 2C10 <hr/>	No program in position  C24-1  proc # ↓ next program

PROGRAM		
Tag	Instruction	Remarks
c15,	ca 1c4 su c28 cp 6c15 sp c11 2c28 0	1.4141 oh 1.0273
6c15,	ca 1c28 ta 3501 sp 3000	oh
c28,	2i 41 rd 0.51051 0.71054 0.16040 0.10075 0.07023 0.76076 0.10071 0.14030 0.10054 0.34010	

DL. 1080

0.24012  
0.02040  
1.75051



PROGRAM		
Tag	Instruction	Remarks
C18,	APC11 C21 <u>APC12-5</u>	print test complete

# ca FF4 Subroutine

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PROGRAM		
Tag	Instruction	Remarks
0	<u>ca 21r</u>	
1	ca 0	
2	ca 4	
3	ca 24	
4	ca 0	
5	ex 4	
6	<u>cp 15r</u>	
7	ca 0	
10	ex 24	
11	<u>cp 22r</u>	
12	spc 11	} print & put FF4 in 4 or 24 ↓
13	ca 26	
14	<u>sp 1c4</u>	

PROGRAM		
Tag	Instruction	Remarks
15	ca 4	
16	cp 7 r	
17	si 10	
20	ca 4	
21	sp -	
	ca 24	
	cp 12 r	
	si 10	
	ca 24	
	sp 21 r	

PROGRAM		
Tag	Instruction	Remarks
C26,	0.51071	↓ 9
	0,54075	P ↓
	0,16040	m t
	0,10071	→ 9
	0,32032	F F
	0,75013	↓ 4
	0,10014	→ i
	0,30010	m →
	0,13010	4 →
	0,60024	o r
	0,10017	→ 2
	1,13051	4 ↓

<u>CONSTANTS</u>		PROGRAM
Tag	Instruction	Remarks
c1 <sub>g</sub>	ca 3777 cle 14 <del>si 177</del> 9 si 360 90 si 1400 3 si 1777	360
10c1 <sub>g</sub>	0.10000 0.14000	SM. + SM -
12c1 <sub>g</sub>	si 2000 si 6000	.
14c1 <sub>g</sub>	si 2040	



PROGRAM		
Tag	Instruction	Remarks
15C1,	ca 1740 <u>tr 3740</u> ca 1777	} for line# transfer
20C1,	0.36000 C24-1	
22C1,	0.22070 0.26006	} keywords
24C1,	ca 3737	

<u>INDICATOR 5</u>		PROGRAM
Tag	Instruction	Remarks
C2,	0	contente FF3
1	0	no PMC, select next program if -
2	0	select? - excursion if -
3	0	contente FF2
4	0	ind 6 if - select line in FF4 if D1 icon1
5	0	contente FF4
6	0	- program selected
7	0	+ AD } location of - BD } programs

TEMP REGISTERS PROGRAM

Tag	Instruction	Remarks
C3 <sub>9</sub>	0 0 0	LINE # temp storage for DA temp storage for P x fer

PROGRAM		
Tag	Instruction	Remarks
C19,	ta 6r	0
	ca 7r	1
	si 707	2
	ca 10r	3
	bo 40	4
	ck 1#r	5
	sp -	
	0.44040	
	si 3740	?
	si 4000	.

5C19 =  $\frac{3314}{5}$   
 $\frac{3321}{11}$   
 ck  $\frac{3314}{11}$   
 ck  $\frac{3325}{11}$

PROGRAM		
Tag	Instruction	Remarks
C11,	LSR 3613 m5 Za1 = R1225 Za2 = R1225	print title of <u>test program</u>
<hr/>		



PROGRAM		
Tag	Instruction	Remarks
3500	sp3000	Print title → si 2
	rd -	} is pme line selected? Yes
	cp40	
	-----	No reset FF's
	si10	} was digit 0 of FF's changed on last shutdown?
	ca3	
	lx c2	
	mkc2	
	cp c17	
	-----	→ START PROGRAMS OVER
	ca2	→ PMC selected
	cp c8	
	-----	
	ca0	<u>next program</u>
	ex1c2	
	cp 2c10	
	-----	
	sp40	
	-----	

PROGRAM

Tag	Instruction	Remarks
CB, CB,	<p>ca 0 ex 2c2 cp c36</p> <hr/> <p>ca 2 dc 17 ex 3c2 mh 3c2 cp c61</p>	<p>select? - excursion</p> <p>was digit 15 of FF2 changed on last stallover?</p> <p>reset line counter</p>
7C40,	<p>ca 4c2 cp c60</p> <hr/> <p>sp c4 ex 5c2 mh 5c2 cp c60</p> <hr/> <p>ao c16 su c1 cp c16</p>	<p>no and 4er FF4 changed?</p> <p>select line? FF4 → get contents of FF4</p> <p>select line? FF4</p> <p>line counter +1</p> <p>ca 3776 to line selection</p>

sp 2c10 next program

PROGRAM		
Tag	Instruction	Remarks
C16	ca -	← <u>select line</u>
	ta C3	
	md 2C1	} is units line number legal.
	su 3C1	
	cp C31	
C3	sp C30	→ print ill line #
C31,	ca C3	line
	md 4C1	<u>line 360</u>
	roh 4	
	su 3C1	<u>197</u>
	cp C33	
	sp C30	→ print
C32,	ca C3	
	md 5C1	
	roh 10	
	su 6C1	
	cp C33	
	sp C30	→ print

PROGRAM		
Tag	Instruction	Remarks
C33,	cac 3	[n 7777 } is line no. "0"? up index line counter
	md 7c1	
	su 0	
	cp c40	
	-----	(si 2 rd cp 40) D3
	cac 3	select + excursion
	clc 3	
	cp c34	D4
	-----	
	clc 1	select - excursion normal mode
	cp c35	
	ts 2c2	
sp c19		
cac 3		
si 3	-----	

PROGRAM		
Tag	Instruction	Remarks
C34,	c20 t2 2c2 spc19 ca c3  md7c1 ad 10c1 si 3	Select + excursion set 2c2 for my ex. to follow no to 99.  <u>si 1777</u>  <u>0.10000</u> special mode +
C35,	ca0 t2 2c2 spc19 ca c3  md7c1 ad 11c1 si 3	Select - excursion <del>set</del> 2c2 for normal op.  0.14000 rpm -



PROGRAM		
Tag	Instruction	Remarks
C36,	<u>CAC3</u> <u>CLC 4</u> <u>CP C35</u> <u>SP C40</u>	Select - excursion ?  - excursion  next line

PROGRAM		
Tag	Instruction	Remarks
C60,	<del>           spc4            t4c3            clc 1            sp 5c1            sp 4c2            t4c2            casc2            t4c3            sp 7c16         </del>	<p>SPECIAL LINE REQUEST</p> <p>repeat line</p> <p>CA FF4</p> <p>to line selection</p>
C60,	<del>           t4c4            spc4            t4c2            clc 1            ex 4c2            sp 1c16         </del>	

PROGRAM		
Tag	Instruction	Remarks
c619	ca 2401 <del>ts</del> c16 ca 0 ts 4c2 ts 2c2 <u>sp 3500</u>	Reset line counter

PROGRAM		
Tag	Instruction	Remarks
C30,	sp C'' C 27 0 AP3500	print Illegal line number
C27,	0.51071	↓ π
	0.14075	I ↓
	0.44044	l l
	0.02064	e g
	0.06044	a l
	0.10044	→ l
	0.14030	i m
	0.02000	e s
	0.10030	→ m
	0.16070	u m
	0.62002	b e
	1.24051	v ↓



0.24006 1.70051

c21,0.51071 0.40075 0.02012 0.40010 0.71034 0.75060 0.70054 0.44002

0.40002 0.51051 1.51000

c23,0.51071 0.30075 0.60010 0.54024 0.60064 0.24006 0.70010 0.14030

0.10054 0.60012 0.14040 0.14060 1.30010

c24,1.10025

r,1.10017

r,1.10007

r,1.10013

r,1.10023

r,1.10033

r,1.10027

r,1.10003

r,1.10066

r,1.25076

r,1.25025

r,1.25017

c25,1.51000

c22,0.51051 0.45071 0.24060 0.60070 0.10075 0.25023 0.33010 0.71034

0.60030 0.12060 0.44014 0.22006 0.40002 0.22010 0.40002 0.12040

0.10054 0.24060 0.64024 0.06070 0.10040 0.75035 0.07003 0.76076

1.51051 c13,spc19 1 sp3002 c14,1 0

c15,ca1c4 suc28 cp6c15 spc11 2c28 0 6c15, sp3000

c28,si41 rd 0.51051 0.71054 0.16040 0.10075 0.07023 0.76076 0.10071

0.14030 0.10054 0.34010 0.24012 0.02040 1.75051 4p 3500 DITTO 3477/

3500| ta1c4 spc15 cp40 si10 ca3 exc2 mhc2 cpc17

ca2 cpc8 cs0 ex1c2 cp2c10 sp40 c8,ca0 ex2c2 cpc36

ca2 clc17 ex3c2 mh3c2 cpc61 ca4c2 cpc60 spc4 ex5c2

mh5c2 cpe60 c40,aoc16 suc1 cpe16 sp2c10 c16,ca tsc3

md2c1 su3c1 cpc31 spc30 c31,cac3 md4c1 srh4 su3c1 cpc33

spc30 c33,cac3 md7c1 su0 cpc40 ~~si2 rd ep40~~ cac3 clc3 cpc34 clc1

cpc35 ts2c2 spc19 cac3 si3 c34,cs0 ts2c2 spc19 cac3

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md7c1 ad10c1 si3 c35,ca0 ts2c2 spc19 cac3 md7c1 ad11c1

si3 c36,cac3 clc4 cpc35 spc40 c60,spc4 clc1 ts4c2

ca5c2 tsc3 sp2c16 c61,ca24c1 tsc16 ca0 ts4c2 ts2c2

sp3500 c30,spc11 c27 0 sp3500 c27,0.51071 0.14075 0.44044

0.02064 0.06044 0.10044 0.14030 0.02000 0.10030 0.16070 0.62002 1.24051

Or,sp3500 DITTO 3777| sp3500

START AT 3500



fc TAPE 3800 m1 ACKLEY

OCTAL

40  sp3500	DITTO	1037  sp3500	DITTO	2036  sp3500	DITTO	2777  sp3500				
3000  aoc14	epe13	spe11	c22	si10	ca3	tsc2	ca2	clc17		
ts3c2	spc4	ts5c2	c17,ca1	tdc10	ad1	ts3500				
ca1c28	ts3501	ca0	ts1c2	ts4c2	ts2c2	spe10-1	ca2	c10,clc	epe41	aoc10
su1c1	epe10-1	ca6c2	epe18	spe11	c20	eac12	ts40	ts3500		
spe19	0	c12, spe17		c41, eac10		md2c1	mh12c1	slh17		
ad13c1	ts1c3	ca7c2	epe42	ca1c3	si703	c43, ca12c1		bi40		
ck14c1	3c43, ca1736		dm23c1	dm0	epe44	spe50	c44, ca1735			
dm22c1	dm0	epe45	spe50	c45, ca1737		epe47	su0	epe49		
ca15c1	tsc46	ca16c1	ts1c46	c46, 0	0	ao1c46	aoc46	su17c1		
epe46	spe11	si2000	10c46, cs0			ts6c2	ca24c1	tsc16	ca0	
ts2c2	ts1c2	ts4c2	spe19	sp40	c47, cs7c2			cp4c45	ca10c1	
ts2c3	c48, ca2c3		si713	ca12c1	bi40	ck14c1	ca2c3	si707	ca12c1	

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bo40	ck14c1	12c48, ca2c3		ad12c1	ts2c3	su20c1	epe48	ts7c2		
spe43-2	c49, ca7c2		cp4c45	ca10c1	ts2c3	ca2c3	si703	ca12c1	bi40	
ck14c1	ca2c3	si717	ca12c1	bo40	ck14c1	ca2c3	ad12c1	ts2c3		
su20c1	cp4c49	es0	ts7c2	spe42	c42, ca1c3		si713	spe43		
c50, spe11		c23	eac10	ad21c1	ts6c50	spe11	0	spe11		
c25	sp2c10	c18, spe11		c21	spe12-5	c4, ta21r	es0	ts4		
ts24	ca0	ex4	cp15r	ca0	ex24	cp22r	spe11	c26		
sp1c4	ca4	cp7r	si10	ca4	sp	ca24	cp12r	si10		
ca24	sp21r	c26, 0.51071		0.54075	0.16040	0.10071	0.32032	0.75013		
0.10014	0.30010	0.13010	0.60024	0.10017	1.13051	c1, ca3776		clc14		

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si17	9	si360	si1400	3	si1777	10c1, 0.10000		0.14000		
12c1, si2000		si6000	14c1, si2040		15c1, ca1740		ts3737	ca1777		
20c1, 0.36000		c24-1	22c1, 0.22070		0.26006	24c1, ca3736		c2, 0		
0	0	0	0	0	0	0	c3, 0	0		
0	c19, ta6r	ca7r	si707	ca10r	bo40	ck11r	sp	0.44040		
si3740	si4000									

c11,

LSR PRINT OUT

za1=si225		za2=si225								
Or, ta3r	ta16r	za1	ca	td5r	ca	clh1				
rc	clh9	rc	clc22	cp14r	ao5r	sp5r	ao16r	za2		

sp

END OF SUBROUTINE

c20, 0.51071	0.12075	0.02044	0.02034	0.40010	0.71054	0.75024	0.60064			
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c25,1.51000

c22,0.51051	0.45071	0.24060	0.60070	0.10075	0.25023	0.33010	0.71034	
0.60030	0.12060	0.44014	0.22006	0.40002	0.22010	0.40002	0.12040	
0.10054	0.24060	0.64024	0.06070	0.10040	0.75035	0.07003	0.76076	
1.51051	c13,spc19		1	sp3002	c14,-1	0		
c15,ca1c4	suc28	cp6c15	spc11	2c28	0	6c15,	sp3000	
c28,si41	rd	0.51051	0.71054	0.16040	0.10075	0.07023	0.76076	0.10071
0.14030	0.10054	0.34010	0.24012	0.02040	1.75051			

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sp3500	DITTO	3477	1.67757					
3500	ta1c4	spc15	cp40	si10	ca3	exc2	mhc2	cpc17
ca2	cpc8	cs0	ex1c2	cp2c10	sp40	c8,ca0	ex2c2	cpc36
ca2	clc17	ex3c2	mh3c2	cpc61	ca4c2	cpc60	spc4	ex5c2
mh5c2	cpc60	c40,aoc16		suc1	cpc16	sp2c10	c16,ca	tsc3
md2c1	su3c1	cpc31	spc30	c31,cac3	md4c1	srh4	su3c1	cpc33
spc30	c33,cac3	md7c1	su0	cpc40	cac3	clc3	cpc34	clc1
cpc35	ts2c2	spc19	cac3	si3	c34,cs0	ts2c2	spc19	cac3

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