

9S02 HA AND 9S02 LA

CORE COMPLEMENT CHECKERBOARD RELIABILITY
FOR 737 STORAGES ONLY

A. PURPOSE

1. 9S02 H AND 9S02 L WILL TEST A 4K, 8K, OR 16K STORAGE. IT SHOULD NOT BE USED ON A 738 AS THE PATTERN WILL BE INCORRECT.
2. THE CORE STORAGE IS TESTED BY PUTTING THE PATTERN BELOW PHYSICALLY IN STORAGE

00110011
00110011
11001100
11001100
00110011

AS THE ACTUAL PROGRAM LOCATIONS DIFFER FROM THE PHYSICAL LOCATIONS, A MEMORY PRINTOUT WILL SHOW BLOCKS OF MEMORY LIKE THIS

```
0 . . . .20 . . . .40 . . . .60 . . . .77
.
. 0      1S      0S      1S
.
.
2000 . . .2020 . . .2040 . . .2060 . . .2077
.
. 1S      0S      1S      0S
.
.
4000 . . .
      0S      1S
```

B. AREA OF MACHINE REQUIRED

1. UNITS CARD READER, MF, CF, AND PRINTER.
2. STORAGE LOCATIONS
9S02 H 0000 TO 0315
AREA TESTED 0210 TO 3777
9S02 L 77463 TO 37777
AREA TESTED 00000 TO 37567

C. PROGRAM CONTROL

1. DECK 000 9LD02 HIGH BINARY LOADER

001 - 010 9S02 H DIAGNOSTIC
012 TRANSFER CARD TO 207

001 - 010 9S02 L DIAGNOSTIC
011 TRANSFER CARD TO 77463
012 - 015 BLANK CARDS

2. SENSE SWITCH CONTROL

- A. SWITCH 3 UP - PRINT OUT ON ERROR
- B. SWITCH 3 DOWN - STOP ON ERROR
- C. SWITCH 6 DOWN - WILL LOAD NEXT PROGRAM FROM THE CARD READER.
- D. SWITCH 6 UP - CONTINUOUS REPEAT

D. ERROR STOPS

1. TESTING SIZE OF STORAGE

9S02 H 0240 9S02 L 77514
PUSH START KEY TO CONTINUE AND TEST MACHINE ASSUMING A 4K STORAGE.

2. TRYING TO TEST 32K STORAGE

9S02 H 0240 9S02 L 77514

3. PROGRAM ERROR STOP

9S02 H 0107 9S02 L 77674

ERROR ADDRESS IN ACCUMULATOR DECREMENT, ONES IN THE ACCUMULATOR ADDRESS
IF A COMPLEMENT ERROR
ERROR WORD IN MQ

4. PRESS START BUTTON TO RETURN TO PROGRAM. THE ERROR IS CORRECTED AND THE TEST CONTINUES.

E. EXAMPLE OF PRINTOUT

THE FIRST LINE OF THE PRINTOUT CONTAINS THE ADDRESS OF THE WORD IN ERROR AND THE ERROR WORD. THE SECOND LINE CONTAINS AN INDICATION AS TO WHETHER IT IS AN INITIAL OR COMPLEMENT ERROR AND WHAT THE ERROR WORD SHOULD HAVE BEEN. THE FIRST POSITION OF THE WORD IS THE SIGN POSITION.

EXAMPLE I

000010111011 111 111 111 111 111 111 111 111 111 101 111 111
 111 111 111 111 111 111 111 111 111 111 111 111

IN EXAMPLE I AN INITIAL ERROR OCCURRED AT ADDRESS 273. ALL ONES SHOULD HAVE

BEEN WRITTEN. THE ERROR WORD HAS DROPPED A ONE IN POSITION 28.

EXAMPLE 2.

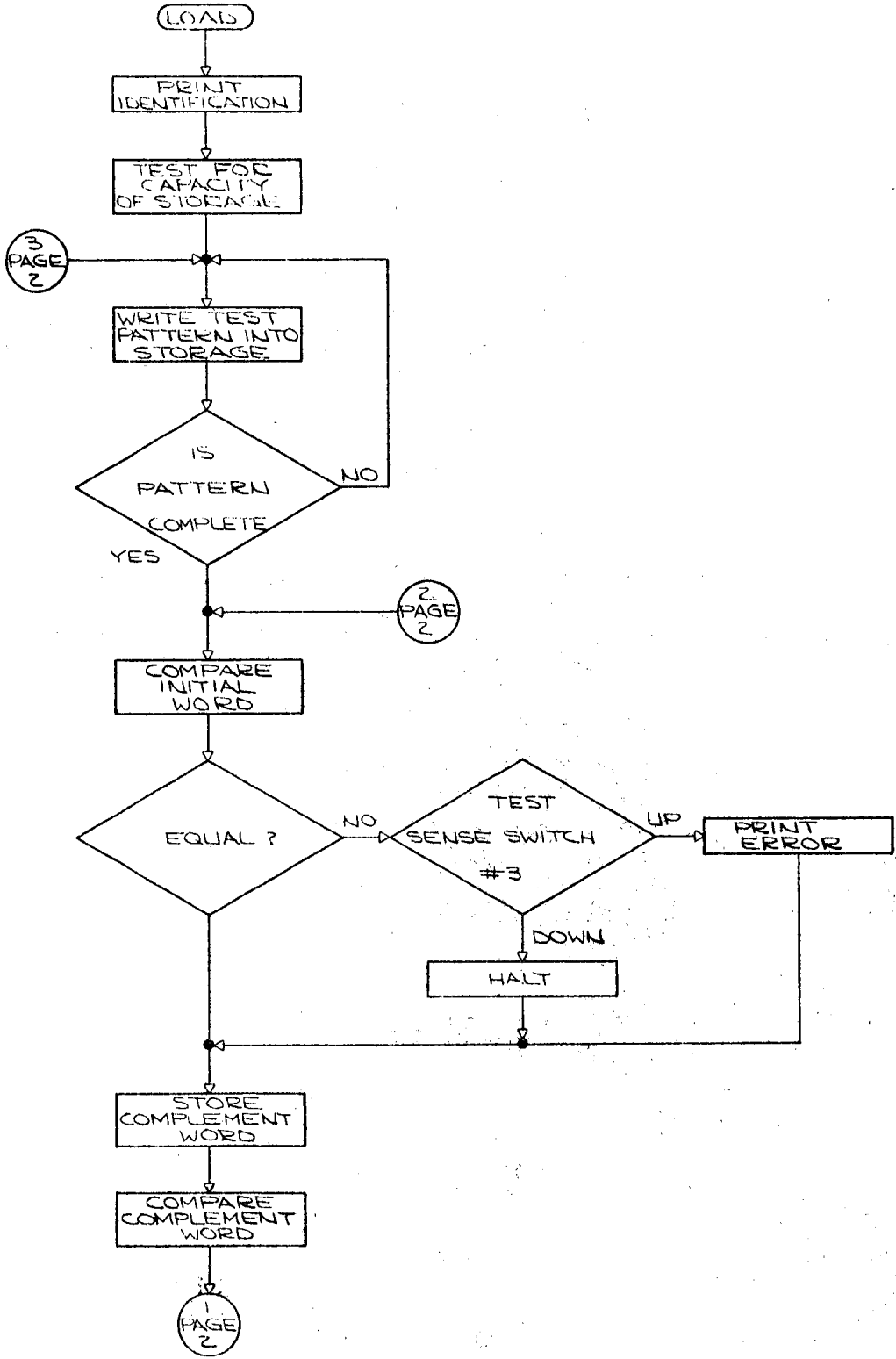
```
000010111011          000 000 010 000 000 000 000 000 000 000 000 000 000
      111111111111 000 000 000 000 000 000 000 000 000 000 000 000
```

IN EXAMPLE 2 A COMPLEMENT ERROR OCCURRED AT ADDRESS 273. ALL ZEROS SHOULD HAVE BEEN WRITTEN. THE ERROR WORD HAS PICKED UP A ONE IN POSITION 7, THE GROUP OF ONES IN THE SECOND LINE INDICATE WHEN A COMPLEMENT ERROR OCCURS.

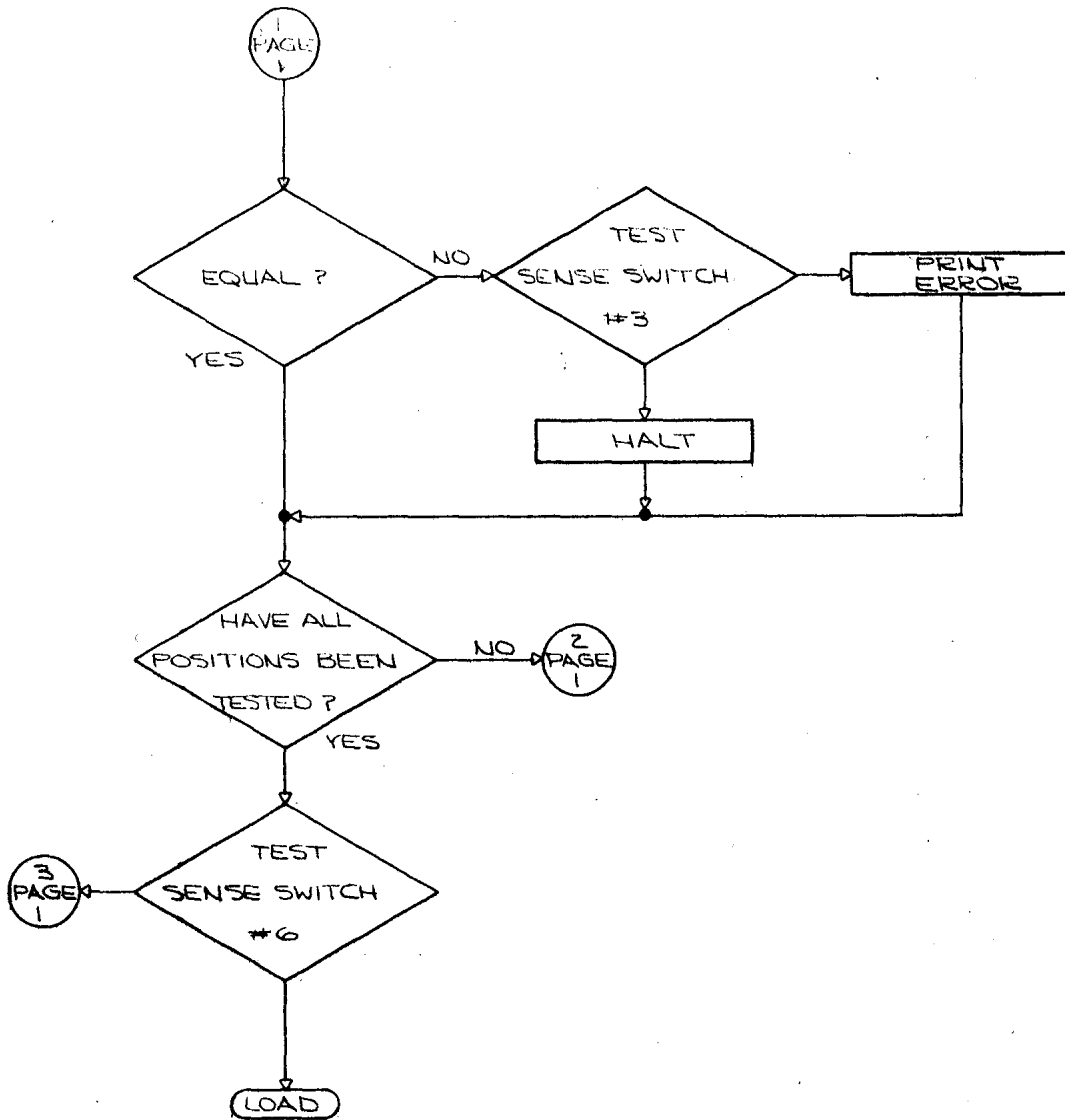
F. COMMENTS

1. THE PROGRAM TAKES ABOUT TWO SECONDS TO MAKE A SUCCESSFUL PASS IN ONE CORE STORAGE.
2. THE PROGRAM WRITES A COMPLETE PATTERN, CHECKS EACH WORD, COMPLEMENTS THE WORD, CHECKS THE COMPLEMENT AND THEN RESTORES THE PATTERN. AFTER ONE COMPLETE PATTERN IS READ, THE PROGRAM THEN WRITES AND CHECKS AN INVERSE PATTERN.
3. THE PROGRAM MAY FAIL DUE TO AN ALTERATION IN THE PROGRAM ITSELF DUE TO A STORAGE FAILURE.
4. PROGRAM 9S02 H WILL LOAD INTO THE FIRST 315 LOCATIONS IN STORAGE AND WILL TEST ALL OF THE AVAILABLE STORAGE ABOVE 206. PROGRAM 9S02 L WILL LOAD INTO THE LAST 315 LOCATIONS AVAILABLE IN STORAGE AND WILL TEST ALL OF THE REST OF STORAGE.
5. BOTH PROGRAM 9S02 H AND 9S02 L SHOULD BE RUN TO CHECK ALL OF THE STORAGE AREA. THESE PROGRAMS CAN BE USED WITH ONLY 737 CORE STORAGES. THE PROGRAM TESTS FOR THE SIZE OF STORAGE AND THE ADJUSTS THE PROGRAM ACCORDINGLY. THE TEST WILL THEN WIPE OUT THE AREA WHICH WAS USED TO TEST THE SIZE OF STORAGE.
6. THE TEST WORDS WHICH ARE USED IN THIS TEST ARE LOCATED AT 171 AND 172 IN 9S02 H AND AT 77774 AND 77775 IN 9S02 L THESE TWO TEST WORD WILL ALTERNATE THROUGH THE NORMAL OPERATION OF THE TEST.
7. IF A PATTERN OTHER THEN ALL ONES OR ALL ZEROS IS DESIRED IN THIS TEST, JUST CHANGE THE TWO TEST WORDS AND RUN THE TEST. THE PROGRAM WILL RUN CORRECTLY FOR ANY TEST WORDS.
8. DURING THE FIRST PASS THE TEST FOR SIZE OF STORAGE WILL BE WRITTEN OVER. IF A RESTART IS NEEDED, IT WILL BE NECESSARY TO TRANSFER MANUALLY TO 0000 OR 77570

4



5



9S02 H

CORE COMPLEMENT CHECKERBOARD
 FOR ONE, TWO, OR FOUR
 737 CORE STORAGES

				WRITE PATTERN			
00000	0534	00	1	00156	LXA K0,1	L 0	
00001	0534	00	2	00156	LXA K0,2	L 0	
00002	0534	00	4	00157	LXA K1,4	L 20	
00003	0500	00	0	00171	CLA T1	L TEST WORD	
00004	0601	00	1	07777	B	STO 4095,1	
00005	1	00001	1	00006		TXI B+2,1,1	
00006	1	00001	2	00007		TXI B+3,2,1	
00007	3	07570	1	00016	TXH C,1,3960	PATTERN COMPLETE	
00010	3	01777	2	00001	TXH BB-1,2,1023	BLOCK COMPLETE	
00011	2	00001	4	00004	TIX B,4,1		
00012	0560	00	0	00172	LDQ T2	REVERSE	
00013	0601	00	0	00172	STO T2	CONSTANTS	
00014	-0600	00	0	00171	STQ T1		
00015	0020	00	0	00002	TRA BB		
				TEST PATTERN			
00016	0534	00	1	00156	C	LXA K0,1	L 0
00017	0534	00	2	00156		LXA K0,2	L 0
00020	0534	00	4	00157		LXA K1,4	L +20
00021	0500	00	1	07777		CLA 4095,1	
00022	0340	00	0	00171		CAS T1	COMPARE INITIAL WORD
00023	0020	00	0	00060		TRA E	ERROR
00024	0020	00	0	00026		TRA C1	OK
00025	0020	00	0	00060		TRA E	ERROR
00026	0500	00	0	00172	C1	CLA T2	
00027	0601	00	1	07777		STO 4095,1	
00030	0500	00	1	07777		CLA 4095,1	
00031	0340	00	0	00172		CAS T2	COMPARE COMPLEMENT WORD
00032	0020	00	0	00067		TRA E1	ERROR
00033	0020	00	0	00035		TRA C2	OK
00034	0020	00	0	00067		TRA E1	ERROR
00035	0500	00	0	00171	C2	CLA T1	
00036	0601	00	1	07777		STO 4095,1	RESTORE INITIAL WORD
00037	1	00001	1	00040		TXI C2+3,1,1	
00040	1	00001	2	00041		TXI C2+4,2,1	
00041	3	07570	1	00050		TXH F,1,3960	TESTING COMPLETE
00042	3	01777	2	00017		TXH C+1,2,1023	BLOCK COMPLETE
00043	2	00001	4	00021		TIX C+3,4,1	
00044	0560	00	0	00172		LDQ T2	REVERSE
00045	0601	00	0	00172		STO T2	CONSTANTS
00046	-0600	00	0	00171		STQ T1	
00047	0020	00	0	00020		TRA C+2	

00050	0560	00	0	00172	F	LDQ T2	REVERSE PATTERN
00051	0601	00	0	00172		STO T2	
00052	-0600	00	0	00171		STQ T1	
00053	0500	00	0	00162		CLA K1+3	L COUNTER
00054	0402	00	0	00161		SUB K1+2	L 1
00055	0100	00	0	00147		TZE F1	INITIAL AND INVERSE PATTERNS TESTED
00056	0601	00	0	00162		STO K1+3	
00057	0020	00	0	00000		TRA BB-2	WRITE INVERSE PATTERN
00060	0601	00	0	00166	E	STO P2	ERROR WORD
00061	0500	00	0	00171		CLA T1	
00062	0601	00	0	00165		STO P1	TEST WORD
00063	0600	00	0	00167		STZ P3	
00064	0500	00	0	00024		CLA C+6	L TRA TO C1
00065	0601	00	0	00143		STO PC	PROGRAM RETURN
00066	0020	00	0	00076		TRA P	
00067	0601	00	0	00166	E1	STO P2	ERROR WORD
00070	0500	00	0	00172		CLA T2	
00071	0601	00	0	00165		STO P1	TEST WORD
00072	0500	00	0	00004		CLA B	
00073	0621	00	0	00167		STA P3	ONES IN ADDRESS
00074	0500	00	0	00033		CLA C1+5	L TRA TO C2
00075	0601	00	0	00143		STO PC	PROGRAM RETURN
00076	-0634	00	1	00163	P	SXD K2,1	
00077	0500	00	0	00164		CLA K2+1	L DEPENDS UPON SIZE OF STORAGE
00100	0402	00	0	00163		SUB K2	
00101	0601	00	0	00170		STO P4	ERROR ADDRESS
00102	0760	00	0	00163		SWT 3	STOP OR PRINT
00103	0020	00	0	00110		TRA P+10	PRINT ERROR
00104	0560	00	0	00165		LDQ P1	STOP ERROR WORD IN MQ
00105	0500	00	0	00170		CLA P4	
00106	-0501	00	0	00167		ORA P3	ERROR ADDRESS IN ACC DEC ONES IN ACC ADR FOR COMPLEMENT PATTERN
00107	0000	00	0	00143		HTR PC	RETURN TO PROGRAM
00110	0766	00	0	01361		WPRA	PRINT ERROR
00111	0760	00	0	01364		SPRA 4	PRINT FIRST LINE
00112	-0634	00	1	00163		SXD K1+4,1	TO GET OCTAL SPACING
00113	-0534	00	1	00157		LXD K1,1	SAVE COUNT
00114	0540	00	0	00202		RCHA K3	L +17
00115	0544	00	0	00202		LCHA K3	PRINT 9L ROW
							PRINT 9R-2R ROWS

00116	2	00001	1	00115		TIX *-1,1,1	
00117	0544	00	0	00203		LCHA K3+1	PRINT 1+0 ROWS
00120	0500	00	0	00170		CLA P4	
00121	0760	00	0	00006		COM	
00122	-0320	00	0	00164		ANA K2+1	L+7777000000
00123	0601	00	0	00173		STO P5	
00124	-0500	00	0	00165		CAL P1	
00125	0760	00	0	00006		COM	
00126	0602	00	0	00174		SLW P6	
00127	0766	00	0	01361		WPRA	PRINT 2ND LINE
00130	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
00131	-0534	00	1	00157		LXD K1,1	L +17
00132	0540	00	0	00202		RCHA K3	PRINT 9L ROW
00133	0544	00	0	00202		LCHA K3	PRINT 9R-2R ROWS
00134	2	00001	1	00133		TIX *-1,1,1	
00135	0544	00	0	00175		LCHA K4	PRINT 1+0 ROWS
00136	-0500	00	0	00166		CAL P2	
00137	0760	00	0	00006		COM	
00140	0602	00	0	00173		SLW P5	
00141	-0534	00	1	00163		LXD K1+4,1	
00142	-0534	00	1	00163		LXD K2,1	RESTORE INDEX
00143	0020	00	0	00000	PC	TRA	RETURN TO PROGRAM
00144	0500	00	0	00160	F2	CLA K1+1	L +2
00145	0601	00	0	00162		STO K1+3	RESTORE PASS COMPLETE COUNTER
00146	0020	00	0	00000		TRA BB-2	REPEAT TEST
00147	0760	00	0	00166	F1	SWT 6	TEST SWITCH 6
00150	0020	00	0	00152		TRA *+2	UP-READ NEXT PROGRAM
00151	0020	00	0	00144		TRA F2	REPEAT TEST
00152	0762	00	0	01321		RCDA	
00153	0540	00	0	00201		RCHA K5	
00154	0544	00	0	00000		LCHA 0	
00155	0020	00	0	00001		TRA 1	
CONSTANTS							
00156	+0000000000000			K0		OCT 0	
00157	+000017000020			K1		OCT 17000020	
00160	+0000000000002					OCT 2	
00161	+0000000000001					OCT 1	
00162	+0000000000002					OCT 2	PASS COMPLETE COUNTER
00163	+0000000000000			K2		OCT	TEMPORARY STORAGE
00164	+0077770000000					OCT 7777000000	THE DEC OF THIS LOCATION WILL CONTAIN THE HIGHEST LOCATION IN STORAGE
PRINT AREA							
00165	+0000000000000			P1		OCT	TEST WORD
00166	+0000000000000			P2		OCT	ERROR WORD
00167	+0000000000000			P3		OCT	INITIAL OR COMPLEMENT
00170	+0000000000000			P4		OCT	ERROR ADDRESS

00171	+000000000000	T1	OCT 0	TEST WORD
00172	-377777777777	T2	OCT 777777777777	TEST WORD
00173	0 00000 0 00000	P5		
00174	0 00000 0 00000	P6		
00175	-0 00001 0 00167	K4	MZE P3,0,1	INITIAL OR COMPLEMENT
00176	-0 00001 0 00166		MZE P2,0,1	TEST WORD
00177	-0 00001 0 00156		MZE K0,0,1	
00200	0000 01 0 00173		HTR P5,0,1	COMPLEMENT OF TEST WORD
00201	-1 00003 0 00000	K5	MON 0,0,3	CONTROL RCD
00202	-1 00001 0 00156	K3	MON K0,0,1	
00203	-0 00001 0 00170		MZE P4,0,1	ERROR ADDRESS
00204	-0 00001 0 00165		MZE P1,0,1	ERROR WORD
00205	-0 00001 0 00173		MZE P5,0,1	COMPL OF ERROR ADDRESS
00206	0000 01 0 00174		HTR P6,0,1	COMPLEMENT OF ERROR WORD

TEST FOR CAPACITY OF STORAGE

00207	0760 00 0 00163	NPER	SWT 3	
00210	0020 00 0 00212		TRA *+2	
00211	0020 00 0 00220		TRA AA	
00212	0766 00 0 01361		WPRA	
00213	0760 00 0 01363		SPRA 3	
00214	0540 00 0 00217		RCHA *+3	
00215	0060 00 0 00215		TCOA *	
00216	0020 00 0 00220		TRA AA	
00217	0000 30 0 00266		IOCD PNP,0,24	
00220	0500 00 0 00156	AA	CLA K0	L +0
00221	0601 00 0 77777		STO 32767	
00222	0400 00 0 00161		ADD K1+2	
00223	0601 00 0 37777		STO 16383	
00224	0400 00 0 00161		ADD K1+2	
00225	0601 00 0 17777		STO 8191	
00226	0400 00 0 00161		ADD K1+2	
00227	0601 00 0 07777		STO 4095	
00230	0500 00 0 77777		CLA 32767	L IS DEPENDENT UPON SIZE OF STORAGE
00231	0100 00 0 00240		TZE D-1	32 K STORAGE-SHOULD NOT BE RUN
00232	0402 00 0 00161		SUB K1+2	L +1
00233	0100 00 0 00243		TZE D4	16 K
00234	0402 00 0 00161		SUB K1+2	
00235	0100 00 0 00245		TZE D6	8 K
00236	0402 00 0 00161		SUB K1+2	
00237	0100 00 0 00000		TZE BB-2	4 K BEGIN TEST
00240	0000 00 0 00000		HTR BB-2	ERROR IN TESTING SIZE OF STORAGE
00241	0500 00 0 00263	D	CLA TS1	L +77777 IN DEC
00242	0020 00 0 00246		TRA D7	

00243 0500 00 0 00264 D4 CLA TS1+1 L +37777 IN DECR
00244 0020 00 0 00246 TRA D7

00245 0500 00 0 00265 D6 CLA TS1+2 L +17777 IN DECR

00246 0601 00 0 00164 D7 STO K2+1 ADJUST CONSTANTS
00247 0771 00 0 00022 ARS 18
00250 0621 00 0 00004 STA B
00251 0621 00 0 00021 STA C+3
00252 0621 00 0 00027 STA C1+1
00253 0621 00 0 00030 STA C1+2
00254 0621 00 0 00036 STA C2+1

00255 0500 00 0 00164 CLA K2+1
00256 0402 00 0 00262 SUB TS L +200 IN DEC
00257 0622 00 0 00007 STD B+3
00260 0622 00 0 00041 STD C2+4
00261 0020 00 0 00000 TRA BB-2 BEGIN TEST

00262 +000210000000 TS OCT 210000000
00263 +077777000000 TS1 OCT 77777000000
00264 +037777000000 OCT 37777000000
00265 +017777000000 OCT 17777000000

* PRINT - NOW PERFORMING-9S02H-STORAGE TEST
* IMAGE - NOW PERFORMING-9S02H-STORAGE TEST

00266 +000000045040 PNPOR OCT 000000045040 9 ROW LEFT
00267 +040000000000 OCT 040000000000 9 ROW RIGHT
00270 +000000000002 OCT 000000000002 8 L
00271 +000000000000 OCT 000000000000 8 R
00272 +000000200200 OCT 000000200200 7 L
00273 +010000000000 OCT 010000000000 7 R
00274 +000003030000 OCT 000003030000 6 L
00275 +100000000000 OCT 100000000000 6 R
00276 +000004100400 OCT 000004100400 5 L
00277 +004400000000 OCT 004400000000 5 R
00300 +000000002000 OCT 000000002000 4 L
00301 +000000000000 OCT 000000000000 4 R
00302 +000000000000 OCT 000000000000 3 L
00303 +201100000000 OCT 201100000000 3 R
00304 +000000000024 OCT 000000000024 2 L
00305 -000200000000 OCT 400200000000 2 R
00306 +000000000000 OCT 000000000000 1 L
00307 +020000000000 OCT 020000000000 1 R
00310 +000001000030 OCT 000001000030 0 L
00311 -201300000000 OCT 601300000000 0 R
00312 +000006256501 OCT 000006256501 11 L
00313 +140000000000 OCT 140000000000 11 R
00314 +000000121202 OCT 000000121202 12 L
00315 +034400000000 OCT 034400000000 12 R

00000

END

EOF*

9S02 L

CORE COMPLEMENT CHECKERBOARD
 FOR ONE, TWO, OR FOUR
 737 CORE STORAGES

77463 ORG 32563

TEST FOR CAPACITY OF STORAGE

77463	0760	00	0	00163	NPER	SWT 3	
77464	0020	00	0	77466		TRA *+2	
77465	0020	00	0	77474		TRA AA	
77466	0766	00	0	01361		WPRA	
77467	0760	00	0	01363		SPRA 3	
77470	0540	00	0	77473		RCHA *+3	
77471	0060	00	0	77471		TCOA *	
77472	0020	00	0	77474		TRA AA	
77473	0000	30	0	77540		IOCD PNP,0,24	
77474	0500	00	0	77743	AA	CLA K0	L +0
77475	0601	00	0	77777		STO 32767	
77476	0400	00	0	77746		ADD K1+2	L +1
77477	0601	00	0	37777		STO 16383	
77500	0400	00	0	77746		ADD K1+2	
77501	0601	00	0	17777		STO 8191	
77502	0400	00	0	77746		ADD K1+2	
77503	0601	00	0	07777		STO 4095	
77504	0500	00	0	77777		CLA 32767	L IS DEPENDENT UPON SIZE OF STORAGE
77505	0100	00	0	77514		TZE D-1	32 K STORAGE-SHOULD NOT BE RUN
77506	0402	00	0	77746		SUB K1+2	L +1
77507	0100	00	0	77517		TZE D4	16 K
77510	0402	00	0	77746		SUB K1+2	
77511	0100	00	0	77521		TZE D6	8 K
77512	0402	00	0	77746		SUB K1+2	
77513	0100	00	0	77515		TZE D	4 K
77514	0000	00	0	77515		HTR D	ERROR IN TESTING SIZE OF STORAGE ASSUME A 4K STORAGE
77515	0500	00	0	77535	D	CLA TS1	L +7777 IN DEC
77516	0020	00	0	77522		TRA D7	
77517	0500	00	0	77536	D4	CLA TS1+1	L +37777 IN DECR
77520	0020	00	0	77522		TRA D7	
77521	0500	00	0	77537	D6	CLA TS1+2	L +17777 IN DECR
77522	0601	00	0	77752	D7	STO K2+1	ADJUST CONSTANTS
77523	0402	00	0	77534		SUB TS	
77524	0622	00	0	77753		STD K2+2	
77525	0771	00	0	00022		ARS 18	

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77526 0621 00 0 77574      STA B
77527 0621 00 0 77607      STA C+3
77530 0621 00 0 77615      STA C1+1
77531 0621 00 0 77616      STA C1+2
77532 0621 00 0 77624      STA C2+1
77533 0020 00 0 77570      TRA BB-2          BEGIN TEST

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77534 +000210000000      TS      OCT 2100000000
77535 +007777000000      TS1     OCT 7777000000
77536 +037777000000      OCT 377770000000
77537 +017777000000      OCT 177770000000

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* PRINT - NOW PERFORMING-9S02L-STORAGE TEST
* IMAGE - NOW PERFORMING-9S02L-STORAGE TEST

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77540 +000000045040      PNPOR  OCT 000000045040  9 ROW LEFT
77541 +040000000000      OCT 040000000000  9 ROW RIGHT
77542 +000000000000      OCT 000000000000  8 L
77543 +000000000000      OCT 000000000000  8 R
77544 +000000200200      OCT 000000200200  7 L
77545 +010000000000      OCT 010000000000  7 R
77546 +000003030000      OCT 000003030000  6 L
77547 +100000000000      OCT 100000000000  6 R
77550 +000004100400      OCT 000004100400  5 L
77551 +004400000000      OCT 004400000000  5 R
77552 +000000002000      OCT 000000002000  4 L
77553 +000000000000      OCT 000000000000  4 R
77554 +000000000002      OCT 000000000002  3 L
77555 +201100000000      OCT 201100000000  3 R
77556 +0000000000024      OCT 0000000000024  2 L
77557 -000200000000      OCT 400200000000  2 R
77560 +000000000000      OCT 000000000000  1 L
77561 +020000000000      OCT 020000000000  1 R
77562 +000001000030      OCT 000001000030  0 L
77563 -201300000000      OCT 601300000000  0 R
77564 +000006256503      OCT 000006256503  11 L
77565 +140000000000      OCT 140000000000  11 R
77566 +000000121200      OCT 000000121200  12 L
77567 +034400000000      OCT 034400000000  12 R

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77570 -0534 00 1 77753      LXD K2+2,1      WRITE PATTERN
77571 -0534 00 2 77744      LXD K1,2        L +77567
77572 0534 00 4 77744      BB  LX A K1,4   L +2000
77573 0500 00 0 77774      CLA T1         L +20
77574 0601 00 1 77570      B  STO BB-2,1  L TEST WORD
77575 -2 00001 1 77604      TNX C,1,1      PATTERN COMPLETE
77576 -2 00001 2 77571      TNX BB-1,2,1  BLOCK COMPLETE

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77577 2 00001 4 77574      TIX B,4,1
77600 0560 00 0 77775      LDQ T2         REVERSE
77601 0601 00 0 77775      STO T2         CONSTANTS
77602 -0600 00 0 77774      STQ T1
77603 0020 00 0 77572      TRA BB

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TEST PATTERN

77604	-0534	00	1	77753	C	LXD K2+2,1	L +77567
77605	-0534	00	2	77744		LXD K1,2	L +2000
77606	0534	00	4	77744		LXA K1,4	L +20
77607	0500	00	1	77570		CLA BB-2,1	
77610	0340	00	0	77774		CAS T1	COMPARE INITIAL WORD
77611	0020	00	0	77644		TRA E	ERROR
77612	0020	00	0	77614		TRA C1	OK
77613	0020	00	0	77644		TRA E	ERROR
77614	0500	00	0	77775	C1	CLA T2	
77615	0601	00	1	77570		STO BB-2,1	
77616	0500	00	1	77570		CLA BB-2,1	
77617	0340	00	0	77775		CAS T2	COMPARE COMPLEMENT WORD
77620	0020	00	0	77653		TRA E1	ERROR
77621	0020	00	0	77623		TRA C2	OK
77622	0020	00	0	77653		TRA E1	ERROR
77623	0500	00	0	77774	C2	CLA T1	
77624	0601	00	1	77570		STO BB-2,1	RESTORE INITIAL WORD
77625	-2 00001	1	1	77634		TNX F,1,1	PATTERN COMPLETE
77626	-2 00001	2	2	77605		TNX C+1,2,1	BLOCK COMPLETE
77627	2 00001	4	4	77607		TIX C+3,4,1	
77630	0560	00	0	77775		LDQ T2	REVERSE
77631	0601	00	0	77775		STO T2	CONSTANTS
77632	-0600	00	0	77774		STQ T1	
77633	0020	00	0	77606		TRA C+2	
77634	0560	00	0	77775	F	LDQ T2	REVERSE PATTERN
77635	0601	00	0	77775		STO T2	
77636	-0600	00	0	77774		STQ T1	
77637	0500	00	0	77747		CLA K1+3	L COUNTER
77640	0402	00	0	77746		SUB K1+2	L 1
77641	0100	00	0	77734		TZE F1	INITIAL AND INVERSE PATTERNS TESTED
77642	0601	00	0	77747		STO K1+3	
77643	0020	00	0	77570		TRA BB-2	WRITE INVERSE PATTERN
77644	0601	00	0	77755	E	STO P2	ERROR WORD
77645	0500	00	0	77774		CLA T1	
77646	0601	00	0	77754		STO P1	TEST WORD
77647	0600	00	0	77756		STZ P3	
77650	0500	00	0	77612		CLA C+6	L TRA TO C1
77651	0601	00	0	77730		STO PC	PROGRAM RETURN
77652	0020	00	0	77663		TRA P	
77653	0601	00	0	77755	E1	STO P2	ERROR WORD
77654	0500	00	0	77775		CLA T2	
77655	0601	00	0	77754		STO P1	TEST WORD
77656	0500	00	0	77752		CLA K2+1	

77657	0771	00	0	00022		ARS 18	
77660	0621	00	0	77756		STA P3	ONES IN ADDRESS
77661	0500	00	0	77621		CLA C1+5	L TRA TO C2
77662	0601	00	0	77730		STO PC	PROGRAM RETURN
77663	-0634	00	1	77751	P	SXD K2,1	
77664	0500	00	0	77753		CLA K2+2	L DEPENDS UPON SIZE OF STORAGE
77665	0402	00	0	77751		SUB K2	
77666	0601	00	0	77757		STO P4	ERROR ADDRESS
77667	0760	00	0	00163		SWT 3	STOP OR PRINT
77670	0020	00	0	77675		TRA P+10	
77671	0560	00	0	77754		LDQ P1	STOP ERROR WORD IN MQ
77672	0500	00	0	77757		CLA P4	
77673	-0501	00	0	77756		ORA P3	ERROR ADDRESS IN ACC DEC ONES IN ACC ADR FOR COMPLEMENT PATTERN
77674	0000	00	0	77730		HTR PC	RETURN TO PROGRAM
77675	0766	00	0	01361		WPRA	PRINT ERROR
77676	0760	00	0	01364		SPRA 4	PRINT FIRST LINE
77677	-0634	00	1	77750		SXD K1+4,1	TO GET OCTAL SPACING
77700	0534	00	1	77750		LXA K1+4,1	SAVE COUNT
77701	0540	00	0	77762		RCHA K3	L +17
77702	0544	00	0	77762		LCHA K3	PRINT 9L ROW
77703	2 00001	1	1	77702		TIX *-1,1,1	PRINT 9R-2R ROWS
77704	0544	00	0	77763		LCHA K3+1	PRINT 1+0 ROWS
77705	0500	00	0	77757		CLA P4	
77706	0760	00	0	00006		COM	
77707	-0320	00	0	77752		ANA K2+1	L+7777000000
77710	0601	00	0	77760		STO P5	
77711	-0500	00	0	77754		CAL P1	
77712	0760	00	0	00006		COM	
77713	0602	00	0	77761		SLW P6	
77714	0766	00	0	01361		WPRA	PRINT SECOND LINE
77715	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
77716	0534	00	1	77750		LXA K1+4,1	L +17
77717	0540	00	0	77762		RCHA K3	PRINT 9L ROW
77720	0544	00	0	77762		LCHA K3	PRINT 9R-2R ROWS
77721	2 00001	1	1	77720		TIX *-1,1,1	
77722	0544	00	0	77767		LCHA K4	PRINT 1+0 ROWS
77723	-0500	00	0	77755		CAL P2	
77724	0760	00	0	00006		COM	
77725	0602	00	0	77760		SLW P5	
77726	-0534	00	1	77751		LXD K2,1	RESTORE INDEX
77727	-0534	00	1	77750		LXD K1+4,1	
77730	0020	00	0	00000	PC	TRA	RETURN TO PROGRAM

77731	0500 00 0	77745	F2	CLA K1+1	L +2
77732	0601 00 0	77747		STO K1+3	RESTORE PASS COMPLETE COUNTER
77733	0020 00 0	77570		TRA BB-2	REPEAT TEST
77734	0760 00 0	00166	F1	SWT 6	TEST SWITCH 6
77735	0020 00 0	77737		TRA *+2	UP-READ NEXT PROGRAM
77736	0020 00 0	77731		TRA F2	REPEAT TEST
77737	0762 00 0	01321		RCDA	
77740	0540 00 0	77773		RCHA K5	
77741	0544 00 0	00000		LCHA 0	
77742	0020 00 0	00001		TRA 1	

CONSTANTS

77743	+000000000000	K0	OCT 0	
77744	+002000000020	K1	OCT 2000000020	
77745	+000000000002		OCT 2	
77746	+000000000001		OCT 1	
77747	+000000000002		OCT 2	PASS COMPLETE COUNTER
77750	+000000000017		OCT 17	
77751	+000000000000	K2	OCT	TEMPORARY STORAGE
77752	+077777000000		OCT 77777000000	THE DEC OF THIS LOCATION WILL CONTAIN THE HIGHEST LOCATION IN STORAGE
77753	+077567000000		OCT 77567000000	

PRINT AREA

77754	+000000000000	P1	OCT	TEST WORD
77755	+000000000000	P2	OCT	ERROR WORD
77756	+000000000000	P3	OCT	INITIAL OR COMPLEMENT
77757	+000000000000	P4	OCT	ERROR ADDRESS
77760	0 00000 0 00000	P5		
77761	0 00000 0 00000	P6		
77762	-1 00001 0 77743	K3	MON K0,0,1	
77763	-0 00001 0 77757		MZE P4,0,1	ERROR ADDRESS
77764	-0 00001 0 77754		MZE P1,0,1	TEST WORD
77765	-0 00001 0 77760		MZE P5,0,1	COMPL OF ERROR ADDRESS
77766	0 00001 0 77761		PZE P6,0,1	COMPLEMENT OF TEST WORD
77767	-0 00001 0 77756	K4	MZE P3,0,1	INITIAL OR COMPLEMENT
77770	-0 00001 0 77755		MZE P2,0,1	ERROR WORD
77771	-0 00001 0 77743		MZE K0,0,1	
77772	0 00001 0 77760		PZE P5,0,1	COMPLEMENT OF ERROR WORD
77773	-1 00003 0 00000	K5	MON 0,0,3	CONTROL RCD
77774	+000000000000	T1	OCT 0	TEST WORD
77775	-377777777777	T2	OCT 777777777777	TEST WORD

00000

END

EOF*