

9S04 HA AND 9S04 LA

HALF SELECT BEAT TEST FOR 738 CORE STORAGES

A. PURPOSE

TO INSURE THAT HALF SELECTED CORES WILL RETAIN THEIR ORIGINAL STATE  
WHEN OTHER CORES ARE BEING READ INTO AND OUT OF.

B. AREA OF MACHINE REQUIRED

1. UNITS           CARD READER  
                  709 MAIN FRAME WITH A 738 CORE STORAGE

2. STORAGE LOCATIONS

FIRST HALF OF 9S04 H     00000 TO 01762  
                  AREA TESTED         01763 TO 77777

SECOND HALF OF 9S04 L   76000 TO 77760  
                  AREA TESTED         00000 TO 75777

C. PROGRAM CONTROL

1. DECK           H00                   9LD02 HIGH BINARY LOADER  
                  H01 - H46         9S04 DIAGNOSTIC FIRST HALF OF TEST  
                  H47                   TRANSFER CARD TO 0  
                  L 00                 9LD01 LOW BINARY LOADER  
                  L01 - L46         9S04 DIAGNOSTIC SECOND HALF OF TEST  
                  L47                   TRANSFER CARD TO 76000  
                  L48 - L49         BLANK CARDS

2. SENSE SWITCH CONTROL

A. SWITCH 1 UP - CONTINUE PROGRAM  
          1 DN - LOOP IN ROUTINE BEING TESTED

B. SWITCH 2 UP - TEST SWITCH 3  
          2 DN - BYPASS ERROR

C. SWITCH 3 UP - PRINT ERROR  
          3 DN - STOP ON ERROR

D. SWITCH 4 UP - BEAT EACH ADDRESS 500 TIMES  
          4 DN - TEST SWITCH 5

E. SWITCH 5 UP - BEAT EACH ADDRESS 1000 TIMES  
          5 DN - BEAT EACH ADDRESS 5000 TIMES



OF THE WORD THAT FAILED, AND THE WORD AT THAT LOCATION.

THE SECOND LINE CONTAINS THE ERROR EXIT, AND THE CORRECT WORD. THE THIRD LINE CONTAINS THE BEAT ADDRESS, AND THE BEAT WORD.

THE FOURTH LINE CONTAINS THE LOCATION OF THE SWITCH CORES THAT SELECT THE ADDRESS IN ERROR.

IN THE EXAMPLE THE WORD AT ADDRESS 75570 PICKED UP A BIT IN POSITIONS 18 AND 35. THIS ADDRESS IS SELECTED BY THE Y3 AND X2 SWITCH CORE MATRIXES. THE 2 SWITCH CORES ARE PHYSICALLY LOCATED AT THE 7TH ROW AND THE 1ST COLUMN OF THE Y3 MATRIX, AND THE 8TH ROW AND THE 8TH COLUMN OF THE X2 MATRIX.

F. COMMENTS

1. EACH ADDRESS IN TURN IS WRITTEN WITH A TEST WORD A NUMBER OF TIMES AND THEN 16 ADDRESSES ARE CHECKED TO SEE IF THEY STILL RETAIN ZERO. THE 16 ADDRESSES WHICH ARE CHECKED ARE THOSE MOST LIKELY TO PICK UP A BIT DURING WRITE TIME. THEY ARE CORES SHARING THE SAME SELECT LINE AS THE TEST ADDRESS AND ALSO SHARING THE SELECT LINES WHICH CONTAIN NOISE FROM THE CORE DRIVERS AT WRITE TIME. UNDER SENSE SWITCH CONTROL IT IS POSSIBLE TO BEAT EACH ADDRESS 500, 1000, OR 5000 TIMES.
2. THE SPEED OF THE PROGRAM IS 8 MINUTES TO RUN ONE HALF OF THE TEST WHEN RUN WITH SENSE SWITCHES 4 AND 5 UP 500 BEATS PER ADDRESS, AND USING THE TEST WORD 777777777777 AND A ROTATION COUNT OF 1.
3. THE PROGRAM WAS DESIGNED TO GIVE THE CUSTOMER ENGINEER A CHOICE IN THE METHOD OF TESTING THE MACHINE. THE TEST WORD AND THE ROTATION COUNT CAN BE CHANGED TO SATISFY ANY NUMBER OF CONDITIONS.

EXAMPLE A

TO TEST EACH CORE INDIVIDUALLY THE TEST WORD CAN BE CHANGED AND THE ROTATION COUNT ADJUSTED TO ACCOMPLISH THIS, HOWEVER, THIS WOULD REQUIRE AN EXTREMELY LONG PERIOD OF TIME TO RUN.

B A PRATICAL TEST WOULD BE TO CHANGE THE TEST WORD TO 010101010101 AND THE ROTATION COUNT TO 6. THIS WOULD CAUSE THE PROGRAM TO GO THROUGH THE TEST 6 TIMES. EACH TIME THROUGH THE TEST THE MQ WOULD BE ROTATED ONE UNIT. THUS THE MACHINE WOULD BE TESTED WITH THE FOLLOWING WORDS

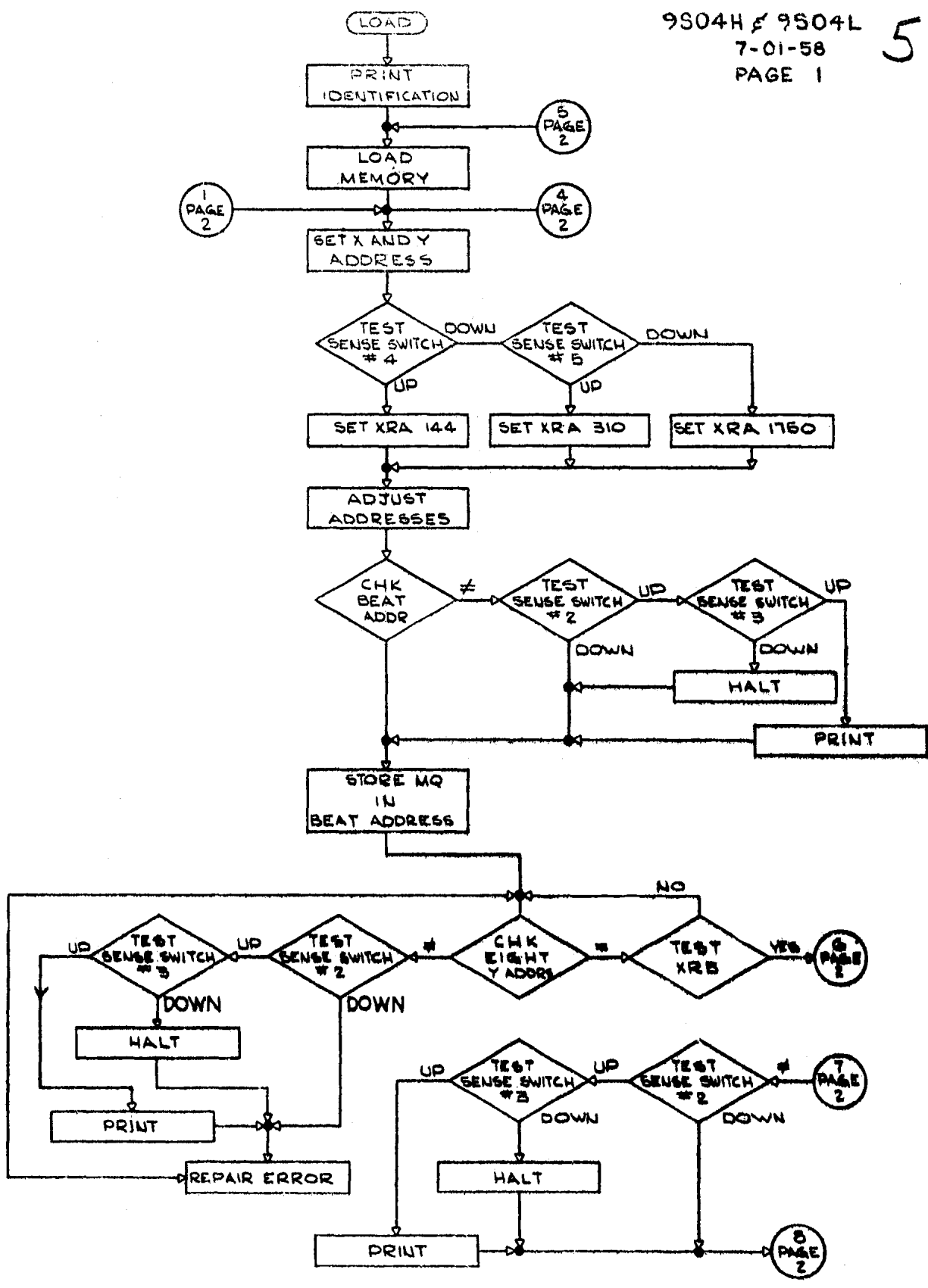
010101010101 - 1ST PASS  
020202020202 - 2ND PASS  
040404040404 - 3RD PASS  
010101010101 - 4TH PASS  
020202020202 - 5TH PASS  
040404040404 - 6TH PASS

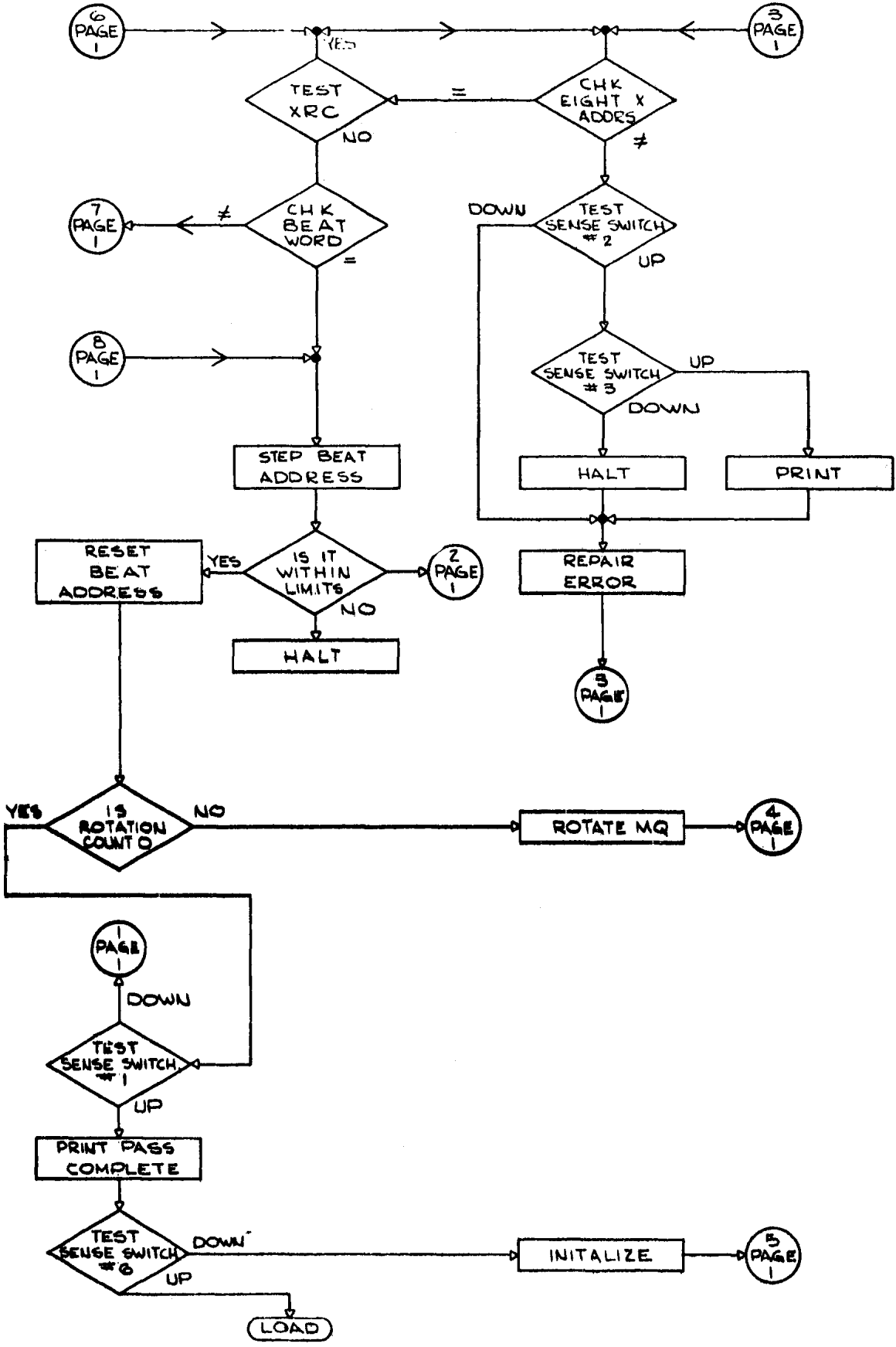
C AT THE COMPLETION OF THIS PROGRAM EACH CORE WOULD BE TESTED ONE TIME. EVERY 6TH PLANE IN THE CORE ARRAY WOULD BE TESTED AT THE SAME

TIME. THIS WOULD REQUIRE APPROXIMATELY 48 MINUTES TO RUN ONE HALF OF THE TEST.

- D. ANY TYPE OF PATTERN CAN BE USED TO TEST MEMORY BY CHANGING SYMBOLIC LOCATIONS ZERO /01403-77467/ AND TEST 2 /01371-77455/ OR ONE /1404-77470/ AND TEST 1 /01370-77454/.
  - E BY PUTTING SENSE SWITCH 1 DOWN THE PROGRAM WILL CONTINUE TO LOOP AND TEST MEMORY WITHOUT LOADING MEMORY EACH TIME.
  - F TO BEAT A SMALL PORTION OF MEMORY PUT SENSE SWITCH ONE DOWN AND ADJUST THE WORDS AT LOCATIONS LOW AND HIGH. 1372 AND 1373, OR 77456 AND 77457, TO BEAT A PORTION OF MEMORY FROM 25010 TO 26500, PUT 25010 IN LOCATION LOW AND 26500 IN LOCATION HIGH. TO RETURN THE PROGRAM TO ORIGINAL STATUS JUST PUT SENSE SWITCH 1 UP AND THE LOW AND HIGH VALUES WILL BE RESTORED TO THE ORIGINAL PROGRAM VALUES.
4. THE ROTATION COUNT AT K6, 1367 OR 77453, CAN BE MADE AS HIGH AS 44 AND THE TEST WORD CAN BE MADE 1. THIS WILL CORRECTLY TEST MEMORY EXCEPT FOR THE SIGN POSITION, THEREFORE, IT IS RECOMMENDED THAT AT ALL TIMES THE TEST WORD SHOULD CONTAIN AT LEAST TWO BINARY BITS. THIS WILL INSURE THAT ALL CORES INCLUDING THE SIGN POSITIONS ARE BEING TESTED. REMEMBER TO TEST IN THIS MANNER WILL REQUIRE AN EXTREMELY LONG PERIOD OF TIME.

5





9S04H

HALF SELECT CORE MEMORY BEAT TEST  
FOR A 738 CORE STORAGE  
THE FIRST HALF OF THE PROGRAM TESTS  
HIGH END OF MEMORY FROM 2000 TO 77777  
AND THE SECOND HALF TESTS THE LOW END  
OF MEMORY FROM 00000 TO 75777

00000	0020	00	0	01666		TRA NPER	TO PRINT IDENTIFICATION
00001	0760	00	0	00140	C	SLF	TURN OFF ALL SENSE LIGHTS
00002	0760	00	0	00144		SLN 4	TURN SENSE LIGHT 4 ON TO INDICATE THAT THE HIGH END OF MEMORY IS BEING TESTED
							FILL MEMORY WITH ZEROS AND BEAT WITH ONES
00003	0500	00	0	01370		CLA TEST1	L +0
00004	0601	00	0	01376		STO FILL	
00005	0500	00	0	01371		CLA TEST2	L ONES
00006	0601	00	0	01375		STO BEAT	
00007	0534	00	1	01403	START1	LXA ZERO,1	
00010	0500	00	0	01376		CLA FILL	
00011	0601	00	1	77777		STO 32767,1	LOAD TEST AREA
00012	3	76013	1	00014		TXH C1,1,32767-CNTL4-2	
00013	1	00001	1	00011		TXI START1+2,1,1	
00014	0500	00	0	01462	C1	CLA K11-1	L+2000
00015	0601	00	0	01372		STO LOW	
00016	0500	00	0	01442		CLA K10	L+77777
00017	0601	00	0	01373		STO HIGH	
00020	0500	00	0	01373		CLA HIGH	HIGHEST ADDRESS TESTED
00021	0621	00	0	01374		STA ADR	RESTORE BEAT ADDRESS
00022	0534	00	1	01367		LXA K6,1	L+1
00023	-0634	00	1	01377		SXD COUNT,1	SAVE INDEX COUNT
00024	0560	00	0	01375		LDQ BEAT	L TEST PATTERN
00025	-0773	00	0	00001	C2	RQL 1	
							SET Y ADDRESS
00026	0500	00	0	01374	C3	CLA ADR	L BEAT ADDRESS
00027	-0501	00	0	01463		ORA K11	L+1600
00030	0621	00	0	00075		STA C7	SAVE ADDRESS
00031	0534	00	6	01403		LXA ZERO,6	

SET X ADDRESS

00032	0500	00	0	01374		CLA ADR	L BEAT ADDRESS
00033	-0501	00	0	01421		ORA K3+1	L+70
00034	0621	00	0	00133		STA C8	SAVE ADDRESS
00035	0760	00	0	00164		SWT 4	TEST SENSE SWITCH 4
00036	0020	00	0	00045		TRA C5	BEAT EACH ADDRESS 500 TIMES
00037	0760	00	0	00165		SWT 5	TEST SENSE SWITCH 5
00040	0020	00	0	00043		TRA C4	BEAT EACH ADDRESS 1000 TIMES
00041	0534	00	1	01502		LXA K1750,1	
00042	0020	00	0	00046		TRA C6	BEAT EACH ADDRESS 5000 TIMES
00043	0534	00	1	01501	C4	LXA K310,1	
00044	0020	00	0	00046		TRA C6	
00045	0534	00	1	01500	C5	LXA K144,1	

## BEAT TEST

00046	0500	00	0	01374	C6	CLA ADR	L BEAT ADDRESS
00047	0621	00	0	00055		STA C6+7	
00050	0621	00	0	00067		STA C6A	
00051	0621	00	0	00070		STA C6A+1	
00052	0621	00	0	00071		STA C6A+2	
00053	0621	00	0	00072		STA C6A+3	
00054	0621	00	0	00073		STA C6A+4	
00055	0500	00	0	00000		CLA	L WORD AT BEAT ADDRESS
00056	0340	00	0	01376		CAS FILL	
00057	0020	00	0	00061		TRA C6+11	ERROR
00060	0020	00	0	00067		TRA C6A	OK
00061	0760	00	0	00162		SWT 2	TEST SENSE SWITCH 2
00062	0020	00	0	00064		TRA *+2	INDICATE ERROR
00063	0020	00	0	00067		TRA C6A	BY PASS ERROR
00064	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
00065	0020	00	0	00252		TRA P	PRINT ERROR
00066	0000	00	0	00067		HTR C6A	ERROR - THE BEAT ADDRESS WAS NOT CORRECT BEFORE BEATING - ERROR WORD IS IN THE ACCUMULATOR , ADDRESS OF WORD IS AT ADR
00067	-0600	00	0	00000	C6A	STQ	BEAT THE ADDRESS
00070	-0600	00	0	00000		STQ	
00071	-0600	00	0	00000		STQ	
00072	-0600	00	0	00000		STQ	
00073	-0600	00	0	00000		STQ	
00074	2	00001	1	00067		TIX C6A,1,1	

## CHECK Y ADDRESSES

00075	0500	00	2	00000	C7	CLA 0,2	Y ADDRESS BEING CHECKED
00076	0340	00	0	01376		CAS FILL	
00077	0020	00	0	00104		TRA C7A	MAYBE AN ERROR



00100	0020	00	0	00102		TRA C7+5	OK
00101	0020	00	0	00104		TRA C7A	MAYBE AN ERROR
00102	3	01400	2	00133		TXH C8,2,768	
00103	1	00200	2	00075		TXI C7,2,128	
00104	0500	00	0	00075	C7A	CLA C7	
00105	0621	00	0	01401		STA T1	TEMPORARY STORAGE
00106	-0754	00	2	00000		PXD 0,2	
00107	0771	00	0	00022		ARS 18	
00110	0402	00	0	01401		SUB T1	
00111	0760	00	0	00003		SSP	
00112	0340	00	0	01374		CAS ADR	L BEAT ADDRESS
00113	0020	00	0	00115		TRA C7B	MAY BE AN ERROR
00114	0020	00	0	00102		TRA C7+5	OK-BEAT ADDRESS
00115	0340	00	0	01431	C7B	CAS K9	L HIGHEST LOCATION OF PROG
00116	0020	00	0	00121		TRA C7B+4	ERROR
00117	0020	00	0	00102		TRA C7+5	OK-PROGRAM AREA
00120	0020	00	0	00102		TRA C7+5	OK-PROGRAM AREA
00121	0760	00	0	00162		SWT 2	TEST SENSE SWITCH 2
00122	0020	00	0	00124		TRA *+2	INDICATE ERROR
00123	0020	00	0	00127		TRA C7C	BY PASS ERROR
00124	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
00125	0020	00	0	00261		TRA P1	PRINT ERROR
00126	0000	00	0	00127		HTR C7C	Y ERROR ADR IN ACC BEAT ADDRESS LOCATED AT ADR
00127	0621	00	0	00131	C7C	STA C7C+2	
00130	0500	00	0	01376		CLA FILL	
00131	0601	00	0	00000		STO	REPAIR Y ERROR
00132	0020	00	0	00075		TRA C7	CHECK REPAIR ADDRESS
							CHECK X ADDRESSES
00133	0500	00	4	00000	C8	CLA 0,4	X ADDRESS BEING CHECKED
00134	0340	00	0	01376		CAS FILL	
00135	0020	00	0	00142		TRA C9	MAYBE AN ERROR
00136	0020	00	0	00140		TRA C8+5	OK
00137	0020	00	0	00142		TRA C9	MAYBE AN ERROR
00140	3	00060	4	00171		TXH C10,4,48	
00141	1	00010	4	00133		TXI C8,4,8	
00142	0500	00	0	00133	C9	CLA C8	
00143	0621	00	0	01401		STA T1	TEMPORARY STORAGE
00144	-0754	00	4	00000		PXD 0,4	
00145	0771	00	0	00022		ARS 18	
00146	0402	00	0	01401		SUB T1	
00147	0760	00	0	00003		SSP	
00150	0340	00	0	01374		CAS ADR	L BEAT ADDRESS
00151	0020	00	0	00153		TRA C9A	MAY BE AN ERROR
00152	0020	00	0	00140		TRA C8+5	OK BEAT ADDRESS
00153	0340	00	0	01431	C9A	CAS K9	L HIGHEST LOC OF PROGRAM
00154	0020	00	0	00157		TRA C9A+4	ERROR

00155	0020	00	0	00140		TRA C8+5	OK - PROGRAM AREA
00156	0020	00	0	00140		TRA C8+5	OK - PROGRAM AREA
00157	0760	00	0	00162		SWT 2	TEST SENSE SWITCH 2
00160	0020	00	0	00162		TRA *+2	INDICATE ERROR
00161	0020	00	0	00165		TRA C9B	BY PASS ERROR
00162	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
00163	0020	00	0	00267		TRA P2	PRINT ERROR
00164	0000	00	0	00165		HTR C9B	X ERROR ADR IN ACC BEAT ADDRESS LOCATED AT ADR
00165	0621	00	0	00167	C9B	STA C9B+2	
00166	0500	00	0	01376		CLA FILL	
00167	0601	00	0	00000		STO	REPAIR X ERROR
00170	0020	00	0	00133		TRA C8	CHECK REPAIR ADDRESS
00171	0500	00	0	01374	C10	CLA ADR	L BEAT ADDRESS
00172	0621	00	0	00175		STA C10+4	
00173	0621	00	0	00210		STA C11	
00174	-0600	00	0	01402		STQ T2	TEMPORARY STORAGE
00175	0500	00	0	00000		CLA	BEAT WORD
00176	0340	00	0	01402		CAS T2	CHECK BEAT WORD
00177	0020	00	0	00201		TRA C10A	ERROR
00200	0020	00	0	00207		TRA C11-1	OK
00201	0760	00	0	00162	C10A	SWT 2	TEST SENSE SWITCH 2
00202	0020	00	0	00204		TRA *+2	INDICATE ERROR
00203	0020	00	0	00207		TRA C11-1	BY PASS ERROR
00204	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
00205	0020	00	0	00275		TRA P3	PRINT ERROR
00206	0000	00	0	00207		HTR C11-1	ERROR IN BEAT WORD BEAT PATTERN IN MQ BEAT WORD IN ACC BEAT ADDRESS LOCATED AT ADR IN STORAGE
00207	0500	00	0	01376		CLA FILL	
00210	0601	00	0	00000	C11	STO	RESET LAST BEAT ADDRESS
00211	0500	00	0	01374		CLA ADR	L BEAT ADDRESS
00212	0402	00	0	01404		SUB ONE	DECREASE BEAT ADDRESS
00213	0340	00	0	01372		CAS LOW	LOWEST ADDRESS TESTED
00214	0020	00	0	00217		TRA C11A	
00215	0020	00	0	00221		TRA C12	REPEAT TEST WITH NEXT PATTERN
00216	0000	00	0	00215		HTR C11+5	SHOULD NEVER ENTER HERE
00217	0621	00	0	01374	C11A	STA ADR	NEW BEAT ADDRESS
00220	0020	00	0	00026		TRA C3	
00221	0500	00	0	01373	C12	CLA HIGH	HIGHEST ADDRESS TESTED
00222	0621	00	0	01374		STA ADR	L BEAT ADDRESS
00223	-0534	00	1	01377		LXD COUNT,1	
00224	2 00001	1	1	00226		TIX C13,1,1	

00225	0020	00	0	00230		TRA PCOM	FIRST HALF OF TEST COMPLETE
00226	-0634	00	1	01377	C13	SXD COUNT,1	
00227	0020	00	0	00025		TRA C2	
00230	0760	00	0	00163	PCOM	SWT 3	
00231	0020	00	0	00233		TRA *+2	
00232	0020	00	0	00240		TRA C14	
00233	0766	00	0	01361		WPRA	TO PRINT PASS COMPLETE
00234	0760	00	0	01363		SPRA 3	
00235	0540	00	0	00237		RCHA *+2	
00236	0020	00	0	00240		TRA C14	
00237	0000	30	0	01726		IOCD PPER,0,24	
00240	0760	00	0	00161	C14	SWT 1	TEST SENSE SWITCH 1
00241	0020	00	0	00243		TRA C14+3	
00242	0020	00	0	00020		TRA C1+4	LOOP IN TEST
00243	0760	00	0	00166		SWT 6	TEST SENSE SWITCH 6
00244	0020	00	0	00246		TRA *+2	
00245	0020	00	0	00014		TRA C1	REPEAT TEST
00246	0762	00	0	01321		RCDA	READ IN NEXT TEST
00247	0540	00	0	01756		RCHA CNTL	
00250	0544	00	0	00000		LCHA 0	
00251	0020	00	0	00001		TRA 1	
ERROR ROUTINES							
00252	0500	00	0	01374	P	CLA ADR	ERROR ADDRESS
00253	0601	00	0	01503		STO P6	
00254	0500	00	0	01432		CLA K9A	L HTR C6+11
00255	0601	00	0	01504		STO P7	ERROR EXIT
00256	0500	00	0	00060		CLA C6+10	L TRA C6A
00257	0601	00	0	01366		STO P13	PROGRAM RETURN
00260	0020	00	0	00311		TRA P4	
00261	0601	00	0	01503	P1	STO P6	ERROR ADDRESS
00262	0500	00	0	01433		CLA K9A+1	L HTR C7B+4
00263	0601	00	0	01504		STO P7	ERROR EXIT
00264	0500	00	0	01436		CLA K9A+4	L TRA C7C
00265	0601	00	0	01366		STO P13	PROGRAM RETURN
00266	0020	00	0	00311		TRA P4	
00267	0601	00	0	01503	P2	STO P6	ERROR ADDRESS
00270	0500	00	0	01434		CLA K9A+2	L HTR C9A+4
00271	0601	00	0	01504		STO P7	ERROR EXIT
00272	0500	00	0	01437		CLA K9A+5	L TRA C9B
00273	0601	00	0	01366		STO P13	PROGRAM RETURN
00274	0020	00	0	00311		TRA P4	
00275	0500	00	0	01374	P3	CLA ADR	
00276	0601	00	0	01503		STO P6	
00277	0500	00	0	01435		CLA K9A+3	L HTR C10A

00300	0601	00	0	01504		STO P7	ERROR EXIT
00301	0500	00	0	00200		CLA C10+7	L TRA C11-1
00302	0601	00	0	01366		STO P13	PROGRAM RETURN
00303	-0600	00	0	01505		STQ QUOT	
00304	-0500	00	0	01505		CAL QUOT	TEST WORD
00305	0602	00	0	01557		SLW PR5	
00306	0760	00	0	00006		COM	
00307	0602	00	0	01561		SLW PR5+2	COMPLEMENT OF TEST WORD
00310	0020	00	0	00315		TRA P5	
00311	-0500	00	0	01376	P4	CAL FILL	TEST WORD
00312	0602	00	0	01557		SLW PR5	
00313	0760	00	0	00006		COM	
00314	0602	00	0	01561		SLW PR5+2	COMPLEMENT OF TEST WORD
00315	0500	00	0	01503	P5	CLA P6	L ERROR ADDRESS
00316	0621	00	0	00317		STA *+1	
00317	-0500	00	0	00000		CAL	ERROR WORD
00320	0602	00	0	01527		SLW PR4	
00321	0760	00	0	00006		COM	
00322	0602	00	0	01531		SLW PR4+2	COMPLEMENT OF ERROR WORD
00323	-0600	00	0	01505		STQ QUOT	
00324	-0500	00	0	01505		CAL QUOT	BEAT WORD
00325	0602	00	0	01617		SLW PR6	
00326	0760	00	0	00006		COM	
00327	0602	00	0	01621		SLW PR6+2	COMPLEMENT OF BEAT WORD
							PRINT ERROR
00330	-0634	00	1	01400	E13	SXD SAVE,1	SAVE XRA
00331	0534	00	1	01410		LXA M+3,1	L +10
00332	0600	00	1	01576		STZ PR7+8,1	CLEAR IMAGE
00333	2 00001	1	1	00332		TIX E13+2,1,1	
00334	0500	00	0	01420		CLA K3	L +7
00335	-0320	00	0	01503		ANA P6	L ERROR ADDRESS
00336	0734	00	1	00000		PAX 0,1	
00337	0500	00	0	01413		CLA K2	L 20000
00340	-0602	00	1	01575		ORS PR7+7,1	
00341	0500	00	0	01421		CLA K3+1	L +70
00342	-0320	00	0	01503		ANA P6	L ERROR ADDRESS
00343	0771	00	0	00003		ARS 3	
00344	0734	00	1	00000		PAX 0,1	
00345	0500	00	0	01414		CLA K2+1	L 40000
00346	-0602	00	1	01575		ORS PR7+7,1	
00347	0500	00	0	01422		CLA K3+2	L +700
00350	-0320	00	0	01503		ANA P6	L ERROR ADDRESS
00351	0771	00	0	00006		ARS 6	
00352	0734	00	1	00000		PAX 0,1	
00353	0500	00	0	01415		CLA K2+2	L 100000
00354	-0602	00	1	01575		ORS PR7+7,1	
00355	0500	00	0	01423		CLA K3+3	L +7000
00356	-0320	00	0	01503		ANA P6	L ERROR ADDRESS

00357	0771	00	0	00011	ARS	9	
00360	0734	00	1	00000	PAX	0,1	
00361	0500	00	0	01416	CLA	K2+3	L 200000
00362	-0602	00	1	01575	ORS	PR7+7,1	
00363	0500	00	0	01424	CLA	K3+4	L +70000
00364	-0320	00	0	01503	ANA	P6	L ERROR ADDRESS
00365	0771	00	0	00014	ARS	12	
00366	0734	00	1	00000	PAX	0,1	
00367	0500	00	0	01417	CLA	K2+4	L 400000
00370	-0602	00	1	01575	ORS	PR7+7,1	
							ADJUST PRINT IMAGE
00371	-0534	00	1	01407	LXD	M+2,1	L +27
00372	0500	00	0	01425	CLA	K4	L +777777017777
00373	0320	00	1	01535	P10AA ANS	PR4+6,1	
00374	2	00002	1	00373	TIX	P10AA,1,2	
00375	0500	00	0	01426	CLA	K5	L ORS PR1+
00376	0601	00	0	00401	STO	P10A	
00377	0534	00	1	01410	LXA	M+3,1	L +10
00400	0500	00	1	01576	CLA	PR7+8,1	
00401	-0602	00	1	01522	P10A ORS	PR1+12,1	
00402	0500	00	0	00401	CLA	P10A	
00403	0402	00	0	01404	SUB	ONE	
00404	0621	00	0	00401	STA	P10A	
00405	2	00001	1	00400	TIX	P10A-1,1,1	
00406	0766	00	0	01361	WPRA		PRINT FIRST LINE
00407	0760	00	0	01363	SPRA	3	DOUBLE SPACE
00410	0760	00	0	01364	SPRA	4	TO GET OCTAL SPACING
00411	0540	00	0	01757	RCHA	CNTL1	
00412	0534	00	1	01410	LXA	M+3,1	L +10
00413	0600	00	1	01576	P11A STZ	PR7+8,1	CLEAR IMAGE
00414	2	00001	1	00413	TIX	P11A,1,1	
00415	0500	00	0	01420	CLA	K3	L +7
00416	-0320	00	0	01504	ANA	P7	L ERROR EXIT
00417	0734	00	1	00000	PAX	0,1	
00420	0500	00	0	01413	CLA	K2	L 20000
00421	-0602	00	1	01575	ORS	PR7+7,1	
00422	0500	00	0	01421	CLA	K3+1	L +70
00423	-0320	00	0	01504	ANA	P7	L ERROR EXIT
00424	0771	00	0	00003	ARS	3	
00425	0734	00	1	00000	PAX	0,1	
00426	0500	00	0	01414	CLA	K2+1	L 40000
00427	-0602	00	1	01575	ORS	PR7+7,1	
00430	0500	00	0	01422	CLA	K3+2	L +700
00431	-0320	00	0	01504	ANA	P7	L ERROR EXIT
00432	0771	00	0	00006	ARS	6	
00433	0734	00	1	00000	PAX	0,1	
00434	0500	00	0	01415	CLA	K2+2	L 100000
00435	-0602	00	1	01575	ORS	PR7+7,1	

00436	0500	00	0	01423	CLA K3+3	L +7000
00437	-0320	00	0	01504	ANA P7	L ERROR EXIT
00440	0771	00	0	00011	ARS 9	
00441	0734	00	1	00000	PAX 0,1	
00442	0500	00	0	01416	CLA K2+3	L 200000
00443	-0602	00	1	01575	ORS PR7+7,1	
00444	0500	00	0	01424	CLA K3+4	L +70000
00445	-0320	00	0	01504	ANA P7	L ERROR EXIT
00446	0771	00	0	00014	ARS 12	
00447	0734	00	1	00000	PAX 0,1	
00450	0500	00	0	01417	CLA K2+4	L 400000
00451	-0602	00	1	01575	ORS PR7+7,1	
ADJUST PRINT IMAGE						
00452	-0534	00	1	01407	LXD M+2,1	L +27
00453	0500	00	0	01425	CLA K4	L +777777017777
00454	0320	00	1	01565	P11AA ANS PR5+6,1	
00455	2 00002	1	1	00454	TIX P11AA,1,2	
00456	0500	00	0	01427	CLA K5+1	L ORS PR2+12,1
00457	0601	00	0	00462	STO P11B	
00460	0534	00	1	01410	LXA M+3,1	L +10
00461	0500	00	1	01576	CLA PR7+8,1	
00462	-0602	00	1	01552	P11B ORS PR2+12,1	
00463	0500	00	0	00462	CLA P11B	
00464	0402	00	0	01404	SUB ONE	
00465	0621	00	0	00462	STA P11B	
00466	2 00001	1	1	00461	TIX P11B-1,1,1	
00467	0766	00	0	01361	WPRA	PRINT SECOND LINE
00470	0760	00	0	01364	SPRA 4	TO GET OCTAL SPACING
00471	0540	00	0	01760	RCHA CNTL2	
00472	0534	00	1	01410	LXA M+3,1	L +10
00473	0600	00	1	01576	PP STZ PR7+8,1	CLEAR IMAGE
00474	2 00001	1	1	00473	TIX PP,1,1	
00475	0500	00	0	01420	CLA K3	L +7
00476	-0320	00	0	01374	ANA ADR	L BEAT ADDRESS
00477	0734	00	1	00000	PAX 0,1	
00500	0500	00	0	01413	CLA K2	L 20000
00501	-0602	00	1	01575	ORS PR7+7,1	
00502	0500	00	0	01421	CLA K3+1	L +70
00503	-0320	00	0	01374	ANA ADR	L BEAT ADDRESS
00504	0771	00	0	00003	ARS 3	
00505	0734	00	1	00000	PAX 0,1	
00506	0500	00	0	01414	CLA K2+1	L 40000
00507	-0602	00	1	01575	ORS PR7+7,1	
00510	0500	00	0	01422	CLA K3+2	L +700
00511	-0320	00	0	01374	ANA ADR	L BEAT ADDRESS
00512	0771	00	0	00006	ARS 6	
00513	0734	00	1	00000	PAX 0,1	
00514	0500	00	0	01415	CLA K2+2	L 100000
00515	-0602	00	1	01575	ORS PR7+7,1	

00516	0500	00	0	01423		CLA K3+3	L +7000
00517	-0320	00	0	01374		ANA ADR	L BEAT ADDRESS
00520	0771	00	0	00011		ARS 9	
00521	0734	00	1	00000		PAX 0,1	
00522	0500	00	0	01416		CLA K2+3	L 200000
00523	-0501	00	1	01575		ORA PR7+7,1	
00524	0500	00	0	01424		CLA K3+4	L +70000
00525	-0320	00	0	01374		ANA ADR	L BEAT ADDRESS
00526	0771	00	0	00014		ARS 12	
00527	0734	00	1	00000		PAX 0,1	
00530	0500	00	0	01417		CLA K2+4	L 400000
00531	-0501	00	1	01575		ORA PR7+7,1	
00532	-0534	00	1	01407		LXD M+2,1	ADJUST PRINT IMAGE L +27
00533	0500	00	0	01425		CLA K4	L +777777017777
00534	0320	00	1	01625	PP1	ANS PR6+6,1	
00535	2 00002	1	00534			TIX PP1,1,2	
00536	0500	00	0	01430		CLA K5+2	L ORS PR8+12,1
00537	0601	00	0	00542		STO PP1B	
00540	0534	00	1	01410		LXA M+3,1	L +10
00541	0500	00	1	01576		CLA PR7+8,1	
00542	-0602	00	1	01612	PP1B	ORS PR8+12,1	
00543	0500	00	0	00542		CLA PP1B	
00544	0402	00	0	01404		SUB ONE	
00545	0621	00	0	00542		STA PP1B	
00546	2 00001	1	00541			TIX PP1B-1,1,1	
00547	0766	00	0	01361		WPRA	PRINT THIRD LINE
00550	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
00551	0540	00	0	01761		RCHA CNTL3	
00552	-0500	00	0	01657		CAL PR11+1	L 777777777377
00553	0320	00	0	01640		ANS PR10+10	
00554	0320	00	0	01642		ANS PR10+12	RESET PRINT IMAGE
00555	0320	00	0	01644		ANS PR10+14	
00556	0320	00	0	01646		ANS PR10+16	
00557	-0500	00	0	01665		CAL PR12+5	L 757673777576
00560	-0534	00	1	01410		LXD M+3,1	L 20
00561	0320	00	1	01651	P12A	ANS PR10+19,1	RESET PRINT IMAGE
00562	2 00002	1	00561			TIX P12A,1,2	
00563	0500	00	0	01442		CLA K10	L +77777
00564	-0320	00	0	01503		ANA P6	ERROR ADDRESS
00565	0601	00	0	01441		STO K10-1	SAVE ADDRESS
00566	0340	00	0	01452		CAS K10+8	L +40000
00567	0020	00	0	01001		TRA Y3	3RD OR 4TH QUADRANT
00570	0020	00	0	01001		TRA Y3	1ST OR 2ND QUADRANT

00571	0340	00	0	01456		CAS K10+12	L +20000
00572	0020	00	0	00575		TRA Y1	1ST 4 COLUMNS
00573	0020	00	0	00575		TRA Y1	
00574	0020	00	0	00607		TRA Y112	LAST COLUMNS Y1 OR Y2
00575	0340	00	0	01453	Y1	CAS K10+9	L +34000
00576	0020	00	0	00621		TRA R1A	COLUMN 1
00577	0020	00	0	00621		TRA R1A	
00600	0340	00	0	01454		CAS K10+10	L +30000
00601	0020	00	0	00626		TRA R2A	COLUMN 2
00602	0020	00	0	00626		TRA R2A	
00603	0340	00	0	01455		CAS K10+11	L +24000
00604	0020	00	0	00633		TRA R3A	COLUMN 3
00605	0020	00	0	00633		TRA R3A	
00606	0020	00	0	00640		TRA R4A	COLUMN 4
00607	0340	00	0	01457	Y112	CAS K10+13	L +14000
00610	0020	00	0	00645		TRA R5A	COLUMN 5
00611	0020	00	0	00645		TRA R5A	
00612	0340	00	0	01460		CAS K10+14	L +10000
00613	0020	00	0	00652		TRA R6A	COLUMN 6
00614	0020	00	0	00652		TRA R6A	
00615	0340	00	0	01461		CAS K10+15	L +4000
00616	0020	00	0	00657		TRA R7A	COLUMN 7
00617	0020	00	0	00657		TRA R7A	
00620	0020	00	0	00664		TRA R8A	COLUMN 8
00621	0500	00	0	01661	R1A	CLA PR12+1	
00622	-0602	00	0	01647		ORS PR10+17	COL 1 Y MATRIX
00623	0500	00	0	01441		CLA K10-1	
00624	0402	00	0	01453		SUB K10+9	L 34000
00625	0020	00	0	00667		TRA R9	
00626	0500	00	0	01661	R2A	CLA PR12+1	
00627	-0602	00	0	01645		ORS PR10+15	COL 2 Y MATRIX
00630	0500	00	0	01441		CLA K10-1	
00631	0402	00	0	01454		SUB K10+10	L 30000
00632	0020	00	0	00667		TRA R9	
00633	0500	00	0	01661	R3A	CLA PR12+1	
00634	-0602	00	0	01643		ORS PR10+13	COL 3 Y MATRIX
00635	0500	00	0	01441		CLA K10-1	
00636	0402	00	0	01455		SUB K10+11	L 24000
00637	0020	00	0	00667		TRA R9	
00640	0500	00	0	01661	R4A	CLA PR12+1	
00641	-0602	00	0	01641		ORS PR10+11	COL 4 Y MATRIX
00642	0500	00	0	01441		CLA K10-1	
00643	0402	00	0	01456		SUB K10+12	L 20000
00644	0020	00	0	00667		TRA R9	
00645	0500	00	0	01661	R5A	CLA PR12+1	
00646	-0602	00	0	01637		ORS PR10+9	COL 5 Y MATRIX
00647	0500	00	0	01441		CLA K10-1	
00650	0402	00	0	01457		SUB K10+13	L 14000
00651	0020	00	0	00667		TRA R9	



00652	0500	00	0	01661	R6A	CLA PR12+1	
00653	-0602	00	0	01635		ORS PR10+7	COL 6 Y MATRIX
00654	0500	00	0	01441		CLA K10-1	
00655	0402	00	0	01460		SUB K10+14	L 10000
00656	0020	00	0	00667		TRA R9	
00657	0500	00	0	01661	R7A	CLA PR12+1	
00660	-0602	00	0	01633		ORS PR10+5	COL 7 Y MATRIX
00661	0500	00	0	01441		CLA K10-1	
00662	0402	00	0	01461		SUB K10+15	L 4000
00663	0020	00	0	00667		TRA R9	
00664	0500	00	0	01661	R8A	CLA PR12+1	
00665	-0602	00	0	01631		ORS PR10+3	COL 8 Y MATRIX
00666	0500	00	0	01441		CLA K10-1	
00667	0601	00	0	01440	R9	STO K10-2	
00670	0340	00	0	01462		CAS K10+16	L 2000
00671	0020	00	0	00677		TRA R10	
00672	0020	00	0	00677		TRA R10	
00673	0500	00	0	01656		CLA PR11	
00674	-0602	00	0	01646		ORS PR10+16	Y1 MATRIX
00675	0500	00	0	01440		CLA K10-2	
00676	0020	00	0	00703		TRA R13A	
00677	0500	00	0	01656	R10	CLA PR11	
00700	-0602	00	0	01644		ORS PR10+14	Y2 MATRIX
00701	0500	00	0	01440		CLA K10-2	
00702	0402	00	0	01462		SUB K10+16	L 2000
00703	0340	00	0	01466	R13A	CAS K11+3	L 1000
00704	0020	00	0	00720		TRA R14A	1ST FOUR ROWS
00705	0020	00	0	00720		TRA R14A	
00706	0340	00	0	01467		CAS K11+4	L 600
00707	0020	00	0	00732		TRA R15A	ROW 5
00710	0020	00	0	00732		TRA R15A	
00711	0340	00	0	01470		CAS K11+5	L 400
00712	0020	00	0	00737		TRA R16A	ROW 6
00713	0020	00	0	00737		TRA R16A	
00714	0340	00	0	01471		CAS K11+6	L 200
00715	0020	00	0	00744		TRA R17A	ROW 7
00716	0020	00	0	00744		TRA R17A	
00717	0020	00	0	00751		TRA R18A	ROW 8
00720	0340	00	0	01463	R14A	CAS K11	L 1600
00721	0020	00	0	00755		TRA R19A	ROW 1
00722	0020	00	0	00755		TRA R19A	
00723	0340	00	0	01464		CAS K11+1	L 1400
00724	0020	00	0	00762		TRA R20A	ROW 2
00725	0020	00	0	00762		TRA R20A	
00726	0340	00	0	01465		CAS K11+2	L 1200
00727	0020	00	0	00767		TRA R21A	ROW 3
00730	0020	00	0	00767		TRA R21A	
00731	0020	00	0	00774		TRA R22A	ROW 4

00732	0500	00	0	01660	R15A	CLA PR12	
00733	-0602	00	0	01637		ORS PR10+9	ROW 5 Y MATRIX
00734	0500	00	0	01440		CLA K10-2	
00735	0402	00	0	01467		SUB K11+4	L 600
00736	0020	00	0	01212		TRA R23	
00737	0500	00	0	01660	R16A	CLA PR12	
00740	-0602	00	0	01635		ORS PR10+7	ROW 6 Y MATRIX
00741	0500	00	0	01440		CLA K10-2	
00742	0402	00	0	01470		SUB K11+5	L 400
00743	0020	00	0	01212		TRA R23	
00744	0500	00	0	01660	R17A	CLA PR12	
00745	-0602	00	0	01633		ORS PR10+5	ROW 7 Y MATRIX
00746	0500	00	0	01440		CLA K10-2	
00747	0402	00	0	01471		SUB K11+6	L 200
00750	0020	00	0	01212		TRA R23	
00751	0500	00	0	01660	R18A	CLA PR12	
00752	-0602	00	0	01631		ORS PR10+3	ROW 8 Y MATRIX
00753	0500	00	0	01440		CLA K10-2	
00754	0020	00	0	01212		TRA R23	
00755	0500	00	0	01660	R19A	CLA PR12	
00756	-0602	00	0	01647		ORS PR10+17	ROW 1 Y MATRIX
00757	0500	00	0	01440		CLA K10-2	
00760	0402	00	0	01463		SUB K11	L 1600
00761	0020	00	0	01212		TRA R23	
00762	0500	00	0	01660	R20A	CLA PR12	
00763	-0602	00	0	01645		ORS PR10+15	ROW 2 Y MATRIX
00764	0500	00	0	01440		CLA K10-2	
00765	0402	00	0	01464		SUB K11+1	L 1400
00766	0020	00	0	01212		TRA R23	
00767	0500	00	0	01660	R21A	CLA PR12	
00770	-0602	00	0	01643		ORS PR10+13	ROW 3 Y MATRIX
00771	0500	00	0	01440		CLA K10-2	
00772	0402	00	0	01465		SUB K11+2	L 1200
00773	0020	00	0	01212		TRA R23	
00774	0500	00	0	01660	R22A	CLA PR12	
00775	-0602	00	0	01641		ORS PR10+11	ROW 4 Y MATRIX
00776	0500	00	0	01440		CLA K10-2	
00777	0402	00	0	01466		SUB K11+3	L 1200
01000	0020	00	0	01212		TRA R23	
01001	0340	00	0	01446	Y3	CAS K10+4	L +60000
01002	0020	00	0	01005		TRA Y3+4	Y3 OR Y4 1ST 4 COLUMNS
01003	0020	00	0	01005		TRA Y3+4	
01004	0020	00	0	01017		TRA Y312	Y3 OR Y4 LAST 4 COLUMNS
							Y3 OR Y4
01005	0340	00	0	01443		CAS K10+1	L +74000
01006	0020	00	0	01031		TRA R1B	COLUMN 1
01007	0020	00	0	01031		TRA R1B	
01010	0340	00	0	01444		CAS K10+2	L +70000

01011	0020	00	0	01036		TRA R2B	COLUMN 2
01012	0020	00	0	01036		TRA R2B	
01013	0340	00	0	01445		CAS K10+3	L +64000
01014	0020	00	0	01043		TRA R3B	COLUMN 3
01015	0020	00	0	01043		TRA R3B	
01016	0020	00	0	01050		TRA R4B	COLUMN 4
01017	0340	00	0	01447	Y312	CAS K10+5	L +54000
01020	0020	00	0	01055		TRA R5B	COLUMN 5
01021	0020	00	0	01055		TRA R5B	
01022	0340	00	0	01450		CAS K10+6	L +50000
01023	0020	00	0	01062		TRA R6B	COLUMN 6
01024	0020	00	0	01062		TRA R6B	
01025	0340	00	0	01451		CAS K10+7	L +44000
01026	0020	00	0	01067		TRA R7B	COLUMN 7
01027	0020	00	0	01067		TRA R7B	
01030	0020	00	0	01074		TRA R8B	COLUMN 8
01031	0500	00	0	01661	R1B	CLA PR12+1	
01032	-0602	00	0	01647		ORS PR10+17	COL 1 Y MATRIX
01033	0500	00	0	01441		CLA K10-1	
01034	0402	00	0	01443		SUB K10+1	L 74000
01035	0020	00	0	01101		TRA R11	
01036	0500	00	0	01661	R2B	CLA PR12+1	
01037	-0602	00	0	01645		ORS PR10+15	COL 2 Y MATRIX
01040	0500	00	0	01441		CLA K10-1	
01041	0402	00	0	01444		SUB K10+2	L 70000
01042	0020	00	0	01101		TRA R11	
01043	0500	00	0	01661	R3B	CLA PR12+1	
01044	-0602	00	0	01643		ORS PR10+13	COL 3 Y MATRIX
01045	0500	00	0	01441		CLA K10-1	
01046	0402	00	0	01445		SUB K10+3	L 64000
01047	0020	00	0	01101		TRA R11	
01050	0500	00	0	01661	R4B	CLA PR12+1	
01051	-0602	00	0	01641		ORS PR10+11	COL 4 Y MATRIX
01052	0500	00	0	01441		CLA K10-1	
01053	0402	00	0	01446		SUB K10+4	L 60000
01054	0020	00	0	01101		TRA R11	
01055	0500	00	0	01661	R5B	CLA PR12+1	
01056	-0602	00	0	01637		ORS PR10+9	COL 5 Y MATRIX
01057	0500	00	0	01441		CLA K10-1	
01060	0402	00	0	01447		SUB K10+5	L 54000
01061	0020	00	0	01101		TRA R11	
01062	0500	00	0	01661	R6B	CLA PR12+1	
01063	-0602	00	0	01635		ORS PR10+7	COL 6 Y MATRIX
01064	0500	00	0	01441		CLA K10-1	
01065	0402	00	0	01450		SUB K10+6	L 50000
01066	0020	00	0	01101		TRA R11	
01067	0500	00	0	01661	R7B	CLA PR12+1	
01070	-0602	00	0	01633		ORS PR10+5	COL 7 Y MATRIX

01071	0500	00	0	01441		CLA K10-1	
01072	0402	00	0	01451		SUB K10+7	L 44000
01073	0020	00	0	01101		TRA R11	
01074	0500	00	0	01661	R8B	CLA PR12+1	
01075	-0602	00	0	01631		ORS PR10+3	COL 8 Y MATRIX
01076	0500	00	0	01441		CLA K10-1	
01077	0402	00	0	01452		SUB K10+8	L 40000
01100	0020	00	0	01101		TRA R11	
01101	0601	00	0	01440	R11	STO K10-2	
01102	0340	00	0	01462		CAS K10+16	L 2000
01103	0020	00	0	01111		TRA R12	
01104	0020	00	0	01111		TRA R12	
01105	0500	00	0	01656		CLA PR11	
01106	-0602	00	0	01642		ORS PR10+12	Y3 MATRIX
01107	0500	00	0	01440		CLA K10-2	
01110	0020	00	0	01115		TRA R13B	
01111	0500	00	0	01656	R12	CLA PR11	
01112	-0602	00	0	01640		ORS PR10+10	Y4 MATRIX
01113	0500	00	0	01440		CLA K10-2	
01114	0402	00	0	01462		SUB K10+16	L 2000
01115	0340	00	0	01466	R13B	CAS K11+3	L 1000
01116	0020	00	0	01132		TRA R14B	LAST FOUR ROWS
01117	0020	00	0	01132		TRA R14B	
01120	0340	00	0	01467		CAS K11+4	L 600
01121	0020	00	0	01144		TRA R15B	ROW 4
01122	0020	00	0	01144		TRA R15B	
01123	0340	00	0	01470		CAS K11+5	L 400
01124	0020	00	0	01151		TRA R16B	ROW 3
01125	0020	00	0	01151		TRA R16B	
01126	0340	00	0	01471		CAS K11+6	L 200
01127	0020	00	0	01156		TRA R17B	ROW 2
01130	0020	00	0	01156		TRA R17B	
01131	0020	00	0	01163		TRA R18B	ROW 1
01132	0340	00	0	01463	R14B	CAS K11	L 1600
01133	0020	00	0	01167		TRA R19B	ROW 8
01134	0020	00	0	01167		TRA R19B	
01135	0340	00	0	01464		CAS K11+1	L 1400
01136	0020	00	0	01174		TRA R20B	ROW 7
01137	0020	00	0	01174		TRA R20B	
01140	0340	00	0	01465		CAS K11+2	L 1200
01141	0020	00	0	01201		TRA R21B	ROW 6
01142	0020	00	0	01201		TRA R21B	
01143	0020	00	0	01206		TRA R22B	ROW 5
01144	0500	00	0	01660	R15B	CLA PR12	
01145	-0602	00	0	01641		ORS PR10+11	ROW 4 Y MATRIX
01146	0500	00	0	01440		CLA K10-2	
01147	0402	00	0	01467		SUB K11+4	L 600
01150	0020	00	0	01212		TRA R23	
01151	0500	00	0	01660	R16B	CLA PR12	

01152	-0602	00	0	01643	ORS PR10+13	ROW 3 Y MATRIX
01153	0500	00	0	01440	CLA K10-2	
01154	0402	00	0	01470	SUB K11+5	L 400
01155	0020	00	0	01212	TRA R23	
01156	0500	00	0	01660	R17B CLA PR12	
01157	-0602	00	0	01645	ORS PR10+15	ROW 2 Y MATRIX
01160	0500	00	0	01440	CLA K10-2	
01161	0402	00	0	01471	SUB K11+6	L 200
01162	0020	00	0	01212	TRA R23	
01163	0500	00	0	01660	R18B CLA PR12	
01164	-0602	00	0	01647	ORS PR10+17	ROW 1 Y MATRIX
01165	0500	00	0	01440	CLA K10-2	
01166	0020	00	0	01212	TRA R23	
01167	0500	00	0	01660	R19B CLA PR12	
01170	-0602	00	0	01631	ORS PR10+3	ROW 8 Y MATRIX
01171	0500	00	0	01440	CLA K10-2	
01172	0402	00	0	01463	SUB K11	L 1600
01173	0020	00	0	01212	TRA R23	
01174	0500	00	0	01660	R20B CLA PR12	
01175	-0602	00	0	01633	ORS PR10+5	ROW 7 Y MATRIX
01176	0500	00	0	01440	CLA K10-2	
01177	0402	00	0	01464	SUB K11+1	L 1400
01200	0020	00	0	01212	TRA R23	
01201	0500	00	0	01660	R21B CLA PR12	
01202	-0602	00	0	01635	ORS PR10+7	ROW 6 Y MATRIX
01203	0500	00	0	01440	CLA K10-2	
01204	0402	00	0	01465	SUB K11+2	L 1200
01205	0020	00	0	01212	TRA R23	
01206	0500	00	0	01660	R22B CLA PR12	
01207	-0602	00	0	01637	ORS PR10+9	ROW 5 Y MATRIX
01210	0500	00	0	01440	CLA K10-2	
01211	0402	00	0	01466	SUB K11+3	L 1200
01212	0601	00	0	01440	R23 STO K10-2	
01213	-0320	00	0	01472	ANA K11+7	L7
01214	0340	00	0	01473	CAS K11+8	L4
01215	0020	00	0	01240	TRA R24D	1ST 4 COLUMNS
01216	0020	00	0	01240	TRA R24D	
01217	-0100	00	0	01223	TNZ R24A	
01220	0500	00	0	01664	CLA PR12+4	
01221	-0602	00	0	01631	ORS PR10+3	COLUMN 8 X MATRIX
01222	0020	00	0	01261	TRA R25	
01223	0402	00	0	01474	R24A SUB K11+9	L1
01224	-0100	00	0	01230	TNZ R24B	
01225	0500	00	0	01664	CLA PR12+4	
01226	-0602	00	0	01633	ORS PR10+5	COLUMN 7 X MATRIX
01227	0020	00	0	01261	TRA R25	
01230	0402	00	0	01474	R24B SUB K11+9	L1

01231	-0100	00	0	01235		TNZ R24C	
01232	0500	00	0	01664		CLA PR12+4	
01233	-0602	00	0	01635		ORS PR10+7	COLUMN 6 X MATRIX
01234	0020	00	0	01261		TRA R25	
01235	0500	00	0	01664	R24C	CLA PR12+4	
01236	-0602	00	0	01637		ORS PR10+9	COLUMN 5 X MATRIX
01237	0020	00	0	01261		TRA R25	
01240	0402	00	0	01473	R24D	SUB K11+8	L4
01241	-0100	00	0	01245		TNZ R24E	
01242	0500	00	0	01664		CLA PR12+4	
01243	-0602	00	0	01641		ORS PR10+11	COLUMN 4 X MATRIX
01244	0020	00	0	01261		TRA R25	
01245	0402	00	0	01474	R24E	SUB K11+9	L1
01246	-0100	00	0	01252		TNZ R24F	
01247	0500	00	0	01664		CLA PR12+4	
01250	-0602	00	0	01643		ORS PR10+13	COLUMN 3 X MATRIX
01251	0020	00	0	01261		TRA R25	
01252	0402	00	0	01474	R24F	SUB K11+9	L1
01253	-0100	00	0	01257		TNZ R24G	
01254	0500	00	0	01664		CLA PR12+4	
01255	-0602	00	0	01645		ORS PR10+15	COLUMN 2 X MATRIX
01256	0020	00	0	01261		TRA R25	
01257	0500	00	0	01664	R24G	CLA PR12+4	
01260	-0602	00	0	01647		ORS PR10+17	COLUMN 1 X MATRIX
01261	0500	00	0	01440	R25	CLA K10-2	
01262	-0320	00	0	01475		ANA K11+10	L 770
01263	0601	00	0	01440		STO K10-2	TEMP STORAGE
01264	0340	00	0	01476		CAS K11+11	L 100
01265	0020	00	0	01272		TRA R26	X2 MATRIX
01266	0020	00	0	01272		TRA R26	
01267	0500	00	0	01662		CLA PR12+2	
01270	-0602	00	0	01647		ORS PR10+17	X 1 MATRIX
01271	0020	00	0	01314		TRA R27	
01272	0500	00	0	01662	R26	CLA PR12+2	
01273	-0602	00	0	01645		ORS PR10+15	X 2 MATRIX
01274	0500	00	0	01440		CLA K10-2	
01275	0402	00	0	01476		SUB K11+11	L 100
01276	0100	00	0	01357		TZE R27G	ROW 1 X2 MATRIX
01277	0402	00	0	01477		SUB K11+12	L 10
01300	0100	00	0	01354		TZE R27F+2	ROW 2 X2
01301	0402	00	0	01477		SUB K11+12	
01302	0100	00	0	01347		TZE R27E+2	ROW 3 X2
01303	0402	00	0	01477		SUB K11+12	
01304	0100	00	0	01342		TZE R27D+2	ROW 4 X2
01305	0402	00	0	01477		SUB K11+12	
01306	0100	00	0	01335		TZE R27C+2	ROW 5 X2
01307	0402	00	0	01477		SUB K11+12	
01310	0100	00	0	01330		TZE R27B+2	ROW 6 X2
01311	0402	00	0	01477		SUB K11+12	

01312	0100	00	0	01323		TZE R27A+2	ROW 7 X2
01313	0020	00	0	01316		TRA R27+2	TOW 8 X2
01314	0500	00	0	01440	R27	CLA K10-2	
01315	-0100	00	0	01321		TNZ R27A	
01316	0500	00	0	01663		CLA PR12+3	
01317	-0602	00	0	01631		ORS PR10+3	ROW 8 X MATRIX
01320	0020	00	0	01361		TRA R28	
01321	0402	00	0	01477	R27A	SUB K11+12	L 10
01322	-0100	00	0	01326		TNZ R27B	
01323	0500	00	0	01663		CLA PR12+3	
01324	-0602	00	0	01633		ORS PR10+5	ROW 7 X MATRIX
01325	0020	00	0	01361		TRA R28	
01326	0402	00	0	01477	R27B	SUB K11+12	L 10
01327	-0100	00	0	01333		TNZ R27C	
01330	0500	00	0	01663		CLA PR12+3	
01331	-0602	00	0	01635		ORS PR10+7	ROW 6 X MATRIX
01332	0020	00	0	01361		TRA R28	
01333	0402	00	0	01477	R27C	SUB K11+12	L 10
01334	-0100	00	0	01340		TNZ R27D	
01335	0500	00	0	01663		CLA PR12+3	
01336	-0602	00	0	01637		ORS PR10+9	ROW 5 X MATRIX
01337	0020	00	0	01361		TRA R28	
01340	0402	00	0	01477	R27D	SUB K11+12	L 10
01341	-0100	00	0	01345		TNZ R27E	
01342	0500	00	0	01663		CLA PR12+3	
01343	-0602	00	0	01641		ORS PR10+11	ROW 4 X MATRIX
01344	0020	00	0	01361		TRA R28	
01345	0402	00	0	01477	R27E	SUB K11+12	L 10
01346	-0100	00	0	01352		TNZ R27F	
01347	0500	00	0	01663		CLA PR12+3	
01350	-0602	00	0	01643		ORS PR10+13	ROW 3 X MATRIX
01351	0020	00	0	01361		TRA R28	
01352	0402	00	0	01477	R27F	SUB K11+12	L 10
01353	-0100	00	0	01357		TNZ R27G	
01354	0500	00	0	01663		CLA PR12+3	
01355	-0602	00	0	01645		ORS PR10+15	ROW 7 X MATRIX
01356	0020	00	0	01361		TRA R28	
01357	0500	00	0	01663	R27G	CLA PR12+3	
01360	-0602	00	0	01647		ORS PR10+17	ROW 1 X MATRIX
01361	0766	00	0	01361	R28	WPRA	
01362	0540	00	0	01762		RCHA CNTL4	PRINT FOURTH LINE
01363	0500	00	0	01503		CLA P6	RETURN TO PROGRAM
01364	0560	00	0	01505		LDQ QUOT	
01365	-0534	00	1	01400		LXD SAVE,1	RESTORE INDEX COUNT
01366	0020	00	0	00000	P13	TRA	TO PROGRAM WHERE ERROR OCCURRED

CONSTANTS

01367	+0000000000001	K6	OCT 1	NUMBER OF ROTATIONS
01370	+0000000000000	TEST1	OCT 0	FILL MEMORY
01371	-3777777777777	TEST2	OCT 7777777777777	BEAT WORD
01372	+0000000000000	LOW	OCT	2000 IS THE MIN VALUE THAT CAN BE USED
01373	+0000000000000	HIGH	OCT	77777 IS THE MAX VALUE THAT CAN BE USED
01374	+0000000777777	ADR	OCT 77777	
01375	+0000000000000	BEAT	OCT	BEAT PATTERN
01376	+0000000000000	FILL	OCT	FILL MEMORY WITH THIS WORD
01377	+0000000000000	COUNT	OCT	ROTATION COUNT IN DEC
01400	+0000000000000	SAVE	OCT	INDEX STORAGE
01401	+0000000000000	T1	OCT 0	ADDRESS STORAGE
01402	+0000000000000	T2	OCT 0	TEMPORARY STORAGE
01403	+0000000000000	ZERO	OCT 0	
01404	+0000000000001	ONE	OCT 1	
01405	+000004001777	M	OCT 00004001777	
01406	+000003000007		OCT 00003000007	
01407	+000027000030		OCT 27000030	
01410	+000020000010		OCT 000020000010	
01411	+000000002000	K1	OCT 2000	
01412	+000007000000		OCT 7000000	
01413	+000000020000	K2	OCT 20000	
01414	+000000040000		OCT 40000	
01415	+000000100000		OCT 100000	
01416	+000000200000		OCT 200000	
01417	+000000400000		OCT 400000	
01420	+000000000007	K3	OCT 7	
01421	+000000000070		OCT 70	
01422	+000000000700		OCT 700	
01423	+000000007000		OCT 7000	
01424	+000000070000		OCT 70000	
01425	-377777017777	K4	OCT 777777017777	
01426	-0602 00 1 01522	K5	ORS PR1+12,1	
01427	-0602 00 1 01552		ORS PR2+12,1	
01430	-0602 00 1 01612		ORS PR8+12,1	
01431	0000 00 0 01665	K9	HTR PR12+5	
01432	0000 00 0 00061	K9A	HTR C6+11	
01433	0000 00 0 00121		HTR C7B+4	
01434	0000 00 0 00157		HTR C9A+4	
01435	0000 00 0 00201		HTR C10A	



01436	0020 00 0 00127		TRA	C7C	
01437	0020 00 0 00165		TRA	C9B	
01440	+0000000000000		OCT	0	TEMP STG.
01441	+0000000000000		OCT	0	ERROR ADDRESS
01442	+000000077777	K10	OCT	77777	
01443	+000000074000		OCT	74000	
01444	+000000070000		OCT	70000	
01445	+000000064000		OCT	64000	
01446	+000000060000		OCT	60000	
01447	+000000054000		OCT	54000	
01450	+000000050000		OCT	50000	
01451	+000000044000		OCT	44000	
01452	+000000040000		OCT	40000	
01453	+000000034000		OCT	34000	
01454	+000000030000		OCT	30000	
01455	+000000024000		OCT	24000	
01456	+000000020000		OCT	20000	
01457	+000000014000		OCT	14000	
01460	+000000010000		OCT	10000	
01461	+000000004000		OCT	4000	
01462	+000000002000		OCT	2000	
01463	+000000001600	K11	OCT	1600	
01464	+000000001400		OCT	1400	
01465	+000000001200		OCT	1200	
01466	+000000001000		OCT	1000	
01467	+000000000600		OCT	600	
01470	+000000000400		OCT	400	
01471	+000000000200		OCT	200	
01472	+000000000007		OCT	7	
01473	+000000000004		OCT	4	
01474	+000000000001		OCT	1	
01475	+0000000000770		OCT	770	
01476	+0000000000100		OCT	100	
01477	+0000000000010		OCT	10	
01500	+0000000000144	K144	OCT	144	
01501	+0000000000310	K310	OCT	310	
01502	+00000000001750	K1750	OCT	1750	
01503	+0000000000000	P6	OCT		ERROR ADDRESS
01504	+0000000000000	P7	OCT		ERROR EXIT
01505	+0000000000000	QUOT	OCT		TEMP STG FOR BEAT PATTERN
					PRINT IMAGE FOR FIRST LINE
01506	+032040001504	PR1	OCT	32040001504	9 ROW LEFT
01507	+0000000000000		OCT		9 ROW RIGHT
01510	+0000000000000		OCT		8
01511	+0000000000000		OCT		
01512	+0000000000000		OCT		7
01513	+0000000000000		OCT		
01514	+0040000000230		OCT	4000000230	6
01515	+0000000000000		OCT		
01516	+040020002000		OCT	40020002000	5

01517	+000000000000		OCT		
01520	+000300000002		OCT	300000002	4
01521	+000000000000		OCT		
01522	+000000000000		OCT		3
01523	+000000000000		OCT		
01524	+000014000000		OCT	14000000	2
01525	+000000000000		OCT		
01526	+000400000000		OCT	400000000	1
01527	+000000000000	PR4	OCT		ERROR WORD
01530	+000014000020		OCT	14000020	0
01531	+000000000000		OCT		COMPLEMENT OF ERROR WORD
01532	+036040001714		OCT	36040001714	11
01533	+000000000000		OCT		
01534	+040720002002		OCT	40720002002	12
01535	+000000000000		OCT		

PRINT IMAGE FOR SECOND  
 LINE

01536	+032100000004	PR2	OCT	32100000004	9
01537	+000000000000		OCT		
01540	+000000000000		OCT		8
01541	+000000000000		OCT		
01542	+000200000000		OCT	200000000	7
01543	+000000000000		OCT		
01544	+004000000030		OCT	4000000030	6
01545	+000000000000		OCT		
01546	+040400000400		OCT	40400000400	5
01547	+000000000000		OCT		
01550	+000000760002		OCT	760002	4
01551	+000000000000		OCT		
01552	+000040001100		OCT	40001100	3
01553	+000000000000		OCT		
01554	+000000000200		OCT	200	2
01555	+000000000000		OCT		
01556	+000000000000		OCT	0	1
01557	+000000000000	PR5	OCT		TEST WORD
01560	+000240001320		OCT	240001320	0
01561	+000000000000		OCT		COMPLEMENT OF TEST WORD
01562	+036000000014		OCT	36000000014	11
01563	+000000000000		OCT		
01564	+040500000402		OCT	40500000402	12
01565	+000000000000		OCT		

ERROR ADDRESSING FORM

01566	+000000000000	PR7	OCT		7
01567	+000000000000		OCT		6
01570	+000000000000		OCT		5
01571	+000000000000		OCT		4
01572	+000000000000		OCT		3
01573	+000000000000		OCT		2
01574	+000000000000		OCT		1
01575	+000000000000		OCT		0

PRINT IMAGE FOR 3RD LINE

01576	+000040000004	PR8	OCT	40000004	9
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01577	+000000000000	OCT		
01600	+000000000000	OCT		8
01601	+000000000000	OCT		
01602	+000000200000	OCT	200000	7
01603	+000000000000	OCT	0	
01604	+000000000030	OCT	30	6
01605	+000000000000	OCT	0	
01606	+020020000400	OCT	20020000400	5
01607	+000000000000	OCT	0	
01610	+000300040002	OCT	300040002	4
01611	+000000000000	OCT	0	
01612	+004000000100	OCT	4000000100	3
01613	+000000000000	OCT	0	
01614	+040014521000	OCT	40014521000	2
01615	+000000000000	OCT		
01616	+010400000200	OCT	10400000200	1
01617	+000000000000	PR6	OCT	BEAT WORD
01620	+004014000120	OCT	4014000120	0
01621	+000000000000	OCT		COMPLEMENT OF BEAT WORD
01622	+000040000014	OCT	40000014	11
01623	+000000000000	OCT	0	
01624	+070720001602	OCT	70720001602	12
01625	+000000000000	OCT	0	

PRINT IMAGE FOR 4TH LINE

01626	+010010040014	PR10	OCT	10010040014	9L
01627	-000000144000		OCT	400000144000	9R
01630	+000001001000		OCT	1001000	8
01631	+010000000100		OCT	10000000100	
01632	+000000000002		OCT	2	7
01633	+000010020000		OCT	10020000	
01634	+204620100000		OCT	204620100000	6
01635	+301000003010		OCT	301000003010	
01636	+002000020000		OCT	2000020000	5
01637	+000000000001		OCT	1	
01640	+000000000100		OCT	100	4
01641	+000001000000		OCT	1000000	
01642	-120006200020		OCT	520006200020	3
01643	+012400200324		OCT	12400200324	
01644	+000040010400		OCT	40010400	2
01645	+000100000000		OCT	100000000	
01646	+040000000040		OCT	40000000040	1
01647	+020004400000		OCT	20004400000	
01650	+020064011022		OCT	20064011022	0
01651	+110010221100		OCT	110010221100	
01652	-206400144110		OCT	606400144110	11
01653	-201441106014		OCT	601441106014	
01654	+150213220044		OCT	150213220044	12
01655	+002000440020		OCT	2000440020	
01656	+000000000400	PR11	OCT	400	Y1, Y2, Y3, OR Y4
01657	-377777777377		OCT	777777777377	
01660	+020000000000	PR12	OCT	20000000000	ROW Y MATRIX
01661	+000100000000		OCT	100000000	COL Y MATRIX
01662	+000004000000		OCT	4000000	X1 OR X2
01663	+000000000200		OCT	200	ROW X MATRIX
01664	+000000000001		OCT	1	COL X MATRIX

01665 -357673777576 OCT 757673777576

01666 0760 00 0 00163 NPER SWT 3  
01667 0020 00 0 01671 TRA \*+2  
01670 0020 00 0 00001 TRA C

01671 0766 00 0 01361 WPRA  
01672 0760 00 0 01363 SPRA 3  
01673 0540 00 0 01675 RCHA \*+2  
01674 0020 00 0 00001 TRA C

01675 0000 30 0 01676 IOCD PNPEN,0,24

\* PRINT - NOW PERFORMING-9S04H-STORAGE TEST  
\* IMAGE - NOW PERFORMING-9S04H-STORAGE TEST  
01676 +000000045040 PNPEN OCT 000000045040 9 ROW LEFT  
01677 +040000000000 OCT 040000000000 9 ROW RIGHT  
01700 +0000000000002 OCT 0000000000002 8 L  
01701 +0000000000000 OCT 0000000000000 8 R  
01702 +000000200200 OCT 000000200200 7 L  
01703 +0100000000000 OCT 0100000000000 7 R  
01704 +000003030000 OCT 000003030000 6 L  
01705 +1000000000000 OCT 1000000000000 6 R  
01706 +000004100400 OCT 000004100400 5 L  
01707 +0044000000000 OCT 0044000000000 5 R  
01710 +000000002004 OCT 000000002004 4 L  
01711 +0000000000000 OCT 0000000000000 4 R  
01712 +0000000000000 OCT 0000000000000 3 L  
01713 +2011000000000 OCT 2011000000000 3 R  
01714 +0000000000020 OCT 0000000000020 2 L  
01715 -0002000000000 OCT 4002000000000 2 R  
01716 +0000000000000 OCT 0000000000000 1 L  
01717 +0200000000000 OCT 0200000000000 1 R  
01720 +000001000030 OCT 000001000030 0 L  
01721 -2013000000000 OCT 6013000000000 0 R  
01722 +000006256501 OCT 000006256501 11 L  
01723 +1400000000000 OCT 1400000000000 11 R  
01724 +000000121202 OCT 000000121202 12 L  
01725 +0344000000000 OCT 0344000000000 12 R

\* PRINT - PASS COMPLETE-9S04H-STORAGE TEST  
\* IMAGE - PASS COMPLETE-9S04H-STORAGE TEST  
01726 +0000000000010 PPER OCT 0000000000010 9 ROW LEFT  
01727 +0100000000000 OCT 0100000000000 9 ROW RIGHT  
01730 +0000000000000 OCT 0000000000000 8 L  
01731 -0000000000000 OCT 4000000000000 8 R  
01732 +000000401000 OCT 000000401000 7 L  
01733 +0020000000000 OCT 0020000000000 7 R  
01734 +000000004000 OCT 000000004000 6 L  
01735 +0200000000000 OCT 0200000000000 6 R  
01736 +000000000240 OCT 000000000240 5 L  
01737 +0011000000000 OCT 0011000000000 5 R  
01740 +000000002001 OCT 000000002001 4 L  
01741 +0000000000000 OCT 0000000000000 4 R  
01742 +000000010500 OCT 000000010500 3 L  
01743 +0402200000000 OCT 0402200000000 3 R

01744	+000000140004	OCT	000000140004	2	L
01745	+100040000000	OCT	100040000000	2	R
01746	+000000200000	OCT	000000200000	1	L
01747	+004000000000	OCT	004000000000	1	R
01750	+000000140106	OCT	000000140106	0	L
01751	+140260000000	OCT	140260000000	0	R
01752	+000000407420	OCT	000000407420	11	L
01753	+230000000000	OCT	230000000000	11	R
01754	+000000210240	OCT	000000210240	12	L
01755	-007100000000	OCT	407100000000	12	R
01756	-1 00003 0 00000	CNTL	MON 0,0,3		
01757	0 00030 0 01506	CNTL1	PZE PR1,0,24	CNTRL	PRINT 1ST LINE
01760	0 00030 0 01536	CNTL2	PZE PR2,0,24	CNTRL	PRINT 2ND LINE
01761	0 00030 0 01576	CNTL3	PZE PR8,0,24	CNTRL	PRINT 3RD LINE
01762	0 00030 0 01626	CNTL4	PZE PR10,0,24	CNTRL	PRINT 4TH LINE
	00000		END		

EOF\*

9S04L  
SECOND HALF OF TEST  
WILL TEST THE LOW END OF  
MEMORY FROM 00000 TO 75777

			76000		ORG	31744			
76000	0020	00	0	77363	TRA	NPER			
76001	0760	00	0	00140	B	SLF		TURN OFF ALL SENSE LIGHTS	
76002	0760	00	0	00141		SLN 1		TURN SENSE LIGHT 1 ON TO INDICATE THAT THE LOW END OF MEMORY IS BEING TESTED	
								FILL MEMORY WITH ZEROS AND BEAT WITH ONES	
76003	0500	00	0	77454		CLA TEST1		L +0	
76004	0601	00	0	77462		STO FILL			
76005	0500	00	0	77455		CLA TEST2		L ONES	
76006	0601	00	0	77461		STO BEAT			
76007	0534	00	1	77515	START	LXA K7,1		L +3	
76010	0500	00	0	77462		CLA FILL			
76011	0601	00	1	76001		STO B,1		LOAD TEST AREA	
76012	2	00001	1	76011		TIX START+2,1,1			
76013	0500	00	0	77467	B1	CLA ZERO			
76014	0601	00	0	77456		STO LOW			
76015	0500	00	0	77516		CLA K8		L+75777	
76016	0601	00	0	77457		STO HIGH			
76017	0500	00	0	77456		CLA LOW		LOWEST POSITION TESTED	
76020	0621	00	0	77460		STA ADR		RESTORE BEAT ADDRESS	
76021	0534	00	1	77453		LXA K6,1		L+1	
76022	-0634	00	1	77463		SXD COUNT,1		SAVE INDEX COUNT	
76023	0560	00	0	77461		LDQ BEAT		L TEST PATTERN	
76024	-0773	00	0	00001	B2	RQL 1			
								SET Y ADDRESS	
76025	0500	00	0	77460	B3	CLA ADR		L BEAT ADDRESS	
76026	-0501	00	0	77551		ORA K11		L+1600	
76027	0621	00	0	76074		STA B7		SAVE ADDRESS	
76030	0534	00	6	77467		LXA ZERO,6			
								SET X ADDRESS	
76031	0500	00	0	77460		CLA ADR		L BEAT ADDRESS	
76032	-0501	00	0	77505		ORA K3+1		L+70	
76033	0621	00	0	76131		STA B8		SAVE ADDRESS	

76034	0760	00	0	00164		SWT 4	TEST SENSE SWITCH 4
76035	0020	00	0	76044		TRA B5	BEAT EACH ADDRESS 500 TIMES
76036	0760	00	0	00165		SWT 5	TEST SENSE SWITCH 5
76037	0020	00	0	76042		TRA B4	BEAT EACH ADDRESS 1000 TIMES
76040	0534	00	1	77570		LXA K1750,1	
76041	0020	00	0	76045		TRA B6	BEAT EACH ADDRESS 5000 TIMES
76042	0534	00	1	77567	B4	LXA K310,1	
76043	0020	00	0	76045		TRA B6	
76044	0534	00	1	77566	B5	LXA K144,1	

BEAT TEST

76045	0500	00	0	77460	B6	CLA ADR	L BEAT ADDRESS
76046	0621	00	0	76054		STA B6+7	
76047	0621	00	0	76066		STA B6A	
76050	0621	00	0	76067		STA B6A+1	
76051	0621	00	0	76070		STA B6A+2	
76052	0621	00	0	76071		STA B6A+3	
76053	0621	00	0	76072		STA B6A+4	
76054	0500	00	0	00000		CLA	L WORD AT BEAT ADDRESS
76055	0340	00	0	77462		CAS FILL	
76056	0020	00	0	76060		TRA B6+11	
76057	0020	00	0	76066		TRA B6A	OK
76060	0760	00	0	00162		SWT 2	TEST SENSE SWITCH 2
76061	0020	00	0	76063		TRA *+2	INDICATE ERROR
76062	0020	00	0	76066		TRA B6A	BY PASS ERROR
76063	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
76064	0020	00	0	76246		TRA P	PRINT ERROR
76065	0000	00	0	76066		HTR B6A	ERROR - THE BEAT ADDRESS WAS NOT CORRECT BEFORE BEATING - ERROR WORD IS IN THE ACCUMULATOR ADDRESS OF WORD IS AT ADR

76066	-0600	00	0	00000	B6A	STQ	BEAT THE ADDRESS
76067	-0600	00	0	00000		STQ	
76070	-0600	00	0	00000		STQ	
76071	-0600	00	0	00000		STQ	
76072	-0600	00	0	00000		STQ	
76073	2 00001	1	1	76066		TIX B6A,1,1	

CHECK Y ADDRESSES

76074	0500	00	2	00000	B7	CLA 0,2	Y ADDRESS BEING CHECKED
76075	0340	00	0	77462		CAS FILL	
76076	0020	00	0	76103		TRA B7A	MAYBE AN ERROR
76077	0020	00	0	76101		TRA B7+5	OK
76100	0020	00	0	76103		TRA B7A	MAYBE AN ERROR
76101	3 01400	2	2	76131		TXH B8,2,768	



76102	1	00200	2	76074		TXI B7,2,128	
76103	0500	00	0	76074	B7A	CLA B7	
76104	0621	00	0	77465		STA T1	TEMPORARY STORAGE
76105	-0754	00	2	00000		PXD 0,2	
76106	0771	00	0	00022		ARS 18	
76107	0402	00	0	77465		SUB T1	
76110	0760	00	0	00003		SSP	
76111	0340	00	0	77460		CAS ADR	L BEAT ADDRESS
76112	0020	00	0	76114		TRA B7B	MAY BE AN ERROR
76113	0020	00	0	76101		TRA B7+5	OK-BEAT ADDRESS
76114	0340	00	0	77515	B7B	CAS K7	L LOWEST LOCATION OF PROG
76115	0020	00	0	76101		TRA B7+5	OK-PROGRAM AREA
76116	0020	00	0	76101		TRA B7+5	OK-PROGRAM AREA
76117	0760	00	0	00162		SWT 2	TEST SENSE SWITCH 2
76120	0020	00	0	76122		TRA *+2	INDICATE ERROR
76121	0020	00	0	76125		TRA B7C	BY PASS ERROR
76122	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
76123	0020	00	0	76255		TRA P1	PRINT ERROR
76124	0000	00	0	76125		HTR B7C	Y ERROR ADR IN ACC BEAT ADDRESS LOCATED AT ADR
76125	0621	00	0	76127	B7C	STA B7C+2	
76126	0500	00	0	77462		CLA FILL	
76127	0601	00	0	00000		STO	REPAIR Y ERROR
76130	0020	00	0	76074		TRA B7	CHECK REPAIR ADDRESS
							CHECK X ADDRESSES
76131	0500	00	4	00000	B8	CLA 0,4	X ADDRESS BEING CHECKED
76132	0340	00	0	77462		CAS FILL	
76133	0020	00	0	76140		TRA B9	MAYBE AN ERROR
76134	0020	00	0	76136		TRA B8+5	OK
76135	0020	00	0	76140		TRA B9	MAYBE AN ERROR
76136	3	00060	4	76166		TXH B10,4,48	
76137	1	00010	4	76131		TXI B8,4,8	
76140	0500	00	0	76131	B9	CLA B8	
76141	0621	00	0	77465		STA T1	
76142	-0754	00	4	00000		PXD 0,4	
76143	0771	00	0	00022		ARS 18	
76144	0402	00	0	77465		SUB T1	
76145	0760	00	0	00003		SSP	
76146	0340	00	0	77460		CAS ADR	L BEAT ADDRESS
76147	0020	00	0	76151		TRA B9A	MAY BE AN ERROR
76150	0020	00	0	76136		TRA B8+5	OK BEAT ADDRESS
76151	0340	00	0	77515	B9A	CAS K7	L LOWEST LOCATION OF PROG
76152	0020	00	0	76136		TRA B8+5	OK-PROGRAM AREA
76153	0020	00	0	76136		TRA B8+5	OK-PROGRAM AREA
76154	0760	00	0	00162		SWT 2	TEST SENSE SWITCH 2
76155	0020	00	0	76157		TRA *+2	INDICATE ERROR
76156	0020	00	0	76162		TRA B9B	BY PASS ERROR

76157	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
76160	0020	00	0	76263		TRA P2	PRINT ERROR
76161	0000	00	0	76162		HTR B9B	X ERROR ADR IN ACC BEAT ADDRESS LOCATED AT ADR
76162	0621	00	0	76164	B9B	STA B9B+2	
76163	0500	00	0	77462		CLA FILL	
76164	0601	00	0	00000		STO	REPAIR X ERROR
76165	0020	00	0	76131		TRA B8	CHECK REPAIR ADDRESS
76166	0500	00	0	77460	B10	CLA ADR	L BEAT ADDRESS
76167	0621	00	0	76172		STA B10+4	
76170	0621	00	0	76205		STA B11	
76171	-0600	00	0	77466		STQ T2	TEMPORARY STORAGE
76172	0500	00	0	00000		CLA	BEAT WORD
76173	0340	00	0	77466		CAS T2	CHECK BEAT WORD
76174	0020	00	0	76176		TRA B10A	ERROR
76175	0020	00	0	76204		TRA B11-1	OK
76176	0760	00	0	00162	B10A	SWT 2	TEST SENSE SWITCH 2
76177	0020	00	0	76201		TRA *+2	INDICATE ERROR
76200	0020	00	0	76204		TRA B11-1	BY PASS ERROR
76201	0760	00	0	00163		SWT 3	TEST SENSE SWITCH 3
76202	0020	00	0	76271		TRA P3	PRINT ERROR
76203	0000	00	0	76204		HTR B11-1	ERROR IN BEAT WORD BEAT PATTERN IN MQ BEAT WORD IN ACC BEAT ADDRESS LOCATED AT ADR IN STORAGE
76204	0500	00	0	77462		CLA FILL	
76205	0601	00	0	00000	B11	STO	RESET LAST BEAT ADDRESS
76206	0500	00	0	77460		CLA ADR	L BEAT ADDRESS
76207	0400	00	0	77470		ADD ONE	INCREASE BEAT ADDRESS
76210	0340	00	0	77457		CAS HIGH	
76211	0000	00	0	76212		HTR B11+5	SHOULD NEVER ENTER HERE
76212	0020	00	0	76215		TRA B12	REPEAT TEST WITH NEXT PATTERN
76213	0621	00	0	77460		STA ADR	NEW BEAT ADDRESS
76214	0020	00	0	76025		TRA B3	
76215	0500	00	0	77456	B12	CLA LOW	
76216	0621	00	0	77460		STA ADR	L BEAT ADDRESS
76217	-0534	00	1	77463		LXD COUNT,1	
76220	2	00001	1	76222		TIX B13,1,1	
76221	0020	00	0	76224		TRA PCOM	
76222	-0634	00	1	77463	B13	SXD COUNT,1	
76223	0020	00	0	76024		TRA B2	
76224	0760	00	0	00163	PCOM	SWT 3	

76225	0020	00	0	76227		TRA	*+2	
76226	0020	00	0	76234		TRA	B14	
76227	0766	00	0	01361		WPRA		TO PRINT PASS COMPLETE
76230	0760	00	0	01363		SPRA	3	
76231	0540	00	0	76233		RCHA	*+2	
76232	0020	00	0	76234		TRA	B14	
76233	0000	30	0	77423		IOCD	PPER,0,24	
76234	0760	00	0	00161	B14	SWT	1	TEST SENSE SWITCH 1
76235	0020	00	0	76237		TRA	B14+3	
76236	0020	00	0	76017		TRA	B1+4	LOOP IN TEST
76237	0760	00	0	00166		SWT	6	TEST SENSE SWITCH 6
76240	0020	00	0	76242		TRA	*+2	
76241	0020	00	0	76013		TRA	B1	REPEAT TEST
76242	0762	00	0	01321		RCDA		READ IN NEXT TEST
76243	0540	00	0	77754		RCHA	CNTL	
76244	0544	00	0	00000		LCHA	0	
76245	0020	00	0	00001		TRA	1	

								ERROR ROUTINES
76246	0500	00	0	77460	P	CLA	ADR	ERROR ADDRESS
76247	0601	00	0	77571		STO	P6	
76250	0500	00	0	77520		CLA	K9A	L HTR B6+11
76251	0601	00	0	77572		STO	P7	ERROR EXIT
76252	0500	00	0	76057		CLA	B6+10	L TRA B6A
76253	0601	00	0	77362		STO	P13	PROGRAM RETURN
76254	0020	00	0	76305		TRA	P4	
76255	0601	00	0	77571	P1	STO	P6	ERROR ADDRESS
76256	0500	00	0	77521		CLA	K9A+1	L HTR B7B+4
76257	0601	00	0	77572		STO	P7	ERROR EXIT
76260	0500	00	0	77524		CLA	K9A+4	L TRA B7C
76261	0601	00	0	77362		STO	P13	PROGRAM RETURN
76262	0020	00	0	76305		TRA	P4	
76263	0601	00	0	77571	P2	STO	P6	ERROR ADDRESS
76264	0500	00	0	77522		CLA	K9A+2	L HTR B9A+4
76265	0601	00	0	77572		STO	P7	ERROR EXIT
76266	0500	00	0	77525		CLA	K9A+5	L TRA B9B
76267	0601	00	0	77362		STO	P13	PROGRAM RETURN
76270	0020	00	0	76305		TRA	P4	
76271	0500	00	0	77460	P3	CLA	ADR	
76272	0601	00	0	77571		STO	P6	
76273	0500	00	0	77523		CLA	K9A+3	L HTR B10A
76274	0601	00	0	77572		STO	P7	ERROR EXIT
76275	0500	00	0	76175		CLA	B10+7	L TRA B11-1
76276	0601	00	0	77362		STO	P13	PROGRAM RETURN
76277	-0600	00	0	77573		STQ	QUOT	
76300	-0500	00	0	77573		CAL	QUOT	TEST WORD

76301	0602	00	0	77645		SLW PR5	
76302	0760	00	0	00006		COM	
76303	0602	00	0	77647		SLW PR5+2	COMPLEMENT OF TEST WORD
76304	0020	00	0	76311		TRA P5	
76305	-0500	00	0	77462	P4	CAL FILL	TEST WORD
76306	0602	00	0	77645		SLW PR5	
76307	0760	00	0	00006		COM	
76310	0602	00	0	77647		SLW PR5+2	COMPLEMENT OF TEST WORD
76311	0500	00	0	77571	P5	CLA P6	L ERROR ADDRESS
76312	0621	00	0	76313		STA *+1	
76313	-0500	00	0	00000		CAL	ERROR WORD
76314	0602	00	0	77615		SLW PR4	
76315	0760	00	0	00006		COM	
76316	0602	00	0	77617		SLW PR4+2	COMPLEMENT OF ERROR WORD
76317	-0600	00	0	77573		STQ QUOT	
76320	-0500	00	0	77573		CAL QUOT	BEAT WORD
76321	0602	00	0	77705		SLW PR6	
76322	0760	00	0	00006		COM	
76323	0602	00	0	77707		SLW PR6+2	COMPLEMENT OF BEAT WORD
							PRINT ERROR
76324	-0634	00	1	77464	E13	SXD SAVE,1	SAVE XRA
76325	0534	00	1	77474		LXA M+3,1	L +10
76326	0600	00	1	77664		STZ PR7+8,1	CLEAR IMAGE
76327	2 00001	1	1	76326		TIX E13+2,1,1	
76330	0500	00	0	77504		CLA K3	L +7
76331	-0320	00	0	77571		ANA P6	L ERROR ADDRESS
76332	0734	00	1	00000		PAX 0,1	
76333	0500	00	0	77477		CLA K2	L 20000
76334	-0602	00	1	77663		ORS PR7+7,1	
76335	0500	00	0	77505		CLA K3+1	L +70
76336	-0320	00	0	77571		ANA P6	L ERROR ADDRESS
76337	0771	00	0	00003		ARS 3	
76340	0734	00	1	00000		PAX 0,1	
76341	0500	00	0	77500		CLA K2+1	L 40000
76342	-0602	00	1	77663		ORS PR7+7,1	
76343	0500	00	0	77506		CLA K3+2	L +700
76344	-0320	00	0	77571		ANA P6	L ERROR ADDRESS
76345	0771	00	0	00006		ARS 6	
76346	0734	00	1	00000		PAX 0,1	
76347	0500	00	0	77501		CLA K2+2	L 100000
76350	-0602	00	1	77663		ORS PR7+7,1	
76351	0500	00	0	77507		CLA K3+3	L +7000
76352	-0320	00	0	77571		ANA P6	L ERROR ADDRESS
76353	0771	00	0	00011		ARS 9	
76354	0734	00	1	00000		PAX 0,1	
76355	0500	00	0	77502		CLA K2+3	L 200000
76356	-0602	00	1	77663		ORS PR7+7,1	

76357	0500	00	0	77510	CLA K3+4	L +70000
76360	-0320	00	0	77571	ANA P6	L ERROR ADDRESS
76361	0771	00	0	00014	ARS 12	
76362	0734	00	1	00000	PAX 0,1	
76363	0500	00	0	77503	CLA K2+4	L 400000
76364	-0602	00	1	77663	ORS PR7+7,1	
						ADJUST PRINT IMAGE
76365	-0534	00	1	77473	LXD M+2,1	L +27
76366	0500	00	0	77511	CLA K4	L +777777017777
76367	0320	00	1	77623	P10AA ANS PR4+6,1	
76370	2 00002	1	1	76367	TIX P10AA,1,2	
76371	0500	00	0	77512	CLA K5	L ORS PR1+
76372	0601	00	0	76375	STO P10A	
76373	0534	00	1	77474	LXA M+3,1	L +10
76374	0500	00	1	77664	CLA PR7+8,1	
76375	-0602	00	1	77610	P10A ORS PR1+12,1	
76376	0500	00	0	76375	CLA P10A	
76377	0402	00	0	77470	SUB ONE	
76400	0621	00	0	76375	STA P10A	
76401	2 00001	1	1	76374	TIX P10A-1,1,1	
76402	0766	00	0	01361	WPRA	PRINT FIRST LINE
76403	0760	00	0	01363	SPRA 3	DOUBLE SPACE
76404	0760	00	0	01364	SPRA 4	TO GET OCTAL SPACING
76405	0540	00	0	77755	RCHA CNTL1	
76406	0534	00	1	77474	LXA M+3,1	L +10
76407	0600	00	1	77664	P11A STZ PR7+8,1	CLEAR IMAGE
76410	2 00001	1	1	76407	TIX P11A,1,1	
76411	0500	00	0	77504	CLA K3	L +7
76412	-0320	00	0	77572	ANA P7	L ERROR EXIT
76413	0734	00	1	00000	PAX 0,1	
76414	0500	00	0	77477	CLA K2	L 20000
76415	-0602	00	1	77663	ORS PR7+7,1	
76416	0500	00	0	77505	CLA K3+1	L +70
76417	-0320	00	0	77572	ANA P7	L ERROR EXIT
76420	0771	00	0	00003	ARS 3	
76421	0734	00	1	00000	PAX 0,1	
76422	0500	00	0	77500	CLA K2+1	L 40000
76423	-0602	00	1	77663	ORS PR7+7,1	
76424	0500	00	0	77506	CLA K3+2	L +700
76425	-0320	00	0	77572	ANA P7	L ERROR EXIT
76426	0771	00	0	00006	ARS 6	
76427	0734	00	1	00000	PAX 0,1	
76430	0500	00	0	77501	CLA K2+2	L 100000
76431	-0602	00	1	77663	ORS PR7+7,1	
76432	0500	00	0	77507	CLA K3+3	L +7000
76433	-0320	00	0	77572	ANA P7	L ERROR EXIT
76434	0771	00	0	00011	ARS 9	
76435	0734	00	1	00000	PAX 0,1	
76436	0500	00	0	77502	CLA K2+3	L 200000

76437	-0602	00	1	77663		ORS PR7+7,1	
76440	0500	00	0	77510		CLA K3+4	L +70000
76441	-0320	00	0	77572		ANA P7	L ERROR EXIT
76442	0771	00	0	00014		ARS 12	
76443	0734	00	1	00000		PAX 0,1	
76444	0500	00	0	77503		CLA K2+4	L 400000
76445	-0602	00	1	77663		ORS PR7+7,1	
							ADJUST PRINT IMAGE
76446	-0534	00	1	77473		LXD M+2,1	L +27
76447	0500	00	0	77511		CLA K4	L +777777017777
76450	0320	00	1	77653	P11AA	ANS PR5+6,1	
76451	2 00002	1	1	76450		TIX P11AA,1,2	
76452	0500	00	0	77513		CLA K5+1	L ORS PR2+12,1
76453	0601	00	0	76456		STO P11B	
76454	0534	00	1	77474		LXA M+3,1	L +10
76455	0500	00	1	77664		CLA PR7+8,1	
76456	-0602	00	1	77640	P11B	ORS PR2+12,1	
76457	0500	00	0	76456		CLA P11B	
76460	0402	00	0	77470		SUB ONE	
76461	0621	00	0	76456		STA P11B	
76462	2 00001	1	1	76455		TIX P11B-1,1,1	
76463	0766	00	0	01361		WPRA	PRINT SECOND LINE
76464	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
76465	0540	00	0	77756		RCHA CNTL2	
76466	0534	00	1	77474		LXA M+3,1	L +10
76467	0600	00	1	77664	PP	STZ PR7+8,1	CLEAR IMAGE
76470	2 00001	1	1	76467		TIX PP,1,1	
76471	0500	00	0	77504		CLA K3	L +7
76472	-0320	00	0	77460		ANA ADR	L BEAT ADDRESS
76473	0734	00	1	00000		PAX 0,1	
76474	0500	00	0	77477		CLA K2	L 20000
76475	-0602	00	1	77663		ORS PR7+7,1	
76476	0500	00	0	77505		CLA K3+1	L +70
76477	-0320	00	0	77460		ANA ADR	L BEAT ADDRESS
76500	0771	00	0	00003		ARS 3	
76501	0734	00	1	00000		PAX 0,1	
76502	0500	00	0	77500		CLA K2+1	L 40000
76503	-0602	00	1	77663		ORS PR7+7,1	
76504	0500	00	0	77506		CLA K3+2	L +700
76505	-0320	00	0	77460		ANA ADR	L BEAT ADDRESS
76506	0771	00	0	00006		ARS 6	
76507	0734	00	1	00000		PAX 0,1	
76510	0500	00	0	77501		CLA K2+2	L 100000
76511	-0602	00	1	77663		ORS PR7+7,1	
76512	0500	00	0	77507		CLA K3+3	L +7000
76513	-0320	00	0	77460		ANA ADR	L BEAT ADDRESS
76514	0771	00	0	00011		ARS 9	
76515	0734	00	1	00000		PAX 0,1	

76516	0500	00	0	77502		CLA K2+3	L 200000
76517	-0501	00	1	77663		ORA PR7+7,1	
76520	0500	00	0	77510		CLA K3+4	L +70000
76521	-0320	00	0	77460		ANA ADR	L BEAT ADDRESS
76522	0771	00	0	00014		ARS 12	
76523	0734	00	1	00000		PAX 0,1	
76524	0500	00	0	77503		CLA K2+4	L 400000
76525	-0501	00	1	77663		ORA PR7+7,1	
							ADJUST PRINT IMAGE
76526	-0534	00	1	77473		LXD M+2,1	L +27
76527	0500	00	0	77511		CLA K4	L +777777017777
76530	0320	00	1	77713	PP1	ANS PR6+6,1	
76531	2 00002	1	1	76530		TIX PP1,1,2	
76532	0500	00	0	77514		CLA K5+2	L ORS PR8+12,1
76533	0601	00	0	76536		STO PP1B	
76534	0534	00	1	77474		LXA M+3,1	L +10
76535	0500	00	1	77664		CLA PR7+8,1	
76536	-0602	00	1	77700	PP1B	ORS PR8+12,1	
76537	0500	00	0	76536		CLA PP1B	
76540	0402	00	0	77470		SUB ONE	
76541	0621	00	0	76536		STA PP1B	
76542	2 00001	1	1	76535		TIX PP1B-1,1,1	
76543	0766	00	0	01361		WPRA	PRINT THIRD LINE
76544	0760	00	0	01364		SPRA 4	TO GET OCTAL SPACING
76545	0540	00	0	77757		RCHA CNTL3	
76546	-0500	00	0	77745		CAL PR11+1	L 777777777377
76547	0320	00	0	77726		ANS PR10+10	
76550	0320	00	0	77730		ANS PR10+12	RESET PRINT IMAGE
76551	0320	00	0	77732		ANS PR10+14	
76552	0320	00	0	77734		ANS PR10+16	
76553	-0500	00	0	77753		CAL PR12+5	L 757673777576
76554	-0534	00	1	77474		LXD M+3,1	L 20
76555	0320	00	1	77737	P12A	ANS PR10+19,1	RESET PRINT IMAGE
76556	2 00002	1	1	76555		TIX P12A,1,2	
76557	0500	00	0	77530		CLA K10	L +77777
76560	-0320	00	0	77571		ANA P6	ERROR ADDRESS
76561	0601	00	0	77527		STO K10-1	SAVE ADDRESS
76562	0340	00	0	77540		CAS K10+8	L +40000
76563	0020	00	0	76775		TRA Y3	3RD OR 4TH QUADRANT
76564	0020	00	0	76775		TRA Y3	1ST OR 2ND QUADRANT
76565	0340	00	0	77544		CAS K10+12	L +20000
76566	0020	00	0	76571		TRA Y1	1ST 4 COLUMNS
76567	0020	00	0	76571		TRA Y1	
76570	0020	00	0	76603		TRA Y112	LAST COLUMNS Y1 OR Y2

76571	0340	00	0	77541	Y1	CAS K10+9	L +34000
76572	0020	00	0	76615		TRA R1A	COLUMN 1
76573	0020	00	0	76615		TRA R1A	
76574	0340	00	0	77542		CAS K10+10	L +30000
76575	0020	00	0	76622		TRA R2A	COLUMN 2
76576	0020	00	0	76622		TRA R2A	
76577	0340	00	0	77543		CAS K10+11	L +24000
76600	0020	00	0	76627		TRA R3A	COLUMN 3
76601	0020	00	0	76627		TRA R3A	
76602	0020	00	0	76634		TRA R4A	COLUMN 4
76603	0340	00	0	77545	Y112	CAS K10+13	L +14000
76604	0020	00	0	76641		TRA R5A	COLUMN 5
76605	0020	00	0	76641		TRA R5A	
76606	0340	00	0	77546		CAS K10+14	L +10000
76607	0020	00	0	76646		TRA R6A	COLUMN 6
76610	0020	00	0	76646		TRA R6A	
76611	0340	00	0	77547		CAS K10+15	L +4000
76612	0020	00	0	76653		TRA R7A	COLUMN 7
76613	0020	00	0	76653		TRA R7A	
76614	0020	00	0	76660		TRA R8A	COLUMN 8
76615	0500	00	0	77747	R1A	CLA PR12+1	
76616	-0602	00	0	77735		ORS PR10+17	COL 1 Y MATRIX
76617	0500	00	0	77527		CLA K10-1	
76620	0402	00	0	77541		SUB K10+9	L 34000
76621	0020	00	0	76663		TRA R9	
76622	0500	00	0	77747	R2A	CLA PR12+1	
76623	-0602	00	0	77733		ORS PR10+15	COL 2 Y MATRIX
76624	0500	00	0	77527		CLA K10-1	
76625	0402	00	0	77542		SUB K10+10	L 30000
76626	0020	00	0	76663		TRA R9	
76627	0500	00	0	77747	R3A	CLA PR12+1	
76630	-0602	00	0	77731		ORS PR10+13	COL 3 Y MATRIX
76631	0500	00	0	77527		CLA K10-1	
76632	0402	00	0	77543		SUB K10+11	L 24000
76633	0020	00	0	76663		TRA R9	
76634	0500	00	0	77747	R4A	CLA PR12+1	
76635	-0602	00	0	77727		ORS PR10+11	COL 4 Y MATRIX
76636	0500	00	0	77527		CLA K10-1	
76637	0402	00	0	77544		SUB K10+12	L 20000
76640	0020	00	0	76663		TRA R9	
76641	0500	00	0	77747	R5A	CLA PR12+1	
76642	-0602	00	0	77725		ORS PR10+9	COL 5 Y MATRIX
76643	0500	00	0	77527		CLA K10-1	
76644	0402	00	0	77545		SUB K10+13	L 14000
76645	0020	00	0	76663		TRA R9	
76646	0500	00	0	77747	R6A	CLA PR12+1	
76647	-0602	00	0	77723		ORS PR10+7	COL 6 Y MATRIX
76650	0500	00	0	77527		CLA K10-1	
76651	0402	00	0	77546		SUB K10+14	L 10000



76652	0020	00	0	76663		TRA R9	
76653	0500	00	0	77747	R7A	CLA PR12+1	
76654	-0602	00	0	77721		ORS PR10+5	COL 7 Y MATRIX
76655	0500	00	0	77527		CLA K10-1	
76656	0402	00	0	77547		SUB K10+15	L 4000
76657	0020	00	0	76663		TRA R9	
76660	0500	00	0	77747	R8A	CLA PR12+1	
76661	-0602	00	0	77717		ORS PR10+3	COL 8 Y MATRIX
76662	0500	00	0	77527		CLA K10-1	
76663	0601	00	0	77526	R9	STO K10-2	
76664	0340	00	0	77550		CAS K10+16	L 2000
76665	0020	00	0	76673		TRA R10	
76666	0020	00	0	76673		TRA R10	
76667	0500	00	0	77744		CLA PR11	
76670	-0602	00	0	77734		ORS PR10+16	Y1 MATRIX
76671	0500	00	0	77526		CLA K10-2	
76672	0020	00	0	76677		TRA R13A	
76673	0500	00	0	77744	R10	CLA PR11	
76674	-0602	00	0	77732		ORS PR10+14	Y2 MATRIX
76675	0500	00	0	77526		CLA K10-2	
76676	0402	00	0	77550		SUB K10+16	L 2000
76677	0340	00	0	77554	R13A	CAS K11+3	L 1000
76700	0020	00	0	76714		TRA R14A	1ST FOUR ROWS
76701	0020	00	0	76714		TRA R14A	
76702	0340	00	0	77555		CAS K11+4	L 600
76703	0020	00	0	76726		TRA R15A	ROW 5
76704	0020	00	0	76726		TRA R15A	
76705	0340	00	0	77556		CAS K11+5	L 400
76706	0020	00	0	76733		TRA R16A	ROW 6
76707	0020	00	0	76733		TRA R16A	
76710	0340	00	0	77557		CAS K11+6	L 200
76711	0020	00	0	76740		TRA R17A	ROW 7
76712	0020	00	0	76740		TRA R17A	
76713	0020	00	0	76745		TRA R18A	ROW 8
76714	0340	00	0	77551	R14A	CAS K11	L 1600
76715	0020	00	0	76751		TRA R19A	ROW 1
76716	0020	00	0	76751		TRA R19A	
76717	0340	00	0	77552		CAS K11+1	L 1400
76720	0020	00	0	76756		TRA R20A	ROW 2
76721	0020	00	0	76756		TRA R20A	
76722	0340	00	0	77553		CAS K11+2	L 1200
76723	0020	00	0	76763		TRA R21A	ROW 3
76724	0020	00	0	76763		TRA R21A	
76725	0020	00	0	76770		TRA R22A	ROW 4
76726	0500	00	0	77746	R15A	CLA PR12	
76727	-0602	00	0	77725		ORS PR10+9	ROW 5 Y MATRIX
76730	0500	00	0	77526		CLA K10-2	
76731	0402	00	0	77555		SUB K11+4	L 600
76732	0020	00	0	77206		TRA R23	

76733	0500	00	0	77746	R16A	CLA PR12	
76734	-0602	00	0	77723		ORS PR10+7	ROW 6 Y MATRIX
76735	0500	00	0	77526		CLA K10-2	
76736	0402	00	0	77556		SUB K11+5	L 400
76737	0020	00	0	77206		TRA R23	
76740	0500	00	0	77746	R17A	CLA PR12	
76741	-0602	00	0	77721		ORS PR10+5	ROW 7 Y MATRIX
76742	0500	00	0	77526		CLA K10-2	
76743	0402	00	0	77557		SUB K11+6	L 200
76744	0020	00	0	77206		TRA R23	
76745	0500	00	0	77746	R18A	CLA PR12	
76746	-0602	00	0	77717		ORS PR10+3	ROW 8 Y MATRIX
76747	0500	00	0	77526		CLA K10-2	
76750	0020	00	0	77206		TRA R23	
76751	0500	00	0	77746	R19A	CLA PR12	
76752	-0602	00	0	77735		ORS PR10+17	ROW 1 Y MATRIX
76753	0500	00	0	77526		CLA K10-2	
76754	0402	00	0	77551		SUB K11	L 1600
76755	0020	00	0	77206		TRA R23	
76756	0500	00	0	77746	R20A	CLA PR12	
76757	-0602	00	0	77733		ORS PR10+15	ROW 2 Y MATRIX
76760	0500	00	0	77526		CLA K10-2	
76761	0402	00	0	77552		SUB K11+1	L 1400
76762	0020	00	0	77206		TRA R23	
76763	0500	00	0	77746	R21A	CLA PR12	
76764	-0602	00	0	77731		ORS PR10+13	ROW 3 Y MATRIX
76765	0500	00	0	77526		CLA K10-2	
76766	0402	00	0	77553		SUB K11+2	L 1200
76767	0020	00	0	77206		TRA R23	
76770	0500	00	0	77746	R22A	CLA PR12	
76771	-0602	00	0	77727		ORS PR10+11	ROW 4 Y MATRIX
76772	0500	00	0	77526		CLA K10-2	
76773	0402	00	0	77554		SUB K11+3	L 1200
76774	0020	00	0	77206		TRA R23	
76775	0340	00	0	77534	Y3	CAS K10+4	L +60000
76776	0020	00	0	77001		TRA Y3+4	Y3 OR Y4 1ST 4 COLUMNS
76777	0020	00	0	77001		TRA Y3+4	
77000	0020	00	0	77013		TRA Y312	Y3 OR Y4 LAST 4 COLUMNS
77001	0340	00	0	77531		CAS K10+1	L +74000
77002	0020	00	0	77025		TRA R1B	COLUMN 1
77003	0020	00	0	77025		TRA R1B	
77004	0340	00	0	77532		CAS K10+2	L +70000
77005	0020	00	0	77032		TRA R2B	COLUMN 2
77006	0020	00	0	77032		TRA R2B	
77007	0340	00	0	77533		CAS K10+3	L +64000
77010	0020	00	0	77037		TRA R3B	COLUMN 3
77011	0020	00	0	77037		TRA R3B	

77012	0020	00	0	77044		TRA R4B	COLUMN 4
77013	0340	00	0	77535	Y312	CAS K10+5	L +54000
77014	0020	00	0	77051		TRA R5B	COLUMN 5
77015	0020	00	0	77051		TRA R5B	
77016	0340	00	0	77536		CAS K10+6	L +50000
77017	0020	00	0	77056		TRA R6B	COLUMN 6
77020	0020	00	0	77056		TRA R6B	
77021	0340	00	0	77537		CAS K10+7	L +44000
77022	0020	00	0	77063		TRA R7B	COLUMN 7
77023	0020	00	0	77063		TRA R7B	
77024	0020	00	0	77070		TRA R8B	COLUMN 8
77025	0500	00	0	77747	R1B	CLA PR12+1	
77026	-0602	00	0	77735		ORS PR10+17	COL 1 Y MATRIX
77027	0500	00	0	77527		CLA K10-1	
77030	0402	00	0	77531		SUB K10+1	L 74000
77031	0020	00	0	77075		TRA R11	
77032	0500	00	0	77747	R2B	CLA PR12+1	
77033	-0602	00	0	77733		ORS PR10+15	COL 2 Y MATRIX
77034	0500	00	0	77527		CLA K10-1	
77035	0402	00	0	77532		SUB K10+2	L 70000
77036	0020	00	0	77075		TRA R11	
77037	0500	00	0	77747	R3B	CLA PR12+1	
77040	-0602	00	0	77731		ORS PR10+13	COL 3 Y MATRIX
77041	0500	00	0	77527		CLA K10-1	
77042	0402	00	0	77533		SUB K10+3	L 64000
77043	0020	00	0	77075		TRA R11	
77044	0500	00	0	77747	R4B	CLA PR12+1	
77045	-0602	00	0	77727		ORS PR10+11	COL 4 Y MATRIX
77046	0500	00	0	77527		CLA K10-1	
77047	0402	00	0	77534		SUB K10+4	L 60000
77050	0020	00	0	77075		TRA R11	
77051	0500	00	0	77747	R5B	CLA PR12+1	
77052	-0602	00	0	77725		ORS PR10+9	COL 5 Y MATRIX
77053	0500	00	0	77527		CLA K10-1	
77054	0402	00	0	77535		SUB K10+5	L 54000
77055	0020	00	0	77075		TRA R11	
77056	0500	00	0	77747	R6B	CLA PR12+1	
77057	-0602	00	0	77723		ORS PR10+7	COL 6 Y MATRIX
77060	0500	00	0	77527		CLA K10-1	
77061	0402	00	0	77536		SUB K10+6	L 50000
77062	0020	00	0	77075		TRA R11	
77063	0500	00	0	77747	R7B	CLA PR12+1	
77064	-0602	00	0	77721		ORS PR10+5	COL 7 Y MATRIX
77065	0500	00	0	77527		CLA K10-1	
77066	0402	00	0	77537		SUB K10+7	L 44000
77067	0020	00	0	77075		TRA R11	
77070	0500	00	0	77747	R8B	CLA PR12+1	

77071	-0602	00	0	77717	ORS	PR10+3	COL 8 Y MATRIX
77072	0500	00	0	77527	CLA	K10-1	
77073	0402	00	0	77540	SUB	K10+8	L 40000
77074	0020	00	0	77075	TRA	R11	
77075	0601	00	0	77526	R11	STO	K10-2
77076	0340	00	0	77550	CAS	K10+16	L 2000
77077	0020	00	0	77105	TRA	R12	
77100	0020	00	0	77105	TRA	R12	
77101	0500	00	0	77744	CLA	PR11	
77102	-0602	00	0	77730	ORS	PR10+12	Y3 MATRIX
77103	0500	00	0	77526	CLA	K10-2	
77104	0020	00	0	77111	TRA	R13B	
77105	0500	00	0	77744	R12	CLA	PR11
77106	-0602	00	0	77726	ORS	PR10+10	Y4 MATRIX
77107	0500	00	0	77526	CLA	K10-2	
77110	0402	00	0	77550	SUB	K10+16	L 2000
77111	0340	00	0	77554	R13B	CAS	K11+3
77112	0020	00	0	77126	TRA	R14B	LAST FOUR ROWS
77113	0020	00	0	77126	TRA	R14B	
77114	0340	00	0	77555	CAS	K11+4	L 600
77115	0020	00	0	77140	TRA	R15B	ROW 4
77116	0020	00	0	77140	TRA	R15B	
77117	0340	00	0	77556	CAS	K11+5	L 400
77120	0020	00	0	77145	TRA	R16B	ROW 3
77121	0020	00	0	77145	TRA	R16B	
77122	0340	00	0	77557	CAS	K11+6	L 200
77123	0020	00	0	77152	TRA	R17B	ROW 2
77124	0020	00	0	77152	TRA	R17B	
77125	0020	00	0	77157	TRA	R18B	ROW 1
77126	0340	00	0	77551	R14B	CAS	K11
77127	0020	00	0	77163	TRA	R19B	ROW 8
77130	0020	00	0	77163	TRA	R19B	
77131	0340	00	0	77552	CAS	K11+1	L 1400
77132	0020	00	0	77170	TRA	R20B	ROW 7
77133	0020	00	0	77170	TRA	R20B	
77134	0340	00	0	77553	CAS	K11+2	L 1200
77135	0020	00	0	77175	TRA	R21B	ROW 6
77136	0020	00	0	77175	TRA	R21B	
77137	0020	00	0	77202	TRA	R22B	ROW 5
77140	0500	00	0	77746	R15B	CLA	PR12
77141	-0602	00	0	77727	ORS	PR10+11	ROW 4 Y MATRIX
77142	0500	00	0	77526	CLA	K10-2	
77143	0402	00	0	77555	SUB	K11+4	L 600
77144	0020	00	0	77206	TRA	R23	
77145	0500	00	0	77746	R16B	CLA	PR12
77146	-0602	00	0	77731	ORS	PR10+13	ROW 3 Y MATRIX
77147	0500	00	0	77526	CLA	K10-2	
77150	0402	00	0	77556	SUB	K11+5	L 400
77151	0020	00	0	77206	TRA	R23	

77152	0500	00	0	77746	R17B	CLA PR12	
77153	-0602	00	0	77733		ORS PR10+15	ROW 2 Y MATRIX
77154	0500	00	0	77526		CLA K10-2	
77155	0402	00	0	77557		SUB K11+6	L 200
77156	0020	00	0	77206		TRA R23	
77157	0500	00	0	77746	R18B	CLA PR12	
77160	-0602	00	0	77735		ORS PR10+17	ROW 1 Y MATRIX
77161	0500	00	0	77526		CLA K10-2	
77162	0020	00	0	77206		TRA R23	
77163	0500	00	0	77746	R19B	CLA PR12	
77164	-0602	00	0	77717		ORS PR10+3	ROW 8 Y MATRIX
77165	0500	00	0	77526		CLA K10-2	
77166	0402	00	0	77551		SUB K11	L 1600
77167	0020	00	0	77206		TRA R23	
77170	0500	00	0	77746	R20B	CLA PR12	
77171	-0602	00	0	77721		ORS PR10+5	ROW 7 Y MATRIX
77172	0500	00	0	77526		CLA K10-2	
77173	0402	00	0	77552		SUB K11+1	L 1400
77174	0020	00	0	77206		TRA R23	
77175	0500	00	0	77746	R21B	CLA PR12	
77176	-0602	00	0	77723		ORS PR10+7	ROW 6 Y MATRIX
77177	0500	00	0	77526		CLA K10-2	
77200	0402	00	0	77553		SUB K11+2	L 1200
77201	0020	00	0	77206		TRA R23	
77202	0500	00	0	77746	R22B	CLA PR12	
77203	-0602	00	0	77725		ORS PR10+9	ROW 5 Y MATRIX
77204	0500	00	0	77526		CLA K10-2	
77205	0402	00	0	77554		SUB K11+3	L 1200
77206	0601	00	0	77526	R23	STO K10-2	
77207	-0320	00	0	77560		ANA K11+7	L7
77210	0340	00	0	77561		CAS K11+8	L4
77211	0020	00	0	77234		TRA R24D	1ST 4 COLUMNS
77212	0020	00	0	77234		TRA R24D	
77213	-0100	00	0	77217		TNZ R24A	
77214	0500	00	0	77752		CLA PR12+4	
77215	-0602	00	0	77717		ORS PR10+3	COLUMN 8 X MATRIX
77216	0020	00	0	77255		TRA R25	
77217	0402	00	0	77562	R24A	SUB K11+9	L1
77220	-0100	00	0	77224		TNZ R24B	
77221	0500	00	0	77752		CLA PR12+4	
77222	-0602	00	0	77721		ORS PR10+5	COLUMN 7 X MATRIX
77223	0020	00	0	77255		TRA R25	
77224	0402	00	0	77562	R24B	SUB K11+9	L1
77225	-0100	00	0	77231		TNZ R24C	
77226	0500	00	0	77752		CLA PR12+4	
77227	-0602	00	0	77723		ORS PR10+7	COLUMN 6 X MATRIX
77230	0020	00	0	77255		TRA R25	

77231	0500	00	0	77752	R24C	CLA PR12+4	
77232	-0602	00	0	77725		ORS PR10+9	COLUMN 5 X MATRIX
77233	0020	00	0	77255		TRA R25	
77234	0402	00	0	77561	R24D	SUB K11+8	L4
77235	-0100	00	0	77241		TNZ R24E	
77236	0500	00	0	77752		CLA PR12+4	
77237	-0602	00	0	77727		ORS PR10+11	COLUMN 4 X MATRIX
77240	0020	00	0	77255		TRA R25	
77241	0402	00	0	77562	R24E	SUB K11+9	L1
77242	-0100	00	0	77246		TNZ R24F	
77243	0500	00	0	77752		CLA PR12+4	
77244	-0602	00	0	77731		ORS PR10+13	COLUMN 3 X MATRIX
77245	0020	00	0	77255		TRA R25	
77246	0402	00	0	77562	R24F	SUB K11+9	L1
77247	-0100	00	0	77253		TNZ R24G	
77250	0500	00	0	77752		CLA PR12+4	
77251	-0602	00	0	77733		ORS PR10+15	COLUMN 2 X MATRIX
77252	0020	00	0	77255		TRA R25	
77253	0500	00	0	77752	R24G	CLA PR12+4	
77254	-0602	00	0	77735		ORS PR10+17	COLUMN 1 X MATRIX
77255	0500	00	0	77526	R25	CLA K10-2	
77256	-0320	00	0	77563		ANA K11+10	L 770
77257	0601	00	0	77526		STO K10-2	TEMP STORAGE
77260	0340	00	0	77564		CAS K11+11	L 100
77261	0020	00	0	77266		TRA R26	X2 MATRIX
77262	0020	00	0	77266		TRA R26	
77263	0500	00	0	77750		CLA PR12+2	
77264	-0602	00	0	77735		ORS PR10+17	X 1 MATRIX
77265	0020	00	0	77310		TRA R27	
77266	0500	00	0	77750	R26	CLA PR12+2	
77267	-0602	00	0	77733		ORS PR10+15	X 2 MATRIX
77270	0500	00	0	77526		CLA K10-2	
77271	0402	00	0	77564		SUB K11+11	L 100
77272	0100	00	0	77353		TZE R27G	ROW 1 X2 MATRIX
77273	0402	00	0	77565		SUB K11+12	L 10
77274	0100	00	0	77350		TZE R27F+2	ROW 2 X2
77275	0402	00	0	77565		SUB K11+12	
77276	0100	00	0	77343		TZE R27E+2	ROW 3 X2
77277	0402	00	0	77565		SUB K11+12	
77300	0100	00	0	77336		TZE R27D+2	ROW 4 X2
77301	0402	00	0	77565		SUB K11+12	
77302	0100	00	0	77331		TZE R27C+2	ROW 5 X2
77303	0402	00	0	77565		SUB K11+12	
77304	0100	00	0	77324		TZE R27B+2	ROW 6 X2
77305	0402	00	0	77565		SUB K11+12	
77306	0100	00	0	77317		TZE R27A+2	ROW 7 X2
77307	0020	00	0	77312		TRA R27+2	TOW 8 X2
77310	0500	00	0	77526	R27	CLA K10-2	
77311	-0100	00	0	77315		TNZ R27A	

77312	0500	00	0	77751	CLA	PR12+3	
77313	-0602	00	0	77717	ORS	PR10+3	ROW 8 X MATRIX
77314	0020	00	0	77355	TRA	R28	
77315	0402	00	0	77565	R27A	SUB K11+12	L 10
77316	-0100	00	0	77322	TNZ	R27B	
77317	0500	00	0	77751	CLA	PR12+3	
77320	-0602	00	0	77721	ORS	PR10+5	ROW 7 X MATRIX
77321	0020	00	0	77355	TRA	R28	
77322	0402	00	0	77565	R27B	SUB K11+12	L 10
77323	-0100	00	0	77327	TNZ	R27C	
77324	0500	00	0	77751	CLA	PR12+3	
77325	-0602	00	0	77723	ORS	PR10+7	ROW 6 X MATRIX
77326	0020	00	0	77355	TRA	R28	
77327	0402	00	0	77565	R27C	SUB K11+12	L 10
77330	-0100	00	0	77334	TNZ	R27D	
77331	0500	00	0	77751	CLA	PR12+3	
77332	-0602	00	0	77725	ORS	PR10+9	ROW 5 X MATRIX
77333	0020	00	0	77355	TRA	R28	
77334	0402	00	0	77565	R27D	SUB K11+12	L 10
77335	-0100	00	0	77341	TNZ	R27E	
77336	0500	00	0	77751	CLA	PR12+3	
77337	-0602	00	0	77727	ORS	PR10+11	ROW 4 X MATRIX
77340	0020	00	0	77355	TRA	R28	
77341	0402	00	0	77565	R27E	SUB K11+12	L 10
77342	-0100	00	0	77346	TNZ	R27F	
77343	0500	00	0	77751	CLA	PR12+3	
77344	-0602	00	0	77731	ORS	PR10+13	ROW 3 X MATRIX
77345	0020	00	0	77355	TRA	R28	
77346	0402	00	0	77565	R27F	SUB K11+12	L 10
77347	-0100	00	0	77353	TNZ	R27G	
77350	0500	00	0	77751	CLA	PR12+3	
77351	-0602	00	0	77733	ORS	PR10+15	ROW 7 X MATRIX
77352	0020	00	0	77355	TRA	R28	
77353	0500	00	0	77751	R27G	CLA PR12+3	
77354	-0602	00	0	77735	ORS	PR10+17	ROW 1 X MATRIX
77355	0766	00	0	01361	R28	WPRA	
77356	0540	00	0	77760		RCHA CNTL4	PRINT FOURTH LINE
77357	0500	00	0	77571	CLA	P6	RETURN TO PROGRAM
77360	0560	00	0	77573	LDQ	QUOT	
77361	-0534	00	1	77464	LXD	SAVE,1	RESTORE INDEX COUNT
77362	0020	00	0	00000	P13	TRA	TO PROGRAM WHERE ERROR OCCURRED
77363	0760	00	0	00163	NPER	SWT 3	
77364	0020	00	0	77366	TRA	*+2	
77365	0020	00	0	76001	TRA	B	

77366 0766 00 0 01361 WPR A  
77367 0760 00 0 01363 SPRA 3  
77370 0540 00 0 77372 RCHA \*+2  
77371 0020 00 0 76001 TRA B

77372 0000 30 0 77373 IOCD PNP ER,0,24

\* PRINT - NOW PERFORMING-9S04L-STORAGE TEST  
\* IMAGE - NOW PERFORMING-9S04L-STORAGE TEST

77373 +000000045040	PNPER OCT 000000045040	9 ROW LEFT
77374 +040000000000	OCT 040000000000	9 ROW RIGHT
77375 +000000000000	OCT 000000000000	8 L
77376 +000000000000	OCT 000000000000	8 R
77377 +000000200200	OCT 000000200200	7 L
77400 +010000000000	OCT 010000000000	7 R
77401 +000003030000	OCT 000003030000	6 L
77402 +100000000000	OCT 100000000000	6 R
77403 +000004100400	OCT 000004100400	5 L
77404 +004400000000	OCT 004400000000	5 R
77405 +000000002004	OCT 000000002004	4 L
77406 +000000000000	OCT 000000000000	4 R
77407 +000000000002	OCT 000000000002	3 L
77410 +201100000000	OCT 201100000000	3 R
77411 +000000000020	OCT 000000000020	2 L
77412 -000200000000	OCT 400200000000	2 R
77413 +000000000000	OCT 000000000000	1 L
77414 +020000000000	OCT 020000000000	1 R
77415 +000001000030	OCT 000001000030	0 L
77416 -201300000000	OCT 601300000000	0 R
77417 +000006256503	OCT 000006256503	11 L
77420 +140000000000	OCT 140000000000	11 R
77421 +000000121200	OCT 000000121200	12 L
77422 +034400000000	OCT 034400000000	12 R

\* PRINT - PASS COMPLETE-9S04L-STORAGE TEST  
\* IMAGE - PASS COMPLETE-9S04L-STORAGE TEST

77423 +000000000010	PPER OCT 000000000010	9 ROW LEFT
77424 +010000000000	OCT 010000000000	9 ROW RIGHT
77425 +000000000000	OCT 000000000000	8 L
77426 +000000000000	OCT 000000000000	8 R
77427 +000000401000	OCT 000000401000	7 L
77430 +002000000000	OCT 002000000000	7 R
77431 +000000004000	OCT 000000004000	6 L
77432 +020000000000	OCT 020000000000	6 R
77433 +000000000240	OCT 000000000240	5 L
77434 +001100000000	OCT 001100000000	5 R
77435 +000000002001	OCT 000000002001	4 L
77436 +000000000000	OCT 000000000000	4 R
77437 +000000010500	OCT 000000010500	3 L
77440 -040220000000	OCT 440220000000	3 R
77441 +000000140004	OCT 000000140004	2 L
77442 +100040000000	OCT 100040000000	2 R
77443 +000000200000	OCT 000000200000	1 L
77444 +004000000000	OCT 004000000000	1 R
77445 +000000140106	OCT 000000140106	0 L



77446	+1402600000000	OCT	1402600000000	0 R
77447	+000000407420	OCT	000000407420	11 L
77450	-2300000000000	OCT	6300000000000	11 R
77451	+000000210240	OCT	000000210240	12 L
77452	+0071000000000	OCT	0071000000000	12 R

CONSTANTS

77453	+0000000000001	K6	OCT 1	NUMBER OF ROTATIONS
77454	+0000000000000	TEST1	OCT 0	FILL MEMORY
77455	-3777777777777	TEST2	OCT 7777777777777	BEAT WORD
77456	+0000000000000	LOW	OCT	000 IS THE MIN VALUE THAT CAN BE USED
77457	+0000000000000	HIGH	OCT	75777 IS THE MAX VALUE THAT CAN BE USED
77460	+000000077777	ADR	OCT 77777	
77461	+0000000000000	BEAT	OCT	BEAT PATTERN
77462	+0000000000000	FILL	OCT	FILL MEMORY WITH THIS WORD
77463	+0000000000000	COUNT	OCT	ROTATION COUNT IN DEC
77464	+0000000000000	SAVE	OCT	INDEX STORAGE
77465	+0000000000000	T1	OCT 0	ADDRESS STORAGE
77466	+0000000000000	T2	OCT 0	TEMPORARY STORAGE
77467	+0000000000000	ZERO	OCT 0	
77470	+0000000000001	ONE	OCT 1	
77471	+000004001777	M	OCT 00004001777	
77472	+000003000007		OCT 00003000007	
77473	+000027000030		OCT 27000030	
77474	+000020000010		OCT 000020000010	
77475	+000000002000	K1	OCT 2000	
77476	+000007000000		OCT 7000000	
77477	+000000020000	K2	OCT 20000	
77500	+000000040000		OCT 40000	
77501	+000000100000		OCT 100000	
77502	+000000200000		OCT 200000	
77503	+000000400000		OCT 400000	
77504	+000000000007	K3	OCT 7	
77505	+000000000070		OCT 70	
77506	+000000000700		OCT 700	
77507	+000000007000		OCT 7000	
77510	+000000070000		OCT 70000	
77511	-377777017777	K4	OCT 777777017777	
77512	-0602 00 1 77610	K5	ORS PR1+12,1	
77513	-0602 00 1 77640		ORS PR2+12,1	
77514	-0602 00 1 77700		ORS PR8+12,1	
77515	0000 00 0 76001	K7	HTR B	

77516	+0000000075777	K8	OCT	75777
77517	0000 00 0 77753	K9	HTR	PR12+5
77520	0000 00 0 76060	K9A	HTR	B6+11
77521	0000 00 0 76120		HTR	B7B+4
77522	0000 00 0 76155		HTR	B9A+4
77523	0000 00 0 76176		HTR	B10A
77524	0020 00 0 76125		TRA	B7C
77525	0020 00 0 76162		TRA	B9B

77526	+0000000000000		OCT	0	TEMP STG.
77527	+0000000000000		OCT	0	ERROR ADDRESS
77530	+0000000077777	K10	OCT	77777	
77531	+0000000074000		OCT	74000	
77532	+0000000070000		OCT	70000	
77533	+0000000064000		OCT	64000	
77534	+0000000060000		OCT	60000	
77535	+0000000054000		OCT	54000	
77536	+0000000050000		OCT	50000	
77537	+0000000044000		OCT	44000	
77540	+0000000040000		OCT	40000	
77541	+0000000034000		OCT	34000	
77542	+0000000030000		OCT	30000	
77543	+0000000024000		OCT	24000	
77544	+0000000020000		OCT	20000	
77545	+0000000014000		OCT	14000	
77546	+0000000010000		OCT	10000	
77547	+0000000004000		OCT	4000	
77550	+0000000002000		OCT	2000	
77551	+0000000001600	K11	OCT	1600	
77552	+0000000001400		OCT	1400	
77553	+0000000001200		OCT	1200	
77554	+0000000001000		OCT	1000	
77555	+0000000000600		OCT	600	
77556	+0000000000400		OCT	400	
77557	+0000000000200		OCT	200	
77560	+0000000000007		OCT	7	
77561	+0000000000004		OCT	4	
77562	+0000000000001		OCT	1	
77563	+0000000000770		OCT	770	
77564	+0000000000100		OCT	100	
77565	+0000000000010		OCT	10	

77566	+0000000000144	K144	OCT	144
77567	+0000000000310	K310	OCT	310
77570	+00000000001750	K1750	OCT	1750

77571	+0000000000000	P6	OCT	ERROR ADDRESS
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77572	+0000000000000	P7	OCT	ERROR EXIT
77573	+0000000000000	QUOT	OCT	TEMP STG BEAT PATTERN

PRINT IMAGE FOR FIRST LINE

77574	+032040001504	PR1	OCT	32040001504 9 ROW LEFT
77575	+0000000000000		OCT	9 ROW RIGHT
77576	+0000000000000		OCT	8
77577	+0000000000000		OCT	

77600	+000000000000		OCT		7
77601	+000000000000		OCT		
77602	+004000000230		OCT	4000000230	6
77603	+000000000000		OCT		
77604	+040020002000		OCT	40020002000	5
77605	+000000000000		OCT		
77606	+000300000002		OCT	300000002	4
77607	+000000000000		OCT		
77610	+000000000000		OCT		3
77611	+000000000000		OCT		
77612	+000014000000		OCT	14000000	2
77613	+000000000000		OCT		
77614	+000400000000		OCT	400000000	1
77615	+000000000000	PR4	OCT		ERROR WORD
77616	+000014000020		OCT	14000020	0
77617	+000000000000		OCT		COMPLEMENT OF ERROR WORD
77620	+036040001714		OCT	36040001714	11
77621	+000000000000		OCT		
77622	+040720002002		OCT	40720002002	12
77623	+000000000000		OCT		

PRINT IMAGE FOR SECOND  
 LINE

77624	+032100000004	PR2	OCT	32100000004	9
77625	+000000000000		OCT		
77626	+000000000000		OCT		8
77627	+000000000000		OCT		
77630	+000200000000		OCT	200000000	7
77631	+000000000000		OCT		
77632	+004000000030		OCT	4000000030	6
77633	+000000000000		OCT		
77634	+040400000400		OCT	40400000400	5
77635	+000000000000		OCT		
77636	+000000760002		OCT	760002	4
77637	+000000000000		OCT		
77640	+000040001100		OCT	40001100	3
77641	+000000000000		OCT		
77642	+000000000200		OCT	200	2
77643	+000000000000		OCT		
77644	+000000000000		OCT	0	1
77645	+000000000000	PR5	OCT		TEST WORD
77646	+000240001320		OCT	240001320	0
77647	+000000000000		OCT		COMPLEMENT OF TEST WORD
77650	+036000000014		OCT	36000000014	11
77651	+000000000000		OCT		
77652	+040500000402		OCT	40500000402	12
77653	+000000000000		OCT		

ERROR ADDRESSING FORM

77654	+000000000000	PR7	OCT		7
77655	+000000000000		OCT		6
77656	+000000000000		OCT		5
77657	+000000000000		OCT		4
77660	+000000000000		OCT		3
77661	+000000000000		OCT		2

77662 +000000000000  
77663 +000000000000

OCT 1  
OCT 0

PRINT IMAGE FOR 3RD LINE

77664 +0000400000004  
77665 +0000000000000  
77666 +0000000000000  
77667 +0000000000000  
77670 +0000002000000  
77671 +0000000000000  
77672 +0000000000030  
77673 +0000000000000  
77674 +0200200004000  
77675 +0000000000000  
77676 +0003000400002  
77677 +0000000000000  
77700 +0040000000100  
77701 +0000000000000  
77702 +0400145210000  
77703 +0000000000000  
77704 +0104000002000  
77705 +0000000000000  
77706 +0040140001200  
77707 +0000000000000  
77710 +0000400000140  
77711 +0000000000000  
77712 +0707200016020  
77713 +0000000000000

PR8 OCT 40000004 9  
OCT  
OCT 8  
OCT  
OCT 200000 7  
OCT 0  
OCT 30 6  
OCT 0  
OCT 20020000400 5  
OCT 0  
OCT 300040002 4  
OCT 0  
OCT 4000000100 3  
OCT 0  
OCT 40014521000 2  
OCT  
OCT 10400000200 1  
PR6 OCT BEAT WORD  
OCT 4014000120 0  
OCT COMPLEMENT OF BEAT WORD  
OCT 40000014 11  
OCT 0  
OCT 70720001602 12  
OCT 0

PRINT IMAGE FOR 4TH LINE

77714 +010010040014  
77715 -000000144000  
77716 +000001001000  
77717 +0100000000100  
77720 +0000000000002  
77721 +0000100200000  
77722 +2046201000000  
77723 +3010000030100  
77724 +0020000200000  
77725 +0000000000001  
77726 +0000000000100  
77727 +0000010000000  
77730 -1200062000200  
77731 +0124002003240  
77732 +0000400104000  
77733 +0001000000000  
77734 +0400000000040  
77735 +0200044000000  
77736 +0200640110220  
77737 +1100102211000  
77740 -2064001441100  
77741 -2014411060140  
77742 +1502132200440  
77743 +0020004400200  
77744 +0000000000400  
77745 -377777777377

PR10 OCT 10010040014 9L  
OCT 400000144000 9R  
OCT 1001000 8  
OCT 10000000100  
OCT 2 7  
OCT 10020000  
OCT 204620100000 6  
OCT 301000003010  
OCT 2000020000 5  
OCT 1  
OCT 100 4  
OCT 1000000  
OCT 520006200020 3  
OCT 12400200324  
OCT 40010400 2  
OCT 100000000  
OCT 40000000040 1  
OCT 20004400000  
OCT 20064011022 0  
OCT 110010221100  
OCT 606400144110 11  
OCT 601441106014  
OCT 150213220044 12  
OCT 2000440020  
PR11 OCT 400 Y1, Y2, Y3, OR Y4  
OCT 777777777377

77746	+0200000000000	PR12	OCT	20000000000	ROW Y MATRIX
77747	+0001000000000		OCT	100000000	COL Y MATRIX
77750	+0000040000000		OCT	4000000	X1 OR X2
77751	+0000000000200		OCT	200	ROW X MATRIX
77752	+0000000000001		OCT	1	COL X MATRIX
77753	-357673777576		OCT	757673777576	
77754	-1 00003 0 00000	CNTL	MON	0,0,3	
77755	0 00030 0 77574	CNTL1	PZE	PR1,0,24	CNTRL PRINT 1ST LINE
77756	0 00030 0 77624	CNTL2	PZE	PR2,0,24	CNTRL PRINT 2ND LINE
77757	0 00030 0 77664	CNTL3	PZE	PR8,0,24	CNTRL PRINT 3RD LINE
77760	0 00030 0 77714	CNTL4	PZE	PR10,0,24	CNTRL PRINT 4TH LINE
	00000			END	

EOF\*