

WORST CASE B TIME TEST

A. PURPOSE OF TEST

1. Test maximum delay in B TIME and the 7090 channel priority circuit.

B. METHOD OF TEST

1. A test of TAU operations is made on each channel selected.
2. A B TIME with concurrent ORS instruction execution test is made to check specifically and -AND circuit 3F on systems page 2.09.00.1
3. 100 octal records consisting of 100 octal words are written, back-spaced, read and checked for errors on TAPE UNIT 2 CHANNEL A and TAPE UNIT 1 on each of the other channels selected.
4. If sense switch 5 is down, the program continuously stores the channel contents while reading information from tape.

C. MACHINE UNITS AND STORAGE AREA

1. Units

- a. Card reader of tape unit 1 on channel A for loading
- b. Main frame
- c. Core frame
- d. Tape unit 2 on channel A and tape unit 1 on each of the other channels to be tested.

2. Storage Locations

- a. 00030-06606 9B53B
- b. 75300-76340 9IOCA
- c. 76400-77710 9DEPRX

D. PROGRAM CONTROL

1. Deck

- a. 000 9LD01A Low end loader
- b. 001-084 9B53B
- c. 085-109 9IOCA
- d. 110-141 9DEPRX
- e. 142 Transfer card - TRA 00030
- f. 143-144 2 blank cards

2. Sense Switch Control

- a. Use of sense switches 1 through 4 are as outlined in DEPRX.
- b. Sense Switch 5 Up - Initially make 1 pass through entire program except for continuous STORE CHANNEL section and check sense switch 6.
- c. Sense Switch 5 Dn - Repeat continuous STORE CHANNEL routines.
- d. Sense Switch 6 Up - Load next program.
- e. Sense Switch 6 Dn - Repeat test (see section H-3)

E. NORMAL STOPS

- 1. 75320 - Enter keys for tape units on channels A-D
- 2. 75334 - Enter keys for tape units on channels E-H

F. ERROR STOPS

- 1. 01436 - No tape units selected; press start to return to IOC.
- 2. 02163 - Consult listing at this location for comments to aid in diagnosing error.

3. 75326 - Control word entered at location 75320 contained no tag bits for channels.
4. 76471 - Error while executing routines of 9B53.

G. PRINTOUTS

1. Program identification is printed on the initial pass with sense switch 3 up.
2. Pass complete is printed for each pass through program with sense switches 3 up and 6 down.
3. For errors while executing routines of 9B53, DEPRX printouts will result with sense switch 3 up.

H. COMMENTS

1. For worst case test use 729 MOD IV tape frames.
2. If the contents of any channel becomes larger than it should, the channel will be reset and a halt will occur. The comments in the listing following location 02162 may be an aid in determining the trouble.
3. With sense switch 5 up and 6 down, the return is to the beginning of the program. To repeat the TAU operations and B TIME-ORS tests, manually store a NOP instruction in location 00542 or the above tests will be omitted after the initial pass.
4. For TAU operations and B TIME-ORS tests, only TAPE UNIT 2 on CHANNEL A is used but any number of units can be called for on other channels selected.
5. For WORST CASE routines, TAPE UNIT 2 on CHANNEL A and TAPE UNIT 1 on all other channels selected are the only drives used.
6. The sign key is used to designate the type of loading for the simulated load button sequence under sense switch 6 control.
7. To write this card deck program on a diagnostic program tape, only the loader must be replaced.

8. Consult write-ups of DEPRX and 9IOCA for details on error halt or printouts and I/O unit selection.
9. The release of this program obsoletes 9B53A.

9B53B

* 9B03B-WORST CASE B TIME

			00030		ORG 24	
00030	0500	00	0	01417	CLA SW6+2	POST
00031	0601	00	0	00000	STO 0	RESTART
00032	0760	00	0	00163	SWT 3	
00033	0020	00	0	00035	TRA *+2	
00034	0020	00	0	00037	TRA *+3	
00035	0766	00	0	01361	BEGIN WPRA	
00036	0540	00	0	02336	RCHA STCTL	CONTROL FOR PRINTING STARTING HEADING
00037	0074	00	4	75316	TSX IOC,4	ENTER CONTROL WORDS
00040	0500	00	0	75300	CLA CTRL1	L CONTROL WORD
00041	-0120	00	0	00045	TMI *+4	FIX SELECT
00042	0500	00	0	00655	CLA READ5+2	IF THE SIGN
00043	0402	00	0	03466	SUB ONE	KEY WAS
00044	0601	00	0	01422	STO SW6+5	DEPRESSED
00045	0520	00	0	75303	ZET CTRA	SEE IF CHN. A IS ON LINE
00046	0020	00	0	00052	TRA *+4	NO ZERO
00047	0074	00	4	75315	TSX CTX,4	MODIFY PROGRAM FOR FIRST UNIT TO BE TESTED
00050	0005	06	0	00062	HTR ABLE-4,0,OR2+1	
00051	0020	00	0	00057	TRA IONT+1	
00052	0500	00	0	75300	CLA CTRL1	
00053	-0320	00	0	03437	ANA EXCL	MASK OUT CHN A
00054	-0501	00	0	03440	ORA EXCL+1	OR IN EXCL UNIT TWO
00055	0602	00	0	75300	SLW CTRL1	
00056	0074	00	4	75314	IONT TSX IOCNT,4	
00057	0020	00	0	01427	TRA CHNG	
00060	0500	00	0	03414	CLA COUNT	SWITCH TO BYPASS
00061	-0100	00	0	00543	TNZ TEST	INITIAL SECTIONS
* ROUTINES FROM THIS POINT TO SYMBOLIC LOCATION ***TEST*** WILL CHECK						
* BUFFER AND SYNCHRONIZER INSTRUCTIONS FOR ALL THE CHANNELS SELECTED						
* THE FOLLOWING ROUTINES WILL BE MODIFIED FOR ALL CHANNELS BY IOC						
00062	-0760	00	0	01000	ETTA	
00063	0772	00	0	01202	REWA 2	
00064	0020	00	0	00066	TRA *+2	
00065	632346216060				BCD 1TCOA	TEST TRANS CHANNEL A IN OPN
00066	0766	00	0	01222	ABLE WTBA 2	
00067	0060	00	0	00072	TCOA *+3	CHAN. SHOULD BE IN OPN.
00070	0074	00	4	76403	TSX ERROR-1,4	FAILED TO TRANS. IN OPN.
00071	-3	00000	0	00066	TXL ABLE	

00072	0540	00	0	03361	RCHA CNTL	NO TRGS ON-WORD. CNT. 1
00073	0060	00	0	00076	TCOA *+3	SHOULD TRANS.
00074	0074	00	4	76403	TSX ERROR-1,4	FAILED TO TRANS. IN OPN.
00075	-3	00000	0	00066	TXL ABLE	
00076	0060	00	0	00076	TCOA *	IF UNIT RUNS AWAY,OR MACHINE HANGS ON THIS OR ANY PREVIOUS TCOA OPN.,BUFFER MAY NOT BE RECEIVING END OPER. FROM SYNC.
00077	0060	00	0	00101	TCOA *+2	SHOULD NOT TRANS.
00100	0020	00	0	00103	TRA *+3	OK
00101	0074	00	4	76403	TSX ERROR-1,4	TRANS. IN ERROR-TCOA
00102	-3	00000	0	00066	TXL ABLE	
00103	0074	00	4	76405	TSX OK,4	OUT TO CHECK SWITCHES
00104	0020	00	0	00066	TRA ABLE	REPEAT
00105	632345216060				BCD 1TCNA	TEST TRANS. CHAN NOT IN OPN
00106	-0060	00	0	00111	BAKER TCNA *+3	SHOULD TRANS.
00107	0074	00	4	76403	TSX ERROR-1,4	FAILED TO TRANS.
00110	-3	00000	0	00106	TXL BAKER	
00111	0766	00	0	01222	WTBA 2	
00112	-0060	00	0	00114	TCNA *+2	SHOULD NOT TRANS.
00113	0020	00	0	00116	TRA *+3	OK
00114	0074	00	4	76403	TSX ERROR-1,4	SHOULD NOT ENTER HERE
00115	-3	00000	0	00106	TXL BAKER	
00116	0540	00	0	03362	RCHA CNTL+1	NO TGRS. ON-WRD. CNT. 1
00117	-0060	00	0	00121	TCNA *+2	SHOULD NOT TRANS.
00120	0020	00	0	00123	TRA *+3	OK
00121	0074	00	4	76403	TSX ERROR-1,4	SHOULD NOT ENTER HERE
00122	-3	00000	0	00106	TXL BAKER	
00123	0060	00	0	00123	TCOA *	
00124	-0060	00	0	00127	TCNA *+3	SHOULD TRANS.
00125	0074	00	4	76403	TSX ERROR-1,4	SHOULD NOT ENTER HERE
00126	-3	00000	0	00106	TXL BAKER	
00127	0074	00	4	76405	TSX OK,4	OUT TO CHECK SWITCHES
00130	0020	00	0	00106	TRA BAKER	REPEAT
00131	226363216060				BCD 1BTTA	TEST BEGIN. TAPE
00132	0772	00	0	01202	CHUCK REWA 2	
00133	0764	00	0	01202	BSRA 2	BACKSPACE TO LOAD PT.
00134	0772	00	0	01202	REWA 2	SHOULD ACT AS NOP
00135	0764	00	0	01202	BSRA 2	TRY TO BACKSP OVER LD. PT.
00136	0060	00	0	00136	TCOA *	DELAY BEGIN. TAPE TGR. SHOULD BE TURNED ON HERE
00137	0760	00	0	01000	BTTA	

00140	0020	00	0	00143		TRA *+3	OK-SHOULD BE ON
00141	0074	00	4	76403		TSX ERROR-1,4	SHLD NOT SKIP TO ENTER HERE
00142	-3	00000	0	00132		TXL CHUCK	
00143	0760	00	0	01000		BTTA	
00144	0020	00	0	00146		TRA *+2	ERROR-BTT SHOULD BE OFF
00145	0020	00	0	00150		TRA *+3	OK-OFF
00146	0074	00	4	76403		TSX ERROR-1,4	SHOULD NOT ENTER HERE
00147	-3	00000	0	00132		TXL CHUCK	
00150	0074	00	4	76405		TSX OK,4	OUT TO CHECK SWITCHES
00151	0020	00	0	00132		TRA CHUCK	
00152	314663606060					BCD 1IOT	TEST I/O CHECK TGR.
00153	0766	00	0	01222	DOG	WTBA 2	
00154	0540	00	0	03361		RCHA CNTL	NO TGRS. ON-WRD. CNT. 1
00155	0060	00	0	00155		TCOA *	
00156	0544	00	0	03362		LCHA CNTL+1	SHOULD TURN ON IOT
00157	0760	00	0	00005		IOT	
00160	0020	00	0	00163		TRA *+3	SHOULD ENTER HERE-OK
00161	0074	00	4	76403		TSX ERROR-1,4	ERROR-SHOULD NOT SKIP
00162	-3	00000	0	00153		TXL DOG	
00163	0760	00	0	00005		IOT	
00164	0020	00	0	00166		TRA *+2	ERROR-TGR WAS NOT TURNED OFF BY PREVIOUS SEQUENCE
00165	0020	00	0	00170		TRA *+3	OK-TGR SHOULD BE OFF
00166	0074	00	4	76403		TSX ERROR-1,4	
00167	-3	00000	0	00153		TXL DOG	
00170	0074	00	4	76405		TSX OK,4	OUT TO CHECK SWITCHES
00171	0020	00	0	00153		TRA DOG	
00172	662526216060					BCD 1WEFA	TEST TO SEE THAT WEF BCD OR BINARY, BOTH WRITE TAPE MARKS
* WRITE 1 WORD RECORD OF 1-S, AN EOF, 1 WORD RECORD OF 0-S AND AN EOF							
00173	0766	00	0	01202		WTDA 2	WRITE 1 WORD RECORD OF 1-S
00174	0540	00	0	03361		RCHA CNTL	NO TRGS. ON-WRD. CNT. 1
00175	0770	00	0	01202		WEFA 2	BCD EOF
00176	0766	00	0	01222		WTBA 2	WRITE 1 WORD RECORD OF 0-S
00177	0540	00	0	03362		RCHA CNTL+1	NO. TGRS ON-WRD. CNT. 1
00200	0770	00	0	01222		WEFA 18	BINARY EOF, SHOULD WRITE BCD TAPE MARK
00201	0020	00	0	00203		TRA *+2	
00202	226251216001					BCD 1BSRA 1	
00203	0764	00	0	01222	EASY	BSRA 18	
00204	0764	00	0	01202		BSRA 2	
00205	0762	00	0	01222		RTBA 2	READ 1 WORD RECORD OF 0-S
00206	0540	00	0	03364		RCHA CNTLR+1	NO TGRS ON-WRD CNT 2
00207	0060	00	0	00207		TCOA *	
00210	0774	00	2	00003		AXT 3,2	L 3 IN XRB

00211	0634	00	2	76410		SXA WDNO,2	ADJUST PRINTOUT	76413
00212	0774	00	1	00100		AXT 64,1		
00213	0634	00	1	76407		SXA RDNCK,1	764X7	
00214	2	00002	2	00215		TIX *+1,2,2 NUMBER	
00215	2	00001	1	00215		TIX *,1,1		
* CHECK 2ND WRD IS ZERO AND FOR EOF AT THE RECORD								
00216	0500	00	0	03370		CLA READ	WORD READ	
00217	0560	00	0	03366		LDQ ZEROS	WORD WRITTEN	
00220	0340	00	0	03366		CAS ZEROS		
00221	0020	00	0	00223		TRA *+2	ERROR	
00222	0020	00	0	00225		TRA *+3	OK	
00223	0074	00	4	76402		TSX ERROR-2,4		
00224	0761	00	0	00203		NOP EASY	DO NOT REPEAT	
00225	0074	00	4	76407		TSX RDNCK,4		
00226	0020	00	0	00203		TRA EASY		
00227	0030	00	0	00232		TEFA *+3	SHOULD TRANS.	
00230	0074	00	4	76403		TSX ERROR-1,4	EOF DID NOT COME UP	
00231	-3	00000	0	00244		TXL GEORG		
00232	0020	00	0	00234		TRA *+2		
00233	226226216002					BCD 1BSFA 2		
00234	-0764	00	0	01202	FOX	BSFA 2	BKSP OVER EOF	
00235	-0764	00	0	01202		BSFA 2	BKSP OVER EOF AND 1 REC	
00236	0764	00	0	01202		BSRA 2	BKSP OVER 1 REC	
00237	0762	00	0	01202		RTDA 2		
00240	0540	00	0	03364		RCHA CNTLR+1	NO TGRS ON-WRD CNT 2	
00241	0060	00	0	00241		TCOA *	TO READ ONE WD AND BCD EOF	
00242	0020	00	0	00244		TRA *+2	CONTINUE	
00243	632526216060					BCD 1TEFA	TEST EOF TGR + INDICATOR	
00244	0030	00	0	00247	GEORG	TEFA *+3	SHOULD TRANS.	
00245	0074	00	4	76403		TSX ERROR-1,4		
00246	-3	00000	4	00244		TXL GEORG,4,0	DO NOT REPEAT	
00247	0030	00	0	00251		TEFA *+2	SHOULD NOT TRANS.	
00250	0020	00	0	00253		TRA *+3	OK	
00251	0074	00	4	76403		TSX ERROR-1,4	ERROR-TGR SHOULD BE OFF	
00252	-3	00000	4	00244		TXL GEORG,4,0	DO NOT REPEAT	
00253	0762	00	0	01222		RTBA 2		
00254	0540	00	0	03365		RCHA CNTLR+2	NO TGRS ON-WRD CNT 2 TO READ ONE WD AND BIN EOF	
00255	0060	00	0	00255		TCOA *	DELAY	
00256	0020	00	0	00260		TRA *+2		
00257	606325262160					BCD 1 TEFA	TEST EOF TGR + INDICATOR	
00260	0030	00	0	00263		TEFA *+3		
00261	0074	00	4	76403		TSX ERROR-1,4		
00262	-3	00000	4	00260		TXL *-2,4,0	DO NOT REPEAT	

* CHECK 1ST RECORD IS ONES

00263	0774	00	2	00002	AXT 2,2	L 2 IN XRB
00264	0500	00	0	03370	CLA READ	WORD READ
00265	0560	00	0	03367	LDQ ONES	WORD WRITTEN
00266	0340	00	0	03367	CAS ONES	
00267	0020	00	0	00271	TRA *+2	ERROR
00270	0020	00	0	00273	TRA *+3	OK
00271	0074	01	4	76402	TSX ERROR-2,4,1	TO ERROR ROUTINE
00272	0761	00	0	00234	NOP FOX	
00273	0074	00	4	76407	TSX RDNCK,4	TEST RDNCY
00274	0020	00	0	00234	TRA FOX	

* CHECK 2ND RECORD IS ZEROS

00275	0500	00	0	03372	CLA READ+2	WORD READ
00276	0560	00	0	03366	LDQ ZEROS	WORD WRITTEN
00277	0340	00	0	03366	CAS ZEROS	
00300	2	00001	2	00303	TIX *+3,2,1	ERROR
00301	0020	00	0	00305	TRA *+4	OK
00302	2	00001	2	00303	TIX *+1,2,1	ERROR
00303	0074	01	4	76402	TSX ERROR-2,4,1	TO ERROR ROUTINE
00304	0761	00	0	00234	NOP FOX	
00305	0074	00	4	76405	TSX OK,4	OUT TO TEST SWITCHES
00306	0020	00	0	00234	TRA FOX	

* PERFORM TAPE OPERATION AND EXECUTE ORS INSTRUCTION

00307	516322465162				BCD 1RTBORS	
00310	-0774	00	4	00314	OR	AXC *+4,4 2-S COMPLEMENT TO XRC
00311	0774	00	1	01000	AXT 512,1	L 1000 IN XRA
00312	0600	00	1	03361	STZ RCHA+512,1	CLEAR THISE
00313	2	00001	1	00312	TIX *-1,1,1	LOCATIONS
00314	0020	00	4	00001	TRA 1,4	PROCEED

* WRITE 1000 OCTAL WORD RECORD OF ZEROS

00315	0766	00	0	01222	WTBA 2	1000 WORDS
00316	0540	00	0	03472	RCHA ORWRD	OF ZEROS
00317	0544	00	0	03473	LCHA ORWRD+1	ON TAPE
00320	-0760	00	0	01000	ETTA	CHECK FOR END OF TAPE
00321	0020	00	0	00324	TRA *+3	REACHED END OF TAPE
00322	0060	00	0	00320	TCOA *-2	REPEAT CHECKING FOR EOT
00323	0020	00	0	00327	TRA *+4	NO END OF TAPE, PROCEED
00324	0760	00	0	01352	RDCA	BLAST THE CHANNEL
00325	0522	00	0	00063	XEC IONT+5	REWIND TAPE AT EOT
00326	0020	00	0	00310	TRA OR	REPEAT ROUTINE
00327	0764	00	0	01202	BSRA 2	BACKSPACE RECORD
00330	0774	00	1	01000	AXT 512,1	L 1000 IN XRA
00331	-0754	00	0	00000	PXD	CLEAR ACCUMLATOR
00332	0760	00	0	00006	COM	ACC Q-35 NOR ONES
00333	0602	00	1	03361	SLW RCHA+512,1	STORE 1-S IN

00334	2	00001	1	00333	TIX *-1,1,1	READ FIELD
00335	0760	00	0	00006	COM	ACCUMULATOR NOW ZEROS

* READ TAPE AND EXECUTE 100 SUCCESSIVE ORS

00336	0762	00	0	01222	RTBA 2	START
00337	0540	00	0	03472	RCHA ORWRD	READING
00340	0544	00	0	03473	LCHA ORWRD+1	TAPE
00341	-0602	00	0	03471	OR1	ORS ORTST EXECUTE SUCCESSIVE ORS
00342	-0602	00	0	03471		ORS ORTST
00343	-0602	00	0	03471		ORS ORTST
00344	-0602	00	0	03471		ORS ORTST
00345	-0602	00	0	03471		ORS ORTST
00346	-0602	00	0	03471		ORS ORTST
00347	-0602	00	0	03471		ORS ORTST
00350	-0602	00	0	03471		ORS ORTST
00351	-0602	00	0	03471		ORS ORTST
00352	-0602	00	0	03471		ORS ORTST
00353	-0602	00	0	03471		ORS ORTST
00354	-0602	00	0	03471		ORS ORTST
00355	-0602	00	0	03471		ORS ORTST
00356	-0602	00	0	03471		ORS ORTST
00357	-0602	00	0	03471		ORS ORTST
00360	-0602	00	0	03471		ORS ORTST
00361	-0602	00	0	03471		ORS ORTST
00362	-0602	00	0	03471		ORS ORTST
00363	-0602	00	0	03471		ORS ORTST
00364	-0602	00	0	03471		ORS ORTST
00365	-0602	00	0	03471		ORS ORTST
00366	-0602	00	0	03471		ORS ORTST
00367	-0602	00	0	03471		ORS ORTST
00370	-0602	00	0	03471		ORS ORTST
00371	-0602	00	0	03471		ORS ORTST
00372	-0602	00	0	03471		ORS ORTST
00373	-0602	00	0	03471		ORS ORTST
00374	-0602	00	0	03471		ORS ORTST
00375	-0602	00	0	03471		ORS ORTST
00376	-0602	00	0	03471		ORS ORTST
00377	-0602	00	0	03471		ORS ORTST
00400	-0602	00	0	03471		ORS ORTST
00401	-0602	00	0	03471		ORS ORTST
00402	-0602	00	0	03471		ORS ORTST
00403	-0602	00	0	03471		ORS ORTST
00404	-0602	00	0	03471		ORS ORTST
00405	-0602	00	0	03471		ORS ORTST
00406	-0602	00	0	03471		ORS ORTST
00407	-0602	00	0	03471		ORS ORTST
00410	-0602	00	0	03471		ORS ORTST
00411	-0602	00	0	03471		ORS ORTST
00412	-0602	00	0	03471		ORS ORTST
00413	-0602	00	0	03471		ORS ORTST
00414	-0602	00	0	03471		ORS ORTST
00415	-0602	00	0	03471		ORS ORTST
00416	-0602	00	0	03471		ORS ORTST
00417	-0602	00	0	03471		ORS ORTST

00420	-0602	00	0	03471	ORS	ORTST		
00421	-0602	00	0	03471	ORS	ORTST		
00422	-0602	00	0	03471	ORS	ORTST		
00423	-0602	00	0	03471	ORS	ORTST		
00424	-0602	00	0	03471	ORS	ORTST		
00425	-0602	00	0	03471	ORS	ORTST		
00426	-0602	00	0	03471	ORS	ORTST		
00427	-0602	00	0	03471	ORS	ORTST		
00430	-0602	00	0	03471	ORS	ORTST		
00431	-0602	00	0	03471	ORS	ORTST		
00432	-0602	00	0	03471	ORS	ORTST		
00433	-0602	00	0	03471	ORS	ORTST		
00434	-0602	00	0	03471	ORS	ORTST		
00435	-0602	00	0	03471	ORS	ORTST		
00436	-0602	00	0	03471	ORS	ORTST		
00437	-0602	00	0	03471	ORS	ORTST		
00440	-0602	00	0	03471	ORS	ORTST		
00441	-0602	00	0	03471	ORS	ORTST		
00442	-0602	00	0	03471	ORS	ORTST		
00443	-0602	00	0	03471	ORS	ORTST		
00444	-0602	00	0	03471	ORS	ORTST		
00445	-0602	00	0	03471	ORS	ORTST		
00446	-0602	00	0	03471	ORS	ORTST		
00447	-0602	00	0	03471	ORS	ORTST		
00450	-0602	00	0	03471	ORS	ORTST		
00451	-0602	00	0	03471	ORS	ORTST		
00452	-0602	00	0	03471	ORS	ORTST		
00453	-0602	00	0	03471	ORS	ORTST		
00454	-0602	00	0	03471	ORS	ORTST		
00455	-0602	00	0	03471	ORS	ORTST		
00456	-0602	00	0	03471	ORS	ORTST		
00457	-0602	00	0	03471	ORS	ORTST		
00460	-0602	00	0	03471	ORS	ORTST		
00461	-0602	00	0	03471	ORS	ORTST		
00462	-0602	00	0	03471	ORS	ORTST		
00463	-0602	00	0	03471	ORS	ORTST		
00464	-0602	00	0	03471	ORS	ORTST		
00465	-0602	00	0	03471	ORS	ORTST		
00466	-0602	00	0	03471	ORS	ORTST		
00467	-0602	00	0	03471	ORS	ORTST		
00470	-0602	00	0	03471	ORS	ORTST		
00471	-0602	00	0	03471	ORS	ORTST		
00472	-0602	00	0	03471	ORS	ORTST		
00473	-0602	00	0	03471	ORS	ORTST		
00474	-0602	00	0	03471	ORS	ORTST		
00475	-0602	00	0	03471	ORS	ORTST		
00476	-0602	00	0	03471	ORS	ORTST		
00477	-0602	00	0	03471	ORS	ORTST		
00500	-0602	00	0	03471	ORS	ORTST		
00501	-0602	00	0	03471	ORS	ORTST		
00502	-0602	00	0	03471	ORS	ORTST		
00503	-0602	00	0	03471	ORS	ORTST		
00504	-0602	00	0	03471	ORS	ORTST		
00505	0060	00	0	00341	OR2	TCOA OR1	ORS IF CHANNEL IN OPERATION	
00506	0774	00	0	01001	AXT 513	WORD NUMBER		

00507	0634	00	1	76410	SXA	WDNO,1	AND
00510	0774	00	2	00002	AXT	2,2	RECORD NUMBER
00511	0634	00	2	76406	SXA	RECNO,2	FOR ERRORS
00512	2	00001	1	00513	TIX	*+1,1,1	1000 IN XRA
00513	2	00001	2	00515	TIX	*+2,2,1	2 IN XRB
* CHECK LOCATIONS IN READ FIELD ARE ZEROS							
00514	0500	00	1	03361	CLA	RCHA+512,1	L CONTENTS READ FIELD
00515	0100	00	0	00521	TZE	*+4	ARE LOCATIONS IN ZERO
00516	0560	00	0	03366	LDQ	ZEROS	NO, CLEAR MQ
00517	0074	01	4	76402	TSX	ERROR-2,4,1	CHECK CIRCUIT 3G
00520	0761	00	0	00310	NOP	OR	SYSTEMS PAGE 2.09.00.1
00521	2	00001	1	00514	TIX	*-5,1,1	CHECK 1000 OCTAL LOCATION
00522	0500	00	0	03471	CLA	ORTST	CHECK ORS LOCATION
00523	0340	00	0	03367	CAS	ONES	IS LOCATION 1-S
00524	0020	00	0	00526	TRA	*+2	NO
00525	0020	00	0	00530	TRA	*+3	YES
00526	0560	00	0	03367	LDQ	ONES	1-S TO MQ
00527	0074	00	4	76404	TSX	ERROR,4	TO ERROR ROUTINE
00530	0074	00	4	76405	TSX	OK,4	
00531	0020	00	0	00310	TRA	OR	
00532	0761	00	0	00000	NOP		
00533	0074	00	4	00311	TSX	OR+1,4	TO CLEAR READ FIELD
00534	0074	00	4	75315	TSX	CTX,4	
00535	0005	06	0	00062	HTR	ABLE-4,0,OR2+1	
00536	0500	00	0	75302	CLA	IOCT	
00537	0402	00	0	03466	SUB	ONE	
00540	0601	00	0	75302	STO	IOCT	
00541	-0100	00	0	00062	TNZ	IONT+4	CHECK ALL TAPE UNITS
00542	-0625	00	0	03414	STL	COUNT	

*THIS SECTION WRITES A 100 WORD RECORD ON ALL CHANNELS
 *SELECTED TO MOVE FROM LOAD POINT, THEN REPEAT THE SAME RECORD FOR TEST.

00543	0774	00	1	00454	TEST	AXT	300,1
00544	0774	00	2	00101		AXT	65,2
00545	-0520	00	0	75303	NZT	CTRA	TEST FOR CHANNEL-A
00546	0020	00	0	00551	TRA	*+3	NO-GO TO B
00547	0766	00	0	01222	WTBA	2	WRITE CHANNEL-A
00550	0540	00	0	02347	RCHA	WR1	
00551	-0520	00	0	75304	NZT	CTRB	TEST FOR CHANNEL-B
00552	0020	00	0	00555	TRA	*+3	NO-GO TO C
00553	0766	00	0	02221	WTBB	1	WRITE CHANNEL-B
00554	-0540	00	0	02350	RCHB	WR2	
00555	-0520	00	0	75305	NZT	CTRC	TEST FOR CHANNEL-C
00556	0020	00	0	00561	TRA	*+3	NO-GO TO D
00557	0766	00	0	03221	WTBC	1	WRITE CHANNEL C
00560	0540	00	0	02351	RCHA	WR3	
00561	-0520	00	0	75306	NZT	CTRD	TEST FOR CHANNEL-D

00562	0020	00	0	00565	TRA *+3	NO-GO TO E
00563	0766	00	0	04221	WTBD 1	WRITE CHANNEL-D
00564	-0541	00	0	02352	RCHD WR4	
00565	-0520	00	0	75307	NZT CTRE	TEST FOR CHANNEL-E
00566	0020	00	0	00571	TRA *+3	NO-GO TO F
00567	0766	00	0	05221	WTBE 1	WRITE CHANNEL E
00570	0542	00	0	02353	RCHE WR5	
00571	-0520	00	0	75310	NZT CTRF	TEST FOR CHANNEL-F
00572	0020	00	0	00575	TRA *+3	NO-GO TO G
00573	0766	00	0	06221	WTBF 1	WRITE CHANNEL-F
00574	-0542	00	0	02354	RCHF WR6	
00575	-0520	00	0	75311	NZT CTRG	TEST FOR CHANNEL-G
00576	0020	00	0	00601	TRA *+3	NO-GO TO H
00577	0766	00	0	07221	TEST2 WTBG 1	WRITE CHANNEL-G
00600	0543	00	0	02355	RCHG WR7	
00601	-0520	00	0	75312	NZT CTRH	TEST FOR CHANNEL-H
00602	0020	00	0	00605	TRA *+3	NO
00603	0766	00	0	10221	WTBH 1	WRITE CHANNEL-H
00604	-0543	00	0	02356	RCHH WR10	
00605	0020	00	0	01354	TRA CLEAR+5	
00606	2 00001	2	00545		TIX TEST+2,2,1	TAPE WILL BE WRITTEN 101 TIMES. THE FIRST TIME TO MOVE FROM LOAD POINT

00607	0074	00	4	76405	TSX OK,4	
00610	0020	00	0	00545	TRA TEST+2	
00611	0761	00	0	00000	NOP	

*START WORST CASE SECTION

00612	0020	00	0	00614	TRA *+2	
00613	666322606060				BCD 1WTB	
00614	0074	00	4	76407	TSX RDNCK,4	TEST FOR TAPE CHECKS
00615	0761	00	0	00614	NOP *-1	

*THIS SECTION READS A 100 WORD RECORD FROM EACH CHANNEL SELECTED
*WHILE ANS INDIRECTLY ADDRESSED GOES ON IN MF

*TEST FOR BACKSPACE

00616	0760	00	0	00165	SWT 5	TEST SWITCH {5
00617	0020	00	0	01771	TRA ANS	TRY TO PIN POINT TROUBLE TEST WORST CASE

00620	0774	00	2	00100	AXT 64,2	
00621	-0520	00	0	75303	RPEAT NZT CTRA	
00622	0020	00	0	00624	TRA *+2	
00623	0764	00	0	01202	BSRA 2	
00624	-0520	00	0	75304	NZT CTRB	
00625	0020	00	0	00627	TRA *+2	
00626	0764	00	0	02201	BSRB 1	
00627	-0520	00	0	75305	NZT CTRC	
00630	0020	00	0	00632	TRA *+2	

00631	0764	00	0	03201	BSRC 1	
00632	-0520	00	0	75306	NZT CTRD	
00633	0020	00	0	00635	TRA *+2	
00634	0764	00	0	04201	BSRD 1	
00635	-0520	00	0	75307	NZT CTRE	
00636	0020	00	0	00640	TRA *+2	
00637	0764	00	0	05201	BSRE 1	
00640	-0520	00	0	75310	NZT CTRF	
00641	0020	00	0	00643	TRA *+2	
00642	0764	00	0	06201	BSRF 1	
00643	-0520	00	0	75311	NZT CTRG	
00644	0020	00	0	00646	TRA *+2	
00645	000	00	0	00001	BSRG 1	
00646	-0520	00	0	75312	NZT CTRH	
00647	0020	00	0	00651	TRA *+2	
00650	000	00	0	00001	BSRH 1	
00651	2 00001	2	00621	TIX RPEAT,2,1 BACKSPACE 100 RECS.		

00652	0774	00	2	00100	AXT 64,2	
00653	-0520	00	0	75303	READ5 NZT CTRA	
00654	0020	00	0	00657	TRA *+3	
00655	0762	00	0	01222	RTBA 2	READ TAPE CHAN A
00656	0540	00	0	04473	RCHA CCHA	
00657	-0520	00	0	75304	NZT CTRB	
00660	0020	00	0	00663	TRA *+3	
00661	0762	00	0	02221	RTBB 1	READ TAPE CHAN B
00662	-0540	00	0	00000	RCHB **	
00663	-0520	00	0	75305	NZT CTRC	
00664	0020	00	0	00667	TRA *+3	
00665	0762	00	0	03221	RTBC 1	READ TAPE CHAN C
00666	0541	00	0	00000	RCHC **	
00667	-0520	00	0	75306	NZT CTRD	
00670	0020	00	0	00673	TRA *+3	
00671	0762	00	0	04221	RTBD 1	READ TAPE CHAN D
00672	-0541	00	0	00000	RCHD **	
00673	-0520	00	0	75307	NZT CTRE	
00674	0020	00	0	00677	TRA *+3	
00675	0762	00	0	05221	RTBE 1	READ TAPE CHAN E
00676	0542	00	0	00000	RCHE **	
00677	-0520	00	0	75310	NZT CTRF	
00700	0020	00	0	00703	TRA *+3	
00701	0762	00	0	06221	RTBF 1	READ TAPE CHAN F
00702	-0542	00	0	00000	RCHF **	
00703	-0520	00	0	75311	NZT CTRG	
00704	0020	00	0	00707	TRA *+3	
00705	0762	00	0	07221	RTBG 1	READ TAPE CHAN G
00706	0543	00	0	00000	RCHG **	
00707	-0520	00	0	75312	NZT CTRH	
00710	0020	00	0	00713	TRA *+3	
00711	0762	00	0	10221	RTBH 1	READ TAPE CHAN H
00712	-0543	00	0	00000	RCHH **	

00713	0320	60	0	02357	ANS* SAVE	CONTINUOUS
00714	0320	60	0	02357	ANS* SAVE	ANS INDIRECTLY
00715	0320	60	0	02357	ANS* SAVE	ADDRESSED
00716	0320	60	0	02357	ANS* SAVE	THESE INSTRUCTIONS

00717	0320	60	0	02357		ANS* SAVE	SHOULD NOT
00720	0320	60	0	02357		ANS* SAVE	INTERRUPT OR,
00721	0320	60	0	02357		ANS* SAVE	SHARE FOR
00722	0320	60	0	02357		ANS* SAVE	B TIME
00723	0320	60	0	02357		ANS* SAVE	FROM
00724	0320	60	0	02357		ANS* SAVE	BUFFER
00725	2	00001	1	00713		TIX *-10,1,1	
00726	0074	00	4	76405		TSX OK,4	
00727	0020	00	0	00621		TRA RPEAT	
00730	0761	00	0	00000		NOP	
00731	0060	00	0	00731	TCO	TCOA *	DELAY
00732	0061	00	0	00732		TCOB *	TO
00733	0062	00	0	00733		TCOC *	ENABLE
00734	0063	00	0	00734		TCOD *	SCH TO
00735	0064	00	0	00735		TCOE *	GET CORRECT
00736	0065	00	0	00736		TCOF *	INFORMATION
00737	0066	00	0	00737		TCOG *	
00740	0067	00	0	00740		TCOH *	
00741	-0520	00	0	75303		NZT CTRA	TEST FOR CHAN A
00742	0020	00	0	00744		TRA *+2	
00743	0640	00	0	03404		SCHA SCH	
00744	-0520	00	0	75304		NZT CTRB	TEST FOR CHAN B
00745	0020	00	0	00747		TRA *+2	
00746	-0640	00	0	03405		SCHB SCH+1	
00747	-0520	00	0	75305		NZT CTRC	TEST FOR CHAN C
00750	0020	00	0	00752		TRA *+2	
00751	0641	00	0	03406		SCHC SCH+2	
00752	-0520	00	0	75306		NZT CTRD	TEST FOR CHAN D
00753	0020	00	0	00755		TRA *+2	
00754	-0641	00	0	03407		SCHD SCH+3	
00755	-0520	00	0	75307		NZT CTRE	TEST FOR CHAN E
00756	0020	00	0	00760		TRA *+2	
00757	0642	00	0	03410		SCHE SCH+4	
00760	-0520	00	0	75310		NZT CTRF	TEST FOR CHAN F
00761	0020	00	0	00763		TRA *+2	
00762	-0642	00	0	03411		SCHF SCH+5	
00763	-0520	00	0	75311		NZT CTRG	TEST FOR CHAN G
00764	0020	00	0	00766		TRA *+2	
00765	0643	00	0	03412		SCHG SCH+6	
00766	-0520	00	0	75312		NZT CTRH	TEST FOR CHAN H
00767	0020	00	0	00771		TRA *+2	
00770	-0643	00	0	03413		SCHH SCH+7	
00771	0500	00	0	03415		CLA CT	
00772	0601	00	0	76410		STO WDNO	
00773	0601	00	0	76406		STO RECNO	
00774	0020	00	0	00776		TRA *+2	

*THE ROUTINES FROM THIS POINT TO END OF PROGRAM, TESTS FOR THE CHECKS,
 *IOT LIGHT, INFORMATION STORED FROM CHANNELS, END OF FILE, AND INFORMATION
 *TRANSMITTED FOR ALL CHANNELS SELECTED

00775	516322606060		BCD 1RTB	
00776	0074 00 4 76407		TSX RDNCK,4	CHECK REDUNDANCY
00777	0761 00 0 00776		NOP *-1	
01000	0020 00 0 01002		TRA *+2	
01001	314663606060		BCD 1IOT	
01002	0760 00 0 00005		IOT	
01003	0020 00 0 01005		TRA *+2	ERROR
01004	0020 00 0 01007		TRA *+3	OK
01005	0074 00 4 76403		TSX ERROR-1,4	
01006	-3 00000 4 01002		TXL *-4,4	
01007	-0520 00 0 75303		NZT CTRA	TEST FOR CHANS A
01010	0020 00 0 01045		TRA TRB	NO-GO TO B
01011	0020 00 0 01013		TRA *+2	YES
01012	622330216060		BCD 1SCHA	
01013	0500 00 0 03404		CLA SCH	WORD FROM CHANNEL
01014	0560 00 0 03374		LDQ CINFO	CORRECT INFORMATION
01015	0340 00 0 03374		CAS CINFO	
01016	0020 00 0 01020		TRA *+2	ERROR
01017	0020 00 0 01022		TRA *+3	OK
01020	0074 00 4 76403		TSX ERROR-1,4	
01021	0761 00 0 01013		NOP *-6	
01022	0020 00 0 01024		TRA *+2	
01023	606325262160		BCD 1 TEFA	
01024	0030 00 0 01026		TEFA *+2	ERROR
01025	0020 00 0 01032		TRA *+5	OK
01026	0074 00 4 76403		TSX ERROR-1,4	EXIT HERE WILL INDICATE
01027	-3 00000 4 01024		TXL *-3,4	A DISCONNECT ON A FALSE EOF
01030	0020 00 0 01032		TRA *+2	CHANNEL A
01031	516322216002		BCD 1RTBA 2	
01032	0774 00 1 00100		AXT 64,1	
01033	0500 00 1 02461		CLA RCHA+64,1	WORD READ
01034	0560 00 1 03574		LDQ WTCHA+64,1	WORD GENERATED
01035	0340 00 1 03574		CAS WTCHA+64,1	
01036	0020 00 0 01040		TRA *+2	ERROR
01037	0020 00 0 01042		TRA *+3	OK
01040	0074 00 4 76402		TSX ERROR-2,4	
01041	0761 00 0 01032		NOP *-7	
01042	2 00001 1 01033		TIX *-7,1,1	RETURN TO CHECK ALL WORDS
01043	0020 00 0 01045		TRA *+2	
01044	622330226060		BCD 1SCHB	
01045	-0520 00 0 75304	TRB	NZT CTRB	TEST FOR CHN. B
01046	0020 00 0 01101		TRA TRC	NO-GO TO C
01047	0500 00 0 03405		CLA SCH+1	WORD FROM CHANNEL

01050	0560	00	0	03375		LDQ	CINFO+1	CORRECT INFORMATION
01051	0340	00	0	03375		CAS	CINFO+1	
01052	0020	00	0	01054		TRA	*+2	ERROR
01053	0020	00	0	01056		TRA	*+3	OK
01054	0074	00	4	76403		TSX	ERROR-1,4	
01055	0761	00	0	01047		NOP	*-6	
01056	0020	00	0	01060		TRA	*+2	
01057	606325262260					BCD	1	TEFB
01060	-0030	00	0	01062		TEFB	*+2	ERROR
01061	0020	00	0	01066		TRA	*+5	
01062	0074	00	4	76403		TSX	ERROR-1,4	EXIT HERE WILL
01063	-3	00000	4	01060		TXL	*-3,4	INDICATE FALSE EOF
01064	0020	00	0	01066		TRA	*+2	CHANNEL B
01065	516322226001					BCD	1	RTBB 1
01066	0774	00	1	00100		AXT	64,1	
01067	0500	00	1	02561		CLA	RCHB+64,1	WORD READ
01070	0560	00	1	03674		LDQ	WTCHB+64,1	WORD GENERATED
01071	0340	00	1	03674		CAS	WTCHB+64,1	
01072	0020	00	0	01074		TRA	*+2	ERROR
01073	0020	00	0	01076		TRA	*+3	OK
01074	0074	00	4	76402		TSX	ERROR-2,4	
01075	0761	00	0	01066		NOP	*-7	
01076	2	00001	1	01067		TIX	*-7,1,1	RETURN TO CHECK ALL WORDS
01077	0020	00	0	01101		TRA	*+2	YES
01100	622330236060					BCD	1	SCHC
01101	-0520	00	0	75305	TRC	NZT	CTRC	TEST FOR CHN. C
01102	0020	00	0	01135		TRA	TRD	NO-GO TO D
01103	0500	00	0	03406		CLA	SCH+2	WORD FROM CHANNEL
01104	0560	00	0	03376		LDQ	CINFO+2	CORRECT INFORMATION
01105	0340	00	0	03376		CAS	CINFO+2	
01106	0020	00	0	01110		TRA	*+2	ERROR
01107	0020	00	0	01112		TRA	*+3	OK
01110	0074	00	4	76403		TSX	ERROR-1,4	
01111	0761	00	0	01103		NOP	*-6	
01112	0020	00	0	01114		TRA	*+2	
01113	632526236060					BCD	1	TEFC
01114	0031	00	0	01116		TEFC	*+2	ERROR
01115	0020	00	0	01122		TRA	*+5	OK
01116	0074	00	4	76403		TSX	ERROR-1,4	
01117	-3	00000	4	01114		TXL	*-3,4	
01120	0020	00	0	01122		TRA	*+2	
01121	516322236060					BCD	1	RTBC
01122	0774	00	1	00100		AXT	64,1	
01123	0500	00	1	02661		CLA	RCHC+64,1	WORD READ
01124	0560	00	1	03774		LDQ	WTCHC+64,1	WORD GENERATED

01125	0340	00	1	03774		CAS	WTCHC+64,1		
01126	0020	00	0	01130		TRA	*+2	ERROR	
01127	0020	00	0	01132		TRA	*+3	OK	
01130	0074	00	4	76402		TSX	ERROR-2,4		
01131	0761	00	0	01122		NOP	*-7		
01132	2	00001	1	01123		TIX	*-7,1,1	RETURN TO CHECK ALL WORDS	
01133	0020	00	0	01135		TRA	*+2		
01134	622330246060					BCD	1SCHD		
01135	-0520	00	0	75306	TRD	NZT	CTRD	TEST FOR CHN. D	
01136	0020	00	0	01171		TRA	TRE	NO-GO TO E	
01137	0500	00	0	03407		CLA	SCH+3	WORD FOR CHANNEL	
01140	0560	00	0	03377		LDQ	CINFO+3	CORRECT INFORMATION	
01141	0340	00	0	03377		CAS	CINFO+3		
01142	0020	00	0	01144		TRA	*+2	ERROR	
01143	0020	00	0	01146		TRA	*+3	OK	
01144	0074	00	4	76403		TSX	ERROR-1,4		
01145	0761	00	0	01137		NOP	*-6		
01146	0020	00	0	01150		TRA	*+2		
01147	632526246060					BCD	1TEFD		
01150	-0031	00	0	01152		TEFD	*+2	ERROR	
01151	0020	00	0	01156		TRA	*+5	OK	
01152	0074	00	4	76403		TSX	ERROR-1,4		
01153	-3	00000	4	01150		TXL	*-3,4		
01154	0020	00	0	01156		TRA	*+2		
01155	516322246001					BCD	1RTBD 1		
01156	0774	00	1	00100		AXT	64,1		
01157	0500	00	1	02761		CLA	RCHD+64,1	WORD READ	
01160	0560	00	1	04074		LDQ	WTCHD+64,1	WORD GENERATED	
01161	0340	00	1	04074		CAS	WTCHD+64,1		
01162	0020	00	0	01164		TRA	*+2	ERROR	
01163	0020	00	0	01166		TRA	*+3	OK	
01164	0074	00	4	76402		TSX	ERROR-2,4		
01165	0761	00	0	01156		NOP	*-7		
01166	2	00001	1	01157		TIX	*-7,1,1	RETURN TO CHECK ALL WORDS	
01167	0020	00	0	01171		TRA	*+2		
01170	622330256060					BCD	1SCHE		
01171	-0520	00	0	75307	TRE	NZT	CTRE	TEST FOR CHN. E	
01172	0020	00	0	01225		TRA	TRF	NO-GO TO F	
01173	0500	00	0	03410		CLA	SCH+4	WORD FROM CHANNEL	
01174	0560	00	0	03400		LDQ	CINFO+4	CORRECT INFORMATION	
01175	0340	00	0	03400		CAS	CINFO+4		
01176	0020	00	0	01200		TRA	*+2	ERROR	
01177	0020	00	0	01202		TRA	*+3	OK	
01200	0074	00	4	76403		TSX	ERROR-1,4		
01201	0761	00	0	01173		NOP	*-6		
01202	0020	00	0	01204		TRA	*+2		

01203	632526256060		BCD 1TEFE	
01204	0032 00 0 01206		TEFE *+2	ERROR
01205	0020 00 0 01212		TRA *+5	OK
01206	0074 00 4 76403		TSX ERROR-1,4	
01207	-3 00000 4 01204		TXL *-3,4	
01210	0020 00 0 01212		TRA *+2	
01211	516322256060		BCD 1RTBE	
01212	0774 00 1 00100		AXT 64,1	
01213	0500 00 1 03061		CLA RCHE+64,1	WORD READ
01214	0560 00 1 04174		LDQ WTCHE+64,1	WORD GENERATED
01215	0340 00 1 04174		CAS WTCHE+64,1	
01216	0020 00 0 01220		TRA *+2	ERROR
01217	0020 00 0 01222		TRA *+3	OK
01220	0074 00 4 76402		TSX ERROR-2,4	
01221	0761 00 0 01212		NOP *-7	
01222	2 00001 1 01213		TIX *-7,1,1	RETURN TO CHECK ALL WORDS
01223	0020 00 0 01225		TRA *+2	
01224	622330266060		BCD 1SCHF	
01225	-0520 00 0 75310	TRF	NZT CTRF	TEST FOR CHN. F
01226	0020 00 0 01261		TRA TRG	NO-GO TO G
01227	0500 00 0 03411		CLA SCH+5	WORD FROM CHANNEL
01230	0560 00 0 03401		LDQ CINFO+5	CORRECT INFORMATION
01231	0340 00 0 03401		CAS CINFO+5	
01232	0020 00 0 01234		TRA *+2	ERROR
01233	0020 00 0 01236		TRA *+3	OK
01234	0074 00 4 76403		TSX ERROR-1,4	
01235	0761 00 0 01227		NOP *-6	
01236	0020 00 0 01240		TRA *+2	
01237	632526266060		BCD 1TEFF	
01240	-0032 00 0 01242		TEFF *+2	ERROR
01241	0020 00 0 01246		TRA *+5	OK
01242	0074 00 4 76403		TSX ERROR-1,4	
01243	-3 00000 4 01240		TXL *-3,4	
01244	0020 00 0 01246		TRA *+2	
01245	516322266001		BCD 1RTBF 1	
01246	0774 00 1 00100		AXT 64,1	
01247	0500 00 1 03161		CLA RCHF+64,1	WORD READ
01250	0560 00 1 04274		LDQ WTCHF+64,1	WORD GENERATED
01251	0340 00 1 04274		CAS WTCHF+64,1	
01252	0020 00 0 01254		TRA *+2	ERROR
01253	0020 00 0 01256		TRA *+3	OK
01254	0074 00 4 76402		TSX ERROR-2,4	
01255	0761 00 0 01246		NOP *-7	
01256	2 00001 1 01247		TIX *-7,1,1	RETURN TO CHECK ALL WORDS
01257	0020 00 0 01261		TRA *+2	
01260	622330276060		BCD 1SCHG	

01261	-0520	00	0	75311	TRG	NZT	CTRG	TEST FOR CHN. G	
01262	0020	00	0	01315		TRA	TRH	NO-GO TO H	
01263	0500	00	0	03412		CLA	SCH+6	WORD FROM CHANNEL	
01264	0560	00	0	03402		LDQ	CINFO+6	CORRECT INFORMATION	
01265	0340	00	0	03402		CAS	CINFO+6		
01266	0020	00	0	01270		TRA	*+2	ERROR	
01267	0020	00	0	01272		TRA	*+3	OK	
01270	0074	00	4	76403		TSX	ERROR-1,4		
01271	0761	00	0	01263		NOP	*-6		
01272	0020	00	0	01274		TRA	*+2		
01273 632526276060						BCD 1TEFG			
01274	0033	00	0	01276		TEFG	*+2	ERROR	
01275	0020	00	0	01302		TRA	*+5	OK	
01276	0074	00	4	76403		TSX	ERROR-1,4		
01277	-3	00000	4	01274		TXL	*-3,4		
01300	0020	00	0	01302		TRA	*+2		
01301 516322276001						BCD 1RTBG 1			
01302	0774	00	1	00100		AXT	64,1		
01303	0500	00	1	03261		CLA	RCHG+64,1	WORD READ	
01304	0560	00	1	04374		LDQ	WTCHG+64,1	WORD GENERATED	
01305	0340	00	1	04374		CAS	WTCHG+64,1		
01306	0020	00	0	01310		TRA	*+2	ERROR	
01307	0020	00	0	01312		TRA	*+3	OK	
01310	0074	00	4	76402		TSX	ERROR-2,4		
01311	0761	00	0	01302		NOP	*-7		
01312	2	00001	1	01303		TIX	*-7,1,1	RETURN TO CHECK ALL WORDS	
01313	0020	00	0	01315		TRA	*+2		
01314 622330306060						BCD 1SCHH			
01315	-0520	00	0	75312	TRH	NZT	CTRH	TEST FOR CHN. H	
01316	0020	00	0	01347		TRA	CLEAR	NO-GO TO CLEAR READ AREA	
01317	0500	00	0	03413		CLA	SCH+7	WORD FROM CHANNEL	
01320	0560	00	0	03403		LDQ	CINFO+7	CORRECT INFORMATION	
01321	0340	00	0	03403		CAS	CINFO+7		
01322	0020	00	0	01324		TRA	*+2	ERROR	
01323	0020	00	0	01326		TRA	*+3	OK	
01324	0074	00	4	76403		TSX	ERROR-1,4		
01325	0761	00	0	01317		NOP	*-6		
01326	0020	00	0	01330		TRA	*+2		
01327 632526306060						BCD 1TEFH			
01330	-0033	00	0	01332		TEFH	*+2	ERROR	
01331	0020	00	0	01336		TRA	*+5	OK	
01332	0074	00	4	76403		TSX	ERROR-1,4		
01333	-3	00000	4	01330		TXL	*-3,4		
01334	0020	00	0	01336		TRA	*+2		
01335 516322306001						BCD 1RTBH 1			

01336	0774	00	1	00100		AXT	64,1	
01337	0500	00	1	03361		CLA	RCHH+64,1	WORD READ
01340	0560	00	1	04474		LDQ	WTCHH+64,1	WORD GENERATED
01341	0340	00	1	04474		CAS	WTCHH+64,1	
01342	0020	00	0	01344		TRA	*+2	ERROR
01343	0020	00	0	01346		TRA	*+3	OK
01344	0074	00	4	76402		TSX	ERROR-2,4	
01345	0761	00	0	01336		NOP	*-7	
01346	2	00001	1	01337		TIX	*-7,1,1	RETURN TO CHECK ALL WORDS

*CLEAR READ FIELD AREAS

01347	0774	00	1	01000	CLEAR	AXT	512,1	L 1000 IN XRA
01350	0600	00	1	03361		STZ	RCHA+512,1	
01351	2	00001	1	01350		TIX	*-1,1,1	
01352	2	00001	2	00653		TIX	READ5,2,1	REPEAT 100 TIMES
01353	0020	00	0	02223		TRA	PRINT	PASS COMPLETE

01354	-0520	00	0	75303		NZT	CTRA	
01355	0020	00	0	01360		TRA	*+3	
01356	-0760	00	0	01000		ETTA		
01357	0020	00	0	02170		TRA	EOT	REWIND
01360	-0520	00	0	75304		NZT	CTRB	
01361	0020	00	0	01364		TRA	*+3	
01362	-0760	00	0	02000		ETTB		
01363	0020	00	0	02170		TRA	EOT	REWIND
01364	-0520	00	0	75305		NZT	CTRC	
01365	0020	00	0	01370		TRA	*+3	
01366	-0760	00	0	03000		ETTC		
01367	0020	00	0	02170		TRA	EOT	REWIND
01370	-0520	00	0	75306		NZT	CTRD	
01371	0020	00	0	01374		TRA	*+3	
01372	-0760	00	0	04000		ETTD		
01373	0020	00	0	02170		TRA	EOT	REWIND
01374	-0520	00	0	75307		NZT	CTRE	
01375	0020	00	0	01400		TRA	*+3	
01376	-0760	00	0	05000		ETTE		
01377	0020	00	0	02170		TRA	EOT	REWIND
01400	-0520	00	0	75310		NZT	CTRF	
01401	0020	00	0	01404		TRA	*+3	
01402	-0760	00	0	06000		ETTF		
01403	0020	00	0	02170		TRA	EOT	REWIND
01404	-0520	00	0	75311		NZT	CTRG	
01405	0020	00	0	01410		TRA	*+3	
01406	-0760	00	0	07000		ETTG		
01407	0020	00	0	02170		TRA	EOT	REWIND
01410	-0520	00	0	75312		NZT	CTRH	
01411	0020	00	0	01414		TRA	*+3	
01412	-0760	00	0	10000		ETTH		
01413	0020	00	0	02170		TRA	EOT	REWIND
01414	0020	00	0	00606		TRA	TEST2+7	CONTINUE WRITING

01415	0760	00	0	00166	SW6	SWT 6	TEST SWITCH 6
01416	0020	00	0	01420		TRA *+2	UP-TURN ON LITE 1 AND GO TO REWIND
01417	0020	00	0	00037		TRA BEGIN+2	DOWN-RETURN TO ENTER KEYS
01420	0760	00	0	00141		SLN 1	
01421	0020	00	0	02170		TRA EOT	REWIND TAPES
01422	0762	00	0	01321		RCDA	CALL IN
01423	0540	00	0	01426		RCHA *+3	NEXT PROGRAM
01424	0544	00	0	00000		LCHA 0	
01425	0020	00	0	00001		TRA 1	
01426	-1	00003	0	00000		IOCT 0,0,3	
01427	0500	00	0	03366	CHNG	CLA ZEROS	
01430	0774	00	1	00010		AXT 8,1	L-10
01431	0520	00	1	75313		ZET CTRA+8,1	ZERO TEST CTRA-CTRH
01432	0400	00	0	03466		ADD ONE	ADD ONE FOR EACH UNIT
01433	2	00001	1	01431		TIX *-2,1,1	TIX UNTIL EIGHT CHNS CHECKED
01434	0601	00	0	02337		STO CNT	NUMBER OF UNITS ON LINE
01435	-0520	00	0	02337		NZT CNT	
01436	0000	00	0	00037		HTR BEGIN+2	NO UNITS ON LINE
01437	0500	00	0	02341	HERE	CLA BUF1	THIS IS 72 US X100
01440	0765	00	0	00043		LRS 35	MACH CYCLE X 100
01441	0760	00	0	00000		CLM	
01442	0221	00	0	02340		DVP MCYCL	
01443	0131	00	0	00000		XCA	
01444	0402	00	0	03470		SUB SIX	
01445	0131	00	0	00000		XCA	
01446	-0600	00	0	02342		STQ BUF1	WORST CASE TIME BETWEEN BDW ON ONE CHANNEL.
01447	0760	00	0	00000		CLM	
01450	0221	00	0	02337		DVP CNT	NO. OF CHANNELS ON LINE.
01451	-0600	00	0	02343		STQ BUBAS	BASIC B CYCLES FOR ALL CHANNELS.
01452	0500	00	0	02343		CLA BUBAS	
01453	0200	00	0	02337		MPY CNT	
01454	-0600	00	0	02344		STQ TEM	
01455	0500	00	0	02342		CLA BUF1	
01456	0402	00	0	02344		SUB TEM	
01457	0601	00	0	02344		STO TEM	NO. OF CHANNELS NEEDING AN EXTRA BCW
01460	0500	00	0	03441		CLA TCH	ORIGINAL TCH
01461	-0520	00	0	75303		NZT CTRA	TEST FOR CHANNEL A
01462	0020	00	0	01511		TRA BEE	NO
01463	0074	00	4	02236		TSX CNVRT,4	ALTER INDEX COUNT NUMBER
01464	0621	00	0	00656		STA READ5+3	YES-STORE ADDRESS OF FIRST COMMAND IN RCHA

01465	0560	00	0	03442	LDQ	IOCPA	GENERATE
01466	0774	00	4	00077	AXT	63,4	COMMANDS
01467	0534	00	2	02346	LXA	BCYCL,2	
01470	0621	00	0	01473	STA	*+3	CHANNEL
01471	0400	00	0	03466	ADD	ONE	A
01472	-0130	00	0	00000	XCL		
01473	0602	00	0	00000	SLW		
01474	0400	00	0	03466	ADD	ONE	
01475	-0130	00	0	00000	XCL		
01476	0621	00	0	01500	STA	*+2	
01477	0400	00	0	03466	ADD	ONE	
01500	0602	00	0	00000	SLW		
01501	2	00001	1	01476	TIX	*-3,1,1	
01502	2	00001	4	01467	TIX	*-11,4,1	
01503	0560	00	0	03443	LDQ	IOCDA	
01504	0621	00	0	01505	STA	*+1	
01505	-0600	00	0	00000	STQ		
01506	0400	00	0	03466	ADD	ONE	
01507	0734	00	1	00000	PAX	,1	STORE PROPER CONSTANT TO TEST
01510	-0634	00	1	03374	SXD	CINFO,1	STORE CHANNEL
01511	-0520	00	0	75304	NZT	CTR B	TEST FOR CHANNEL B
01512	0020	00	0	01542	TRA	CEE	
01513	0074	00	4	02236	TSX	CNVRT,4	ALTER INDEX COUNT NUMBER
01514	0621	00	0	00662	STA	READ5+7	STORE ADDR OF FIRST
01515	0621	00	0	02033	STA	RD10+7	COMMAND IN RCHB
01516	0560	00	0	03444	LDQ	IOCPB	B
01517	0774	00	4	00077	AXT	63,4	
01520	0534	00	2	02346	LXA	BCYCL,2	
01521	0621	00	0	01524	STA	*+3	
01522	0400	00	0	03466	ADD	ONE	
01523	-0130	00	0	00000	XCL		
01524	0602	00	0	00000	SLW		
01525	0400	00	0	03466	ADD	ONE	
01526	-0130	00	0	00000	XCL		
01527	0621	00	0	01531	STA	*+2	
01530	0400	00	0	03466	ADD	ONE	
01531	0602	00	0	00000	SLW		
01532	2	00001	2	01527	TIX	*-3,2,1	
01533	2	00001	4	01520	TIX	*-11,4,1	
01534	0560	00	0	03445	LDQ	IOCDB	
01535	0621	00	0	01536	STA	*+1	
01536	-0600	00	0	00000	STQ		
01537	0400	00	0	03466	ADD	ONE	
01540	0734	00	1	00000	PAX	,1	
01541	-0634	00	1	03375	SXD	CINFO+1,1	
01542	-0520	00	0	75305	NZT	CTR C	TEST FOR CHANNEL C
01543	0020	00	0	01573	TRA	DEE	NO
01544	0074	00	4	02236	TSX	CNVRT,4	ALTER INDEX COUNT NUMBER
01545	0621	00	0	00666	STA	READ5+11	YES-STORE ADDRESS OF FIRST
01546	0621	00	0	02037	STA	RD10+11	COMMAND IN RCHC
01547	0560	00	0	03446	LDQ	IOCPC	C
01550	0774	00	4	00077	AXT	63,4	
01551	0534	00	2	02346	LXA	BCYCL,2	
01552	0621	00	0	01555	STA	*+3	
01553	0400	00	0	03466	ADD	ONE	
01554	-0130	00	0	00000	XCL		

01555	0602	00	0	00000	SLW		
01556	0400	00	0	03466	ADD ONE		
01557	-0130	00	0	00000	XCL		
01560	0621	00	0	01562	STA *+2		
01561	0400	00	0	03466	ADD ONE		
01562	0602	00	0	00000	SLW		
01563	2	00001	1	01560	TIX *-3,1,1		
01564	2	00001	4	01551	TIX *-11,4,1		
01565	0560	00	0	03447	LDQ IOCDC		
01566	0621	00	0	01567	STA *+1		
01567	-0600	00	0	00000	STQ		
01570	0400	00	0	03466	ADD ONE		
01571	0734	00	1	00000	PAX ,1		
01572	-0634	00	1	03376	SXD CINFO+2,1		
01573	-0520	00	0	75306	DEE NZT CTRD	TEST FOR CHANNEL D	
01574	0020	00	0	01624	TRA EEE	NO	
01575	0074	00	4	02236	TSX CNVRT,4	ALTER INDEX COUNT NUMBER	
01576	0621	00	0	00672	STA READ5+15		
01577	0621	00	0	02043	STA RD10+15		
01600	0560	00	0	03450	LDQ IOCPCD	D	
01601	0774	00	4	00077	AXT 63,4		
01602	0534	00	2	02346	LXA BCYCL,2		
01603	0621	00	0	01606	STA *+3		
01604	0400	00	0	03466	ADD ONE		
01605	-0130	00	0	00000	XCL		
01606	0602	00	0	00000	SLW		
01607	0400	00	0	03466	ADD ONE		
01610	-0130	00	0	00000	XCL		
01611	0621	00	0	01613	STA *+2		
01612	0400	00	0	03466	ADD ONE		
01613	0602	00	0	00000	SLW		
01614	2	00001	2	01611	TIX *-3,2,1		
01615	2	00001	4	01602	TIX *-11,4,1		
01616	0560	00	0	03451	LDQ IOCDD		
01617	0621	00	0	01620	STA *+1		
01620	-0600	00	0	00000	STQ		
01621	0400	00	0	03466	ADD ONE		
01622	0734	00	1	00000	PAX ,1		
01623	-0634	00	1	03377	SXD CINFO+3,1		
01624	-0520	00	0	75307	EEE NZT CTRE	TEST FOR CHANNEL E	
01625	0020	00	0	01655	TRA FFF		
01626	0074	00	4	02236	TSX CNVRT,4	ALTER INDEX COUNT NUMBER	
01627	0621	00	0	00676	STA READ5+19	YES	
01630	0621	00	0	02047	STA RD10+19		
01631	0560	00	0	03452	LDQ IOCPE		
01632	0774	00	4	00077	AXT 63,4		
01633	0534	00	2	02346	LXA BCYCL,2		
01634	0621	00	0	01637	STA *+3		
01635	0400	00	0	03466	ADD ONE		
01636	-0130	00	0	00000	XCL		
01637	0602	00	0	00000	SLW		
01640	0400	00	0	03466	ADD ONE		
01641	-0130	00	0	00000	XCL		
01642	0621	00	0	01644	STA *+2		
01643	0400	00	0	03466	ADD ONE		
01644	0602	00	0	00000	SLW		

01645	2	00001	1	01642	TIX	*-3,1,1	
01646	2	00001	4	01633	TIX	*-11,4,1	
01647	0560	00	0	03453	LDQ	IOCDE	
01650	0621	00	0	01651	STA	*+1	
01651	-0600	00	0	00000	STQ		
01652	0400	00	0	03466	ADD	ONE	
01653	0734	00	1	00000	PAX	,1	
01654	-0634	00	1	03400	SXD	CINFO+4,1	
01655	-0520	00	0	75310	FFF	NZT CTRF	TEST FOR CHANNEL F
01656	0020	00	0	01706	TRA	GGG	NO
01657	0074	00	4	02236	TSX	CNVRT,4	ALTER INDEX COUNT NUMBER
01660	0621	00	0	00702	STA	READ5+23	
01661	0621	00	0	02053	STA	RD10+23	
01662	0560	00	0	03454	LDQ	IOCPF	F
01663	0774	00	4	00077	AXT	63,4	
01664	0534	00	2	02346	LXA	BCYCL,2	
01665	0621	00	0	01670	STA	*+3	
01666	0400	00	0	03466	ADD	ONE	
01667	-0130	00	0	00000	XCL		
01670	0602	00	0	00000	SLW		
01671	0400	00	0	03466	ADD	ONE	
01672	-0130	00	0	00000	XCL		
01673	0621	00	0	01675	STA	*+2	
01674	0400	00	0	03466	ADD	ONE	
01675	0602	00	0	00000	SLW		
01676	2	00001	2	01673	TIX	*-3,2,1	
01677	2	00001	4	01664	TIX	*-11,4,1	
01700	0560	00	0	03455	LDQ	IOCDF	
01701	0621	00	0	01702	STA	*+1	
01702	-0600	00	0	00000	STQ		
01703	0400	00	0	03466	ADD	ONE	
01704	0734	00	1	00000	PAX	,1	
01705	-0634	00	1	03401	SXD	CINFO+5,1	
01706	-0520	00	0	75311	GGG	NZT CTRG	
01707	0020	00	0	01737	TRA	HHH	
01710	0074	00	4	02236	TSX	CNVRT,4	ALTER INDEX COUNT NUMBER
01711	0621	00	0	00706	STA	READ5+27	YES
01712	0621	00	0	02057	STA	RD10+27	
							OF FIRST COMMAND
01713	0560	00	0	03456	LDQ	IOCPG	GENERATE COMMANDS
01714	0774	00	4	00077	AXT	63,4	FOR CHANNEL
01715	0534	00	2	02346	LXA	BCYCL,2	
01716	0621	00	0	01721	STA	*+3	
01717	0400	00	0	03466	ADD	ONE	
01720	-0130	00	0	00000	XCL		
01721	0602	00	0	00000	SLW		
01722	0400	00	0	03466	ADD	ONE	
01723	-0130	00	0	00000	XCL		
01724	0621	00	0	01726	STA	*+2	
01725	0400	00	0	03466	ADD	ONE	
01726	0602	00	0	00000	SLW		
01727	2	00001	1	01724	TIX	*-3,1,1	
01730	2	00001	4	01715	TIX	*-11,4,1	
01731	0560	00	0	03457	LDQ	IOCDF	
01732	0621	00	0	01733	STA	*+1	
01733	-0600	00	0	00000	STQ		

01734	0400	00	0	03466		ADD ONE	
01735	0734	00	1	00000		PAX ,1	
01736	-0634	00	1	03402		SXD CINFO+6,1	
01737	-0520	00	0	75312	HHH	NZT CTRH	
01740	0020	00	0	00060		TRA IONT+2	RETURN TO PROGRAM
01741	0074	00	4	02236		TSX CNVRT,4	ALTER INDEX COUNT NUMBER
01742	0621	00	0	00712		STA READ5+31	
01743	0621	00	0	02063		STA RD10+31	ADDRESS OF H COMMANDS
01744	0560	00	0	03460		LDQ IOCPH	
01745	0774	00	4	00077		AXT 63,4	
01746	0534	00	2	02346		LXA BCYCL,2	
01747	0621	00	0	01752		STA *+3	
01750	0400	00	0	03466		ADD ONE	
01751	-0130	00	0	00000		XCL	
01752	0602	00	0	00000		SLW	
01753	0400	00	0	03466		ADD ONE	
01754	-0130	00	0	00000		XCL	
01755	0621	00	0	01757		STA *+2	
01756	0400	00	0	03466		ADD ONE	
01757	0602	00	0	00000		SLW	
01760	2 00001	2	2	01755		TIX *-3,2,1	
01761	2 00001	4	4	01746		TIX *-11,4,1	
01762	0560	00	0	03461		LDQ IOCDH	
01763	0621	00	0	01764		STA *+1	
01764	-0600	00	0	00000		STQ	
01765	0400	00	0	03466		ADD ONE	
01766	0734	00	1	00000		PAX ,1	
01767	-0634	00	1	03403		SXD CINFO+7,1	
01770	0020	00	0	00060		TRA IONT+2	RETURN TO PROGRAM
01771	0774	00	2	00100	ANS	AXT 64,2	
01772	-0520	00	0	75303	BKSP	NZT CTRA	TEST FOR CHANNEL A
01773	0020	00	0	01775		TRA *+2	
01774	0764	00	0	01202		BSRA 2	
01775	-0520	00	0	75304		NZT CTRB	TEST FOR CHANNEL B
01776	0020	00	0	02000		TRA *+2	
01777	0764	00	0	02201		BSRB 1	
02000	-0520	00	0	75305		NZT CTRC	TEST FOR CHANNEL C
02001	0020	00	0	02003		TRA *+2	
02002	0764	00	0	03201		BSRC 1	
02003	-0520	00	0	75306		NZT CTRD	TEST FOR CHANNEL D
02004	0020	00	0	02006		TRA *+2	
02005	0764	00	0	04201		BSRD 1	
02006	-0520	00	0	75307		NZT CTRE	TEST FOR CHANNEL E
02007	0020	00	0	02011		TRA *+2	
02010	0764	00	0	05201		BSRE 1	
02011	-0520	00	0	75310		NZT CTRF	TEST FOR CHANNEL F
02012	0020	00	0	02014		TRA *+2	
02013	0764	00	0	06201		BSRF 1	
02014	-0520	00	0	75311		NZT CTRG	TEST FOR CHANNEL G
02015	0020	00	0	02017		TRA *+2	
02016	000	00	0	00001		BSRG 1	
02017	-0520	00	0	75312		NZT CTRH	TEST FOR CHANNEL H
02020	0020	00	0	02022		TRA *+2	
02021	000	00	0	00001		BSRH 1	

02022 2 00001 2 01772 TIX BKSP,2,1 BACKSPACE 100 RECORDS

*THIS SECTION WILL TEST THE CONTENTS OF THE CHANNELS
*WHILE THE READ OPERATION IS BEING PERFORMED. IT
*WILL RESET AND LOAD CHANNEL WITH ZEROS, IF THE CONTENTS

*OF THE DSC EVER BECOME LARGER THAN THEY SHOULD.
*THIS WILL NOT RESET THE DSC COMPLETELY,
*BUT IT WILL STOP THE READ OPERATION, AND HALT, SO
*THAT MEMORY WILL NOT BE WIPED OUT BY A LARGE
*WORD COUNT.

02023	0774	00	2	00100		AXT 64,2	
02024	-0520	00	0	75303	RD10	NZT CTRA	TEST FOR CHANNEL A
02025	0020	00	0	02030		TRA *+3	NO
02026	0762	00	0	01222		RTBA 2	
02027	0540	00	0	04473		RCHA CCHA	
02030	-0520	00	0	75304		NZT CTRB	TEST FOR CHANNEL B
02031	0020	00	0	02034		TRA *+3	NO
02032	0762	00	0	02221		RTBB 1	
02033	-0540	00	0	00000		RCHB **	
02034	-0520	00	0	75305		NZT CTRC	TEST FOR CHANNEL C
02035	0020	00	0	02040		TRA *+3	NO
02036	0762	00	0	03221		RTBC 1	
02037	0541	00	0	00000		RCHC **	
02040	-0520	00	0	75306		NZT CTRD	TEST FOR CHANNEL D
02041	0020	00	0	02044		TRA *+3	NO
02042	0762	00	0	04221		RTBD 1	
02043	-0541	00	0	00000		RCHD **	
02044	-0520	00	0	75307		NZT CTRE	TEST FOR CHANNEL E
02045	0020	00	0	02050		TRA *+3	NO
02046	0762	00	0	05221		RTBE 1	
02047	0542	00	0	00000		RCHE **	
02050	-0520	00	0	75310		NZT CTRF	TEST FOR CHANNEL F
02051	0020	00	0	02054		TRA *+3	NO
02052	0762	00	0	06221		RTBF 1	
02053	-0542	00	0	00000		RCHF **	
02054	-0520	00	0	75311		NZT CTRG	TEST FOR CHANNEL G
02055	0020	00	0	02060		TRA *+3	NO
02056	0762	00	0	07221		RTBG 1	
02057	0543	00	0	00000		RCHG **	
02060	-0520	00	0	75312		NZT CTRH	TEST FOR CHANNEL H
02061	0020	00	0	02064		TRA *+3	NO
02062	0762	00	0	10221		RTBH 1	
02063	-0543	00	0	00000		RCHH **	
02064	0640	00	0	03404	SCHS	SCHA SCH	STORE
02065	-0640	00	0	03405		SCHB SCH+1	ADDRESS AND
02066	0641	00	0	03406		SCHC SCH+2	LOCATION
02067	-0641	00	0	03407		SCHD SCH+3	REGISTERS FOR
02070	0642	00	0	03410		SCHE SCH+4	EACH
02071	-0642	00	0	03411		SCHF SCH+5	CHANNEL
02072	0643	00	0	03412		SCHG SCH+6	
02073	-0643	00	0	03413		SCHH SCH+7	

02074	0774	00	1	00006	TRY	AXT 6,1	
02075	0774	00	4	00022		AXT 18,4	
02076	0320	60	0	02357		ANS* SAVE	
02077	0560	00	1	03404		LDQ CINFO+8,1	
02100	-0500	00	1	03404		CAL CINFO+8,1	CORRECT INFORMATION
02101	0622	00	0	02116		STD *+13	STORE LOCATION REG.
02102	0767	00	0	00022		ALS 18	
02103	0622	00	0	02113		STD *+8	STORE ADDRESS REG.
02104	0402	00	0	03464		SUB K1000	
02105	0622	00	0	02115		STD *+8	
02106	-0500	00	1	03414		CAL SCH+8,1	CONTENTS DSC
02107	-0634	00	1	03465		SXD SINDX,1	SAVE XRA
02110	0634	00	4	03465		SXA SINDX,4	SAVE XRC
02111	0734	00	1	00000		PAX 0,1	ADDRESS REGISTER TO XRA
02112	-0734	00	4	00000		PDX 0,4	LOCATION REGISTER TO XRC
02113	3	00000	1	02124		TXH TOOT,1,**	IF HIGH ADDR. REG. ERROR
02114	-3	00000	1	02117		TXL *+3,1,0	
02115	3	00000	1	02126		TXH HOOT,1,**	IF EQUAL READ NEXT REC.
02116	3	00000	4	02124		TXH TOOT,4,**	IF HIGH LOC. REG. ERROR
02117	0534	00	4	03465		LXA SINDX,4	RESTORE XRC
02120	-0534	00	1	03465		LXD SINDX,1	RESTORE XRA
02121	2	00003	4	02122		TIX *+1,4,3	DECREMENT ERROR LOC.
02122	2	00001	1	02076		TIX TRY+2,1,1	BACK FOR NEXT SCH
02123	0020	00	0	02064		TRA SCHS	AROUND AGAIN
02124	0534	00	4	03465	TOOT	LXA SINDX,4	ERROR
02125	0020	00	4	02160		TRA ERCHA+24,4	
02126	2	00001	2	02024	HOOT	TIX RD10,2,1	
02127	0020	00	0	00731		TRA TCO	
02130	-0625	00	0	02162	ERCHA	STL HPR	
02131	0540	00	0	03426		RCHA BLCHA	BLAST CHANNEL A
02132	0020	00	0	02160		TRA XEC	
02133	-0625	00	0	02162	ERCHB	STL HPR	
02134	-0540	00	0	03427		RCHB BLCHB	BLAST CHANNEL B
02135	0020	00	0	02160		TRA XEC	
02136	-0625	00	0	02162	ERCHC	STL HPR	
02137	0541	00	0	03430		RCHC BLCHC	BLAST CHANNEL C
02140	0020	00	0	02160		TRA XEC	
02141	-0625	00	0	02162		STL HPR	
02142	-0541	00	0	03431	ERCHD	RCHD BLCHD	BLAST CHANNEL D
02143	0020	00	0	02160		TRA XEC	
02144	-0625	00	0	02162		STL HPR	
02145	0542	00	0	03432	ERCHE	RCHE BLCHE	BLAST CHANNEL E
02146	0020	00	0	02160		TRA XEC	

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02147 -0625 00 0 02162          STL HPR
02150 -0542 00 0 03433  ERCHF  RCHF BLCHF  BLAST CHANNEL F
02151  0020 00 0 02160          TRA XEC

02152 -0625 00 0 02162          STL HPR
02153  0543 00 0 03434  ERCHG  RCHG BLCHG  BLAST CHANNEL G
02154  0020 00 0 02160          TRA XEC

02155 -0625 00 0 02162          STL HPR
02156 -0543 00 0 03435  ERCHH  RCHH BLCHH  BLAST CHANNEL H
02157  0020 00 0 02160          TRA XEC

02160  0760 00 0 00005  XEC    IOT          TURN OFF
02161  0761 00 0 00000          NOP          IOT INDICATOR

02162  0420 00 0 00000  HPR    HPR **

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*THE STORAGE REGISTER WILL CONTAIN THE ADDRESS OF THE RESET CHANNEL
*INSTRUCTION WHICH DISCONNECTED THE BUFFER.

*THE INFORMATION RECEIVED DURING THE STORE CHANNEL
*INSTRUCTION WAS HIGHER THAN IT SHOULD HAVE BEEN.

*THE LOCATION REGISTER AND ADDRESS REGISTER SHOULD
*BE NO LARGER THAN WHAT IS DISPLAYED IN THE MQ AT
*THIS TIME. THE INFORMATION RECEIVED FROM THE DSC
*APPEARS IN THE ACCUMULATOR.

*THE DS IN ERROR MAY HAVE TO BE RESET MANUALLY
*BEFORE THE START BUTTON IS DEPRESSED. BECUASE RESET
*CHANNEL WITH ZEROS MAY NOT COMPLETELY DISCONNECT THE
*CHANNEL, AND A HANG UP CONDITION MAY OCCUR.

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02163  2 00001 2 00543          TIX TEST,2,1  RETURN TO WRITE AGAIN

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*IF A HALT HAS OCCURRED AT THE ABOVE LOCATION, IT IS
*ADVISABLE NOT TO ENTER THE WORST CASE SECTION OF
*THIS TEST, AS THE TEST ITSELF MAY BE WIPED OUT.

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02164  0074 00 4 76405          TSX OK,4
02165  0020 00 0 01771          TRA BKSP-1    REPEAT
02166  0761 00 0 00000          NOP
02167  0020 00 0 00731          TRA TCO

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02170 -0520 00 0 75303  EOT    NZT CTRA
02171  0020 00 0 02173          TRA *+2      ZERO
02172  0772 00 0 01202          REWA 2
02173 -0520 00 0 75304          NZT CTRB
02174  0020 00 0 02176          TRA *+2      ZERO
02175  0772 00 0 02201          REWB 1
02176 -0520 00 0 75305          NZT CTRC
02177  0020 00 0 02201          TRA *+2      ZERO
02200  0772 00 0 03201          REWC 1
02201 -0520 00 0 75306          NZT CTRD

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02202	0020	00	0	02204		TRA *+2	ZERO
02203	0772	00	0	04201		REWD 1	
02204	-0520	00	0	75307		NZT CTRE	
02205	0020	00	0	02207		TRA *+2	ZERO
02206	0772	00	0	05201		REWE 1	
02207	-0520	00	0	75310		NZT CTRF	
02210	0020	00	0	02212		TRA *+2	ZERO
02211	0772	00	0	06201		REWF 1	
02212	-0520	00	0	75311		NZT CTRG	
02213	0020	00	0	02215		TRA *+2	ZERO
02214	0772	00	0	07201		REWG 1	
02215	-0520	00	0	75312		NZT CTRH	
02216	0020	00	0	02220		TRA *+2	ZERO
02217	0772	00	0	10201		REWH 1	
02220	-0760	00	0	00141		SLT 1	
02221	0020	00	0	00543		TRA TEST	LITE OFF-START WRITE AGAIN
02222	0020	00	0	01422		TRA SW6+5	RETURN TO CALL NEXT PROGRAM
02223	0760	00	0	00163	PRINT	SWT 3	
02224	0020	00	0	02226		TRA *+2	
02225	0020	00	0	02233		TRA SW5	
02226	0766	00	0	01361		WPRA	TO
02227	0760	00	0	01363		SPRA 3	PRINT
02230	0540	00	0	02232		RCHA *+2	PASS
02231	0020	00	0	02233		TRA SW5	
02232	0000	30	0	02255		IOCD PCOM,0,24	
02233	0760	00	0	00165	SW5	SWT 5	TEST FOR REPEAT OF
							6 CHANNEL OPERATION
02234	0020	00	0	01415		TRA SW6	UP-TEST SWITCH 6
02235	0020	00	0	00543		TRA TEST	DN-REPEAT MULTI- CHANNEL OPERATION
02236	0601	00	0	02344	CNVRT	STO TEM	
02237	-0520	00	0	02345		NZT TEM1	NUMBER OF CHAN. NEEDING EXTRA BCW
02240	0020	00	0	02250		TRA *+8	ALL CHAN. NEED SAME NUMBER OF BCW
02241	0500	00	0	02343		CLA BUBAS	
02242	0402	00	0	03466		SUB ONE	
02243	0601	00	0	02346		STO BCYCL	
02244	0500	00	0	02345		CLA TEM1	
02245	0402	00	0	03466		SUB ONE	
02246	0601	00	0	02345		STO TEM1	
02247	0020	00	0	02253		TRA *+4	
02250	0500	00	0	02343		CLA BUBAS	
02251	0402	00	0	03467		SUB TWO	

02252	0601 00 0 02346	STO	BCYCL	
02253	0500 00 0 02344	CLA	TEM	
02254	0020 00 4 00001	TRA	1,4	
02255	+000000000010	PCOM	OCT 10	9L
02256	+004000400000		OCT 4000400000	9R
02257	+000000000000		OCT 0	8L
02260	+000000000000		OCT 0	8R
02261	+000002004000		OCT 2004000	7L
02262	+000000000000		OCT 0	7R
02263	+000000020000		OCT 20000	6L
02264	+030000000000		OCT 30000000000	6R
02265	+000000001202		OCT 1202	5L
02266	+000020100000		OCT 20100000	5R
02267	+000000010000		OCT 10000	4L
02270	+000000200000		OCT 200000	4R
02271	+000000042401		OCT 42401	3L
02272	+001201000000		OCT 1201000000	3R
02273	+000000600004		OCT 600004	2L
02274	+002044000000		OCT 2044000000	2R
02275	+000001000000		OCT 1000000	1L
02276	+000100000000		OCT 100000000	1R
02277	+000000600400		OCT 600400	0L
02300	+023041000000		OCT 23041000000	0R
02301	+000002036040		OCT 2036040	11L
02302	+114000200000		OCT 114000200000	11R
02303	+000001041204		OCT 1041204	12L
02304	+000324500000		OCT 324500000	12R
02305	+000000112020	PPER	OCT 112020	9L
02306	+010001000000		OCT 10001000000	9R
02307	+000000000000		OCT 0	8L
02310	+000000000000		OCT 0	8R
02311	+000000400400		OCT 400400	7L
02312	+000000000000		OCT 0	7R
02313	+000006060000		OCT 6060000	6L
02314	+060000000000		OCT 60000000000	6R
02315	+000010201004		OCT 10201004	5L
02316	+000040200000		OCT 40200000	5R
02317	+000000004000		OCT 4000	4L
02320	+000000400000		OCT 400000	4R
02321	+000000000002		OCT 2	3L
02322	+002402000000		OCT 2402000000	3R
02323	+000000000010		OCT 10	2L
02324	+004110000000		OCT 4110000000	2R
02325	+000000000000		OCT 0	1L
02326	+000200000000		OCT 200000000	1R
02327	+000002000000		OCT 2000000	0L
02330	+046102000000		OCT 46102000000	0R
02331	+000014535100		OCT 14535100	11L
02332	+230000400000		OCT 230000400000	11R
02333	+000000242410		OCT 242410	12R
02334	+000651200000		OCT 651200000	12L
02335	+000000000000	CTRL	OCT 0	

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02336 0000 30 0 02305 STCTL IOCD PPER,0,24

02337 +0000000000000 CNT OCT 0
02340 +0000000000332 MCYCL DEC 218 MACH CYCLE X 100
02341 +0000000016040 BUF'FM DEC 7200
02342 +0000000000000 BUF1 OCT **
02343 +0000000000000 BUBAS OCT **
02344 +0000000000000 TEM OCT **
02345 +0000000000000 TEM1 OCT **
02346 +0000000000000 BCYCL OCT **

02347 0001 00 0 03474 WR1 IOCD WTCHA,0,64 TO WRITE TAPE CHAN A
02350 0001 00 0 03574 WR2 IOCD WTCHB,0,64 TO WRITE TAPE CHAN B
02351 0001 00 0 03674 WR3 IOCD WTCHC,0,64 TO WRITE TAPE CHAN C
02352 0001 00 0 03774 WR4 IOCD WTCHD,0,64 TO WRITE TAPE CHAN D
02353 0001 00 0 04074 WR5 IOCD WTCHE,0,64 TO WRITE TAPE CHAN E
02354 0001 00 0 04174 WR6 IOCD WTCHF,0,64 TO WRITE TAPE CHAN F
02355 0001 00 0 04274 WR7 IOCD WTCHG,0,64 TO WRITE TAPE CHAN G
02356 0001 00 0 04374 WR10 IOCD WTCHH,0,64 TO WRITE TAPE CHAN H

02357 0761 00 0 02360 SAVE NOP *+1
02360 0 00000 0 00000 SAVE1
          02361 RCHA BSS 64 100 WORD
          02461 RCHB BSS 64
          02561 RCHC BSS 64 BLOCKS FOR
          02661 RCHD BSS 64
          02761 RCHE BSS 64 TAPE READ
          03061 RCHF BSS 64
          03161 RCHG BSS 64
          03261 RCHH BSS 64

03361 0000 01 0 03367 CNTL IOCD ONES,0,1 WRITE ONE WORD-ONES
03362 0000 01 0 03366 IOCD ZEROS,0,1 WRITE ONE WORD-ZEROS

03363 0000 01 0 03370 CNTLR IOCD READ,0,1 READ ONE WORD
03364 0000 02 0 03370 IOCD READ,0,2 READ ONE WORD AND BCD EOF
03365 0000 02 0 03372 IOCD READ+2,0,2 READ ONE WORD AND BIN EOF

03366 +0000000000000 ZEROS OCT 0
03367 -3777777777777 ONES OCT 7777777777777

03370 +0000000000000 READ OCT 0
03371 +0000000000000 OCT 0
03372 +0000000000000 OCT 0
03373 +0000000000000 OCT 0

03374 0046 72 0 02461 CINFO IOCD RCHA+64,0,CCHA+127 CORRECT
03375 0000 00 0 02561 IOCD RCHB+64,0,** INFORMATION
03376 0000 00 0 02661 IOCD RCHC+64,0,** TO COMPARE
03377 0000 00 0 02761 IOCD RCHD+64,0,** STORE
03400 0000 00 0 03061 IOCD RCHE+64,0,** CHANNEL
03401 0000 00 0 03161 IOCD RCHF+64,0,** OPERATIONS
03402 0000 00 0 03261 IOCD RCHG+64,0,**
03403 0000 00 0 03361 IOCD RCHH+64,0,**

03404 +0000000000000 SCH OCT 0
  
```


03405	+0000000000000		OCT 0	
03406	+0000000000000		OCT 0	
03407	+0000000000000		OCT 0	
03410	+0000000000000		OCT 0	
03411	+0000000000000		OCT 0	
03412	+0000000000000		OCT 0	
03413	+0000000000000		OCT 0	
03414	+0000000000000	COUNT	OCT 0	
03415	+000000000101	CT	DEC 65	
03416	+0000000000000	SAVE2	OCT 0	STORAGE
03417	+0000000000000	SAVE3	OCT 0	FOR
03420	+0000000000000	SAVE4	OCT 0	STORE
03421	+0000000000000	SAVE5	OCT 0	CHANNEL
03422	+0000000000000	SAVE6	OCT 0	INFORMATION
03423	+0000000000000	SAVE7	OCT 0	
03424	+0000000000000	SAVE8	OCT 0	
03425	+0000000000000	SAVE9	OCT 0	
03426	0000 00 0 02131	BLCHA	IOCD ERCHA+1	
03427	0000 00 0 02134	BLCHB	IOCD ERCHB+1	
03430	0000 00 0 02137	BLCHC	IOCD ERCHC+1	
03431	0000 00 0 02143	BLCHD	IOCD ERCHD+1	
03432	0000 00 0 02146	BLCHE	IOCD ERCHE+1	
03433	0000 00 0 02151	BLCHF	IOCD ERCHF+1	
03434	0000 00 0 02154	BLCHG	IOCD ERCHG+1	
03435	0000 00 0 02157	BLCHH	IOCD ERCHH+1	
03436	+0777777777777	MASK	OCT 0777777777777	
03437	-3777777777407	EXCL	OCT 7777777777407	
03440	+0000000000220		OCT 220	
03441	1 00000 0 04473	TCH	TCH CCHA	
03442	-0000 01 0 02361	IOCPA	IOCP RCHA,0,1	
03443	0000 01 0 02460	IOCDA	IOCD RCHA+63,0,1	
03444	-0000 01 0 02461	IOCPB	IOCP RCHB,0,1	
03445	0000 01 0 02560	IOCDB	IOCD RCHB+63,0,1	
03446	-0000 01 0 02561	IOCPA	IOCP RCHC,0,1	
03447	0000 01 0 02660	IOCDC	IOCD RCHC+63,0,1	
03450	-0000 01 0 02661	IOCPD	IOCP RCHD,0,1	
03451	0000 01 0 02760	IOCDD	IOCD RCHD+63,0,1	
03452	-0000 01 0 02761	IOCPA	IOCP RCHE,0,1	
03453	0000 01 0 03060	IOCDE	IOCD RCHE+63,0,1	
03454	-0000 01 0 03061	IOCPA	IOCP RCHF,0,1	
03455	0000 01 0 03160	IOCDF	IOCD RCHF+63,0,1	
03456	-0000 01 0 03161	IOCPA	IOCP RCHG,0,1	
03457	0000 01 0 03260	IOCDA	IOCD RCHG+63,0,1	
03460	-0000 01 0 03261	IOCPA	IOCP RCHH,0,1	
03461	0000 01 0 03360	IOCDA	IOCD RCHH+63,0,1	
03462	0 00000 0 00000	XRA	PZE	
03463	0 00000 0 00000	XRBA	PZE	
03464	+000001000000	K1000	OCT 1000000	
03465	+000000000000	SINDX	OCT 0	
03466	+0000000000001	ONE	OCT 1	
03467	+0000000000002	TWO	DEC 2	

03470 +0000000000006 SIX DEC 6

03471 +0777777777777 ORTST OCT 0777777777777
03472 -1 00001 0 02361 ORWRD IOCT RCHA,0,1
03473 0007 77 0 02362 IOCD RCHA+1,0,511

*FROM THIS POINT TO SYMBOLIC LOCATION CCHA-, IS THE INFORMATION WRITTEN
*ON TAPE. EACH CHANNELS INFORMATION IS UNIQUE. THE SECOND TWO CHARACTERS FOR
*CHANNEL A IS A BCD A. THE SECOND TWO CHARACTERS FOR CHANNEL B IS A BCD B E
*EACH CHANNEL HAS ITS CORRESPONDING LETTER IN THE MIDDLE TWO CHARACTERS OF EACH
*WORD TRANSMITTED.

03474 +010121210101 WTCHA OCT 010121210101 FROM WTCHA
03475 +020221210202 OCT 020221210202
03476 +030321210303 OCT 030321210303 TO WTCHA+63
03477 +040421210404 OCT 040421210404
03500 +050521210505 OCT 050521210505 IS FIXED PATTERN
03501 +060621210606 OCT 060621210606
03502 +070721210707 OCT 070721210707 FOR WRITING TAPE
03503 +101021211010 OCT 101021211010
03504 +111121211111 OCT 111121211111 CHANNEL A.
03505 +121221211212 OCT 121221211212
03506 +131321211313 OCT 131321211313
03507 +141421211414 OCT 141421211414
03510 +151521211515 OCT 151521211515
03511 +161621211616 OCT 161621211616
03512 +171721211717 OCT 171721211717
03513 +202021212020 OCT 202021212020
03514 +212121212121 OCT 212121212121
03515 +222221212222 OCT 222221212222
03516 +232321212323 OCT 232321212323
03517 +242421212424 OCT 242421212424
03520 +252521212525 OCT 252521212525
03521 +262621212626 OCT 262621212626
03522 +272721212727 OCT 272721212727
03523 +303021213030 OCT 303021213030
03524 +313121213131 OCT 313121213131
03525 +323221213232 OCT 323221213232
03526 +333321213333 OCT 333321213333
03527 +343421213434 OCT 343421213434
03530 +353521213535 OCT 353521213535
03531 +363621213636 OCT 363621213636
03532 +373721213737 OCT 373721213737
03533 -004021214040 OCT 404021214040
03534 -014121214141 OCT 414121214141
03535 -024221214242 OCT 424221214242
03536 -034321214343 OCT 434321214343
03537 -044421214444 OCT 444421214444
03540 -054521214545 OCT 454521214545
03541 -064621214646 OCT 464621214646
03542 -074721214747 OCT 474721214747
03543 -105021215050 OCT 505021215050
03544 -115121215151 OCT 515121215151
03545 -125221215252 OCT 525221215252
03546 -135321215353 OCT 535321215353
03547 -145421215454 OCT 545421215454

03550	-155521215555	OCT	555521215555
03551	-165621215656	OCT	565621215656
03552	-175721215757	OCT	575721215757
03553	-206021216060	OCT	606021216060
03554	-216121216161	OCT	616121216161
03555	-226221216262	OCT	626221216262
03556	-236321216363	OCT	636321216363
03557	-246421216464	OCT	646421216464
03560	-256521216565	OCT	656521216565
03561	-266621216666	OCT	666621216666
03562	-276721216767	OCT	676721216767
03563	-307021217070	OCT	707021217070
03564	-317121217171	OCT	717121217171
03565	-327221217272	OCT	727221217272
03566	-337321217373	OCT	737321217373
03567	-347421217474	OCT	747421217474
03570	-357521217575	OCT	757521217575
03571	-367621217676	OCT	767621217676
03572	-377721217777	OCT	777721217777
03573	+010121210100	OCT	010121210100

03574	+010122220101	WTCHB	OCT	010122220101	FROM WTCHB
03575	+020222220202		OCT	020222220202	
03576	+030322220303		OCT	030322220303	TO WTCHB+63
03577	+040422220404		OCT	040422220404	
03600	+050522220505		OCT	050522220505	IS FIXED PATTERN
03601	+060622220606		OCT	060622220606	
03602	+070722220707		OCT	070722220707	FOR WRITING TAPE
03603	+101022221010		OCT	101022221010	
03604	+111122221111		OCT	111122221111	CHANNEL B.
03605	+121222221212		OCT	121222221212	
03606	+131322221313		OCT	131322221313	
03607	+141422221414		OCT	141422221414	
03610	+151522221515		OCT	151522221515	
03611	+161622221616		OCT	161622221616	
03612	+171722221717		OCT	171722221717	
03613	+202022222020		OCT	202022222020	
03614	+212122222121		OCT	212122222121	
03615	+222222222222		OCT	222222222222	
03616	+232322222323		OCT	232322222323	
03617	+242422222424		OCT	242422222424	
03620	+252522222525		OCT	252522222525	
03621	+262622222626		OCT	262622222626	
03622	+272722222727		OCT	272722222727	
03623	+303022223030		OCT	303022223030	
03624	+313122223131		OCT	313122223131	
03625	+323222223232		OCT	323222223232	
03626	+333322223333		OCT	333322223333	
03627	+343422223434		OCT	343422223434	
03630	+353522223535		OCT	353522223535	
03631	+363622223636		OCT	363622223636	
03632	+373722223737		OCT	373722223737	
03633	-004022224040		OCT	404022224040	
03634	-014122224141		OCT	414122224141	
03635	-024222224242		OCT	424222224242	
03636	-034322224343		OCT	434322224343	

03637	-044422224444	OCT	444422224444
03640	-054522224545	OCT	454522224545
03641	-064622224646	OCT	464622224646
03642	-074722224747	OCT	474722224747
03643	-105022225050	OCT	505022225050
03644	-115122225151	OCT	515122225151
03645	-125222225252	OCT	525222225252
03646	-135322225353	OCT	535322225353
03647	-145422225454	OCT	545422225454
03650	-155522225555	OCT	555522225555
03651	-165622225656	OCT	565622225656
03652	-175722225757	OCT	575722225757
03653	-206022226060	OCT	606022226060
03654	-216122226161	OCT	616122226161
03655	-226222226262	OCT	626222226262
03656	-236322226363	OCT	636322226363
03657	-246422226464	OCT	646422226464
03660	-256522226565	OCT	656522226565
03661	-266622226666	OCT	666622226666
03662	-276722226767	OCT	676722226767
03663	-307022227070	OCT	707022227070
03664	-317122227171	OCT	717122227171
03665	-327222227272	OCT	727222227272
03666	-337322227373	OCT	737322227373
03667	-347422227474	OCT	747422227474
03670	-357522227575	OCT	757522227575
03671	-367622227676	OCT	767622227676
03672	-377722227777	OCT	777722227777
03673	+010122220100	OCT	010122220100

03674	+010123230101	WTCHC	OCT	010123230101	FROM WTCHC
03675	+020223230202		OCT	020223230202	
03676	+030323230303		OCT	030323230303	TO WTCHC+63
03677	+040423230404		OCT	040423230404	
03700	+050523230505		OCT	050523230505	IS FIXED PATTERN
03701	+060623230606		OCT	060623230606	
03702	+070723230707		OCT	070723230707	FOR WRITING TAPE
03703	+101023231010		OCT	101023231010	
03704	+111123231111		OCT	111123231111	CHANNEL C.
03705	+121223231212		OCT	121223231212	
03706	+131323231313		OCT	131323231313	
03707	+141423231414		OCT	141423231414	
03710	+151523231515		OCT	151523231515	
03711	+161623231616		OCT	161623231616	
03712	+171723231717		OCT	171723231717	
03713	+202023232020		OCT	202023232020	
03714	+212123232121		OCT	212123232121	
03715	+222223232222		OCT	222223232222	
03716	+232323232323		OCT	232323232323	
03717	+242423232424		OCT	242423232424	
03720	+252523232525		OCT	252523232525	
03721	+262623232626		OCT	262623232626	
03722	+272723232727		OCT	272723232727	
03723	+303023233030		OCT	303023233030	
03724	+313123233131		OCT	313123233131	
03725	+323223233232		OCT	323223233232	

03726	+333323233333	OCT	333323233333
03727	+343423233434	OCT	343423233434
03730	+353523233535	OCT	353523233535
03731	+363623233636	OCT	363623233636
03732	+373723233737	OCT	373723233737
03733	-004023234040	OCT	404023234040
03734	-014123234141	OCT	414123234141
03735	-024223234242	OCT	424223234242
03736	-034323234343	OCT	434323234343
03737	-044423234444	OCT	444423234444
03740	-054523234545	OCT	454523234545
03741	-064623234646	OCT	464623234646
03742	-074723234747	OCT	474723234747
03743	-105023235050	OCT	505023235050
03744	-115123235151	OCT	515123235151
03745	-125223235252	OCT	525223235252
03746	-135323235353	OCT	535323235353
03747	-145423235454	OCT	545423235454
03750	-155523235555	OCT	555523235555
03751	-165623235656	OCT	565623235656
03752	-175723235757	OCT	575723235757
03753	-206023236060	OCT	606023236060
03754	-216123236161	OCT	616123236161
03755	-226223236262	OCT	626223236262
03756	-236323236363	OCT	636323236363
03757	-246423236464	OCT	646423236464
03760	-256523236565	OCT	656523236565
03761	-266623236666	OCT	666623236666
03762	-276723236767	OCT	676723236767
03763	-307023237070	OCT	707023237070
03764	-317123237171	OCT	717123237171
03765	-327223237272	OCT	727223237272
03766	-337323237373	OCT	737323237373
03767	-347423237474	OCT	747423237474
03770	-357523237575	OCT	757523237575
03771	-367623237676	OCT	767623237676
03772	-377723237777	OCT	777723237777
03773	+010123230100	OCT	010123230100

03774	+010124240101	WTCHD	OCT	010124240101
03775	+020224240202		OCT	020224240202
03776	+030324240303		OCT	030324240303
03777	+040424240404		OCT	040424240404
04000	+050524240505		OCT	050524240505
04001	+060624240606		OCT	060624240606
04002	+070724240707		OCT	070724240707
04003	+101024241010		OCT	101024241010
04004	+111124241111		OCT	111124241111
04005	+121224241212		OCT	121224241212
04006	+131324241313		OCT	131324241313
04007	+141424241414		OCT	141424241414
04010	+151524241515		OCT	151524241515
04011	+161624241616		OCT	161624241616
04012	+171724241717		OCT	171724241717
04013	+202024242020		OCT	202024242020
04014	+212124242121		OCT	212124242121

04015	+222224242222	OCT	222224242222
04016	+232324242323	OCT	232324242323
04017	+242424242424	OCT	242424242424
04020	+252524242525	OCT	252524242525
04021	+262624242626	OCT	262624242626
04022	+272724242727	OCT	272724242727
04023	+303024243030	OCT	303024243030
04024	+313124243131	OCT	313124243131
04025	+323224243232	OCT	323224243232
04026	+333324243333	OCT	333324243333
04027	+343424243434	OCT	343424243434
04030	+353524243535	OCT	353524243535
04031	+363624243636	OCT	363624243636
04032	+373724243737	OCT	373724243737
04033	-004024244040	OCT	404024244040
04034	-014124244141	OCT	414124244141
04035	-024224244242	OCT	424224244242
04036	-034324244343	OCT	434324244343
04037	-044424244444	OCT	444424244444
04040	-054524244545	OCT	454524244545
04041	-064624244646	OCT	464624244646
04042	-074724244747	OCT	474724244747
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04044	-115124245151	OCT	515124245151
04045	-125224245252	OCT	525224245252
04046	-135324245353	OCT	535324245353
04047	-145424245454	OCT	545424245454
04050	-155524245555	OCT	555524245555
04051	-165624245656	OCT	565624245656
04052	-175724245757	OCT	575724245757
04053	-206024246060	OCT	606024246060
04054	-216124246161	OCT	616124246161
04055	-226224246262	OCT	626224246262
04056	-236324246363	OCT	636324246363
04057	-246424246464	OCT	646424246464
04060	-256524246565	OCT	656524246565
04061	-266624246666	OCT	666624246666
04062	-276724246767	OCT	676724246767
04063	-307024247070	OCT	707024247070
04064	-317124247171	OCT	717124247171
04065	-327224247272	OCT	727224247272
04066	-337324247373	OCT	737324247373
04067	-347424247474	OCT	747424247474
04070	-357524247575	OCT	757524247575
04071	-367624247676	OCT	767624247676
04072	-377724247777	OCT	777724247777
04073	+010124240100	OCT	010124240100

04074	+010125250101	WTCHE	OCT	010125250101
04075	+020225250202		OCT	020225250202
04076	+030325250303		OCT	030325250303
04077	+040425250404		OCT	040425250404
04100	+050525250505		OCT	050525250505
04101	+060625250606		OCT	060625250606
04102	+070725250707		OCT	070725250707
04103	+101025251010		OCT	101025251010

04104	+111125251111	OCT	111125251111
04105	+121225251212	OCT	121225251212
04106	+131325251313	OCT	131325251313
04107	+141425251414	OCT	141425251414
04110	+151525251515	OCT	151525251515
04111	+161625251616	OCT	161625251616
04112	+171725251717	OCT	171725251717
04113	+202025252020	OCT	202025252020
04114	+212125252121	OCT	212125252121
04115	+222225252222	OCT	222225252222
04116	+232325252323	OCT	232325252323
04117	+242425252424	OCT	242425252424
04120	+252525252525	OCT	252525252525
04121	+262625252626	OCT	262625252626
04122	+272725252727	OCT	272725252727
04123	+303025253030	OCT	303025253030
04124	+313125253131	OCT	313125253131
04125	+323225253232	OCT	323225253232
04126	+333325253333	OCT	333325253333
04127	+343425253434	OCT	343425253434
04130	+353525253535	OCT	353525253535
04131	+363625253636	OCT	363625253636
04132	+373725253737	OCT	373725253737
04133	-004025254040	OCT	404025254040
04134	-014125254141	OCT	414125254141
04135	-024225254242	OCT	424225254242
04136	-034325254343	OCT	434325254343
04137	-044425254444	OCT	444425254444
04140	-054525254545	OCT	454525254545
04141	-064625254646	OCT	464625254646
04142	-074725254747	OCT	474725254747
04143	-105025255050	OCT	505025255050
04144	-115125255151	OCT	515125255151
04145	-125225255252	OCT	525225255252
04146	-135325255353	OCT	535325255353
04147	-145425255454	OCT	545425255454
04150	-155525255555	OCT	555525255555
04151	-165625255656	OCT	565625255656
04152	-175725255757	OCT	575725255757
04153	-206025256060	OCT	606025256060
04154	-216125256161	OCT	616125256161
04155	-226225256262	OCT	626225256262
04156	-236325256363	OCT	636325256363
04157	-246425256464	OCT	646425256464
04160	-256525256565	OCT	656525256565
04161	-266625256666	OCT	666625256666
04162	-276725256767	OCT	676725256767
04163	-307025257070	OCT	707025257070
04164	-317125257171	OCT	717125257171
04165	-327225257272	OCT	727225257272
04166	-337325257373	OCT	737325257373
04167	-347425257474	OCT	747425257474
04170	-357525257575	OCT	757525257575
04171	-367625257676	OCT	767625257676
04172	-377725257777	OCT	777725257777
04173	+010125250100	OCT	010125250100

04174	+010126260101	WTCHF	OCT	010126260101
04175	+020226260202		OCT	020226260202
04176	+030326260303		OCT	030326260303
04177	+040426260404		OCT	040426260404
04200	+050526260505		OCT	050526260505
04201	+060626260606		OCT	060626260606
04202	+070726260707		OCT	070726260707
04203	+101026261010		OCT	101026261010
04204	+111126261111		OCT	111126261111
04205	+121226261212		OCT	121226261212
04206	+131326261313		OCT	131326261313
04207	+141426261414		OCT	141426261414
04210	+151526261515		OCT	151526261515
04211	+161626261616		OCT	161626261616
04212	+171726261717		OCT	171726261717
04213	+202026262020		OCT	202026262020
04214	+212126262121		OCT	212126262121
04215	+222226262222		OCT	222226262222
04216	+232326262323		OCT	232326262323
04217	+242426262424		OCT	242426262424
04220	+252526262525		OCT	252526262525
04221	+262626262626		OCT	262626262626
04222	+272726262727		OCT	272726262727
04223	+303026263030		OCT	303026263030
04224	+313126263131		OCT	313126263131
04225	+323226263232		OCT	323226263232
04226	+333326263333		OCT	333326263333
04227	+343426263434		OCT	343426263434
04230	+353526263535		OCT	353526263535
04231	+363626263636		OCT	363626263636
04232	+373726263737		OCT	373726263737
04233	-004026264040		OCT	404026264040
04234	-014126264141		OCT	414126264141
04235	-024226264242		OCT	424226264242
04236	-034326264343		OCT	434326264343
04237	-044426264444		OCT	444426264444
04240	-054526264545		OCT	454526264545
04241	-064626264646		OCT	464626264646
04242	-074726264747		OCT	474726264747
04243	-105026265050		OCT	505026265050
04244	-115126265151		OCT	515126265151
04245	-125226265252		OCT	525226265252
04246	-135326265353		OCT	535326265353
04247	-145426265454		OCT	545426265454
04250	-155526265555		OCT	555526265555
04251	-165626265656		OCT	565626265656
04252	-175726265757		OCT	575726265757
04253	-206026266060		OCT	606026266060
04254	-216126266161		OCT	616126266161
04255	-226226266262		OCT	626226266262
04256	-236326266363		OCT	636326266363
04257	-246426266464		OCT	646426266464
04260	-256526266565		OCT	656526266565
04261	-266626266666		OCT	666626266666
04262	-276726266767		OCT	676726266767

04263	-307026267070	OCT	707026267070
04264	-317126267171	OCT	717126267171
04265	-327226267272	OCT	727226267272
04266	-337326267373	OCT	737326267373
04267	-347426267474	OCT	747426267474
04270	-357526267575	OCT	757526267575
04271	-367626267676	OCT	767626267676
04272	-377726267777	OCT	777726267777
04273	+010126260100	OCT	010126260100

04274	+010127270101	WTCHG	OCT	010127270101
04275	+020227270202		OCT	020227270202
04276	+030327270303		OCT	030327270303
04277	+040427270404		OCT	040427270404
04300	+050527270505		OCT	050527270505
04301	+060627270606		OCT	060627270606
04302	+070727270707		OCT	070727270707
04303	+101027271010		OCT	101027271010
04304	+111127271111		OCT	111127271111
04305	+121227271212		OCT	121227271212
04306	+131327271313		OCT	131327271313
04307	+141427271414		OCT	141427271414
04310	+151527271515		OCT	151527271515
04311	+161627271616		OCT	161627271616
04312	+171727271717		OCT	171727271717
04313	+202027272020		OCT	202027272020
04314	+212127272121		OCT	212127272121
04315	+222227272222		OCT	222227272222
04316	+232327272323		OCT	232327272323
04317	+242427272424		OCT	242427272424
04320	+252527272525		OCT	252527272525
04321	+262627272626		OCT	262627272626
04322	+272727272727		OCT	272727272727
04323	+303027273030		OCT	303027273030
04324	+313127273131		OCT	313127273131
04325	+323227273232		OCT	323227273232
04326	+333327273333		OCT	333327273333
04327	+343427273434		OCT	343427273434
04330	+353527273535		OCT	353527273535
04331	+363627273636		OCT	363627273636
04332	+373727273737		OCT	373727273737
04333	-004027274040		OCT	404027274040
04334	-014127274141		OCT	414127274141
04335	-024227274242		OCT	424227274242
04336	-034327274343		OCT	434327274343
04337	-044427274444		OCT	444427274444
04340	-054527274545		OCT	454527274545
04341	-064627274646		OCT	464627274646
04342	-074727274747		OCT	474727274747
04343	-105027275050		OCT	505027275050
04344	-115127275151		OCT	515127275151
04345	-125227275252		OCT	525227275252
04346	-135327275353		OCT	535327275353
04347	-145427275454		OCT	545427275454
04350	-155527275555		OCT	555527275555
04351	-165627275656		OCT	565627275656

04352	-175727275757	OCT	575727275757
04353	-206027276060	OCT	606027276060
04354	-216127276161	OCT	616127276161
04355	-226227276262	OCT	626227276262
04356	-236327276363	OCT	636327276363
04357	-246427276464	OCT	646427276464
04360	-256527276565	OCT	656527276565
04361	-266627276666	OCT	666627276666
04362	-276727276767	OCT	676727276767
04363	-307027277070	OCT	707027277070
04364	-317127277171	OCT	717127277171
04365	-327227277272	OCT	727227277272
04366	-337327277373	OCT	737327277373
04367	-347427277474	OCT	747427277474
04370	-357527277575	OCT	757527277575
04371	-367627277676	OCT	767627277676
04372	-377727277777	OCT	777727277777
04373	+010127270100	OCT	010127270100

04374	+010130300101	WTCHH	OCT	010130300101
04375	+020230300202		OCT	020230300202
04376	+030330300303		OCT	030330300303
04377	+040430300404		OCT	040430300404
04400	+050530300505		OCT	050530300505
04401	+060630300606		OCT	060630300606
04402	+070730300707		OCT	070730300707
04403	+101030301010		OCT	101030301010
04404	+111130301111		OCT	111130301111
04405	+121230301212		OCT	121230301212
04406	+131330301313		OCT	131330301313
04407	+141430301414		OCT	141430301414
04410	+151530301515		OCT	151530301515
04411	+161630301616		OCT	161630301616
04412	+171730301717		OCT	171730301717
04413	+202030302020		OCT	202030302020
04414	+212130302121		OCT	212130302121
04415	+222230302222		OCT	222230302222
04416	+232330302323		OCT	232330302323
04417	+242430302424		OCT	242430302424
04420	+252530302525		OCT	252530302525
04421	+262630302626		OCT	262630302626
04422	+272730302727		OCT	272730302727
04423	+303030303030		OCT	303030303030
04424	+313130303131		OCT	313130303131
04425	+323230303232		OCT	323230303232
04426	+333330303333		OCT	333330303333
04427	+343430303434		OCT	343430303434
04430	+353530303535		OCT	353530303535
04431	+363630303636		OCT	363630303636
04432	+373730303737		OCT	373730303737
04433	-004030304040		OCT	404030304040
04434	-014130304141		OCT	414130304141
04435	-024230304242		OCT	424230304242
04436	-034330304343		OCT	434330304343
04437	-044430304444		OCT	444430304444
04440	-054530304545		OCT	454530304545

04441	-064630304646	OCT	464630304646
04442	-074730304747	OCT	474730304747
04443	-105030305050	OCT	505030305050
04444	-115130305151	OCT	515130305151
04445	-125230305252	OCT	525230305252
04446	-135330305353	OCT	535330305353
04447	-145430305454	OCT	545430305454
04450	-155530305555	OCT	555530305555
04451	-165630305656	OCT	565630305656
04452	-175730305757	OCT	575730305757
04453	-206030306060	OCT	606030306060
04454	-226230306262	OCT	626230306262
04455	-236330306363	OCT	636330306363
04456	-246430306464	OCT	646430306464
04457	-256530306565	OCT	656530306565
04460	-266630306666	OCT	666630306666
04461	-276730306767	OCT	676730306767
04462	-307030307070	OCT	707030307070
04463	-317130307171	OCT	717130307171
04464	-327230307272	OCT	727230307272
04465	-337330307373	OCT	737330307373
04466	-347430307474	OCT	747430307474
04467	-357530307575	OCT	757530307575
04470	-367630307676	OCT	767630307676
04471	-377730307777	OCT	777730307777
04472	+010130300100	OCT	010130300100

* I - O C O M M A N D F I E L D

04473	CCHA	BSS	1100	I-O CMMANDS WILL BE GENERATED FOR ALL COMBINATIONS OF CHANNELS.
75300	CTRL1	EQU	31424	COUNT WORD FOR CHNS A-B-C-D
75301	CTRL2	EQU	31425	COUNT WORD FOR CHNS E-F-G-H
75302	IOCT	EQU	31426	TOTAL I-O COUNT
75314	IOCNT	EQU	31436	ENTRY TO RECALCUATE COUNT
75316	IOC	EQU	31438	ENTRY FOR CONTROL WORDS
75313	CMKW	EQU	31435	COUNT WORD - CARD MACHINES
75303	CTRA	EQU	31427	NO. OF TAPE UNITS - CHN A
75304	CTRB	EQU	31428	NO. OF TAPE UNITS - CHN B
75305	CTRC	EQU	31429	NO. OF TAPE UNITS - CHN C
75306	CTRD	EQU	31430	NO. OF TAPE UNITS - CHN D
75307	CTRE	EQU	31431	NO. OF TAPE UNITS - CHN E
75310	CTRF	EQU	31432	NO. OF TAPE UNITS - CHN F
75311	CTRG	EQU	31433	NO. OF TAPE UNITS - CHN G
75312	CTRH	EQU	31434	NO. OF TAPE UNITS - CHN H
75315	CTX	EQU	31437	ENTRY TO MODIFY PROGRAM
76404	ERROR	EQU	32004	
76405	OK	EQU	32005	
76407	RDNCK	EQU	32007	
76410	WDNO	EQU	32008	
76406	RECNO	EQU	32006	
00000			END	

EOF*