

copy

* SETS CLOCK FOR 10 SECONDS, THEN GOES INTO LOOP TO SEE HOW MANY INSTRUCTIONS CAN BE EXECUTED IN THAT TIME. TRIES ONCE WITH A SEQUENCE ALLOWING OVERLAP, THEN WITHOUT OVERLAP.
* 2/3 AS MANY INSTRUCTIONS SHOULD BE DONE IN THE SECOND CASE.

PCC ON
SST
COUNT 80
LBU CALIB

TRANSFER VECTOR
0000 336225636447 .SETUP
00001 334751314563 .PRINT
00002 256731636060 EXIT

00003	0074	00	4	00000	00004	NTESTS	EQU	4	.SETUP	FOUR TESTS.
00004	1	00000	0	00006	00005	EVEN	CALL	5	SETUP TIMER, DUMP, ETC.	
00005	0	00003	0	00000	00006	LMTM		5	CHARGE	DON'T MIX IR'S ON A WILD TRANSFER.
00006	0760	00	0	00016	00007	CAL		7	SAVE7	SAVE CLOCK SETTING.
00007	0500	00	0	00005	00011	SLW		5	CHARGE	FOR LATER CHARGING.
00010	0602	00	0	00761	00012	CAL		7	SAVE7	SAVE MONITOR TRAP RETURN.
00011	0500	00	0	00007	00013	SLW		5	CHARGE	** CLEAR THE CLOCK.
00012	0602	00	0	00760	00014	NZI		5	CHARGE	WAIT FOR IT TO CHANGE.
00013	0600	00	0	00005	00015	IRA		5	CHARGE	NO CHANGE, TRY AGAIN.
00014	0520	00	0	00005	00016	CAL		5	CHARGE	GET NEW VALUE
00015	0020	00	0	00014	00017	SLW		5	CHARGE	KEEP IT AROUND TO PRINT INCREMENT.
00016	0500	00	0	00005	00020	SPI		5	CHARGE	GET PROTECTION INDICATORS.
00017	0602	00	0	00757	00021	TEM		5	CHARGE	MOVE TO INDICATORS.
00020	0604	00	0	00762	00022	LNT		5	CHARGE	WAS PROTECTION MODE ON.
00021	0441	00	0	00762	00023	LNT		5	CHARGE	NO, NOT TIME-SHARED.
00022	0056	00	0	100000	00024	IRA		5	CHARGE	ANNOUNCE.
00023	0020	00	0	00027	00025	TSX		5	CHARGE	**
00024	0074	00	4	00001	00026	STR		5	CHARGE	**
00025	1	00000	0	01137	00027	ENB		5	CHARGE	MAKE SURE CLOCK WORKING.
00026	1	00000	0	00000	00030	AXT		5	CHARGE	SET TEST COUNT.
00027	0564	00	0	00763	00031	CAL		5	CHARGE	SET
00030	0774	00	2	00004	00032	SLW		5	CHARGE	TRAP
00031	0500	00	0	00057	00033	SLW		5	CHARGE	RETURN, REENTRY FOR 2ND TRY.
00032	0602	00	0	00007	00034	AXT		5	CHARGE	**
00033	0600	00	0	00006	00035	LDQ		5	CHARGE	GET TIME WANTED.
00034	0774	00	1	00000	00036	MPY		5	CHARGE	CHANGE TO CLOCK TICKS.
00035	0560	00	2	00771	00037	XCA		5	CHARGE	TO AC.
00036	0200	00	0	01201	00040	ADD		5	CHARGE	ADD INITIAL TICK.
00037	0131	00	0	00000	00041	SID		5	CHARGE	SAVE,
00040	0400	00	0	00757	00042	TOV		5	CHARGE	TURN OFF LITE.
00041	0601	00	0	00764	00043	ADD		5	CHARGE	DON'T FORGET TO PAY FOR THIS.
00042	0140	00	0	00043	00044	TNO		5	CHARGE	DOES IT OVERFLOW.
00043	0400	00	0	00761	00045	STL		5	CHARGE	YES, TELL MONITOR.
00044	0140	00	0	00046	00046	STO		5	CHARGE	SAVE CHARGE TIME.
00045	0625	00	0	00134	00047	CAL		5	CHARGE	GET MAGIC NUMBER.
00046	0601	00	0	00761	00050	COM		5	CHARGE	TURN IT INTO A CLOCK SETTING.
00047	0500	00	0	00764	00051	ANA		5	CHARGE	MASK OUT UNNECESSARY BITS.
00050	0760	00	0	00006	00052	SLW		5	CHARGE	SET ALARM CLOCK.
00051	0320	00	0	01204						
00052	0602	00	0	00005						

2002

```

00053 -0340 00 0 00005 5 5  WAIT FOR IT TO CHANGE.
00054 0000 00 0 00054  *  CAN'T GET HERE.
00055 0020 00 0 00053  #2  NO CHANGE YET.
00056 0020 60 2 00127  TRA* TEST,2  GO DO TEST INSTRUCTIONS.

00057 0020 00 0 00060  *7TRA TRA  RETURN TO HERE ON TRAP.
00060 0600 00 0 00005  STZ 5  INSURE NO TRAP.
00061 0564 00 0 00763  CLOK  REENABLE CLOCK FOR LATER TEST.
00062 -0500 00 0 00006  CAL 6  GET LOC OF NEXT INSTRUCTION TO BE DONE.
00063 -0320 00 0 01203  ANA  =077777  GET ADDRESS.
00064 0402 00 2 00127  SUBJ  SUBTRACT STARTING LOCATION OF TEST SET.
00065 0765 00 0 00043  LRS 35  TO MQ FOR DIVIDE.
00066 0221 00 2 01001  DVP ICNT,2  DIVIDE BY LENGTH OF SEQUENCE.
00067 -0600 00 2 01156  STQ LENGTH,2  SAVE ANSWER FOR PRINTING.
00070 0754 00 1 00000  PXA 0.1  GET NUMBER OF TIMES THROUGH LOOP.
00071 0131 00 0 00000  XCA  TO MQ FOR MPY.
00072 0200 00 2 01005  MPY  CALCULATE NUMBER OF SEQUENCES.
00073 0131 00 0 00000  XCA  TO AC FOR ADDITION.
00074 0400 00 2 01156  ADD  ADD FINAL INCREMENT.
00075 0601 00 2 01156  STO LENGTH,2  SAVE TOTAL NUMBER OF INSTRUCTIONS DONE.
00076 0765 00 0 00043  LRS 35  PREPARE DIVISION.
00077 0200 00 0 01202  MPY =100  CHANGE TO PERCENT.
00100 0221 00 2 00775  DVP EXPECT,2  DIVIDE BY EXPECTED NUMBER.
00101 -0600 00 2 01162  STQ PCNT,2  SAVE PERCENTAGE.
00102 2 00001 2 00033  IIX LOOP,2,1  DO IT AGAIN ON NEXT TEST SET.
00103 0074 00 4 00001  TSX $,PRINT,4  PRINT RESULTS.
00104 -1 00000 3 01005  STR FBI  **
00105 -1 00000 0 00757  INCR  TIME INCREMENT.
00106 0774 00 2 00004  AXI NIESTS,2  PRINT ALL RESULTS.
00107 -1 00000 2 01156  PRLP STR  **
00110 -1 00000 2 00771  STR I,2  **
00111 -1 00000 2 01162  STR PCNT,2  **
00112 2 00001 2 00107  IIX PRLP,2,1  **
00113 -1 00000 0 00000  STR  **
00114 -0500 00 2 00760  CAL  RESTORE MONITOR SETTING OF CLOCK TRAP.
00115 0602 00 0 00007  SLW  **
00116 -0500 00 0 00761  CAL  ALL DONE, BUGGER CHARGE.
00117 0602 00 0 00005  SLW  **
00120 0074 00 4 00002  CALL  GO BACK TO MONITOR.
00121 1 00000 0 00123  **
00122 0 00170 0 00000  **

*
00123 0 00000 0 00127  TEST1  LOCATION OF FIRST TEST CASE.
00124 0 00000 0 00437  TEST2  LOCATION OF SECOND TEST CASE.
00125 0 00000 0 00747  TEST3  THIRD.
00126 0 00000 0 00752  TEST4  FOURTH.

TEST 5
TEST 6

*
00124 00124  DIF SET **EVEN  FIND OUT DISTANCE FROM EVEN LOCATION.
      IFF  DIF-DIF/2*2  IF DIFFERENCE NOT EVEN,
      NOP  MAKE IT EVEN.

*
00144 00144  N EQU 100  NUMBER OF INSTRUCTION PAIRS.
*
00127 00127  TEST1 DUP 2,N-1  DON'T PRINT GENERATED DUPS.

```


01005 301400234346 * BCI, H10CLOCK INCREMENT IS , I12, /

01017 301400466525 * BCI, H10OVERLAP TEST, 10X, V112, H1 INSTRUCTIONS IN, I4, H1 S

01031 252333601314 * BCI, EC, =, I4, H1 PERCENT 7094, /

01043 301400454645 * BCI, H10NON-OVERLAP TEST, 6X, V112, H1 INSTRUCTIONS IN, I4, H1 S

01055 252333601314 * BCI, EC, =, I4, H1 PERCENT 7094, /

01067 301400316146 * BCI, H10OVERLAP TEST, 14X, V112, H1 RECORDS IN, I4, H1 S

01101 252333601314 * BCI, EC, =, I4, H1 PERCENT 7094, /

01113 301400316146 * BCI, H10LLO-OVERLAP TEST, 6X, V112, H1 RECORDS IN, I4, H1 S

01125 252333601314 * BCI, EC, =, I4, H1 PERCENT 7094, /

01137 301400475146 * EMIL BCI, H10PROTECTION MODE ON, *

DETAIL RETURN TO NORMAL LISTING MODE.

01191 0 00016 I 01162 * SCORE INBUFF, I4 KEEP CISS HAPPY.

01156 * LENGTH BES N1ESTS STORAGE FOR INSTRUCTION NUMBER.

01162 * PCNT BES N1ESTS STORAGE FOR PERCENT.

01162 * INBUFF BSS 15 READ BUFFER.

END

LITERALS

01201 000000000074

01202 000000001144

01203 00000077777

01204 3777777777

BCI, A10 INPUT TEST

BCI, A10 INPUT OVERLAP

2297

POST PROCESSOR ASSEMBLY DATA

1205 IS THE FIRST LOCATION NOT USED BY THIS PROGRAM

REFERENCES TO DEFINED SYMBOLS

144	N	127, 437, 1001, 1002	
771	J	35, 110, 771	
1151	IO	750, 753	
124	DLE	127	
1005	FMT	104, 1005	
1005	NUM	72, 1005	
762	TEM	20, 21, 127, 131, 133, 135, 137, 141, 143, 145, 147, 151, 153, 155, 157, 161, 163	
		165, 167, 171, 173, 175, 177, 201, 203, 205, 207, 211, 213, 215, 217, 221, 223, 225	
		227, 231, 235, 237, 241, 243, 245, 247, 251, 253, 255, 257, 261, 263, 265, 267	
		271, 273, 275, 277, 301, 303, 305, 307, 311, 313, 315, 317, 321, 323, 325, 327, 331	
		333, 335, 337, 341, 343, 345, 347, 351, 353, 355, 357, 361, 363, 365, 367, 371, 373	
		375, 377, 401, 403, 405, 407, 411, 413, 415, 417, 421, 423, 425, 427, 431, 433, 435	
57	7TRA	31	
3	EVEN	127	
2	EXIT	120	
1137	EMIL	25	
1001	ICNT	66, 1001	
33	LODP	102	
27	NOTS	23	
1162	PCNT	101, 111	
107	PLP	112	
127	TEST	56, 64, 127	
12	TIME	765, 766, 767, 770	
763	CLOCK	27, 61	
7740	CTIME		
757	INCR	17, 40, 105	
764	MAGIC	41, 47	
760	SAVE7	12, 114	
127	TEST1	123, 436	
437	TEST2	124, 746	
747	TEST3	125, 747, 751	
752	TEST4	126, 752, 756	
73400	BOTIOP		
144	ROTIOM		
761	CHARGE	10, 43, 46, 116	
142	DAIEBX		
775	EXPECT	100, 775	
2	FINIAP		
140	FLAGBX		
1162	INRUEE	1151	
1	PRINT	24, 103	
3	SEIUP	3	
77727	JOBTME		
1156	LENGTH	67, 74, 75, 107	
1	LIBTAP		
141	LINECT		
7	MBNTAP		
10	MCHIAP		
5	MINTAP		
6	MLSIAP		
4	NTESTS	30, 106, 1156, 1162	

3 SINTAP
11 SNIAP
4 IINIAP
7777 TOPMEM
1000 (CHKJ)
134 (CKIV) 45
5 (CKRD)
74 (CLKL)
6 (CLOC)
7 (CTRP)
73471 (DATE)
105 (DATI)
73451 (DGLD)
73403 (DIAS)
73474 (ENDS)
73452 (ES1S)
73453 (ES2S)
73454 (ES3S)
73455 (ES4S)
73456 (ES5S)
73457 (ES6S)
135 (ECNT)
73467 (FGBX)
143 (HILO)
133 (JBTM)
73461 (LIBI)
73470 (LNCT)
73400 (LOAD)
73450 (MECL)
73473 (MSLN)
143 (PCBK)
73460 (PGCT)
76 (PMAD)
73414 (PNCH)
130 (PRCT)
73411 (PRMT)
102 (PROB)
104 (PROS)
131 (PUCT)
40014 (RBEC)
40004 (RBEP)
40010 (RBNC)
40000 (RBNP)
40016 (RDEC)
40006 (RDEP)
40012 (RDNC)
40002 (RDNP)
73417 (READ)
73425 (REST)
100 (SBUF)
73501 (SCHU)
73447 (SECL)
20010 (SKBC)

- 20000 (SKBP)
- 20012 (SKDC)
- 20002 (SKDP)
- 50 (SKEL)
- 1000 (SNAP)
- 73472 (SNCT)
- 73422 (STAT)
- 73431 (SIDM)
- 73406 (TAPE)
- 4000 (TPER)
- 77 (TRPM)
- 136 (TYRN)
- 40011 (WBNC)
- 40001 (WBNP)
- 40013 (WDNC)
- 40003 (WDNP)
- 40015 (WEEC)
- 40005 (WEPP)
- 40031 (WRDM)

NO ERROR IN ABOVE ASSEMBLY.

*TIME SPENT IN FAP.. 000(36) MINUTES.

$$.16 \text{ time saved} = \frac{.1}{.376} = 30.9\% \text{ increase}$$

32694

DATA

ENTRY POINTS TO SUBROUTINES REQUESTED FROM LIBRARY,

.SETUP .PRINT .EXIT

.53 MINUTES ELAPSED SINCE START OF JOB = .36 ~~seconds~~ = 1.17 ~~other~~ → 2.5 ~~time shown~~ = $\frac{.08}{.19} = 50.9\%$ increase.

EXECUTION

CLOCK INCREMENT IS 1

OVERLAP TEST 5,006,208 INSTRUCTIONS IN 10 SEC. = 100 PERCENT 7094.

NON-OVERLAP TEST 3,337,641 INSTRUCTIONS IN 10 SEC. = 100 PERCENT 7094.

I/O TEST 1,136 RECORDS IN 10 SEC. = 99 PERCENT 7094. } output, 14 word records

I/O-OVERLAP TEST 1,138 RECORDS IN 10 SEC. = 99 PERCENT 7094.

OUTPUT WORDS PER MINUTE

2290

* AT START OF THIS JOB THE DATE WAS 06/03 AND THE TIME WAS 0103.9
* THE TOTAL TIME USED BY THIS JOB WAS 1.23 MINUTES.
* THE TOTAL TIME CHARGED THIS JOB WAS 02 HOURS.
* 386 LINES TOTAL OFF-LINE PRINTED OUTPUT
* PROGRAMMER OUTPUT
* 31 LINES OFF-LINE PRINTER
* 0 CARDS OFF-LINE PUNCH
* 0 LINES ON-LINE PRINTER
* 0 CARDS ON-LINE PUNCH

32691

386 LINES TOTAL PRINTED OUTPUT