



C. PROGRAM CONTROL

1. DECK,           9S01   H000       9LD01 BINARY LOADER  
                      H001-014 14 PROGRAM CARDS  
                      H015       1 TRANSFER CARD TRA 00275  
  
                      L000       9LD02 BINARY LOADER  
                      L001-014 14 PROGRAM CARDS  
                      L015       1 TRANSFER CARD TRA 77337  
                      L016-017 2 BLANK CARDS

2. SENSE SWITCH CONTROL

A.           SWITCH #1 UP           GO TO NEXT SECTION OF PROGRAM.  
B.           SWITCH #1 DOWN        REPEAT PRESENT SECTION  
C.           SWITCH #3 UP           PRINT ON ERROR  
D.           SWITCH #3 DOWN        HALT ON ERROR  
E.           SWITCH #4 UP           TEST SWITCH #5  
F.           SWITCH #4 DOWN        TEST ZEROS ONLY  
G.           SWITCH #5 UP           ALTERNATE ONES AND ZEROS  
H.           SWITCH #5 DOWN        TEST ONES ONLY

NOTE-SWITCHES #4 AND #5 USED IN ONES AND ZEROS ONLY  
SWITCH #3 NOT USED IN DEFLECTION SECTION

I.           SWITCH #6 UP           LOAD NEXT PROGRAM FROM CARD READER  
J.           SWITCH #6 DOWN        REPEAT COMPLETE TEST

D. NORMAL STOPS-NONE

E. ERROR STOPS-SWITCH #3 DOWN

00326 OR 77370                    ERROR IN TESTING SIZE OF STORAGE  
00021 OR 77523                    ERROR IN STORAGE DEFLECTION  
00065 OR 77567                    ERROR IN ONES AND ZEROS  
00205 OR 77707                    ERROR IN RANDOM NUMBERS

NOTE-STOP AT ANY OTHER LOCATION IN DEFLECTION SECTION MAY INDICATE  
INSTRUCTION COUNTER FAILURE.

F. PRINT OUT

A. STORAGE DEFLECTION - NONE  
B. ONES AND ZEROS-ONE LINE WILL BE PRINTED. THE ERROR AND ERROR ADDRESS  
ARE PRINTED IN BINARY. THE POSITION IN ERROR IS DETERMINED BY THE  
INCONSISTENT BIT. THE FIRST POSITION IN THE ERROR WORD IS THE SIGN.

THE EXAMPLE BELOW SHOWS THAT POSITION 14 FAILED TO READ OR WRITE A ONE  
AT ADDRESS 03674.

00001111101111100                111 111 111 111 110 111 111 111 111 111 111 111

C. RANDOM NUMBERS-TWO LINES WILL PRINT IN THE SAME FORM AS BEFORE EXCEPT THAT TWO LINES WILL PRINT, GIVING THE ERROR ADDRESS AND ERROR WORD ON FIRST LINE AND CORRECT WORD ON THE SECOND LINE.

G. COMMENTS

1. SENSE LIGHTS INDICATE WHAT TEST ROUTINE IS BEING PERFORMED.  
SENSE LIGHT #1 SIGNIFIES WORKING IN STORAGE DEFLECTION  
#2 SIGNIFIES WORKING IN ONES AND ZEROS

NOTE-LIGHT #4 IS USED BY THIS SECTION IN NORMAL RUNNING

#3 SIGNIFIES WORKING IN RANDOM NUMBERS

2. IN THE DEFLECTION SECTION OF THE TEST, IF AN ERROR HALT OCCURS AND THE ERROR WORD WHICH APPEARS IN THE MQ SHOWS THE ERROR IN THE ADDRESS PORTION, THE CORRECT ADDRESS WILL NOT BE SHOWN AS STATED ON THE LISTING, HOWEVER, THE CORRECT ADDRESS WILL APPEAR IN THE ACCUMULATOR.

3. IN THE ONES & ZEROS SECTION, IT IS POSSIBLE TO INDEFINATELY REPEAT ONES OR ZEROS RATHER THAN ALTERNATING, THROUGH THE USE OF SENSE SWITCHES #4 AND #5. SEE SENSE SWITCH CONTROL

4. IT IS POSSIBLE TO ENTER ANY OF THE THREE PHASES OF THE TEST BY TRANSFERRING MANUALLY.

A. STORAGE DEFLECTION	9S01 HA - TRA 00000
	9S01 LA - TRA 77501
B. ONES AND ZEROS	9S01 HA - TRA 00040
	9S01 LA - TRA 77542
C. RANDOM NUMBERS	9S01 HA - TRA 00126
	9S01 LA - TRA 77630

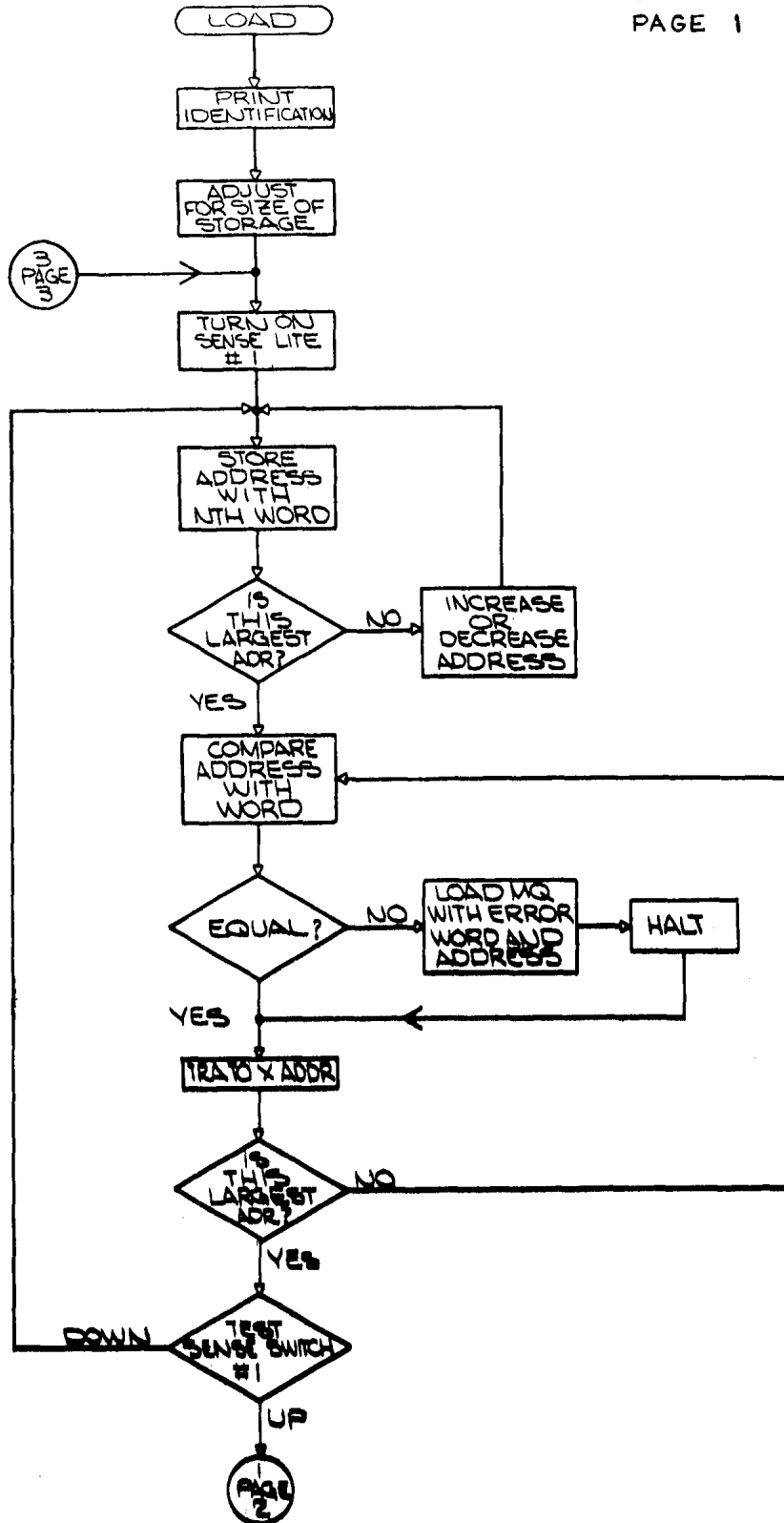
5. THE PROGRAM AT A LEVEL CONSISTS OF 8 PAGES.

6. THE TIME FOR ONE PASS THROUGH ALL THREE SECTIONS OF EITHER 9S01 HA OR LA IS APPROXIMATELY 6 SEC.

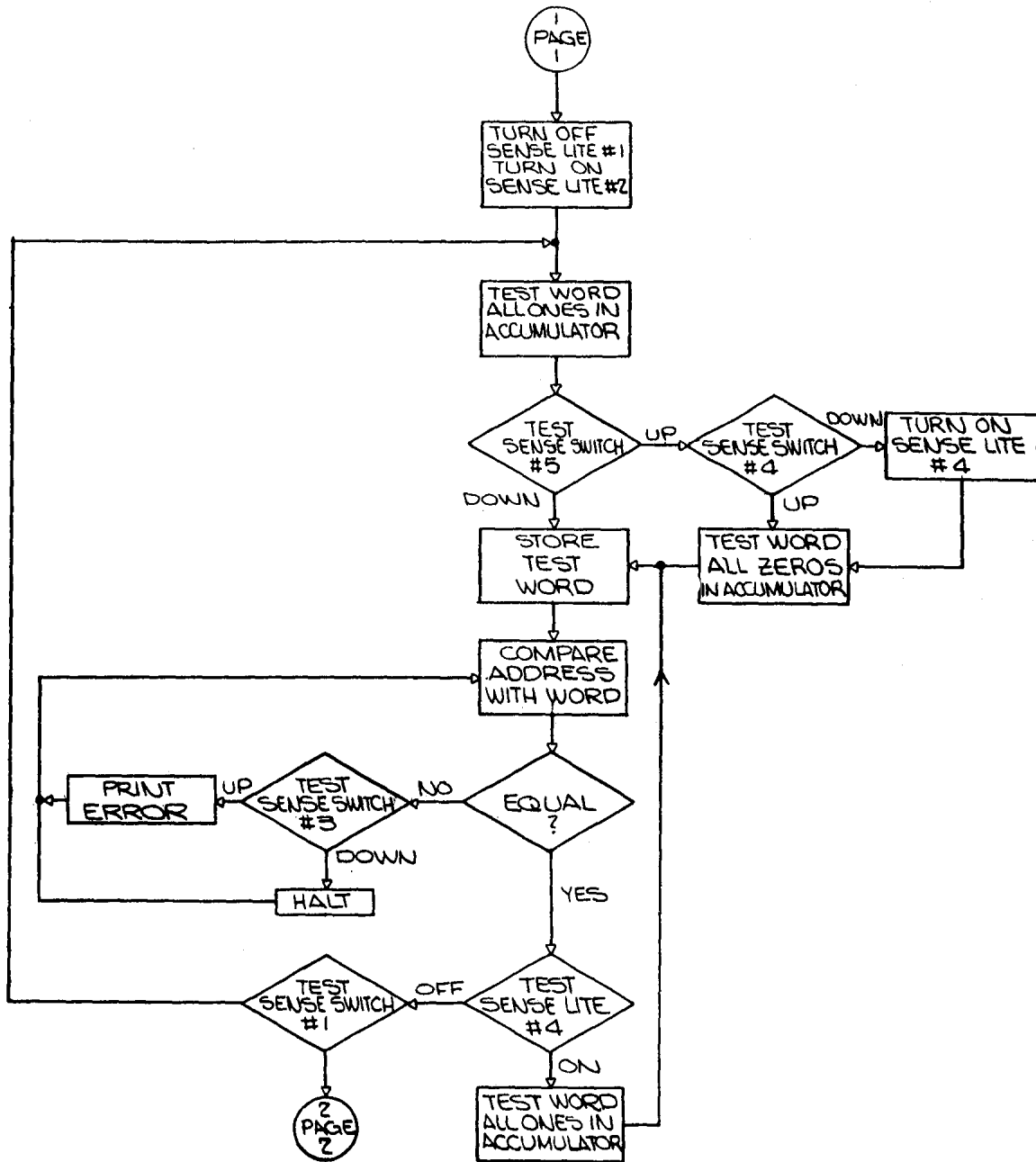
7. THE PROGRAM OF COURSE DOES NOT HAVE A RESTART. AFTER THE FIRST RUN THE TEST FOR SIZE OF STORAGE WILL BE WRITTEN OVER, THEREFORE, IF IT IS DESIRABLE TO RESTART, A MANUAL TRANSFER WILL BE NECESSITATED, TO THE ABOVE MENTIONED LOCATIONS.

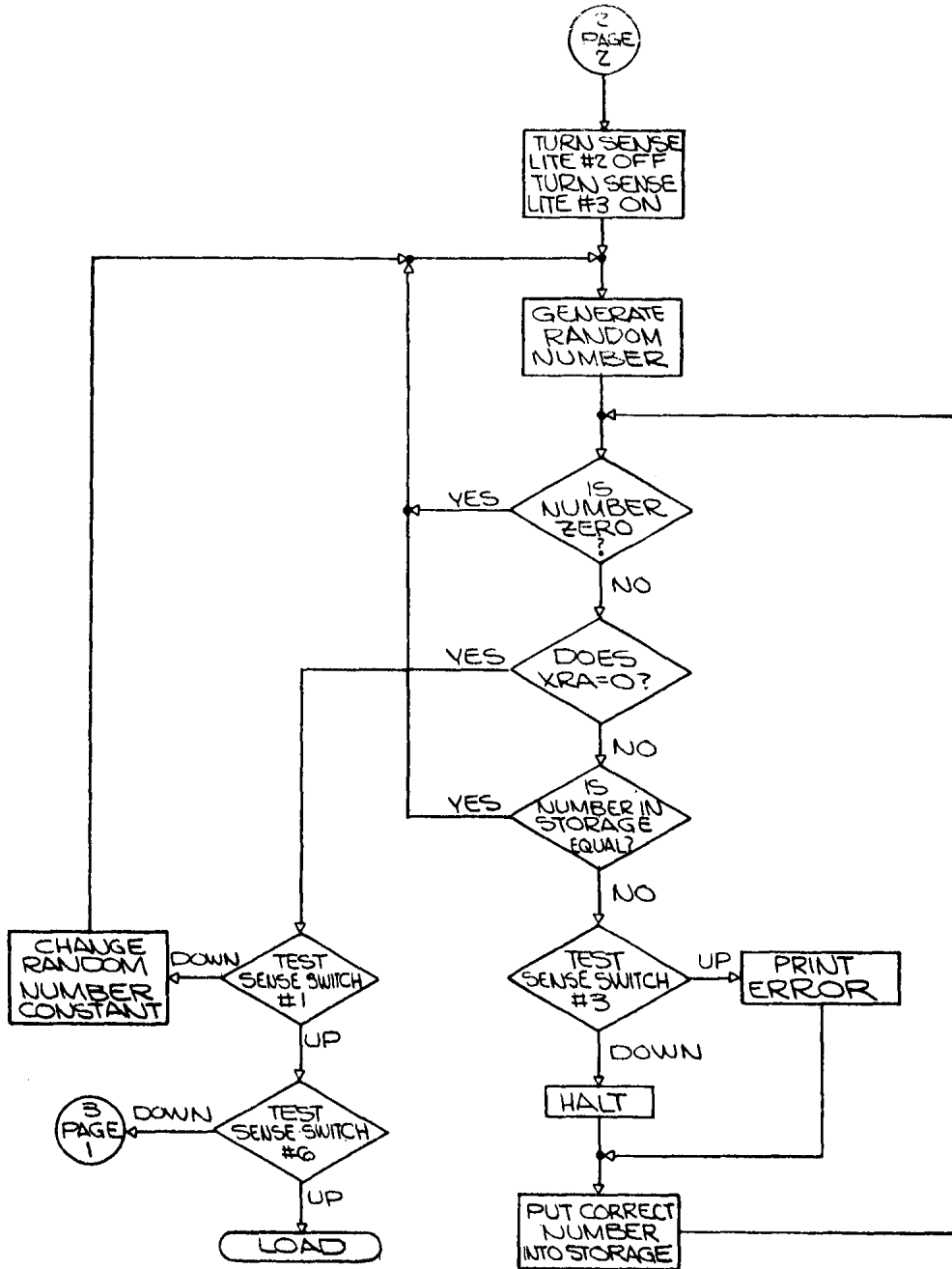
NOTE. PASS COMPLETE WILL NOT BE PRINTED, AS THIS CANNOT BE WIPED OUT BY THE PROGRAM, AND WILL THEREFORE ADD TO THE LOCATIONS USE TO STORE THE PROGRAM.

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9S01 H

\*STORAGE DEFLECTION, STORAGE ONES AND ZEROS,  
\*AND RANDOM NUMBERS TESTS FOR 1,2, OR 4  
\*737 CORE STORAGES OF FOR ONE 738 CORE STORAGE

BEGIN. DEFLECTION TEST

					00000	ORG	
00000	0760	00	0	00140		SLF	
00001	0760	00	0	00141		SLN 1	LIGHT ONE FOR VISUAL SIGNAL TO DEFINE WORKING IN STORAGE DEFLECTION
00002	0500	00	0	00271		CLA K2	L 001360100274
00003	0560	00	0	00272		LDQ K3	L 037770107776
00004	0400	00	0	00273	A1	ADD K4	L 000004000001-INCR ADDR
00005	0621	00	0	00006		STA A2	
00006	0601	00	0	00000	A2	STO 0	PUT IN STORAGE
00007	0040	00	0	00011		TLQ A3	OUT WHEN FINISHED
00010	0020	00	0	00004		TRA A1	NEXT ADDRESS
00011	0500	00	0	00271	A3	CLA K2	L 001360100274
00012	0400	00	0	00273		ADD K4	L 000004000001-INCR STG
00013	0621	00	0	00015		STA A4	
00014	0621	00	0	00020		STA A4+3	
00015	0340	00	0	00000	A4	CAS 0	CHECK STORAGE
00016	0020	00	0	00020		TRA *+2	NG
00017	0020	00	0	00022		TRA A5	OK
00020	0560	00	0	00000		LDQ 0	NG-ERROR WORD
00021	0000	00	0	00022		HTR A5	ADDRESS OF MQ CONTAINS LOCATION OF ERROR IN STG.
							FULL 36 BITS OF MQ CONTAIN ERROR WORD
							ACC. ADDR. CONTAINS CORRECT ADDRESS
							FULL 36 BITS OF ACC. CONTAIN CORRECT WORD
00022	0560	00	0	00274	A5	LDQ K5	L TRA A7-1
00023	0621	00	0	00026		STA A6	ADJUST STQ ADDR
00024	0621	00	0	00027		STA A6+1	ADJUST TRA ADDR
00025	0621	00	0	00030		STA A6+2	ADJUST STO ADDR
00026	-0600	00	0	00000	A6	STQ	PLACE RETURN TRA INTO X ADDR
00027	0020	00	0	00000		TRA	TRA TO X ADDR

00030	0601	00	0	00000		STO	CORRECT WORD BACK INTO STG
00031	0340	00	0	00272	A7	CAS K3	
00032	0020	00	0	00012		TRA A3+1	NO
00033	0020	00	0	00035		TRA A8	YES
00034	0020	00	0	00012		TRA A3+1	NO
00035	0760	00	0	00161	A8	SWT 1	TEST SWITCH 1 FOR REPEAT
00036	0020	00	0	00040		TRA B2	NO-OUT TO ONES AND ZEROS
00037	0020	00	0	00002		TRA A1-2	YES-REPEAT

BEGIN. ONES AND ZEROS

00040	0760	00	0	00140	B2	SLF	TURN OFF LIGHT ONE
00041	0760	00	0	00142		SLN 2	LIGHT TWO FOR VISUAL SIGNAL TO DEFINE WORKING IN ONES AND ZEROS
00042	0500	00	0	00260		CLA B11	L-377777777777
00043	0760	00	0	00165		SWT 5	TEST SENSE SWITCH 5 DOWN-ONES ONLY
00044	0020	00	0	00046		TRA B3	NO EFFECT
00045	0020	00	0	00051		TRA B4	TEST ONES ONLY
00046	0760	00	0	00164	B3	SWT 4	TEST SENSE SWITCH 4 DOWN-ZEROS ONLY
00047	0760	00	0	00144		SLN 4	TURN ON SIGNAL AND ALTERNATE ZEROS AND ONES
00050	0500	00	0	00256		CLA ZERO	L ZERO TEST WORD
00051	0534	00	3	00261	B4	LXA B12,3	L IS DEPENDENT UPON SIZE OF STORAGE
00052	0601	00	2	07777	B5	STO 4095,2	WRITE TEST WORD
00053	2	00001	2	00052		TIX B5,2,1	
00054	0340	00	1	07777	B6	CAS 4095,1	READ ANCHE CHECK TEST WORD
00055	0020	00	0	00057		TRA B7	ERROR
00056	0020	00	0	00066		TRA B8	OK
00057	0760	00	0	00163	B7	SWT 3	TEST SENSE SWITCH 3 ERROR, PRINT OR STOP
00060	0020	00	0	00073		TRA C1	PRINT ON ERROR
00061	0601	00	0	00257		STO B	SAVE CORRECT WORD
00062	-0754	00	1	00000		PXD 0,1	STOP ON ERROR
00063	0402	00	0	00262		SUB BA	ERROR ADDR IN ACC DECR.
00064	0560	00	1	07777		LDQ 4095,1	TEST WORD ERROR IN QUOTIENT
00065	0000	00	0	00106		HTR PRINT-5	ERROR STOP
00066	2	00001	1	00054	B8	TIX B6,1,1	



00067	-0760	00	0	00144		SLT 4	TEST AND RESET SIGNAL
00070	0020	00	0	00110		TRA PRINT-3	REPEAT TEST
00071	0500	00	0	00260		CLA B11	L ONES
00072	0020	00	0	00051		TRA B4	TEST ONES
00073	0601	00	0	00257	C1	STO B	SAVE CORRECT WORD
00074	-0500	00	1	07777		CAL 4095,1	TEST WORD IN ERROR
00075	0602	00	0	00253		SLW C3	
00076	0760	00	0	00006		COM	
00077	0602	00	0	00255		SLW C5	ERROR ZEROS IN PRINT
00100	-0754	00	1	00000		PXD 0,1	
00101	0402	00	0	00262		SUB BA	L 7777 IN DECR
00102	0622	00	0	00252		STD C2	ERROR ADDRESS ONES IN PRINT
00103	0760	00	0	00006		COM	
00104	0622	00	0	00254		STD C4	ERROR ADDRESS ZEROS IN PRINT
00105	0074	00	4	00113		TSX PRINT,4	
00106	0500	00	0	00257		CLA B	CORRECT WORD
00107	2 00001	1	00054			TIX B6,1,1	CONTINUE COMPARING
00110	0760	00	0	00161		SWT 1	
00111	0020	00	0	00126		TRA E1	UP-GO TO RANDOM NUMBERS
00112	0020	00	0	00042		TRA B2+2	DOWN-REPEAT ONES-ZEROS

PRINT ROUTINE FOR ERROR

00113	0766	00	0	01361	PRINT	WPRA	
00114	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
00115	-0634	00	2	00261		SXD B12,2	SAVE COUNT
00116	0534	00	2	00266		LXA E2,2	L +17
00117	0540	00	0	00263		RCHA C8	CONTROL PRINT 9L
00120	0544	00	0	00263		LCHA C8	CONTROL PRINT 9R-2R
00121	2 00001	2	00120			TIX *-1,2,1	
00122	0544	00	0	00264		LCHA C8+1	CONTROL PRINT 1L-0R
00123	0060	00	0	00123		TCOA *	DELAY
00124	-0534	00	2	00261		LXD B12,2	
00125	0020	00	4	00001		TRA 1,4	RETURN TO CONTINUE COMPARING

BEGIN. RANDOM NUMBERS TEST

00126	0760	00	0	00140	E1	SLF	TURN OFF LIGHT TWO
00127	0760	00	0	00143		SLN 3	LIGHT THREE FOR VISUAL SIGNAL TO DEFINE WORKING IN RANDOM NUMBERS
00130	0534	00	1	00261		LXA B12,1	L 7502
00131	2 00001	2	00154			TIX E8,2,1	
00132	-0534	00	2	00266		LXD E2,2	L +2
00133	0560	00	0	00267		LDQ E3	
00134	0200	00	0	00267		MPY E3	
00135	-0763	00	0	00021	E4	LGL 17	
00136	-0100	00	0	00143		TNZ E5	

00137	-0763	00	0	00022		LGL	18	
00140	-0100	00	0	00143		TNZ	E5	
00141	0560	00	1	07777		LDQ	4095,1	
00142	0200	00	1	07777		MPY	4095,1	
00143	0140	00	0	00144	E5	TOV	E6	
00144	-0763	00	0	00001	E6	LGL	1	
00145	-0140	00	0	00147		TNO	E7	
00146	-0760	00	0	00003		SSM		
00147	-2	00001	1	00130	E7	TNX	E1+2,1,1	
00150	0601	00	1	07777		STO	4095,1	RANDOM NUMBER INTO STG.
00151	0131	00	0	00000		XCA		
00152	0200	00	1	07777		MPY	4095,1	
00153	0020	00	0	00135		TRA	E4	
00154	0560	00	0	00267	E8	LDQ	E3	
00155	0200	00	0	00267		MPY	E3	
00156	-0763	00	0	00021	E9	LGL	17	
00157	-0100	00	0	00164		TNZ	E10	
00160	-0763	00	0	00022		LGL	18	
00161	-0100	00	0	00164		TNZ	E10	
00162	0560	00	1	07777		LDQ	4095,1	
00163	0200	00	1	07777		MPY	4095,1	
00164	0140	00	0	00165	E10	TOV	E11	
00165	-0763	00	0	00001	E11	LGL	1	
00166	-0140	00	0	00170		TNO	E12	
00167	-0760	00	0	00003		SSM		
00170	-2	00001	1	00231	E12	TNX	F1-3,1,1	
00171	0767	00	0	00002		ALS	2	CLEAR P AND Q BITS
00172	0771	00	0	00002		ARS	2	
00173	0340	00	1	07777		CAS	4095,1	COMPARE WORD WRITTEN WITH WORD READ
00174	0020	00	0	00176		TRA	E13	ERROR
00175	0020	00	0	00234		TRA	F1	OK
00176	0601	00	0	00257	E13	STO	B	SAVE CORRECT WORD
00177	0131	00	0	00000		XCA		
00200	-0754	00	1	00000		PXD	0,1	
00201	0402	00	0	00262		SUB	BA	L 7777 UN DECR
00202	0760	00	0	00163		SWT	3	
00203	0020	00	0	00206		TRA	E14	ERROR PRINT
00204	0560	00	1	07777		LDQ	4095,1	
00205	0000	00	0	00225		HTR	F1-7	ERROR ADDRESS IN ACC DECR
00206	0622	00	0	00252	E14	STD	C2	ERROR ADDRESS
00207	0760	00	0	00006		COM		
00210	0622	00	0	00254		STD	C4	COMPLEMENT OF ERROR ADDR
00211	-0600	00	0	00253		STQ	C3	CORRECT WORD
00212	-0130	00	0	00000		XCL		
00213	0760	00	0	00006		COM		
00214	0602	00	0	00255		SLW	C5	COMPLEMENT OF CORRECT WORD
00215	0074	00	4	00113		TSX	PRINT,4	

00216	0600	00	0	00254		STZ	C4	
00217	0600	00	0	00252		STZ	C2	
00220	-0500	00	1	07777		CAL	4095,1	
00221	0602	00	0	00253		SLW	C3	ERROR WORD
00222	0760	00	0	00006		COM		
00223	0602	00	0	00255		SLW	C5	COMPLEMENT OF ERROR WORD
00224	0074	00	4	00113		TSX	PRINT,4	
00225	0560	00	0	00257		LDQ	B	CORRECT WORD
00226	-0600	00	1	07777		STQ	4095,1	PUT CORRECT WORD BACK INTO STORAGE
00227	0200	00	0	00257		MPY	B	
00230	0020	00	0	00156		TRA	E9	CONTINUE COMPARING
00231	0760	00	0	00161		SWT	1	TEST SENSE SWITCH 1
00232	0020	00	0	00243		TRA	F7	UP-GO TO READ NEXT PROG. FROM CRD RDR OR CONTINUE
00233	0020	00	0	00237		TRA	F	
00234	0131	00	0	00000	F1	XCA		
00235	0200	00	1	07777		MPY	4095,1	
00236	0020	00	0	00156		TRA	E9	
00237	-0500	00	0	00267	F	CAL	E3	CHANGE
00240	0361	00	0	00262		ACL	BA	RANDOM NUMBER
00241	0601	00	0	00267		STO	E3	CONSTANT
00242	0020	00	0	00130		TRA	E1+2	REPEAT TEST
00243	0760	00	0	00166	F7	SWT	6	TEST SENSE SWITCH 6
00244	0020	00	0	00246		TRA	F7+3	UP-CALL NEXT PROGRAM
00245	0020	00	0	00000		TRA	A1-4	START AT BEGINNING OF PROGRAM
00246	0762	00	0	01321		RCDA		
00247	0540	00	0	00270		RCHA	F8	LOAD
00250	0544	00	0	00000		LCHA	0	CARDS
00251	0020	00	0	00001		TRA	1	

CONSTANTS

00252	0	00000	0	00000	C2			THIS IS
00253	0	00000	0	00000	C3			ERROR
00254	0	00000	0	00000	C4			PRINT
00255	0	00000	0	00000	C5			IMAGE
00256	+0000000000000				ZERO	OCT	0	
00257	+0000000000000				B	OCT	0	TEST WORD
00260	-3777777777777				B11	OCT	-3777777777777	TEST WORD
00261	+000000007502				B12	OCT	7502	
00262	+0077770000000				BA	OCT	77770000000	
00263	-1	00001	0	00256	C8	MON	ZERO,0,1	CONTROL 9L-2R ROWS PRINT
00264	0000	04	0	00252		HTR	C2,0,4	CONTROL 1L-0R ROWS PRINT
00265	+0000000000275				E	OCT	275	

00266	+000002000017	E2	OCT	000002000017
00267	+000007700000	E3	OCT	000007700000
00270	-1 00003 0 00000	F8	MON	0,0,3 CONTROL RCD
00271	+001360100274	K2	OCT	001360100274
00272	+037770107776	K3	OCT	037770107776
00273	+000004000001	K4	OCT	000004000001
00274	0020 00 0 00030	K5	TRA	A7-1

TEST FOR CAPACITY OF STORAGE

THIS SECTION WILL BE  
WRITTEN OVER DURING TEST

00275	0760 00 0 00163	NPER	SWT	3	
00276	0020 00 0 00300		TRA	*+2	
00277	0020 00 0 00306		TRA	Z	
00300	0766 00 0 01361		WPRA		
00301	0760 00 0 01363		SPRA	3	
00302	0540 00 0 00305		RCHA	*+3	
00303	0060 00 0 00303		TCOA	*	
00304	0020 00 0 00306		TRA	Z	
00305	0000 30 0 00407		IOCD	PNPER,0,24	
00306	0500 00 0 00256	Z	CLA	ZERO	L +0
00307	0601 00 0 77777		STO	32767	
00310	0400 00 0 00400		ADD	K1+1	
00311	0601 00 0 37777		STO	16383	
00312	0400 00 0 00400		ADD	K1+1	
00313	0601 00 0 17777		STO	8191	
00314	0400 00 0 00400		ADD	K1+1	
00315	0601 00 0 07777		STO	4095	
00316	0500 00 0 77777		CLA	32767	L IS DEPENDENT UPON SIZE OF STORAGE
00317	0100 00 0 00327		TZE	D	32K STORAGE
00320	0402 00 0 00400		SUB	K1+1	L+1
00321	0100 00 0 00335		TZE	D4	16K STORAGE
00322	0402 00 0 00400		SUB	K1+1	
00323	0100 00 0 00343		TZE	D6	8K STORAGE
00324	0402 00 0 00400		SUB	K1+1	
00325	0100 00 0 00001		TZE	A1-3	4K STORAGE-BEGIN TESTING
00326	0000 00 0 00001		HTR	A1-3	ERROR IN TESTING SIZE OF STORAGE
00327	0500 00 0 00406	D	CLA	G8	
00330	0601 00 0 00271		STO	K2	
00331	0500 00 0 00403		CLA	H8	
00332	0601 00 0 00272		STO	K3	
00333	0500 00 0 00374		CLA	TS1	L +77777 IN DECR.
00334	0020 00 0 00350		TRA	D7	
00335	0500 00 0 00405	D4	CLA	G4	

00336 0601 00 0 00271 STO K2  
00337 0500 00 0 00402 CLA H4  
00340 0601 00 0 00272 STO K3  
00341 0500 00 0 00375 CLA TS1+1 L +37777  
00342 0020 00 0 00350 TRA D7

00343 0500 00 0 00404 D6 CLA G2  
00344 0601 00 0 00271 STO K2  
00345 0500 00 0 00401 CLA H2  
00346 0601 00 0 00272 STO K3  
00347 0500 00 0 00376 CLA TS1+2 L +17777

00350 0601 00 0 00262 D7 STO BA ADJUST CONSTANTS  
00351 0771 00 0 00022 ARS 18  
00352 0621 00 0 00052 STA B5  
00353 0621 00 0 00054 STA B6  
00354 0621 00 0 00064 STA B7+5  
00355 0621 00 0 00074 STA C1+1  
00356 0621 00 0 00141 STA E4+4  
00357 0621 00 0 00142 STA E4+5  
00360 0621 00 0 00150 STA E7+1  
00361 0621 00 0 00152 STA E7+3  
00362 0621 00 0 00162 STA E9+4  
00363 0621 00 0 00163 STA E9+5  
00364 0621 00 0 00173 STA E12+3  
00365 0621 00 0 00204 STA E13+6  
00366 0621 00 0 00226 STA F1-6  
00367 0621 00 0 00235 STA F1+1  
00370 0621 00 0 00220 STA E14+10  
00371 0402 00 0 00377 SUB K1  
00372 0621 00 0 00261 STA B12  
00373 0020 00 0 00001 TRA A1-3

00374 +077777000000 TS1 OCT 77777000000  
00375 +037777000000 OCT 37777000000  
00376 +017777000000 OCT 17777000000

00377 +000000000275 K1 OCT 275  
00400 +000000000001 OCT 1

CHANGE K3 DEPEND SIZE STG

00401 +077770217776 H2 OCT 077770217776  
00402 +177770437776 H4 OCT 177770437776  
00403 +377770077776 H8 OCT 377770077776

CHANGE K2 DEPEND SIZE STG

00404 +001360200274 G2 OCT 001360200274  
00405 +001360400274 G4 OCT 001360400274  
00406 +001360000274 G8 OCT 001360000274

\* PRINT - NOW PERFORMING-9S01H-STORAGE TEST  
\* IMAGE - NOW PERFORMING-9S01H-STORAGE TEST

00407 +000000045040 PNPOR OCT 000000045040 9 ROW LEFT

00410	+040000000000	OCT 040000000000	9 ROW RIGHT
00411	+000000000002	OCT 000000000002	8 L
00412	+000000000000	OCT 000000000000	8 R
00413	+000000200200	OCT 000000200200	7 L
00414	+010000000000	OCT 010000000000	7 R
00415	+000003030000	OCT 000003030000	6 L
00416	+100000000000	OCT 100000000000	6 R
00417	+000004100400	OCT 000004100400	5 L
00420	+004400000000	OCT 004400000000	5 R
00421	+000000002000	OCT 000000002000	4 L
00422	+000000000000	OCT 000000000000	4 R
00423	+000000000000	OCT 000000000000	3 L
00424	+201100000000	OCT 201100000000	3 R
00425	+000000000020	OCT 000000000020	2 L
00426	-000200000000	OCT 400200000000	2 R
00427	+000000000004	OCT 000000000004	1 L
00430	+020000000000	OCT 020000000000	1 R
00431	+000001000030	OCT 000001000030	0 L
00432	-201300000000	OCT 601300000000	0 R
00433	+000006256501	OCT 000006256501	11 L
00434	+140000000000	OCT 140000000000	11 R
00435	+000000121202	OCT 000000121202	12 L
00436	+034400000000	OCT 034400000000	12 R

00306

END Z

EOF\*

9S01 L

\*STORAGE DEFLECTION, STORAGE ONES AND ZEROS,  
\*AND RANDOM NUMBERS TESTS FOR 1,2, OR 4  
\*737 CORE STORAGES OF FOR ONE 738 CORE STORAGE

TEST FOR CAPACITY OF STORAGE

THIS SECTION WILL BE  
WRITTEN OVER DURING TEST

				77337		ORG 32479		
77337	0760	00	0	00163	NPER	SWT 3		
77340	0020	00	0	77342		TRA *+2		
77341	0020	00	0	77350		TRA Z		
77342	0766	00	0	01361		WPRA		
77343	0760	00	0	01363		SPRA 3		
77344	0540	00	0	77347		RCHA *+3		
77345	0060	00	0	77345		TCOA *		
77346	0020	00	0	77350		TRA Z		
77347	0000	30	0	77451		IOCD PNP,0,24		
77350	0500	00	0	77760	Z	CLA ZERO	L +0	
77351	0601	00	0	77777		STO 32767		
77352	0400	00	0	77442		ADD K1+1	L +1	
77353	0601	00	0	37777		STO 16383		
77354	0400	00	0	77442		ADD K1+1		
77355	0601	00	0	17777		STO 8191		
77356	0400	00	0	77442		ADD K1+1		
77357	0601	00	0	07777		STO 4095		
77360	0500	00	0	77777		CLA 32767	L IS DEPENDENT UPON SIZE OF STORAGE	
77361	0100	00	0	77371		TZE D	32K STORAGE	
77362	0402	00	0	77442		SUB K1+1	L+1	
77363	0100	00	0	77377		TZE D4	16K STORAGE	
77364	0402	00	0	77442		SUB K1+1		
77365	0100	00	0	77405		TZE D6		
77366	0402	00	0	77442		SUB K1+1		
77367	0100	00	0	77501		TZE A1-3	4K STORAGE-BEGIN TESTING	
77370	0000	00	0	77501		HTR A1-3	ERROR IN TESTING SIZE OF STORAGE	
77371	0500	00	0	77450	D	CLA G8		
77372	0601	00	0	77773		STO K2		
77373	0500	00	0	77445		CLA H8		
77374	0601	00	0	77774		STO K3		
77375	0500	00	0	77436		CLA TS1	L +77777 IN DECR.	
77376	0020	00	0	77412		TRA D7-1		



77377 0500 00 0 77447 D4 CLA G4  
 77400 0601 00 0 77773 STO K2  
 77401 0500 00 0 77444 CLA H4  
 77402 0601 00 0 77774 STO K3  
 77403 0500 00 0 77437 CLA TS1+1 L +37777  
 77404 0020 00 0 77412 TRA D7-1

77405 0500 00 0 77446 D6 CLA G2  
 77406 0601 00 0 77773 STO K2  
 77407 0500 00 0 77443 CLA H2  
 77410 0601 00 0 77774 STO K3  
 77411 0500 00 0 77440 CLA TS1+2 L +17777

77412 0402 00 0 77441 SUB K1  
 77413 0601 00 0 77764 D7 STO BA ADJUST CONSTANTS  
 77414 0771 00 0 00022 ARS 18  
 77415 0621 00 0 77554 STA B5  
 77416 0621 00 0 77556 STA B6  
 77417 0621 00 0 77566 STA B7+5  
 77420 0621 00 0 77576 STA C1+1  
 77421 0621 00 0 77643 STA E4+4  
 77422 0621 00 0 77644 STA E4+5  
 77423 0621 00 0 77652 STA E7+1  
 77424 0621 00 0 77654 STA E7+3  
 77425 0621 00 0 77664 STA E9+4  
 77426 0621 00 0 77665 STA E9+5  
 77427 0621 00 0 77675 STA E12+3  
 77430 0621 00 0 77706 STA E13+6  
 77431 0621 00 0 77730 STA F1-6  
 77432 0621 00 0 77737 STA F1+1  
 77433 0621 00 0 77722 STA E14+10  
 77434 0621 00 0 77763 STA B12  
 77435 0020 00 0 77501 TRA A1-3

77436 +077777000000 TS1 OCT 77777000000  
 77437 +037777000000 OCT 37777000000  
 77440 +017777000000 OCT 17777000000

77441 +000277000000 K1 OCT 277000000  
 77442 +0000000000001 OCT 1

CHANGE K3 DEPEND SIZE STG

77443 +076404217501 H2 OCT 076404217501  
 77444 +176404437501 H4 OCT 176404437501  
 77445 +376404077501 H8 OCT 376404077501

CHANGE K2 DEPEND SIZE STG

77446 +000000200000 G2 OCT 000000200000  
 77447 +000000400000 G4 OCT 000000400000  
 77450 +000000000000 G8 OCT 0

\* PRINT - NOW PERFORMING-9S01L-STORAGE TEST

\* IMAGE - NOW PERFORMING-9S01L-STORAGE TEST

77451	+000000045040	PNPER	OCT	000000045040	9 ROW LEFT
77452	+040000000000		OCT	040000000000	9 ROW RIGHT
77453	+000000000000		OCT	000000000000	8 L
77454	+000000000000		OCT	000000000000	8 R
77455	+000000200200		OCT	000000200200	7 L
77456	+010000000000		OCT	010000000000	7 R
77457	+000003030000		OCT	000003030000	6 L
77460	+100000000000		OCT	100000000000	6 R
77461	+000004100400		OCT	000004100400	5 L
77462	+004400000000		OCT	004400000000	5 R
77463	+000000002000		OCT	000000002000	4 L
77464	+000000000000		OCT	000000000000	4 R
77465	+000000000002		OCT	000000000002	3 L
77466	+201100000000		OCT	201100000000	3 R
77467	+000000000020		OCT	000000000020	2 L
77470	-000200000000		OCT	400200000000	2 R
77471	+000000000004		OCT	000000000004	1 L
77472	+020000000000		OCT	020000000000	1 R
77473	+000001000030		OCT	000001000030	0 L
77474	-201300000000		OCT	601300000000	0 R
77475	+000006256503		OCT	000006256503	11 L
77476	+140000000000		OCT	140000000000	11 R
77477	+000000121200		OCT	000000121200	12 L
77500	+034400000000		OCT	034400000000	12 R

BEGIN. DEFLECTION TEST

77501	0760 00 0 00140		SLF		
77502	0760 00 0 00141		SLN 1		LIGHT ONE FOR VISUAL SIGNAL TO DEFINE WORKING IN STORAGE DEFLECTION
77503	0500 00 0 77774		CLA K3		L 036404107501
77504	0402 00 0 77775	A1	SUB K4		L 000004000001
77505	0621 00 0 77506		STA A2		
77506	0601 00 0 00000	A2	STO 0		PUT IN STORAGE
77507	0340 00 0 77773		CAS K2		L 000001000000
77510	0020 00 0 77512		TRA *+2		STG. LESS THAN ACC.
77511	0020 00 0 77513		TRA A3		OUT WHEN STORAGE IS EQUAL
77512	0020 00 0 77504		TRA A1		CONT.-STG MORE OR LESS
77513	0500 00 0 77774	A3	CLA K3		L 036404107501
77514	0402 00 0 77775		SUB K4		L 000004000001
77515	0621 00 0 77517		STA A4		
77516	0621 00 0 77522		STA A4+3		
77517	0340 00 0 00000	A4	CAS 0		COMPARE TEST WORD
77520	0020 00 0 77522		TRA *+2		STG LESS THAN ACC -NG
77521	0020 00 0 77524		TRA A5		STG EQUAL-OK
77522	0560 00 0 00000		LDQ 0		STG MORE OR LESS-NG

77523	0000	00	0	77524		HTR A5	ADDRESS OF MQ CONTAINS LOCATION OF ERROR IN STG.
							FULL 36 BITS OF MQ CONTAIN ERROR WORD
							ACC. ADDR. CONTAINS CORRECT ADDRESS
							FULL 36 BITS OF ACC. CONTAIN CORRECT WORD
77524	0560	00	0	77776	A5	LDQ K5	L TRA A7-1
77525	0621	00	0	77530		STA A6	ADJUST STQ ADDR
77526	0621	00	0	77531		STA A6+1	ADJUST TRA ADDR
77527	0621	00	0	77532		STA A6+2	ADJUST STO ADDR
77530	-0600	00	0	00000	A6	STQ	PLACE RETURN TRA INTO X ADDR
77531	0020	00	0	00000		TRA	TRA TO X ADDR
77532	0601	00	0	00000		STO	CORRECT WORD BACK INTO STG
77533	0340	00	0	77773	A7	CAS K2	L 000001000000
77534	0020	00	0	77514		TRA A3+1	NO
77535	0020	00	0	77537		TRA A8	EQUAL-TEST FOR REPEAT
77536	0020	00	0	77514		TRA A3+1	NO
77537	0760	00	0	00161	A8	SWT 1	TEST SWITCH FOR REPEAT
77540	0020	00	0	77542		TRA B2	NO-OUT TO ONES AND ZEROS
77541	0020	00	0	77502		TRA A1-2	YES-REPEAT
							BEGIN. ONES AND ZEROS
77542	0760	00	0	00140	B2	SLF	TURN OFF LIGHT ONE
77543	0760	00	0	00142		SLN 2	LIGHT TWO FOR VISUAL SIGNAL TO DEFINE WORKING IN ONES AND ZEROS
77544	0500	00	0	77762		CLA B11	L-377777777777
							TEST SENSE SWITCH 5
77545	0760	00	0	00165		SWT 5	DOWN-ONES ONLY
77546	0020	00	0	77550		TRA B3	NO EFFECT
77547	0020	00	0	77553		TRA B4	TEST ONES ONLY
							TEST SENSE SWITCH 4
77550	0760	00	0	00164	B3	SWT 4	DOWN-ZEROS ONLY
77551	0760	00	0	00144		SLN 4	TURN ON SIGNAL AND ALTERNATE ZEROS AND ONES
77552	0500	00	0	77760		CLA ZERO	L ZERO TEST WORD
77553	0534	00	3	77763	B4	LXA B12,3	L IS DEPENDENT UPON SIZE OF STORAGE
77554	0601	00	2	77501	B5	STO A1-3,2	WRITE TEST WORD
77555	2 00001	2	2	77554		TIX B5,2,1	

77556	0340	00	1	77501	B6	CAS A1-3,1	READ AND CHECK TEST WORD
77557	0020	00	0	77561		TRA B7	ERROR
77560	0020	00	0	77570		TRA B8	OK
							TEST SENSE SWITCH 3
77561	0760	00	0	00163	B7	SWT 3	ERROR, PRINT OR STOP
77562	0020	00	0	77575		TRA C1	PRINT ON ERROR
77563	0601	00	0	77761		STO B	SAVE CORRECT WORD
77564	-0754	00	1	00000		PXD 0,1	STOP ON ERROR
77565	0402	00	0	77764		SUB BA	ERROR ADDR IN ACC DECR.
77566	0560	00	1	77501		LDQ A1-3,1	TESTO WORD IN ERROR IN QUOTIENT
77567	0000	00	0	77610		HTR PRINT-5	ERROR STOP
77570	2 00001	1	1	77556	B8	TIX B6,1,1	
77571	-0760	00	0	00144		SLT 4	TEST AND RESET SIGNAL
77572	0020	00	0	77612		TRA PRINT-3	REPEAT TEST
77573	0500	00	0	77762		CLA B11	L ONES
77574	0020	00	0	77553		TRA B4	TEST ONES
77575	0601	00	0	77761	C1	STO B	SAVE TEST WORD
77576	-0500	00	1	77501		CAL A1-3,1	TEST WORD IN ERROR
77577	0602	00	0	77755		SLW C3	
77600	0760	00	0	00006		COM	
77601	0602	00	0	77757		SLW C5	ERROR ZEROS IN PRINT
77602	-0754	00	1	00000		PXD 0,1	
77603	0402	00	0	77764		SUB BA	L 7502 IN DECR
77604	0622	00	0	77754		STD C2	ERROR ADDRESS ONES IN PRINT
77605	0760	00	0	00006		COM	
77606	0622	00	0	77756		STD C4	ERROR ADDRESS ZEROS IN PRINT
77607	0074	00	4	77615		TSX PRINT,4	
77610	0500	00	0	77761		CLA B	CORRECT WORD
77611	2 00001	1	1	77556		TIX B6,1,1	CONTINUE COMPARING
77612	0760	00	0	00161		SWT 1	
77613	0020	00	0	77630		TRA E1	UP-GO TO RANDOM NUMBERS
77614	0020	00	0	77544		TRA B2+2	DOWN-REPEAT ONES-ZEROS

PRINT ROUTINE FOR ERROR

77615	0766	00	0	01361	PRINT	WPRA	
77616	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
77617	-0634	00	2	77763		SXD B12,2	SAVE COUNT
77620	0534	00	2	77770		LXA E2,2	L +17
77621	0540	00	0	77765		RCHA C8	CONTROL PRINT 9L
77622	0544	00	0	77765		LCHA C8	CONTROL PRINT 9R-2R
77623	2 00001	2	1	77622		TIX *-1,2,1	
77624	0544	00	0	77766		LCHA C8+1	CONTROL PRINT 1L-0R
77625	0060	00	0	77625		TCOA *	DELAY

77626	-0534	00	2	77763		LXD B12,2	
77627	0020	00	4	00001		TRA 1,4	RETURN TO CONTINUE COMPARING
BEGIN. RANDOM NUMBERS TEST							
77630	0760	00	0	00140	E1	SLF	TURN ON LIGHT TWO
77631	0760	00	0	00143		SLN 3	LIGHT THREE FOR VISUAL SIGNAL TO DEFINE WORKING IN RANDOM NUMBERS
77632	0534	00	1	77763		LXA B12,1	L 7500
77633	2	00001	2	77656		TIX E8,2,1	
77634	-0534	00	2	77770		LXD E2,2	L +2
77635	0560	00	0	77771		LDQ E3	
77636	0200	00	0	77771		MPY E3	
77637	-0763	00	0	00021	E4	LGL 17	
77640	-0100	00	0	77645		TNZ E5	
77641	-0763	00	0	00022		LGL 18	
77642	-0100	00	0	77645		TNZ E5	
77643	0560	00	1	77501		LDQ A1-3,1	
77644	0200	00	1	77501		MPY A1-3,1	
77645	0140	00	0	77646	E5	TOV E6	
77646	-0763	00	0	00001	E6	LGL 1	
77647	-0140	00	0	77651		TNO E7	
77650	-0760	00	0	00003		SSM	
77651	-2	00001	1	77632	E7	TNX E1+2,1,1	
77652	0601	00	1	77501		STO A1-3,1	RANDOM NUMBER INTO STG.
77653	0131	00	0	00000		XCA	
77654	0200	00	1	77501		MPY A1-3,1	
77655	0020	00	0	77637		TRA E4	
77656	0560	00	0	77771	E8	LDQ E3	
77657	0200	00	0	77771		MPY E3	
77660	-0763	00	0	00021	E9	LGL 17	
77661	-0100	00	0	77666		TNZ E10	
77662	-0763	00	0	00022		LGL 18	
77663	-0100	00	0	77666		TNZ E10	
77664	0560	00	1	77501		LDQ A1-3,1	
77665	0200	00	1	77501		MPY A1-3,1	
77666	0140	00	0	77667	E10	TOV E11	
77667	-0763	00	0	00001	E11	LGL 1	
77670	-0140	00	0	77672		TNO E12	
77671	-0760	00	0	00003		SSM	
77672	-2	00001	1	77733	E12	TNX F1-3,1,1	
77673	0767	00	0	00002		ALS 2	CLEAR P AND Q BITS
77674	0771	00	0	00002		ARS 2	
77675	0340	00	1	77501		CAS A1-3,1	COMPARE WORD WRITTEN WITH WORD READ
77676	0020	00	0	77700		TRA E13	ERROR
77677	0020	00	0	77736		TRA F1	OK

77700	0601	00	0	77761	E13	STO B	SAVE CORRECT WORD
77701	0131	00	0	00000		XCA	
77702	-0754	00	1	00000		PXD 0,1	
77703	0402	00	0	77764		SUB BA	L 7500 IN DECR
77704	0760	00	0	00163		SWT 3	
77705	0020	00	0	77710		TRA E14	ERROR PRINT
77706	0560	00	1	77501		LDQ A1-3,1	
77707	0000	00	0	77727		HTR F1-7	ERROR ADDRESS IN ACC DECR ERROR WORD IN MQ
77710	0622	00	0	77754	E14	STD C2	ERROR ADDRESS
77711	0760	00	0	00006		COM	
77712	0622	00	0	77756		STD C4	COMPLEMENT OF ERROR ADDR
77713	-0600	00	0	77755		STQ C3	CORRECT WORD
77714	-0130	00	0	00000		XCL	
77715	0760	00	0	00006		COM	
77716	0602	00	0	77757		SLW C5	COMPLEMENT OF CORRECT WORD WORD
77717	0074	00	4	77615		TSX PRINT,4	
77720	0600	00	0	77756		STZ C4	
77721	0600	00	0	77754		STZ C2	
77722	-0500	00	1	77501		CAL A1-3,1	
77723	0602	00	0	77755		SLW C3	ERROR WORD
77724	0760	00	0	00006		COM	
77725	0602	00	0	77757		SLW C5	COMPLEMENT OF ERROR WORD
77726	0074	00	4	77615		TSX PRINT,4	
77727	0560	00	0	77761		LDQ B	CORRECT WORD
77730	-0600	00	1	77501		STQ A1-3,1	PUT CORRECT WORD BACK INTO STORAGE
77731	0200	00	0	77761		MPY B	
77732	0020	00	0	77660		TRA E9	CONTINUE COMPARING
77733	0760	00	0	00161		SWT 1	TEST SENSE SWITCH 1
77734	0020	00	0	77745		TRA F7	UP-GO TO READ NEXT PROG. FROM CRD RDR OR CONTINUE
77735	0020	00	0	77741		TRA F	
77736	0131	00	0	00000	F1	XCA	
77737	0200	00	1	77501		MPY A1-3,1	
77740	0020	00	0	77660		TRA E9	
77741	-0500	00	0	77771	F	CAL E3	CHANGE
77742	0361	00	0	77764		ACL BA	RANDOM NUMBER
77743	0601	00	0	77771		STO E3	CONSTANT
77744	0020	00	0	77632		TRA E1+2	REPEAT TEST
77745	0760	00	0	00166	F7	SWT 6	TEST SENSE SWITCH 6
77746	0020	00	0	77750		TRA F7+3	UP-CALL NEXT PROGRAM
77747	0020	00	0	77501		TRA A1-3	START AT BEGINNING OF PROGRAM
77750	0762	00	0	01321		RCDA	

77751	0540	00	0	77772	RCHA	F8	LOAD
77752	0544	00	0	00000	LCHA	0	CARDS
77753	0020	00	0	00001	TRA	1	

CONSTANTS

77754	0	00000	0	00000	C2		THIS IS
77755	0	00000	0	00000	C3		ERROR
77756	0	00000	0	00000	C4		PRINT
77757	0	00000	0	00000	C5		IMAGE
77760	+0000000000000				ZERO	OCT 0	
77761	+0000000000000				B	OCT 0	TEST WORD
77762	-3777777777777				B11	OCT -3777777777777	TEST WORD
77763	+000000007500				B12	OCT 7500	
77764	+007500000000				BA	OCT 7500000000	
77765	-1	00001	0	77760	C8	MON ZERO,0,1	CONTROL 9L-2R ROWS PRINT
77766	0000	04	0	77754	HTR	C2,0,4	CONTROL 1L-0R ROWS PRINT
77767	+000000000277				E	OCT 277	
77770	+000002000017				E2	OCT 000002000017	
77771	+000007700000				E3	OCT 000007700000	
77772	-1	00003	0	00000	F8	MON 0,0,3	CONTROL RCD
77773	+000000100000				K2	OCT 000000100000	
77774	+036404107501				K3	OCT 036404107501	
77775	+000004000001				K4	OCT 000004000001	
77776	0020	00	0	77532	K5	TRA A7-1	
				77350		END Z	

EOF\*