

XDS 901682A

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DIAGNOSTIC PROGRAM MANUAL

SIGMA 5 AND 7
7-CHANNEL MAGNETIC
TAPE TEST

PROGRAM NO. 705735A

August 1970

Prepared by
Field Engineering Publications

XDS 901682

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
1								TITLE 'SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70'

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE	TEST 705735-11/51A00	7/30/70	4
141					.	D7 DEVICE ADDRESS (5TH)	.	.
142					.	D8 DEVICE ADDRESS (6TH)	.	.
143					.	D9 DEVICE ADDRESS (7TH)	.	.
144					.	D10 DEVICE ADDRESS (8TH)	.	.
145					.	EXAMPLE SYST,7372,0,81,83,87	.	.
146					.	-----	.	.
147					.	TAPE DEVICES 81, 83, 87 ON 7372(75 IPS)	.	.
148					.	EXAMPLE SYST,7362,0,80	.	.
149					.	-----	.	.
150					.	TAPE DEVICE 80 ON 7362 (37.5 IPS)	.	.
151					.	EXAMPLE SYST,7362,0,80	.	.
152					.	-----	.	.
153					.	TAPE DEVICE 80 ON 7362 (37.5 IPS)	.	.
154					.	EXAMPLE SYST,7362,0,80	.	.
155					.	-----	.	.
156					.	TAPE DEVICE 80 ON 7362 (37.5 IPS)	.	.
157	01 00300		0000047F 02		TST0ADDR DATA	TST0		
158					.	PARAMETERS D1 NUMBER OF LOOPS ON THE RANDOM EXERCISER		
159					.	----- D2 NUMBER OF RETRIES ON THE RANDOM		
160					.	EXERCISER.		
161					.	EXAMPLE TST0,1000,5		
162					.	-----		
163					.	THE FUNCTIONAL TEST WILL BE RUN ON ALL		
164					.	DEVICES SPECIFIED IN THE SEQUENCE		
165					.	ENTERED IN THE SYST DIRECTIVE.		
166					.	THE RANDOM EXERCISER WILL TEST ALL		
167					.	DEVICES CONCURRENTLY UNTIL 1000 PASSES		
168					.	HAVE BEEN MADE. READ OR WRITE OPERATIONS		
169					.	WILL BE RETRIED 5 TIMES IF TE FAILURES		
170					.	ARE ENCOUNTERED.		
171					.	EXAMPLE TST0,1000,5		
172					.	-----		
173					.	THE FUNCTIONAL TEST WILL BE RUN ON ALL		
174					.	DEVICES SPECIFIED IN THE SEQUENCE		
175					.	ENTERED IN THE SYST DIRECTIVE.		
176					.	THE RANDOM EXERCISER WILL TEST ALL		
177	01 00301		00000498 02		TST1ADDR DATA	TST1		
178					.	PARAMETERS D1 FIRST FUNCTIONAL SUBTEST		
179					.	----- D2 LAST FUNCTIONAL SUBTEST		
180					.	WHERE 0 <D1 <=D2 <=41		
181					.	EXAMPLES TST1,0,0		
182					.	-----		
183					.	RUN ALL FUNCTIONAL TESTS		
184					.	EXAMPLES TST1,0,0		
185					.	-----		
186					.	RUN ALL FUNCTIONAL TESTS		
187					.	EXAMPLES TST1,24,27		
188					.	-----		
189					.	RUN FUNCTIONAL TESTS 24 THRU 27		
190					.	EXAMPLES TST1,24,27		
191					.	-----		
192					.	RUN FUNCTIONAL TESTS 24 THRU 27		
193					.	EXAMPLES TST1,24,27		
194					.	-----		
195	01 00302		000004DD 02		TST2ADDR DATA	TST2		
196					.	PARAMETERS D1 NUMBER OF PASSES TO BE EXECUTED BY		
197					.	----- RANDOM EXERCISER		
198					.	D2 NUMBER OF RETRIES IF TE FAILURES ARE		
199					.	ENCOUNTERED IN THE RANDOM EXERCISER.		
200					.	EXAMPLE TST2,1000,5		
201					.	-----		
202					.	THE RANDOM EXERCISER WILL TEST ALL		
203	01 00303		000004F8 02		TST3ADDR DATA	TST3		
204					.	PARAMETERS D1 UTILITY TEST SELECTION		
205					.	----- D2 OPERATIONS REQUESTED ACCORDING TO TEST		
206					.	D3 PARAMETER REQUESTED ACCORDING TO TEST		
207					.	D4 PARAMETER REQUESTED ACCORDING TO TEST		
208					.	EXAMPLE TST3,1,1,1,1		
209					.	-----		
210	01 00304		0000125F 02		TST31ADR DATA	TST31	D1 1 TAPE TEST	

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0	16:42	AUG 03, '70	SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70					7
351			EXAMPLE LEN,980					
352			-----					
353			GENERATE A RECORD OF 980 BYTES.					
354								
355								
356								
357								
358								
359								
360			OPERATION MODES					
361			-----					
362			PROGRAM-OPERATOR COMMUNICATION IS ACCOMPLISHED					
363			USING THE INPUT/OUTPUT DEVICES SPECIFIED BY					
364			THE OPERATOR.					
365			DIRECTIVES ARE ENTERED AND TESTS ARE INITIATED					
366			THRU THE MESSAGE INPUT DEVICE (MID).					
367								
368			THE PROGRAM OUTPUTS MESSAGES THRU THE MESSAGE					
369			OUTPUT DEVICE (MOD)					
370								
371			(REFER TO DPM DIRECTIVES 'MID' AND 'MOD').					
372								
373			START-RESTART PROCEDURE					
374								
375			START					
376			AFTER THE PROGRAM IS SUCCESSFULLY LOADED AND THE					
377			PROGRAM IDENTIFICATION IS PRINTED, THE OPERATOR					
378			MAY SPECIFY ANY TEST DIRECTIVE (TST0,TST1,TST2,					
379			OR TST3), UTILITY DIRECTIVE (DATA,LIMIT, OR RSET),					
380			OR THE ENVIRONMENTAL DIRECTIVE (SYST).					
381								
382			THE SYST DIRECTIVE MUST BE INITIALLY ENTERED					
383			TO DESCRIBE THE CONFIGURATION TO BE TESTED.					
384			RESTART					
385			RESTART OR RECOVERY MAY BE ACHIEVED BY THE					
386			FOLLOWING PROCEDURE:					
387								
388			1. PRESSING THE CONTROL PANEL INTERRUPT SWITCH.					
389								
390			2. A. PLACING THE COMPUTE SWITCH ON THE PCP TO IDLE					
391			B. PRESSING THE SYSTEM RESET SWITCH ON THE PCP					
392			C. PLACING THE COMPUTE SWITCH ON THE PCP TO RUN					
393								
394			TERMINATION INDICATION					
395								
396			THE TERMINATION OF A DIRECTIVE IS INDICATED BY WHEN					
397			CONTROL IS RETURNED TO THE MESSAGE INPUT DEVICE.					
398								
399			SUCCESS-FAILURE INDICATIONS					
400			-----					
401								
402			WAITS					
403			THE PROGRAM COMES TO A WAIT CONDITION.					
404								
405			1. AFTER ERROR MESSAGE PRINTOUT DURING THE					
406			EXECUTION OF FUNCTIONAL TESTS (SSW3 = 0).					
407								
408			2. AFTER THE COMPLETION OF A TEST (SSW3 = 0).					
409								
410			3. AFTER WATCHDOG TIMER TRAP, IF THE IO RESET					
411			JUMPER WAS NOT ENTERED OR PROGRAMMABLE IO					
412			RESET IS NOT IMPLEMENTED.					
413			LOOPS					
414			THE PROGRAM LOOPS ON AN INSTRUCTION SEQUENCE					
415			PRODUCING AN ERROR DURING FUNCTIONAL TEST					
416			EXECUTION (SSI=1,SS3=1) OR AT THE COMPETION					
417			OF A TEST (SSI=1,SS3=1).					
418			MESSAGE PRINTOUT					
419			1. FUNCTIONAL TEST					
420			THE STANDARD ERROR MESSAGES					

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00	7/30/70 11
631				*				*
632				*	*0901	SIO CONDITION CODE ERROR ON COMMAND CHAINING ORDER (ERASE		*
633				*		READ BACKWARD)		*
634				*		COMMAND CHAINING TEST		*
635				*				*
636				*	*0902	NO INTERRUPT ON COMMAND CHAINING ERASE, READ BACKWARD.		*
637				*		COMMAND CHAINING TEST		*
638				*				*
639				*	*0903	THE LAST DOUBLE WORD ADDRESS IS INCORRECT ON COMMAND CHAINING.		*
640				*		THE ADDRESS SHOULD BE READ BACKWARD.		*
641				*		COMMAND CHAINING TEST		*
642				*				*
643				*	*0904	SIO CONDITION CODE ON COMMAND CHAINING ORDER. (READ BKW,SENSE)		*
644				*		COMMAND CHAINING TEST		*
645				*				*
646				*	*0905	NO INTERRUPT RECEIVED ON COMMAND CHAINING READ BKW, ERASE.		*
647				*		COMMAND CHAINING TEST		*
648				*				*
649				*	*0906	THE LAST DOUBLE WORD ADDRESS IS INCORRECT ON COMMAND CHAINING.		*
650				*		THE ADDRESS SHOULD BE READ BACKWARD.		*
651				*		COMMAND CHAINING TEST		*
652				*				*
653				*	*1101	TDV STATUS ERROR AFTER REWIND ON LINE. NO LOAD POINT BIT SET.		*
654				*		REWIND TEST		*
655				*				*
656				*	*1102	TIO STATUS ERROR AFTER REWIND AND INTERRUPT. NO INTER PEND SET.		*
657				*		REWIND TEST		*
658				*				*
659				*	*1103	TIO STATUS ERROR AFTER HIO ON REWIND WITH INTERRUPT.		*
660				*		REWIND TEST		*
661				*				*
662				*	*1104	TIO STATUS ERROR AFTER REWIND WITH INTERRUPT. INTER PEND NOT SET.		*
663				*		REWIND TEST		*
664				*				*
665				*	*1105	AIO STATUS ERROR AFTER REWIND WITH INTERRUPT. DEVICE END NOT SET.		*
666				*		REWIND TEST		*
667				*				*
668				*	*1106	TIO STATUS ERROR AFTER AIO. INTERRUPT PENDING NOT RESET.		*
669				*		REWIND TEST		*
670				*				*
671				*	*1107	TDV STATUS ERROR AFTER REWIND WITH INTERRUPT. NO LOAD POINT SET.		*
672				*		REWIND TEST		*
673				*				*
674				*	*1203	NO INTERRUPT ON SPACE BACKWARD AT LOAD POINT. (BC =2)		*
675				*		READ, SPACE RECORD, AND SPACE FILE BACKWARD FROM BOT TEST		*
676				*				*
677				*	*1204	TIO OR TDV STATUS ERROR ON SPACE BKW AT LOAD POINT. UE, LOAD		*
678				*		POINT, AND BC =2 EXPECTED.		*
679				*		READ, SPACE RECORD, AND SPACE FILE BACKWARD FROM BOT TEST		*
680				*				*
681				*	*1205	NO INTERRUPT RECEIVED ON SPACE FILE BACKWARD AT LOAD POINT.		*
682				*		READ, SPACE RECORD, AND SPACE FILE BACKWARD FROM BOT TEST		*
683				*				*
684				*	*1206	TIO OR TDV STATUS ERROR ON SPACE FILE BKW AT LOAD POINT. UE,		*
685				*		LOAD POINT, AND NO EOF EXPECTED.		*
686				*		READ, SPACE RECORD, AND SPACE FILE BACKWARD FROM BOT TEST		*
687				*				*
688				*	*1301	NO INTERRUPT ON WRITE TAPE MARK AT LOAD POINT. (CE AND BC =2 SET		*
689				*		WRITE TAPE MARK (TAPE MOTION, WRITE, AND READ AFTER WRITE) TEST		*
690				*				*
691				*	*1302	TIO OR TDV STATUS ERROR ON WRITE TAPE MARK AT LOAD POINT. EOF		*
692				*		AND BC =2 EXPECTED.		*
693				*		WRITE TAPE MARK (TAPE MOTION, WRITE, AND READ AFTER WRITE) TEST		*
694				*				*
695				*	*1401	NO INTERRUPT RECEIVED ON WRITE TAPE MARK AFTER REWIND.		*
696				*		SPACE RECORD FORWARD TEST (TAPE MOTION AND READ)		*
697				*				*
698				*	*1402	NO INTERRUPT RECEIVED ON SPACE FORWARD OVER A TAPE MARK AT LOAD		*
699				*		POINT. (CE AND BC =2 SET)		*
700				*		SPACE RECORD FORWARD TEST (TAPE MOTION AND READ)		*

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701					•			•
702					• 1403	BYTE COUNT ON SPACE FWD AT LOAD POINT ERROR. SHOULD BE 2.		•
703					•	SPACE RECORD FORWARD TEST (TAPE MOTION AND READ)		•
704					•			•
705					• 1404	T10 STATUS ERROR ON SPACE FWD AT LOAD POINT. NO ERROR EXPECTED.		•
706					•	SPACE RECORD FORWARD TEST (TAPE MOTION AND READ)		•
707					•			•
708					• 1501	T10 OR TDV STATUS ERROR ON WRITE RECORDS 1-64 BYTE LENGTH. NO		•
709					•	INCORRECT LENGTH OR UE EXPECTED, BC =00.		•
710					•	WRITE TEST (TAPE MOTION, VARIABLE BC, WRITE, READ AFTER WRITE)		•
711					•			•
712					• 1502	NO INTERRUPT RECEIVED ON WRITING 64 BYTES WITH INTERRUPT ON ZBC.		•
713					•	WRITE TEST (TAPE MOTION, VARIABLE BC, WRITE, READ AFTER WRITE)		•
714					•			•
715					• 1503	A10 OR T10 STATUS ERROR ON WRITING 64 BYTES WITH INTERRUPT ON		•
716					•	ZBC SET.		•
717					•	WRITE TEST (TAPE MOTION, VARIABLE BC, WRITE, READ AFTER WRITE)		•
718					•			•
719					• 1601	T10 OR TDV STATUS ERROR ON WRITING 100 BYTES ALL BITS ON. NO		•
720					•	INCORRECT LENGTH OR UE EXPECTED, BC =00.		•
721					•	READ TEST (TAPE MOTION AND READ)		•
722					•			•
723					• 1602	T10 OR TDV STATUS ERROR ON READ FORWARD 100 BYTES ALL BITS ON		•
724					•	WITH BYTE COUNT 1-64. INCORRECT LENGTH AND NO IZC EXPECTED.		•
725					•	READ TEST (TAPE MOTION AND READ)		•
726					•			•
727					• 1801	T10 OR TDV STATUS ERROR ON WRITING 100 BYTES ALL BITS ON. NO		•
728					•	INCORRECT LENGTH OR UE EXPECTED, BC =00.		•
729					•	WRITE-READ DATA TEST (DATA =X'FF')		•
730					•			•
731					• 1901	WRITE, READ FORWARD, OR INFORMATION ERRORS WHEN SATURATING ONE		•
732					•	TRACK. 100 RECORDS OF 100 BYTES PATTERN 00,01,02,04,08,10,20		•
733					•	WRITE-READ DATA TEST (DATA =X'00'THRU X'20')		•
734					•			•
735					• 2001	ERASE TIME SET TOO LONG. SEE MESSAGE PRINTOUT.		•
736					•	SET ERASE-WRITE TEST		•
737					•			•
738					• 2002	ERASE TIME SET TOO SHORT. SEE MESSAGE PRINTOUT.		•
739					•	SET ERASE-WRITE TEST		•
740					•			•
741					• 2101	T10 OR TDV STATUS ERROR ON WRITING 100 BYTES ALL BITS ON.		•
742					•	WRITE-SPACE FORWARD AND BACKWARD TEST		•
743					•			•
744					• 2102	T10 OR TDV STATUS ERROR ON SPACING FORWARD OVER 100 BYTES AT		•
745					•	LOAD POINT		•
746					•	WRITE-SPACE FORWARD AND BACKWARD TEST		•
747					•			•
748					• 2103	T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER 100 BYTES ONE		•
749					•	RECORD BEYOND LOAD POINT. NO UE OR LOAD POINT EXPECTED.		•
750					•	WRITE-SPACE FORWARD AND BACKWARD TEST		•
751					•			•
752					• 2104	T10 OR TDV STATUS ERROR ON SPACING BACKWARD ONE RECORD AT LOAD		•
753					•	POINT. UE AND LOAD POINT EXPECTED.		•
754					•	WRITE-SPACE FORWARD AND BACKWARD TEST		•
755					•			•
756					• 2105	T10 OR TDV STATUS ERROR ON SPACING FORWARD OVER 100 BYTES ALL		•
757					•	BITS ON. NO UE OR ERROR EXPECTED, BC =00.		•
758					•	WRITE-SPACE FORWARD AND BACKWARD TEST		•
759					•			•
760					• 2106	T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER 100 BYTES ALL		•
761					•	BITS ON. NO UE OR ERROR EXPECTED, BC =00.		•
762					•	WRITE-SPACE FORWARD AND BACKWARD TEST		•
763					•			•
764					• 2201	T10 OR TDV STATUS ERROR ON WRITING A TAPE MARK. TAPE MARK AND		•
765					•	NO UE EXPECTED.		•
766					•	WRITE TAPE MARK TEST		•
767					•			•
768					• 2202	T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER 100 TAPE		•
769					•	MARKS. TAPE MARK AND UE EXPECTED.		•
770					•	WRITE TAPE MARK TEST		•

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0		16:42	AUG 03, '70		SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00	7/30/70 13
771					*			*
772					*	2203	T10 OR TDV STATUS ERROR ON READING FORWARD OVER 100 TAPE MARKS. TAPE MARK AND UE EXPECTED.	*
773					*			*
774					*		WRITE TAPE MARK TEST	*
775					*			*
776					*	2301	T10 OR TDV STATUS ERROR ON WRITING A TAPE MARK. TAPE MARK AND NO UE EXPECTED.	*
777					*			*
778					*		WRITE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
779					*			*
780					*	2302	T10 OR TDV STATUS ERROR ON SPACE FILE FORWARD. TAPE MARK AND NO UE EXPECTED.	*
781					*			*
782					*		WRITE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
783					*			*
784					*	2303	T10 OR TDV STATUS ERROR ON SPACE FILE BACKWARD. TAPE MARK AND NO UE EXPECTED.	*
785					*			*
786					*		WR TE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
787					*			*
788					*	2304	T1 OR TDV STATUS ERROR ON SPACE FILE BACKWARD AT LOAD POINT. LO D POINT, TAPE MARK, AND NO UE EXPECTED.	*
789					*			*
790					*		WR TE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
791					*			*
792					*	2305	T10 OR TDV STATUS ERROR ON WRITING A RECORD 100 BYTES. NO ERROR EX ECTED, BC =00.	*
793					*			*
794					*		WR TE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
795					*			*
796					*	2306	T10 OR TDV STATUS ERROR ON WRITING A TAPE MARK. NO ERROR EXPECTED, TAPE MARK.	*
797					*			*
798					*		WRITE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
799					*			*
800					*	2307	T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER A TAPE MARK. UE AND TAPE MARK EXPECTED.	*
801					*			*
802					*		WRITE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
803					*			*
804					*	2308	T10 OR TDV STATUS ERROR ON SPACING FORWARD OVER A TAPE MARK. UE AND TAPE MARK EXPECTED.	*
805					*			*
806					*		WRITE TAPE MARK - SPACE FILE AND RECORD, READ TEST	*
807					*			*
808					*	2401	T10 OR TDV STATUS ERROR AFTER REWINDING AND WRITING A RECORD OF 27,000 WORDS, LOOPING 10 TIMES. NO ERROR EXPECTED.	*
809					*			*
810					*		TAPE LOOP TEST	*
811					*			*
812					*	2601	T10 OR TDV STATUS ERROR ON WRITING 96 BYTES ALL BITS ON. NO ERRORS EXPECTED, BC =00, NO INCORRECT LENGTH.	*
813					*			*
814					*		INCORRECT LENGTH TEST	*
815					*			*
816					*	2602	T10 OR TDV STATUS ERROR ON SPACING A RECORD BACKWARD. NO ERROR EXPECTED.	*
817					*			*
818					*		INCORRECT LENGTH TEST	*
819					*			*
820					*	2603	T10 OR TDV STATUS ERROR ON READING A RECORD FORWARD. NO ERRER EXPECTED, BC =00, NO INCORRECT LENGTH.	*
821					*			*
822					*		INCORRECT LENGTH TEST	*
823					*			*
824					*	2604	T10 OR TDV STATUS ERROR ON SPACING A 96 BYTE RECORD BACKWARD. NO ERROR EXPECTED.	*
825					*			*
826					*		INCORRECT LENGTH TEST	*
827					*			*
828					*	2605	T10 OR TDV STATUS ERROR ON READING A 96 BYTE RECORD FORWARD WITH A BC =95 INCORRECT LENGTH, UE AND BC =00 EXPECTED.	*
829					*			*
830					*		INCORRECT LENGTH TEST	*
831					*			*
832					*	2606	T10 OR TDV STATUS ERROR ON SPACING A 96 BYTE RECORD BACKWARD. NO ERROR EXPECTED.	*
833					*			*
834					*		INCORRECT LENGTH TEST	*
835					*			*
836					*	2607	T10 OR TDV STATUS ERROR ON READING A 96 BYTE RECORD FORWARD WITH SUPPRESS INC LENGTH, BC=97. INC LENGTH BC=1, NO UE EXPECTED.	*
837					*			*
838					*		INCORRECT LENGTH TEST	*
839					*			*
840					*	2608	T10 OR TDV STATUS ERROR ON SPACING BKW OVER RECORD. NO UE	*

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			15
911					• 2906 T10 OR TDV STATUS ERROR WHEN READING THE BCD CHARACTER SET			•
912					• WITHOUT TRANSLATION. TRANSMISSION ERRORS EXPECTED			•
913					• DECIMAL (BCD) MODE DATA TEST			•
914					•			•
915					• 2907 INFORMATION ERROR ON BCD RECORD READ WITHOUT TRANSLATION.			•
916					• DECIMAL (BCD) MODE DATA TEST			•
917					•			•
918					• 2908 T10 OR TDV ERROR WHEN WRITING A 4 BYTE RECORD CHECKING ZERO			•
919					• TRANSLATION. NO ERROR EXPECTED.			•
920					• DECIMAL (BCD) MODE DATA TEST			•
921					•			•
922					• 2909 T10 OR TDV ERROR WHEN SPACING BKW OVER ZERO TRANSLATION RECORD.			•
923					• DECIMAL (BCD) MODE DATA TEST			•
924					•			•
925					• 2911 T10 OR TDV ERROR WHEN READING 4 BYTE ZERO TRANSLATION RECORD.			•
926					• NO ERROR EXPECTED.			•
927					• DECIMAL (BCD) MODE DATA TEST			•
928					•			•
929					• 2912 INFORMATION ERROR ON ZERO TRANSLATION RECORD. INFORMATION			•
930					• EXPECTED X'FOFOFOFO'.			•
931					• DECIMAL (BCD) MODE DATA TEST			•
932					•			•
933					• 3001 T10 OR TDV STATUS ERROR WHEN WRITING A BINARY RECORD X'00'-X'3F'			•
934					• BINARY MODE DATA TEST			•
935					•			•
936					• 3002 T10 OR TDV STATUS ERROR WHEN SPACING BKW OVER BINARY RECORD.			•
937					• BINARY MODE DATA TEST			•
938					•			•
939					• 3003 T10 OR TDV STATUS ERROR WHEN READING A BINARY RECORD X'00'-X'3F'			•
940					• BINARY MODE DATA TEST			•
941					•			•
942					• 3004 INFORMATION ERROR ON READING BINARY RECORD X'00'-X'3F'.			•
943					• BINARY MODE DATA TEST			•
944					•			•
945					• 3005 T10 OR TDV STATUS ERROR SPACING BKW OVER BINARY RECORD.			•
946					• BINARY MODE DATA TEST			•
947					•			•
948					• 3006 T10 OR TDV STATUS ERROR WHEN READING BINARY RECORD WITH BCD.			•
949					• TRANSMISSION ERROR EXPECTED.			•
950					• BINARY MODE DATA TEST			•
951					•			•
952					• 3007 INFORMATION ERROR WHEN READING BINARY RECORD WITH BCD.			•
953					• BINARY MODE DATA TEST			•
954					•			•
955					• 3101 T10 OR TDV STATUS ERROR WHEN WRITING A PACKED BINARY RECORD			•
956					• X'00'-X'FF'. NO ERROR EXPECTED.			•
957					• PACKED BINARY DATA TEST			•
958					•			•
959					• 3102 T10 OR TDV STATUS ERROR WHEN SPACING BKW OVER A PACKED BINARY			•
960					• RECORD X'00'-X'FF'.			•
961					• PACKED BINARY DATA TEST			•
962					•			•
963					• 3103 T10 OR TDV STATUS ERROR WHEN READING A PACKED BINARY RECORD			•
964					• X'00'-X'FF'.			•
965					• PACKED BINARY DATA TEST			•
966					•			•
967					• 3104 INFORMATION ERROR WHEN READING A PACKED BINARY RECORD.			•
968					• PACKED BINARY DATA TEST			•
969					•			•
970					• 3105 T10 OR TDV STATUS ERROR WRITING PACKED BINARY RECORD OF 6,7,8			•
971					• BYTES TO TEST THE PACKED BINARY END CONDITION.			•
972					• PACKED BINARY DATA TEST			•
973					•			•
974					• 3106 T10 OR TDV STATUS ERROR WHEN SPACING BKW OVER PACKED BINARY REC.			•
975					• PACKED BINARY DATA TEST			•
976					•			•
977					• 3107 T10 OR TDV STATUS ERROR READING A PACKED BINARY RECORD OF 6,8,9			•
978					• BYTES TO TEST THE END CONDITION.			•
979					• PACKED BINARY DATA TEST			•
980					•			•

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00	7/30/70		16
981					• 3108	INFORMATION ERROR ON PACKED BINARY RECORD CHECKING END CONDITION		•
982					•	PACKED BINARY DATA TEST		•
983					•			•
984					• 3201	T10 OR TDV STATUS ERROR WRITING A PACKED BINARY RECORD TO SET		•
985					•	ONE BIT AT A TIME IN THE LRC CHARACTER		•
986					•	LRC TEST		•
987					•			•
988					• 3202	T10 OR TDV STATUS ERROR SPACING BKW OVER PACKED BINARY RECORD.		•
989					•	LRC TEST		•
990					•			•
991					• 3203	T10 OR TDV STATUS ERROR READING A PACKED BINARY RECORD TO SET		•
992					•	ONE BIT AT A TIME IN THE LRC CHARACTER.		•
993					•	LRC TEST		•
994					•			•
995					• 3204	INFORMATION ERROR ON PACKED BINARY RECORD THAT SETS A BIT AT A		•
996					•	TIME IN THE LRC CHARACTER.		•
997					•	LRC TEST		•
998					•			•
999					• 3205	T10 OR TDV STATUS ERROR WRITING A BINARY RECORD TO SET ONE BIT		•
1000					•	AT A TIME IN THE LRC CHARACTER.		•
1001					•	LRC TEST		•
1002					•			•
1003					• 3206	T10 OR TDV STATUS ERROR SPACING BACKWARD OVER A BINARY RECORD.		•
1004					•	LRC TEST		•
1005					•			•
1006					• 3207	T10 OR TDV STATUS ERROR READING A BINARY RECORD TO SET ONE BIT		•
1007					•	AT A TIME IN THE LRC CHARACTER.		•
1008					•	LRC TEST		•
1009					•			•
1010					• 3208	INFORMATION ERROR ON BINARY RECORD THAT SETS A BIT IN THE LRC.		•
1011					•	LRC TEST		•
1012					•			•
1013					• 3209	T10 OR TDV STATUS ERROR WRITING A BCD RECORD WITH A BLANK LRC,		•
1014					•	THEN SETS A PARTICULAR BIT AND THE PARITY BIT IN THE LRC CHAR.		•
1015					•	LRC TEST		•
1016					•			•
1017					• 3210	T10 OR TDV STATUS ERROR SPACING BKW OVER BCD RECORD.		•
1018					•	LRC TEST		•
1019					•			•
1020					• 3211	T10 OR TDV STATUS ERROR READING THE BCD RECORD WITH A BLANK LRC,		•
1021					•	THEN SETS A PARTICULAR BIT AND THE PARITY BIT IN THE LRC CHAR.		•
1022					•	LRC TEST		•
1023					•			•
1024					• 3212	INFORMATION ERROR READING A BCD RECORD WITH A BLANK LRC, AND		•
1025					•	PARTICULAR BITS IN THE LRC CHARACTER.		•
1026					•	LRC TEST		•
1027					•			•
1028					• 3301	T10 OR TDV STATUS ERROR ON WRITING AN INCREMENTED RECORD WITH		•
1029					•	SATURATED TRACKS AND NOISE PATTERN.		•
1030					•	DATA TEST		•
1031					•			•
1032					• 3302	T10 OR TDV STATUS ERROR ON SPACE BACKWARD OVER AN INCREMENTED		•
1033					•	RECORD WITH SATURATED TRACKS AND NOISE PATTERNS.		•
1034					•	DATA TEST		•
1035					•			•
1036					• 3303	T10 OR TDV STATUS ERROR ON READING FORWARD AN INCREMENTED		•
1037					•	RECORD WITH SATURATED TRACKS AND NOISE PATTERNS.		•
1038					•	DATA TEST		•
1039					•			•
1040					• 3304	INFORMATION ERROR ON READING FORWARD AN INCREMENTED RECORD		•
1041					•	WITH SATURATED TRACKS AND NOISE PATTERNS.		•
1042					•	DATA TEST		•
1043					•			•
1044					• 3401	T10 ERROR. DEVICE SHOULD BE BUSY WHILE WRITING 1000 BYTES.		•
1045					•	READY/BUSY TEST		•
1046					•			•
1047					• 3402	NO INTERRUPT RECEIVED AFTER WRITING 1000 BYTES.		•
1048					•	READY/BUSY TEST		•
1049					•			•
1050					• 3403	T10 OR TDV STATUS ERROR ON WRITING A 1000 BYTE RECORD.		•

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42	AUG 03, '70		SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 17
1051						READY/BUSY TEST		
1052								
1053					3404	T10 ERROR. CONTROLER SHOULD BE BUSY WHILE READING 1000 BYTES.		
1054						READY/BUSY TEST		
1055								
1056					3405	NO INTERRUPT RECEIVED AFTER READING A RECORD BKW WITH 1000 BYTES		
1057						READY/BUSY TEST		
1058								
1059					3406	S10 ERROR. CONTROLLER SHOULD BE BUSY ON INITIATING REWIND		
1060						READY/BUSY TEST		
1061								
1062					3407	T10 ERROR. DEVICE SHOULD BE BUSY ON REWINDING.		
1063						READY/BUSY TEST		
1064								
1065					3501	T10 OR TDV STATUS ERROR ON WRITING A 96 BYTE RECORD.		
1066						TAPE CREEP TEST		
1067								
1068					3502	T10 OR TDV STATUS ERROR WHEN WRITING A 12 BYTE RECORD		
1069						TAPE CREEP TEST		
1070								
1071					3503	T10 OR TDV STATUS ERROR WHEN WRITING A 12 BYTE RECORD.		
1072						TAPE CREEP TEST		
1073								
1074					3504	T10 OR TDV STATUS ERROR WHEN SPACING BACKWARD OVER A 12 BYTE REC		
1075						TAPE CREEP TEST		
1076								
1077					3505	T10 OR TDV STATUS ERROR SPACING BACKWARD OVER 96 BYTES.		
1078						TAPE CREEP TEST		
1079								
1080					3506	T10 OR TDV STATUS ERROR READING A 96 BYTE RECORD.		
1081						TAPE CREEP TEST		
1082								
1083					3507	INFORMATION ERROR READING A 96 BYTE RECORD.		
1084						TAPE CREEP TEST		
1085								
1086					3508	TAPE CREEP TOLERANCE EXCEEDED IN THE TAPE CREEP TEST.		
1087						TAPE CREEP TEST		
1088								
1089					3509	TAPE CREEP NEGATIVE IN THE TAPE CREEP TEST.		
1090						TAPE CREEP TEST		
1091								
1092					3701	T10 OR TDV STATUS ERROR WRITING 12 BYTES IN THE I.R.G. TEST.		
1093						GAP LENGTH TIMING TEST		
1094								
1095					3702	T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER 12 BYTES.		
1096						GAP LENGTH TIMING TEST		
1097								
1098					3703	T10 OR TDV STATUS ERROR WRITING 12 BYTES IN THE I.R.G. TEST.		
1099						GAP LENGTH TIMING TEST		
1100								
1101					3704	T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER 12 BYTES.		
1102						GAP LENGTH TIMING TEST		
1103								
1104					3705	I.R.G. TIME IS INCORRECT. SEE PRINTOUT.		
1105						GAP LENGTH TIMING TEST		
1106								
1107					3801	T10 OR TDV ERROR WRITING 1000 BYTES IN THE END OF TAPE TEST.		
1108						END OF TAPE TEST		
1109								
1110					3802	T10 OR TDV ERROR WRITING 1000 BYTES BEYOND EOT INDICATION.		
1111						END OF TAPE FLAG SHOULD BE SET.		
1112						END OF TAPE TEST		
1113								
1114					3803	T10 OR TDV STATUS ERROR SPACING BACKWARD OVER 1000 BYTES AT EOT.		
1115						EOT FLAG SHOULD BE SET.		
1116						END OF TAPE TEST		
1117								
1118					3804	T10 OR TDV STATUS ERROR SPACING BKW OVER 1000 BYTES NEAR EOT.		
1119						EOT FLAG SHOULD BE RESET.		
1120						END OF TAPE TEST		

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42 AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00			18
1121								4001 STATUS ERROR ON WRITING A RECORD DESIGNATING UNIT 0,1,2,3,4,5,6,7
1122								OPERATOR CONTROL PANEL TEST
1123								
1124								4002 STATUS ERROR SPACING BKW WITH UNIT DESIGNATION 1,2,3,4,5,6,7.
1125								OPERATOR CONTROL PANEL TEST
1126								
1127								4004 STATUS ERROR ON READING FWD WITH DESIGNATION UNIT 0,1,2,3,4,5,6,7
1128								OPERATOR CONTROL PANEL TEST
1129								
1130								4005 INFORMATION ERROR READING FWD RECORD FROM UNIT 0,1,2,3,4,5,6,7.
1131								OPERATOR CONTROL PANEL TEST
1132								
1133								4006 STATUS ERROR WHEN TRYING TO WRITE ON A UNIT WITH THE WRITE RING
1134								REMOVED. A WRITE PROTECT IS EXPECTED.
1135								OPERATOR CONTROL PANEL TEST
1136								
1137								4007 STATUS ERROR WHEN TRYING TO WRITE A TAPE MARK WITH THE WRITE
1138								RING REMOVED. A WRITE PROTECT IS EXPECTED.
1139								OPERATOR CONTROL PANEL TEST
1140								
1141								4008 NO INTERRUPT WAS RECEIVED WHEN THE ATTENTION BUTTON WAS SET
1142								BY THE OPERATOR.
1143								OPERATOR CONTROL PANEL TEST
1144								
1145								4009 STATUS ERROR ON REWIND AND PUT OFF LINE. THE DEVICE SHOULD BE
1146								MANUAL AND THE CONTROLLER READY.
1147								OPERATOR CONTROL PANEL TEST
1148								
1149								4010 TDV STATUS INCORRECT. LOAD POINT AND READY EXPECTED.
1150								OPERATOR CONTROL PANEL TEST
1151								
1152								4013 THE DENSITY DIAL IS SET INCORRECTLY OR THE ACTUAL DENSITY
1153								OF THE 1000 BYTE RECORD WAS INCORRECT.
1154								OPERATOR CONTROL PANEL TEST
1155								
1156								4014 T10 OR TDV STATUS ERROR ON WRITING A 96 BYTE RECORD WITH THE
1157								DENSITY DIAL SET TO A PARTICULAR DENSITY.
1158								OPERATOR CONTROL PANEL TEST
1159								
1160								4015 T10 OR TDV STATUS ERROR ON SPACING BACKWARD OVER A RECORD WITH
1161								THE DENSITY DIAL SET AT A PARTICULAR DENSITY.
1162								OPERATOR CONTROL PANEL TEST
1163								
1164								4016 T10 OF TDV STATUS ERROR READING 96 BYTES WITH THE DENSITY DIAL
1165								SET AT A PARTICULAR DENSITY.
1166								OPERATOR CONTROL PANEL TEST
1167								
1168								4017 INFORMATION ERROR ON THE 96 BYTE RECORD READ WITH THE DENSITY
1169								DIAL SET AT A PARTICULAR DENSITY.
1170								OPERATOR CONTROL PANEL TEST
1171								
1172								
1173								
1174								
1175								
1176								
1177								
1178								
1179					R0	EQU	0	
1180		00000000			R1	EQU	1	
1181		00000001			R2	EQU	2	
1182		00000002			R3	EQU	3	
1183		00000003			R4	EQU	4	
1184		00000004			R5	EQU	5	
1185		00000005			R6	EQU	6	
1186		00000006			R7	EQU	7	
1187		00000007			R8	EQU	8	
1188		00000008			R9	EQU	9	
1189		00000009			R10	EQU	X'A'	
1190		0000000A			R11	EQU	X'B'	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 19
1191		0000000C			R12	EQU	X'C'	
1192		0000000D			R13	EQU	X'D'	
1193		0000000E			R14	EQU	X'E'	
1194		0000000F			R15	EQU	X'F'	
1195	01 00200					ORG	X'200'	
	01 00200							
1196					*			
1197					* PROCEDURE			
1198					*			
1199						OPEN	PAGE	THIS INHIBITS
1200		00000000			PAGE	CNAME		PAGE
1201						PROC		DIRECTIVE
1202						PEND		TO PERMIT MAX. LINAGE/PAGE
1203					*			
1204					* PROCEDURE			
1205					*			
1206		00000000			:TSEQ	CNAME		
1207						PROC		
1208					LF	EQU	\$	
1209					I	SET	I	
1210						DO	NUM(AF)/4+1	
1211						GEN,8,8,8,8	AF(1),AF(1+1),AF(1+2),AF(1+3)	
1212					I	SET	I+4	
1213						FIN		
1214						PEND		
1215					*			
1216					*			
1217					* PROCEDURE			
1218					*			
1219		00000000			:TSEQEQU	CNAME		
1220						PROC		
1221					LF(1)	EQU	AF(1)	
1222					LF(2)	EQU	AF(1)+1	
1223					LF(3)	EQU	AF(1)+2	
1224					LF(4)	EQU	AF(1)+3	
1225					LF(5)	EQU	AF(1)+4	
1226					LF(6)	EQU	AF(1)+5	
1227					LF(7)	EQU	AF(1)+6	
1228					LF(8)	EQU	AF(1)+7	
1229						PEND		
1230					*			
1231					* PROCEDURES			
1232					* -----			
1233					*			
1234					* PROCEDURE FOR GENERATING DICTIONARY DOUBLE WORDS			
1235					*			
1236		00000000			:PROCDIC	CNAME		
1237						PROC		
1238					LF	GEN,32,3,3,3,3,4,16	AF(1),ABSVAL(AF(2)),ABSVAL(AF(3)),;	
1239							ABSVAL(AF(4)),ABSVAL(AF(5));;	
1240							ABSVAL(AF(6)),ABSVAL(AF(7))	
1241						PEND		
1242					*			
1243					* PAGE			
1244					*			
1245					* MONITOR LINK TABLE			
1246					* -----			
1247					*			
1248					* PURPOSE OF ESTABLISHING COMMUNICATIONS BETWEEN THE TEST PROGRAM AND			
1249					* THE MONITOR (DPM).			
1250					*			
1251	00 00000				ASECTMLT	ASECT		
1252	00 00200					ORG	X'200'	
	00 00200							
1253	00 00200				:MLT	EQU	\$	ABSOLUTE RECOVERY LOCATION
1254	00 00201				:P1	EQU	:MLT+1	DIRECTIVE PARAMETER 1
1255	00 00202				:P2	EQU	:MLT+2	DIRECTIVE PARAMETER 2
1256	00 00203				:P3	EQU	:MLT+3	DIRECTIVE PARAMETER 3
1257	00 00204				:P4	EQU	:MLT+4	DIRECTIVE PARAMETER 4
1258	00 0020F				:DUMP	EQU	:MLT+15	ADDR OF MEMORY DUMP ROUTINE

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 20
1259		00 00211			:PSW	EQU	:MLT+17	PARAMETER STATUS WORD
1260		00 00213			:BCDC	EQU	:MLT+19	ADDR OF BCD FORMAT CONVERSION
1261		00 00214			:MONITOR	EQU	:MLT+20	DIRECTIVE RETURN ADDRESS
1262		00 00215			:LGFLAG	EQU	:MLT+21	LOAD AND GO FLAG; LOAD & GO IF = -
1263		00 00216			:BINC	EQU	:MLT+22	ADDR OF BINARY FORMAT CONVERSION R
1264		00 00217			:DECC	EQU	:MLT+23	ADDR OF DECIMAL FORMAT CONVERSION
1265		00 00218			:HEXC	EQU	:MLT+24	ADDR OF HEXADEC FORMAT CONVERSION
1266		00 00219			:IBYTEIN	EQU	:MLT+25	ADDR OF 1 BYTE INPUT ROUTINE
1267		00 0021A			:CURBCNT	EQU	:MLT+26	CURRENT BYTE COUNT
1268		00 0021B			:ERROR	EQU	:MLT+27	ADDR OF ERROR REPORT ROUTINE
1269		00 0021C			:PRINT	EQU	:MLT+28	ADDR OF MESSAGE PRINT ROUTINE
1270		00 0021D			:SENSE	EQU	:MLT+29	ADDR OF SENSE SWITCH 1,3 TESTS
1271		00 0021E			:MONWAIT	EQU	:MLT+30	MONITOR WAIT
1272		00 0021F			:MRECOVR	EQU	:MLT+31	BRANCH TO ABSOLUTE RECOVERY LOCATION
1273		00 00220			:MSGOUT	EQU	:MLT+32	MSG OUTPUT DEVICE, TYPE AND ADDR
1274		00 00221			:MSGIN	EQU	:MLT+33	MSG INPUT DEVICE, TYPE AND ADDR
1275		00 00222			:LOADIN	EQU	:MLT+34	ADDR OF INITIAL LOADING DEVICE
1276		00 00223			:ERRORC	EQU	:MLT+35	PROGRAM ERROR COUNT
1277		00 00224			:KSRADR	EQU	:MLT+36	KEYBOARD/PRINTER DEVICE ADDR X'001
1278		00 00225			:MACHINE	EQU	:MLT+37	MACHINE TYPE CODE
1279		00 00226			:RELBIA	EQU	:MLT+38	RELOCATION BIAS
1280		00 00227			:RLOADER	EQU	:MLT+39	ADDR OF RESIDENT LOADER
1281		00 00228			:DTLFLAG	EQU	:MLT+40	DIAGNOSTIC TAPE LIBRARY FLAG
1282		00 00229			:PREPORT	EQU	:MLT+41	ADDR OF PARAMETER ERROR REPORT
1283		00 0022A			:SCT	EQU	:MLT+42	ADDR OF SYSTEM CONTEXT TABLE (SCT)
1284		00 0022B			:SCTLEN	EQU	:MLT+43	LENGTH OF SYSTEM CONTEXT TABLE (SCT)
1285		00 0022C			:DICINDX	EQU	:MLT+44	ADDR OF DICTIONARY INDEX
1286		00 0022D			:DICILEN	EQU	:MLT+45	LENGTH OF DICTIONARY INDEX
1287		00 0022E			:MEMSIZE	EQU	:MLT+46	SYSTEM MEMORY SIZE
1288		00 0022F			:MEMLAST	EQU	:MLT+47	ADDR OF LAST USABLE MEMORY LOCATIO
1289		00 00230			:MONIOBF	EQU	:MLT+48	ADDR OF MONITOR IO BUFFER
1290		00 00231			:MONPBF	EQU	:MLT+49	ADDR OF ABSOLUTE RECOVERY ROUTINE
1291		00 00240			:MLTEND	EQU	:MLT+64	LAST LOCATION OF MONITOR LINK TABL
1292					*			
1293					* PROGRAM INTERFACE TABLE			
1294					* -----			
1295					* THIS TABLE IS LOADED BY THE TEST PROGRAM FOR			
1296					* THE PURPOSE OF ESTABLISHING COMMUNICATIONS BETWEEN THE MONITOR (DPM)			
1297					* AND THE USER PROGRAM.			
1298					* -----			
1299	00	00000			ASECTPIT	ASECT		
1300	00	00300			ORG	X'300'		
1301	00	00300	0000033E 02		:PIT0	DATA	:CATALOG	ADDR OF LOC. CONTAINING CATALOG NO.
1302	00	00301	0000033F 02		:PIT1	DATA	:PROGID	ADDR OF PROGRAM ID MESSAGE.
1303	00	00302	00000320 02		:PIT2	DATA	:DIC	ADDR OF DIRECTIVE DICTIONARY
1304	00	00303	0000000E A		:PIT3	DATA	:DICEND--:DIC	LENGTH OF DIRECTIVE DICTIONARY
1305	00	00304	00000518 02		:PIT4	DATA	:RECOVER	ADDR OF ABSOLUTE RECOVERY ROUTINE
1306	00	00305	0000032E 02		:PIT5	DATA	:CDT	ADDR OF CONTEXT DISCRIPTION TABLE
1307	00	00306	00000002 A		:PIT6	DATA	:CDTEND--:CDT	LENGTH OF CONTEXT DESCRIPTION TABLE
1308	00	00307	00000000 A		:PIT7	DATA	0	
1309	00	00308	00000380 02		:PIT8	DATA	:INITIAL	ADDR OF INITIALIZER ROUTINE
1310	00	00309	00000000 A		:PIT9	DATA	0	LAST MODEL NUMBER STORED IN CDB
1311	00	0030A	00000000 A		:PIT10	DATA	0	PARAMETER NUMBER, PARAMETER IN ERROR
1312	00	0030B	00000000 A		:PIT11	DATA	0	ADDR OF MSG TO BE PRINTED AFTER INIT
1313	00	0030C	00000000 A		:PIT12	DATA	0	RUNFLAG, RUN PROG IF FLAG = -1
1314	00	0030D	00000000 A		:PIT13	DATA	0	NOT USED
1315	00	0030E	00000000 A		:PIT14	DATA	0	NOT USED
1316	00	0030F	00000000 A		:PIT15	DATA	0	ADR OF MEM PARITY AND FAULT INT HAND
1317		00 00310			:PITLAST	EQU	\$	
1318		00 0031B			:PITEND	EQU	:PIT0+27	
1319		0000000B			DO		:PITEND--:PITLAST	CLEAR LOCATIONS UP TO PIT27
1320	00	00310	00000000 A		DATA	0		
1321					FIN			
	00	00311	00000000 A					
	00	00312	00000000 A					
	00	00313	00000000 A					
	00	00314	00000000 A					
	00	00315	00000000 A					
	00	00316	00000000 A					

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42 AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			21
	00	00317	00000000	A				
	00	00318	00000000	A				
	00	00319	00000000	A				
	00	0031A	00000000	A				
1322	00	0031B	000020C5	02	:PIT27	DATA	BUFF1	END OF USER PROGRAM
1323	00	0031C	00000000	A		DATA	0,0,0,0	
	00	0031D	00000000	A				
	00	0031E	00000000	A				
	00	0031F	00000000	A				
1324					PAGE			
1325					*			
1326					*	DIRECTIVE DICTIONARY		
1327					*			
1328					*	THIS TABLE SUPPLIES THE MONITOR WITH		
1329					*	INFORMATION ABOUT EACH DIRECTIVE AVAILABLE IN THE TEST PROGRAM.		
1330					*	EACH DICTIONARY ENTRY CONSISTS OF 2 WORDS (64 BITS) WHICH ARE		
1331					*	DEFINED AS FOLLOWS:		
1332					*			
1333					*	BITS 00 THRU 31 4 BYTE MNEMONIC IDENTIFIER IN EBCDIC		
1334					*	BITS 32 THRU 34 TYPE OF CONVERSION FOR PARAMETER 1.		
1335					*	BITS 35 THRU 37 TYPE OF CONVERSION FOR PARAMETER 2.		
1336					*	BITS 38 THRU 40 TYPE OF CONVERSION FOR PARAMETER 3.		
1337					*	BITS 41 THRU 43 TYPE OF CONVERSION FOR PARAMETER 4.		
1338					*	BITS 44 THRU 47 NOT ASSIGNED; MUST BE EQUAL TO ZERO		
1339					*	BITS 48 THRU 63 ROUTINE ADDRESS		
1340					*			
1341					*	TYPE OF PARAMETER CONVERSION		
1342					*			
1343					*	000 HEXADECIMAL CONVERSION		
1344					*	001 DECIMAL CONVERSION TO BINARY		
1345					*	002 ALPHANUMERIC		
1346					*			
1347	02	00000			CSECTD	CSECT		
1348	02	00320			ORG		X'320'	
	02	00320						
1349	02	00320			:DIC	EQU	\$	
1350	02	00320	E3E2E3F0	A		:PROCDIC	'TST0',1,1,7,7,0,TST0	COMPREHENSIVE TEST
			27F0047F					
1351	02	00322	E3E2E3F1	A		:PROCDIC	'TST1',1,1,7,7,0,TST1	FUNCTIONAL TEST
			27F00498					
1352	02	00324	E3E2E3F2	A		:PROCDIC	'TST2',1,1,7,7,0,TST2	RANDOM EXERCISER
			27F004DD					
1353	02	00326	E3E2E3F3	A		:PROCDIC	'TST3',1,1,1,1,0,TST3	UTILITY TESTS
			249004F8					
1354	02	00328	C4C1E3C1	A		:PROCDIC	'DATA',1,0,0,0,0,DATTA	DATA
			20000535					
1355	02	0032A	00D3C5D5	A		:PROCDIC	'LEN',1,7,7,7,0,LEN	LENGTH
			3FF0052A					
1356	02	0032C	D3C9D4E3	A		:PROCDIC	'LIMT',1,1,7,7,0,:LIMIT	LIMIT
			27F0055D					
1357					*			
1358					*			
1359	02	0032E			:DICEND	EQU	\$	
1360						PAGE		
1361					*			
1362					*	CONTEXT DESCRIPTION TABLE		
1363					*			
1364					*	THE CONTEXT DESCRIPTION TABLE ALLOWS		
1365					*	THE MONITOR TO PASS-ON ENVIRONMENTAL INFORMATION FROM THE 'SYST'		
1366					*	DIRECTIVE TO THE TEST PROGRAM. NORMALLY ONLY ONE ENTRY WILL BE		
1367					*	REQUIRED. EACH CONTEXT DESCRIPTION TABLE ENTRY CONSISTS OF 2 WORDS		
1368					*	(64 BITS) WHICH ARE DEFINED AS FOLLOWS:		
1369					*			
1370					*	BITS 00 THRU 08 LENGTH OF CONTEXT DATA BLOCK		
1371					*	BITS 09 THRU 27 NOT ASSIGNED; MUST BE EQUAL TO ZERO		
1372					*	BITS 28 THRU 31 NUMBER OF DEVICE MODEL NUMBERS		
1373					*	BITS 32 THRU 61 ADDR OF CONTEXT DATA BLOCK		
1374					*			
1375		02	0032E		:CDT	EQU	:DICEND	
1376	02	0032E	05000004	N		GEN,9,19,4,32	:CDBEND--:CDB,0,:CDBMEND--:CDBM,:CDB	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42 AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			22
			00000334					
1377		02 00330			:CDTEND	EQU	\$	
1378					*			
1379					*			
1380					*	CONTEXT DATA BLOCK		
1381					*			
1382					*			THE CONTEXT DATA BLOCK CONTAINS ENVIRONMENTAL
1383					*	INFORMATION FOR THE TEST PROGRAM.		
1384					*			
1385		02 00330			:CDBM	EQU	\$	
1386	02	00330	00001CC2	A		DATA	7362	37.5 IPS STD PACKED BINARY
1387	02	00331	00001CC5	A		DATA	7365	
1388	02	00332	00001CCC	A		DATA	7372	75 IPS STD BINARY AND DECIMAL
1389	02	00333	00001CCE	A		DATA	7374	
1390					*			
1391		02 00334			:CDBMEND	EQU	\$	
1392					*			
1393		02 00334			:CDB	EQU	\$	
1394	02	00334	00031CCC	A		GEN,16,16	3,7372	CURRENTLY SELECTED DEVICE ADDRESS
1395	02	00335	00000000	A		DATA	0	
1396	02	00336	00000080	A	SYTDEVA	DATA	X'080'	DEVICE ADDRESS OF FIRST UNIT
1397	02	00337	00000000	A		DATA	0	DEVICE ADDRESS OF SECOND UNIT
1398	02	00338	00000000	A		DATA	0	DEVICE ADDRESS OF THIRD UNIT
1399	02	00339	00000000	A		DATA	0	DEVICE ADDRESS OF FOURTH UNIT
1400	02	0033A	00000000	A		DATA	0	DEVICE ADDRESS OF FIFTH UNIT
1401	02	0033B	00000000	A		DATA	0	DEVICE ADDRESS OF SIXTH UNIT
1402	02	0033C	00000000	A		DATA	0	DEVICE ADDRESS OF SEVENTH UNIT
1403	02	0033D	00000000	A		DATA	0	DEVICE ADDRESS OF EIGHTH UNIT
1404		02 0033E			:CDBEND	EQU	\$	
1405					*			
1406					*			
1407					*			
1408					*			
1409		02 0033E			:CATALOG	EQU	\$	PROGRAM CATALOG NUMBER
1410	02	0033E	000AC4C7	A		DATA	705735	PROGRAM CATALOG NUMBER
1411					*			
1412		02 0033F			:PROGID	EQU	\$	PROGRAM IDENTIFICATION MESSAGE
1413						TEXTC		'SIGMA 5/7 7-CHANNEL MAGNETIC TAPE TEST ';;
1414	02	0033F	51E2C9C7	A				'PROGRAM NO. 705735-ADD MANUAL NO. 901682A'
	02	00340	D4C140F5	A				
	02	00341	61F740F7	A				
	02	00342	60C3C8C1	A				
	02	00343	D5D5C5D3	A				
	02	00344	40D4C1C7	A				
	02	00345	D5C5E3C9	A				
	02	00346	C340E3C1	A				
	02	00347	D7C540E3	A				
	02	00348	C5E2E340	A				
	02	00349	15D7D9D6	A				
	02	0034A	C7D9C1D4	A				
	02	0034B	40D5D64B	A				
	02	0034C	40F7F0F5	A				
	02	0034D	F7F3F560	A				
	02	0034E	C1F0F040	A				
	02	0034F	D4C1D5E4	A				
	02	00350	C1D340D5	A				
	02	00351	D64B40F9	A				
	02	00352	F0F1F6F8	A				
	02	00353	F2C14040	A				
1415								
1416								
1417								
1418								
1419								
1420	02	00354	000003A4		:TISLT	DATA	:TIMRETN	MONITOR RETURN ADDRESS
1421	02	00355	0000056C			DATA	:T1ST01	THESE SUBTESTS
1422	02	00356	00000592			DATA	:T1ST02	CAN BE EXECUTED IN THE
1423	02	00357	000005BD			DATA	:T1ST03	AUTOMATIC MODE.
1424	02	00358	000005D4			DATA	:T1ST04	NO MANUAL INTERVENTION
1425	02	00359	000005D5			DATA	:T1ST05	IS REQUIRED.

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 23
1426	02	0035A	00000506			DATA	:T1ST06	
1427	02	0035B	00000507			DATA	:T1ST07	
1428	02	0035C	00000626			DATA	:T1ST08	
1429	02	0035D	00000648			DATA	:T1ST09	
1430	02	0035E	00000681			DATA	:T1ST10	
1431	02	0035F	00000682			DATA	:T1ST11	
1432	02	00360	000006D5			DATA	:T1ST12	
1433	02	00361	000006FE			DATA	:T1ST13	
1434	02	00362	00000715			DATA	:T1ST14	
1435	02	00363	0000073F			DATA	:T1ST15	
1436	02	00364	00000773			DATA	:T1ST16	
1437	02	00365	000007A0			DATA	:T1ST17	
1438	02	00366	000007A1			DATA	:T1ST18	
1439	02	00367	000007E9			DATA	:T1ST19	
1440	02	00368	00000874			DATA	:T1ST20	
1441	02	00369	000008A8			DATA	:T1ST21	
1442	02	0036A	00000907			DATA	:T1ST22	
1443	02	0036B	00000934			DATA	:T1ST23	
1444	02	0036C	000009A8			DATA	:T1ST24	
1445	02	0036D	00000989			DATA	:T1ST25	
1446	02	0036E	0000098A			DATA	:T1ST26	
1447	02	0036F	00000A20			DATA	:T1ST27	
1448	02	00370	00000A56			DATA	:T1ST28	
1449	02	00371	00000800			DATA	:T1ST29	
1450	02	00372	0000088E			DATA	:T1ST30	
1451	02	00373	000008F4			DATA	:T1ST31	
1452	02	00374	00000C7B			DATA	:T1ST32	
1453	02	00375	00000D31			DATA	:T1ST33	
1454	02	00376	00000DD1			DATA	:T1ST34	
1455	02	00377	00000E30			DATA	:T1ST35	
1456	02	00378	00000E02			DATA	:T1ST36	
1457	02	00379	00000E03		:TISLT1	DATA	:T1ST37	THE FOLLOWING TESTS MAY REQUIRE INTERVENTION
1458	02	0037A	00000F67			DATA	:T1ST38	
1459	02	0037B	00000FA7			DATA	:T1ST39	
1460	02	0037C	00000FA8			DATA	:T1ST40	
1461	02	0037D	00001089			DATA	:T1ST41	
1462		02 0037E			:TISLT2	EQU	\$	
1463					*			
1464					*	END OF SUBTEST LINK TABLE		
1465					*			
1466					*			
1467					*	*** INTERRUPT/TRAP HANDLER ***		
1468					*			
1469					*	PARAMETERS REQ'D:		
1470					*	-----		
1471					*	ITHTEST - TEST BEING PERFORMED (1=TST1,2=TST2,3=TST3)		
1472					*	ITHSUBT - SUBTEST BEING PERFORMED (TST1 ONLY)		
1473					*	ITHRST - RESTART ADDRESS		
1474					*			
1475	02	0037E	35F00395		ITHDLR	STW,15	ITHSAVE	SAVE RETURN ADDRESS
1476	02	0037F	32C00392			LW,12	ITHTEST	TEST NUMBER
1477	02	00380	EAF00218 A			BAL,15	*:HEXC	CONVERT TO EBCDIC
1478	02	00381	75F20397			STB,15	ITHM2+1,1	ENTER INTO MSG
1479	02	00382	EAF0021C A			BAL,15	*:PRINT	
1480	02	00383	00000396			DATA	ITHM2	'TSTX WILL BE RESTARTED'
1481	02	00384	31100392			CW,1	ITHTEST	TST1?
1482	02	00385	69300388			BNE	\$+6	NO
1483	02	00386	32C00393			LW,12	ITHSUBT	SUBTEST NUMBER
1484	02	00387	EAF00217 A			BAL,15	*:DECC	CONVERT TO EBCDIC
1485	02	00388	55F2039F			STH,15	ITHM3+3,1	ENTER INTO MSG
1486	02	00389	EAF0021C A			BAL,15	*:PRINT	
1487	02	0038A	0000039C			DATA	ITHM3	'SUBTEST NO. XX'
1488	02	0038B	32C01885			LW,12	:DEVADDR	DEVICE ADDRESS
1489	02	0038C	EAF00218 A			BAL,15	*:HEXC	CONVERT TO EBCDIC
1490	02	0038D	35F003A3			STW,15	ITHM4+3	ENTER INTO MSG
1491	02	0038E	EAF0021C A			BAL,15	*:PRINT	
1492	02	0038F	000003A0			DATA	ITHM4	'DEVICE NO. XXXX'
1493	02	00390	32F00394			LW,15	ITHRST	(R15)=RESTART ADDRESS
1494	02	00391	E8000395			B	*ITHSAVE	RETURN TO MONITOR INTER/TRAP HANDLER
1495					*			

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 24
1496	02	00392	00000000	A	ITHTEST	DATA	0	
1497	02	00393	00000000	A	ITHSUBT	DATA	0	
1498	02	00394	00000000	A	ITHRST	DATA	0	
1499	02	00395	00000000	A	ITHSAVE	DATA	0	
1500	02	00396	1740E3E2	A	ITHM2	TEXTC	' TSTX WILL BE RESTARTED'	
	02	00397	E3E740E6	A				
	02	00398	C9D3D340	A				
	02	00399	C2C540D9	A				
	02	0039A	C5E2E3C1	A				
	02	0039B	D9E3C5C4	A				
1501	02	0039C	0F40E2E4	A	ITHM3	TEXTC	' SUBTEST NO. XX'	
	02	0039D	C2E3C5E2	A				
	02	0039E	E340D5D6	A				
	02	0039F	4B40E7E7	A				
1502	02	003A0	0F40C4C5	A	ITHM4	TEXTC	' DEVICE NO. XXXX'	
	02	003A1	E5C9C3C5	A				
	02	003A2	40D5D64B	A				
	02	003A3	E7E7E7E7	A				
1503					*			
1504					*			
1505					*			
1506					*			
1507					*	TEST 1 SEQUENCER (MONITOR)		
1508					*			
1509	02	003A4	35F003BC		:TIMRETN	STW,15	:TIMEXIT	SAVE EXIT ADDRESS
1510	02	003A5	324003BA			LW,4	:TICUR	FETCH CURRENT INDEX
1511	02	003A6	314003BB			CW,4	:TILAST	COMPARE TO LAST SUBTEST NUMBER
1512	02	003A7	E92003BC			BCS,2	+:TIMEXIT	EXIT - ALL SUBTESTS EXECUTED
1513	02	003A8	20400354			A1,4	:TISLT	BRANCH TO SUBTEST
1514	02	003A9	2250037E			L1,5	ITHDLR	FETCH TRAP INT. HANDLER ADDR
1515	02	003AA	3550030F	A		STW,5	:PIT15	STORE INTO PIT + 15
1516	02	003AB	35100392			STW,1	ITHTEST	STORE TEST NUMBER INTO ITHTEST
1517	02	003AC	325003BA			LW,5	:TICUR	FETCH CURRENT SUBTEST NUMBER
1518	02	003AD	35500393			STW,5	ITHSUBT	STORE NUMBER INTO SUBTEST PARAMETER
1519	02	003AE	22500499			L1,5	TST1+1	FETCH RESTART ADDRESS
1520	02	003AF	35500394			STW,5	ITHRST	STORE INTO RESTART ADDRESS PAMTR
1521	02	003B0	B2500004	A		LW,5	*4	NEXT SUBTEST POINTER
1522	02	003B1	E8000005	A		B	*5	BRANCH TO NEXT SUBTEST
1523	02	003B2	331003BA		:TIM	MTW,1	:TICUR	INCREMENT INDEX
1524	02	003B3	32F0207E			LW,15	=X'0000FF00'	RESTORE TE IN OSB
1525	02	003B4	35F0206A			STW,15	:SAVETAB+2	
1526	02	003B5	32F0207F			LW,15	=X'0000BB00'	SET UP TDV WITH TE CHECK
1527	02	003B6	35F0206C			STW,15	:SAVETAB+4	
1528	02	003B7	680003A5			B	:TIMRETN+1	LOOP
1529					*			
1530					*			
1531	02	003B8	00000025	A	:TIAUTO	DATA	:TISLT1--:TISLT	NUMBER OF SUBTESTS IN AUTOMATIC MODE
1532	02	003B9	0000002A	A	:TIALL	DATA	:TISLT2--:TISLT	TOTAL NUMBER OF SUBTEST AVAILABLE
1533	02	003BA	00000000	A	:TICUR	DATA	0	CURRENT SUBTEST LINK TABLE INDEX
1534	02	003BB	00000000	A	:TILAST	DATA	0	LAST SUBTEST TO BE EXECUTED
1535	02	003BC	00000000	A	:TIMEXIT	DATA	0	STORAGE FOR REGISTER 15
1536					*			
1537					*			
1538					*			
1539					*			
1540					*			
1541					*			
1542					*			
1543					*			
1544					*			
1545					*			
1546					*			
1547					*			
1548					*			
1549					*			
1550					*			
1551	02	003BD	35F018A0		:INITIAL	STW,15	ST15	SAVE RETURN ADDRESS
1552	02	003BE	6AF0051B			BAL,15	:RECOVER	GO TO RECOVER ROUTINE
1553	02	003BF	3290022F	A		LW,9	:MEMLAST	
1554	02	003C0	209FDF3B	N		A1,9	-BUFF1	GENERATE BUFFER SIZE

INITIAL ENTRY TO PROGRAM

THIS ROUTINE IS ACCESSED BY THE MONITOR AFTER LOADING THE TEST PROGRAM AND WHENEVER A SYST DIRECTIVE IS EXECUTED BY THE USER.

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	25
1555	02	003C1	21904000	A		CI,9	X'4000'	WORD COUNT TOO LARGE
1556	02	003C2	691003C4			BL	\$+2	
1557	02	003C3	22903FF8	A		LI,9	X'3FF8'	
1558	02	003C4	48902080			AND,9	=X'FFF8'	MAKE DOUBLE WORD
1559	02	003C5	359018C9			STW,9	MAXREC	NUMBER OF WORDS IN I/O AREA
1560	02	003C6	25900002	A		SLS,9	2	
1561	02	003C7	359018C8			STW,9	MAXBYT	MAX BYTES IN I/O AREA
1562	02	003C8	55921859			STH,9	RFSPEC+1,1	
1563	02	003C9	5592185B			STH,9	RFSPEC+1,1	
1564	02	003CA	2590007F	A		SLS,9	-1	
1565	02	003CB	359018CA			STW,9	MAXREADB	MAX BYTES IN ONE BUFFER
1566	02	003CC	2590007E	A		SLS,9	-2	MAX WORDS IN I/O AREA
1567	02	003CD	359018CB			STW,9	MAXREAD	WORDS IN ONE BUFFER
1568	02	003CE	209020C5			AI,9	WA(BUFF1)	
1569	02	003CF	48902081			AND,9	=X'FFFFFFF'	MAKE DOUBLE WORD ADDRESS
1570	02	003D0	3590207D			STW,9	BUFF2	WA(BUFF1)+ WORDS/2
1571					*			BUFFER 2 SET UP IN DOUBLE WORDS
1572					*			DEVICE ADDRESS WITHIN LIMITS
1573					*			-----
1574	02	003D1	52A00334			LH,10	:CDB	CHECK FOR DEVICE NUMBERS
1575	02	003D2	21A00002	A		CI,10	2	
1576	02	003D3	692003D9			BG	INITIAL2	
1577					*			ERROR NO DEVICE NUMBERS GIVEN
1578	02	003D4	22000000	A		LI,0	0	
1579	02	003D5	3500030C	A		STW,0	:PIT12	RESET RUN FLAG
1580	02	003D6	35000215	A		STW,0	:LGFLAG	RESET LOAD AND GO FLAG
1581	02	003D7	3520030A	A		STW,2	:PIT10	PARAMETER 2 IN ERROR
1582	02	003D8	E80018A0			B	*ST15	EXIT FROM INITIALIZER
1583	02	003D9	5A500334		INITIAL2	LCH,5	:CDB	
1584	02	003DA	20500002	A		AI,5	2	NUMBER FO DEVICES TO CHECK
1585	02	003DB	22600000	A		LI,6	0	
1586	02	003DC	327C0336		INITIAL3	LW,7	SYTDEVA,6	
1587	02	003DD	683003EF			BEZ	INITIAL5	LAST DEVICE CHECKED
1588	02	003DE	31702082			CW,7	=X'FFFF'	WITHIN LIMITS
1589	02	003DF	692003E9			BG	INITIAL4	
1590	02	003E0	31702083			CW,7	=X'00000080'	CORRECT BIT SET
1591	02	003E1	684003E9			BCR,4	INITIAL4	
1592	02	003E2	31702084			CW,7	=X'00000080'	0-7 ONLY
1593	02	003E3	694003E9			BCS,4	INITIAL4	
1594	02	003E4	357C1886			STW,7	SAVDEV,6	SAVE DEVICE NUMBER IN TABLE
1595	02	003E5	20600001	A		AI,6	1	
1596	02	003E6	655003DC			BIR,5	INITIAL3	
1597	02	003E7	356018BE			STW,6	SAVNUMB	SAVE NUMBER OF DEVICES
1598	02	003E8	680003EF			B	INITIAL5	
1599					*			DEVICE NUMBER INCORRECT
1600	02	003E9	22000000	A	INITIAL4	LI,0	0	
1601	02	003EA	3500030C	A		STW,0	:PIT12	RESET RUN FLAG
1602	02	003EB	35000215	A		STW,0	:LGFLAG	RESET LOAD AND GO FLAG
1603	02	003EC	20600003	A		AI,6	3	
1604	02	003ED	3560030A	A		STW,6	:PIT10	PARAMETER IN ERROR
1605	02	003EE	E80018A0			B	*ST15	EXIT FROM INITIALIZER
1606	02	003EF	22A00334		INITIAL5	LI,10	:CDBMEND	SELECT MODEL NUMBER
1607	02	003F0	20AFFCDD	N		AI,10	-:CDBM	
1608	02	003F1	3A80000A	A		LCW,8	10	
1609	02	003F2	22600000	A		LI,6	0	
1610	02	003F3	52720334			LH,7	:CDB,1	SELECTED MODEL NUMBER
1611	02	003F4	317C0330			CW,7	:CDBM,6	
1612	02	003F5	683003FC			BE	INITIAL6	
1613	02	003F6	20600001	A		AI,6	1	
1614	02	003F7	658003F4			BIR,8	\$-3	
1615					*			ERROR MODEL NUMBER NOT LISTED
1616	02	003F8	3510030A	A		STW,1	:PIT10	
1617	02	003F9	22000000	A		LI,0	0	
1618	02	003FA	3500030C	A		STW,0	:PIT12	RESET RUN FLAG
1619	02	003FB	E80018A0			B	*ST15	EXIT FROM INITIALIZER
1620	02	003FC	35701808		INITIAL6	STW,7	SAVMODEL	SAVE MODEL NUMBER
1621					*			DETERMINE IPS, STANDARD SYSTEM, AND OPTIONS HERE
1622	02	003FD	21700008	A		CI,7	8	75 IPS
1623	02	003FE	68400425			BCR,4	INITIAL7	
1624					*			** 75 IPS **

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70	26
1625	02	003FF	311019CE			CH,1	MODEFLAG	PACKED BINARY SET
1626	02	00400	69300403			BNE	\$+3	
1627	02	00401	22800C62	A		LI,8	3170	CHARACTER TIME PACKED
1628	02	00402	68000404			B	\$+2	
1629	02	00403	22800990	A		LI,8	2448	AT 800 BPI
1630	02	00404	358018D6			STW,8	CHARTR	TIMES FOR TIMING SECTION
1631	02	00405	21700002	A		CI,7	2	
1632	02	00406	6840040C			BCR,4	\$+6	
1633	02	00407	3510188E			STW,1	OPTPB	PACKED BINARY OPTION INSTALLED
1634	02	00408	351019CE			STW,1	MODEFLAG	PACKED BINARY
1635	02	00409	351019A7			STW,1	NOPKPR	CLEAR PACKED PRINTOUT FLG
1636	02	0040A	3510189C			STW,1	FLGRG	PRINT PACKED
1637	02	0040B	68000411			B	\$+6	
1638	02	0040C	22800000	A		LI,8	0	
1639	02	0040D	3580188E			STW,8	OPTPB	RESET PACKED BINARY OPTION FLAG
1640	02	0040E	352019A7			STW,2	NOPKPR	SET NO PACKED PRINTOUT FLAG
1641	02	0040F	3520189C			STW,2	FLGRG	NO PACKED PRINTOUT
1642	02	00410	358019CE			STW,8	MODEFLAG	UNPACKED
1643	02	00411	22800000	A		LI,8	0	
1644	02	00412	35801890			STW,8	FL37IPS	RESET 37.5 IPS FLAG
1645	02	00413	3580188D			STW,8	STDPB	
1646	02	00414	35101891			STW,1	FL75IPS	SET 75 IPS FLAG
1647	02	00415	3510188C			STW,1	STDBCD	BINARY AND DECIMAL STANDARD
1648	02	00416	22800038	A		LI,8	56	
1649	02	00417	358018AF			STW,8	ERTMAX	MAX ERASE TIME
1650	02	00418	2280002E	A		LI,8	46	
1651	02	00419	358018B0			STW,8	ERTMIN	MIN ERASE TIME
1652	02	0041A	22802DE6	A		LI,8	11750	
1653	02	0041B	358018B1			STW,8	IRGMAX	MAX IRG TIME
1654	02	0041C	22802304	A		LI,8	8964	
1655	02	0041D	358018B2			STW,8	IRGMIN	MIN IRG TIME
1656	02	0041E	22800480	A		LI,8	1200	MAX CREEP
1657	02	0041F	358018B3			STW,8	CRPMAX	MAX CREEP
1658	02	00420	22800F9F	A		LI,8	3999	
1659	02	00421	358018B4			STW,8	WTRT	WRITE TO READ TIME
1660	02	00422	22800514	A		LI,8	1300	BACKWARD DIFFERENTIAL
1661	02	00423	358018D8			STW,8	STOPDIF	
1662	02	00424	68000444			B	INITIALB	
1663								** 37.5 IPS **
1664	02	00425	22802535	A	INITIAL7	LI,8	9525	AT 556 BPI PACKED (+1/4)
1665	02	00426	358018D6			STW,8	CHARTR	
1666	02	00427	351019CE			STW,1	MODEFLAG	SET PACKED FLAG
1667	02	00428	351019A7			STW,1	NOPKPR	CLEAR PACKED PRINTOUT FLG
1668	02	00429	3510189C			STW,1	FLGRG	PRINT PACKED
1669	02	0042A	21700001	A		CI,7	1	BINARY AND DECIMAL OPTION INSTALLED
1670	02	0042B	6840042E			BCR,4	\$+3	
1671	02	0042C	3510188F			STW,1	OPTBCD	SET BINARY AND DECIMAL OPTION
1672	02	0042D	68000430			B	\$+3	
1673	02	0042E	22800000	A		LI,8	0	
1674	02	0042F	3580188F			STW,8	OPTBCD	RESET BINARY AND DECIMAL FLAG
1675	02	00430	35101890			STW,1	FL37IPS	SET 37.5 IPS FLAG
1676	02	00431	22800000	A		LI,8	0	
1677	02	00432	35801891			STW,8	FL75IPS	RESET 75 IPS FLAG
1678	02	00433	3510188D			STW,1	STDPB	PACKED BINARY STANDARD
1679	02	00434	22800000	A		LI,8	0	
1680	02	00435	3580188C			STW,8	STDBCD	RESET BINARY AND DECIMAL FLAG
1681	02	00436	22800070	A		LI,8	112	
1682	02	00437	358018AF			STW,8	ERTMAX	ERASE MAX
1683	02	00438	2280005C	A		LI,8	92	
1684	02	00439	35801880			STW,8	ERTMIN	ERASE MIN
1685	02	0043A	22805A0A	A		LI,8	23050	
1686	02	0043B	358018B1			STW,8	IRGMAX	MAX IRG TIME
1687	02	0043C	22804608	A		LI,8	17928	
1688	02	0043D	35801882			STW,8	IRGMIN	MIN IRG TIME
1689	02	0043E	228007D0	A		LI,8	2000	MAX CREEP
1690	02	0043F	358018B3			STW,8	CRPMAX	
1691	02	00440	22801F3E	A		LI,8	7998	
1692	02	00441	35801884			STW,8	WTRT	WRITE TO READ TIME
1693	02	00442	22800514	A		LI,8	1300	BACKWARD DIFFERENTIAL
1694	02	00443	358018D8			STW,8	STOPDIF	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			28
1765								•
1766							*** TST0 - COMPREHENSIVE TEST	•
1767							-----	•
1768							• THIS DIRECTIVE ALLOWS THE USER TO TEST ALL FUNCTIONS ASSOCIATED WITH	•
1769							• THE 7-TRACK MAGNETIC TAPE SYSTEM AND CONCLUDES THE TEST WITH A RANDOM	•
1770							• EXERCISER AFTER A SUCCESSFUL COMPLETION OF THE FUNCTIONAL TESTS.	•
1771							•	•
1772	02	0047F	32700201	A	TST0	LW,7	:P1	NUMBER OF LOOPS IN RANDOM EXER
1773	02	00480	69300482			BNEZ	\$+2	
1774	02	00481	227003E8	A		LI,7	1000	1000 PASSES IF ZERO
1775	02	00482	35701888			STW,7	NMLCOOP	
1776	02	00483	32700202	A		LW,7	:P2	NUMBER OF RETRIES IN RANDOM EXER
1777	02	00484	69300488			BNEZ	\$+4	
1778	02	00485	32800201	A		LW,8	:P1	P1 NOT ZERO
1779	02	00486	69300488			BNEZ	\$+2	5 RETRIES IF P1 =0, P2 =0
1780	02	00487	22700005	A		LI,7	5	RETRIES FOR RANDOM EXER
1781	02	00488	35701887			STW,7	CRTRY	
1782	02	00489	32700388	A	TST0A	LW,7	:TIAUTO	
1783	02	0048A	35700388			STW,7	:TILAST	LAST SUBTEST
1784	02	0048B	35700202	A		STW,7	:P2	
1785	02	0048C	3510038A			STW,1	:TICUR	FIRST SUBTEST
1786	02	0048D	35100201	A		STW,1	:P1	
1787	02	0048E	22700491			LI,7	WA(TST001)	RETURN ADDRESS FROM TST1
1788	02	0048F	557204C6			STH,7	TST103,1	RETURN FROM TST1
1789	02	00490	68000484			B	TST101	
1790	02	00491	22700494		TST001	LI,7	WA(TST002)	STORE RETURN ADDRESS FROM TST2
1791	02	00492	557204F3			STH,7	TST203,1	GO TO RANDOM EXERCISER
1792	02	00493	680004E7			B	TST202+3	CHECK SENSE SWITCHES
1793	02	00494	EAF0021D	A	TST002	BAL,15	*:SENSE	HALT
1794	02	00495	2E000495			WAIT	\$	
1795	02	00496	68000489			B	TST0A	
1796	02	00497	E8000214	A		B	*:MONITOR	GO TO MONITOR
1797								•
1798								•
1799								•
1800								•
1801								•
1802								•
1803							*** TST1 - FUNCTIONAL TEST	•
1804							-----	•
1805							• THIS DIRECTIVE PREFORMS A SYSTEMATIC TEST OF ALL LOGIC FUNCTIONS	•
1806							• ASSOCIATED WITH THE 7-TRACK MAGNETIC TAPE SYSTEM. THE FUNCTIONAL	•
1807							• TEST CONSISTS OF A NUMBER OF SUBTESTS WHICH MAY BE SELECTED	•
1808							• INDIVIDUALLY OR IN GROUPS.	•
1809							•	•
1810							P1 FIRST SUBTEST TO BE PREFORMED. ERROR IF P1 <0 OR >41.	•
1811							P2 LAST SUBTEST TO BE PREFORMED. ERROR IF P2 <0 OR >41. OR <P1.	•
1812							P3 NOT USED	•
1813							P4 NOT USED	•
1814	02	00498	280004CC		TST1	STM,0	DATASAVE	SAVE ALL REGISTERS
1815	02	00499	32800202	A		LW,8	:P2	LAST TEST
1816	02	0049A	32700201	A		LW,7	:P1	FIRST SUBTEST
1817	02	0049B	693004A3			BNEZ	TST101D	
1818	02	0049C	31800001	A		CW,8	1	
1819	02	0049D	68100482			BGE	TST101B	P1=0, P2 NOT 0
1820	02	0049E	35100007	A		STW,1	7	FIRST SUBTEST
1821	02	0049F	35100201	A		STW,1	:P1	
1822	02	004A0	32800388			LW,8	:TIAUTO	LAST AUTOMATIC SUBTEST
1823	02	004A1	35800202	A		STW,8	:P2	
1824	02	004A2	680004A9			B	TST101C	
1825	02	004A3	21700029	A	TST101D	CI,7	41	P1 >41
1826	02	004A4	692004AE			BG	TST101A	
1827	02	004A5	21800029	A		CI,8	41	P2 >41
1828	02	004A6	69200482			BG	TST101B	P2 >40
1829	02	004A7	31700008	A		CW,7	8	P1 >P2
1830	02	004A8	69200482			BG	TST101B	
1831	02	004A9	3570038A		TST101C	STW,7	:TICUR	FIRST SUBTEST
1832	02	004AA	35800388			STW,8	:TILAST	LAST SUBTEST
1833	02	004AB	228004C7			LI,8	TST103+1	TST1 RETURN ADDRESS
1834	02	004AC	558204C6			STH,8	TST103,1	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 29
1835	02	004AD	680004B4			B	TST101	
1836				*			PARAMETER P1 INCORRECT	
1837	02	004AE	3510030A	A	TST101A	STW,1	:PIT10	P1 IN ERROR
1838	02	004AF	EAF00229	A		BAL,15	*:PREPORT	REPORT BAD PARAMETER
1839	02	004B0	00000322			DATA	:DIC+2	
1840	02	004B1	E8000214	A		B	*:MONITOR	RETURN TO MONITOR
1841				*			PARAMETER P2 INCORRECT	
1842	02	004B2	3520030A	A	TST101B	STW,2	:PIT10	P2 IN ERROR
1843	02	004B3	680004AF			B	\$-4	
1844	02	004B4	3A5018BE		TST101	LCH,5	SAVNUMB	FROM TST0
1845				*				R5 AND R6 DISTURBED
1846	02	004B5	22600000	A		LI,6	0	DEVICE NUMBER
1847	02	004B6	356004DC			STW,6	SAVESIX	
1848	02	004B7	326004DC		TST102	LW,6	SAVESIX	
1849	02	004B8	327C18B6			LW,7	SAVDEV,6	
1850	02	004B9	357018B5			STW,7	:DEVADDR	ADDRESS OF DEVICE TO BE TESTED
1851	02	004BA	32C018B5			LW,12	:DEVADDR	DEVICE
1852	02	004BB	EAF00218	A		BAL,15	*:HEXC	CONVERT
1853	02	004BC	35F019B8			STW,15	DEVPRTO+3	STORE
1854	02	004BD	EAF0021C	A		BAL,15	*:PRINT	MESSAGE
1855	02	004BE	000019B8			DATA	DEVPRTO	
1856	02	004BF	32700201	A		LW,7	:P1	RESTORE FIRST TEST
1857	02	004C0	357003BA			STW,7	:TICUR	
1858	02	004C1	6AF003A4			BAL,15	:TIMRETN	GO TO SEQUENCER
1859				*				ALL SUBTESTS DONE ON ONE UNIT
1860	02	004C2	331004DC			MTW,1	SAVESIX	
1861	02	004C3	326004DC			LW,6	SAVESIX	
1862	02	004C4	316018BE			CW,6	SAVNUMB	HAVE ALL UNITS BEEN TESTED
1863	02	004C5	691004B7			BCS,1	TST102	
1864	02	004C6	680004C7		TST103	B	\$+1	TST0 RETURN HERE
1865	02	004C7	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCHES
1866	02	004C8	2E0004C8			WAIT	\$	HALT
1867	02	004C9	68000498			B	TST1	LOOP ON TST1
1868	02	004CA	2A0004CC			LM,0	DATASAVE	RESTORE ALL REGISTERS
1869	02	004CB	E8000214	A		B	*:MONITOR	GO TO MONITOR
1870				*				
1871						BOUND	8	
1872	02	004CC			DATASAVE	RES	16	
1873	02	004CD	00000000	A	SAVESIX	DATA	0	
1874				*				
1875				*				
1876				*				
1877				*				
1878				*				
1879				*				
1880				*				
1881				*				
1882				*				
1883				*				
1884				*				
1885				*				
1886				*				
1887				*				
1888				*				
1889				*				
1890				*				
1891				*				
1892				*				
1893				*				
1894				*				
1895	02	004DD	32700201	A	TST2	LW,7	:P1	NUMBER OF CYCLES
1896	02	004DE	691004ED			BLZ	TST201A	P1<0
1897	02	004DF	692004E1			BGZ	TST201	P1>0
1898	02	004E0	227003E8	A		LI,7	1000	
1899	02	004E1	357018B8		TST201	STW,7	NMLOOP	NUMBER OF CYCLES STORED
1900	02	004E2	32700202	A		LW,7	:P2	NUMBER OF RETRIES
1901	02	004E3	691004F1			BLZ	TST201B	P2<0
1902	02	004E4	357018B7		TST202	STW,7	CRTRY	NUMBER OF RETRIES STORED
1903	02	004E5	227004F4			LI,7	TST203+1	TST2 RETURN ADDRESS
1904	02	004E6	557204F3			STW,7	TST203,1	

*** TST2 - RANDOM EXERCISER

* THIS DIRECTIVE OPERATES A TAPE SYSTEM WITH A PSEUDO -RANDOM TYPE
 * OPERATION ORDER SEQUENCE, RANDOM DATA PATTERN, I/O AREA, TIME
 * DELAY, AND RECORD SIZE FOR THE PURPOSE OF DETECTING INTERMITTENT
 * FAILURES AND EXERCISING ALL TAPE UNITS. ALL UNITS SPECIFIED WITH
 * THE 'SYST' DIRECTIVE WILL BE EXERCISED.
 * THE RANDOM EXERCISER CAN BE RUN AT ANY DENSITY IF 75 IPS.

* P1 NUMBER OF CYCLES TO BE PERFORMED. ERROR IF P1 <0. P1 IS
 * SET TO 1000 IF P1 =0.
 * P2 ERROR RETRY COUNT
 * P3 NOT USED
 * P4 NOT USED

NUMBER OF CYCLES
 P1<0
 P1>0

NUMBER OF CYCLES STORED
 NUMBER OF RETRIES
 P2<0
 NUMBER OF RETRIES STORED
 TST2 RETURN ADDRESS

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70 30
1905	02	004E7	2270037E			LI,7	ITHDLR	FETCH TRAP INT. HANDLER ADDR
1906	02	004E8	3570030F A			STW,7	:PIT15	STORE INTO PIT + 15
1907	02	004E9	35200392			STW,2	1THTEST	STORE TEST NUMBER INTO 1THTEST
1908	02	004EA	2270040D			LI,7	TST2	FETCH RESTART ADDRESS
1909	02	004EB	35700394			STW,7	1THRST	STORE INTO RESTART ADDRESS PAMTR
1910	02	004EC	6800108A			B	T2RE	
1911					*		PARAMETER P1 INCORRECT	
1912	02	004ED	3510030A A		TST201A	STW,1	:PIT10	P1 IN ERROR
1913	02	004EE	EAF00229 A			BAL,15	*:PREPORT	REPORT BAD PARAMETER
1914	02	004EF	00000324			DATA	:DIC+4	
1915	02	004F0	E8000214 A			B	*:MONITOR	RETURN TO MONITOR
1916					*		PARAMETER P2 INCORRECT	
1917	02	004F1	3520030A A		TST201B	STW,2	:PIT10	P2 IN ERROR
1918	02	004F2	680004EE			B	\$-4	
1919	02	004F3	680004F4		TST203	B	\$+1	TST0 RETURN HERE
1920	02	004F4	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCHES
1921	02	004F5	2E0004F5			WAIT	\$	HALT
1922	02	004F6	6800040D			B	TST2	LOOP
1923	02	004F7	E8000214 A			B	*:MONITOR	GO TO MONITOR
1924					.			
1925					.			
1926					.			
1927					.			
1928					.			
1929					.			
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1974					.			

*** TST3 - UTILITY TEST

* THIS DIRECTIVE ALLOWS THE USER TO SELECT SEVERAL UTILITY TESTS BY SPECIFYING IN PARAMETER 1 THE DESIRED TEST. PARAMETERS 2,3, AND 4 ARE SPECIFICALLY INDICATED IN THE DESCRIPTION OF THE SUBTEST IF APPLICABLE. THE UTILITY TESTS CAN RUN AT ANY DENSITY IF 75 IPS.

P1 =1 TAPE TEST

THIS TEST ALLOWS THE USER TO WRITE, READ FORWARD, READ BACKWARD, OR READ FORWARD AND BACKWARD P3 RECORDS. THE 'DATA' AND 'LEN' DIRECTIVES CAN BE SELECTED TO DEFINE THE PATTERN AND RECORD SIZE.

- P2 =0 WRITE, REWIND, READ FORWARD, AND READ BACKWARD P3 RECORDS.
- =1 WRITE P3 RECORDS.
- =2 READ FORWARD P3 RECORDS.
- =3 READ BACKWARD P3 RECORDS.
- =4 READ FORWARD AND BACKWARD P3 RECORDS IN SEQUENCE.
- =8 WRITE, REWIND, READ FWD, SPACE BKW P3 RECORDS (BCD).
- =9 WRITE P3 RECORDS (BCD).
- =10 READ FORWARD P3 RECORDS (BCD).
- =12 READ FWD AND SPACE BKW P3 RECORDS (BCD).
- P3 =NUMBER OF RECORDS TO BE WRITTEN OR READ. IF P3 =0, CONTINUE UNTIL E.O.T. OR B.O.T. IS REACHED.
- P4 =DELAY IN MILLISECONDS BETWEEN OPERATION SETS.

P1 =2 DESKEW TEST

THIS TEST IS PROVIDED AS A SCOPING AID DURING CHECKING AND ADJUSTING THE READ/WRITE SKEW. A PATTERN OF ALL ONES WILL BE RECORDED AS A CONTINUOUS RECORD.

- P2 =0,1 WRITE UNTIL E.O.T. IS REACHED AND REWIND
- =2 READ FORWARD UNTIL E.O.T. IS REACHED AND REWIND
- =3 READ BACKWARD UNTIL BOT IS REACHED
- =4 READ FWD UNTIL E.O.T., SPACE BKW UNTIL B.O.T. NO REWINDS.
- P3 NOT USED
- P4 NOT USED

P1 =3 SYNC ON A CHARACTER TEST

THIS TEST IS PROVIDED AS A SCOPING AID BY EXECUTING A UNIQUE I/O INSTRUCTION (TDV) AFTER THE BYTE COUNT SPECIFIED HAS BEEN REACHED.

- P2 =1 READ FORWARD AND SPACE RECORD BACKWARD
- =2 READ BACKWARD AND SPACE RECORD FORWARD

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00	7/30/70		31
1975				*		P3 BYTE TO SYNC ON.		*
1976				*		P4 DELAY IN MILLISECONDS BETWEEN SYNC'S.		*
1977				*				*
1978				*		P1 =4 COMPATABILITY AND NOISE PATTERN TEST		*
1979				*		-----		*
1980				*		THIS TEST ALLOWS THE USER TO WRITE, READ FORWARD,		*
1981				*		READ BACKWARD, OR READ FORWARD AND BACKWARD A		*
1982				*		PREDETERMINED, INCREMENTED RECORD PATTERN. WHEN		*
1983				*		THE MAXIMUM RECORD COUNT IS REACHED A PERMANENT		*
1984				*		AND TEMPORARY WRITE AND READ ERROR TALLY IS PRINTED.		*
1985				*		P2 =0,1 WRITE, READ BACKWARD AND READ FORWARD		*
1986				*		=2 SPACE FORWARD, READ BACKWARD AND READ FORWARD		*
1987				*		=3 READ FORWARD, READ BACKWARD, AND SPACE FORWARD		*
1988				*		=4 READ FORWARD ONLY		*
1989				*		=5 WRITE ONLY		*
1990				*		P3 NOT USED		*
1991				*		P4 NOT USED		*
1992				*				*
1993				*		P1 =5 READ/SPACE TEST		*
1994				*		-----		*
1995				*		THIS TEST ALLOWS THE USER TO READ OR SPACE N RECORDS*		*
1996				*		WITH OR WITHOUT REWIND. ONLY NON-RECOVERABLE TRANS*		*
1997				*		MISSION ERRORS WILL CAUSE ERROR PRINTOUT, BACKSPACE,		*
1998				*		AND A HALT.		*
1999				*		P2 =0 REWIND AND READ FWD N RECORDS.		*
2000				*		=1 REWIND AND SPACE FWD N RECORDS.		*
2001				*		=2 DONT REWIND, READ FWD N RECORDS.		*
2002				*		=3 DONT REWIND, SPACE FWD N RECORDS.		*
2003				*		=4 DONT REWIND, SPACE BKW N RECORDS.		*
2004				*		=8 REWIND AND READ FWD N RECORDS (BCD).		*
2005				*		=10 DONT REWIND, READ FWD N RECORDS (BCD).		*
2006				*		P3 NUMBER OF RECORDS TO READ OR SPACE.		*
2007				*		P4 =0 DONT PRINTOUT RECORD.		*
2008				*		=1 PRINTOUT RECORD IN ERROR.		*
2009				*		=2 PRINTOUT NTH RECORD.		*
2010				*				*
2011	02	004F8	22600000	A	TST3	LI,6	0	DEVICE NO
2012	02	004F9	356004DC			STW,6	SAVESIX	
2013	02	004FA	326004DC			LW,6	SAVESIX	
2014	02	004FB	327C1886			LW,7	SAVDEV,6	
2015	02	004FC	35701885			STW,7	:DEVADDR	SET UP DEVICE ADDRESS
2016	02	004FD	2270037E			LI,7	ITHDLR	FETCH TRAP INT. HANDLER ADDR
2017	02	004FE	3570030F	A		STW,7	:PIT15	STORE INTO PIT + 15
2018	02	004FF	35300392			STW,3	ITHTEST	STORE TEST NUMBER INTO ITHTEST
2019	02	00500	227004F8			LI,7	TST3	FETCH RESTART ADDRESS
2020	02	00501	35700394			STW,7	ITHRST	STORE INTO RESTART ADDRESS PAMTR
2021	02	00502	32700201	A		LW,7	:PI	PI
2022	02	00503	21700001	A		CI,7	1	
2023	02	00504	6830125F			BEZ	TST31	GO TO TST3,1
2024	02	00505	21700002	A		CI,7	2	
2025	02	00506	683013A9			BEZ	TST32	GO TO TST3,2
2026	02	00507	21700003	A		CI,7	3	
2027	02	00508	68301403			BEZ	TST33	GO TO TST3,3
2028	02	00509	21700004	A		CI,7	4	
2029	02	0050A	68301456			BEZ	TST34	GO TO TST3,4
2030	02	0050B	21700005	A		CI,7	5	
2031	02	0050C	683014D9			BEZ	TST35	GO TO TST3,5
2032				*		ERROR P1	INCORRECT	
2033	02	0050D	3510030A	A		STW,1	:PIT10	P1 IN ERROR
2034	02	0050E	EAF00229	A		BAL,15	*:PREPORT	REPORT BAD PARAMETER
2035	02	0050F	00000326			DATA	:DIC+6	
2036	02	00510	E8000214	A		B	*:MONITOR	RETURN TO MONITOR
2037	02	00511	31100201	A	TST36	CH,1	:PI	CHANGE DEVICES FOR TST3,1 ONLY
2038	02	00512	69300517			BNE	TST37	
2039	02	00513	331004DC			MTW,1	SAVESIX	
2040	02	00514	326004DC			LW,6	SAVESIX	
2041	02	00515	3160188E			CH,6	SAVNUMB	ALL UNITS TESTED
2042	02	00516	691004F9			BCS,1	TST3+1	
2043	02	00517	EAF0021D	A	TST37	BAL,15	*:SENSE	CHECK SENSE SWITCHES
2044	02	00518	2E000518			WAIT	\$	HALT

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 32
2045	02	00519	680004F8			B	TST3	LOOP
2046	02	0051A	E8000214	A		B	*:MONITOR	GO TO MONITOR
2047					.			
2048					.			
2049					.			
2050					.			
2051					.			
2052					.			ABSOLUTE RECOVERY ROUTINE
2053					.			-----
2054					.			
2055	02	0051B	35F018D2		:RECOVER	STW,15	ST1155	SAVE RETURN ADDRESS
2056	02	0051C	22100001	A		LI,1	1	
2057	02	0051D	22200002	A		LI,2	2	
2058	02	0051E	22300003	A		LI,3	3	
2059	02	0051F	324019CF			LW,4	XPSD1	I/O INTERRUPT
2060	02	00520	3540005C	A		STW,4	X'5C'	
2061	02	00521	32401E42			LW,4	:DELXPSD	ZERO INTERRUPT
2062	02	00522	35400058	A		STW,4	X'58'	
2063	02	00523	32401E43			LW,4	:DELMTW	CLOCK INTERRUPT
2064	02	00524	35400055	A		STW,4	X'55'	
2065	02	00525	32400200	A		LW,4	:MLT	ABSOLUTE RECOVERY
2066	02	00526	35400026	A		STW,4	X'26'	
2067	02	00527	22400020	A		LI,4	X'20'	DISARM INTERRUPT
2068	02	00528	6D401100	A		WD,4	X'1100'	
2069	02	00529	E80018D2			B	*ST1155	BRANCH BACK
2070					.			
2071					.			
2072					.			
2073					.			
2074					.			
2075					.			
2076					.			
2077					.			
2078					.			
2079					.			
2080					.			
2081					.			
2082					.			
2083					.			
2084					.			
2085					.			
2086	02	0052A	32700201	A	LEN	LW,7	:P1	LENGTH INTO R7
2087	02	0052B	69200530			BGZ	LENI	
2088					.			
2089	02	0052C	3510030A	A		STW,1	:P110	P1 IN ERROR
2090	02	0052D	EAF00229	A		BAL,15	*:PREPORT	REPORT BAD PARAMETER
2091	02	0052E	0000032A			DATA	:DIC+10	
2092	02	0052F	E8000214	A		B	*:MONITOR	
2093	02	00530	317018CA		LENI	CW,7	MAXREADB	MAXIMUM READ BYTE COUNT
2094	02	00531	68200533			BLE	\$+2	
2095	02	00532	327018CA			LW,7	MAXREADB	USE MAXIMUM
2096	02	00533	357019A6			STW,7	LENGTH	
2097	02	00534	E8000214	A		B	*:MONITOR	GO TO MONITOR
2098					.			
2099					.			
2100					.			
2101					.			
2102					.			
2103					.			
2104					.			
2105					.			
2106					.			
2107					.			
2108					.			
2109					.			
2110					.			
2111					.			
2112					.			
2113					.			
2114					.			

*** LEN DIRECTIVE

THIS DIRECTIVE DEFINES THE RECORD LENGTH TO BE USED IN THE UTILITY TESTS TO ALTER PREDEFINED BYTE COUNT

- P1 FIXED RECORD LENGTH OF N BYTES
- P2 NOT USED
- P3 NOT USED
- P4 NOT USED

*** DATA DIRECTIVE

THIS DIRECTIVE DEFINES THE DATA PATTERN TO BE USED IN THE UTILITY TESTS TO ALTER PREDEFINED DATA PATTERNS.

- P1 =0 FIXED PATTERN (PATTERN IN P2)
- =2 RANDOM PATTERN (SEED IN P2)
- =5 BIT CROWDING PATTERN (TRACKS IN P2, DATA IN P3 AND P4)
- P2 FIXED PATTERN IF P1 =0.
- RANDOM PATTERN SEED IF P1 =2.
- TRACK NUMBERS IF P1=5 (TWO TRACKS 12 TO 76)
- P3 BINARY DIGIT STRING FOR FIRST TRACK IF P1 =5.
- P4 BINARY DIGIT STRING FOR SECOND TRACK IF P1 =5.

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70				SIGMA 5/7 7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 33
2115				*				
2116	02	00535	32700201	A	DATTA	LW,7	:P1	PATTERN TYPE
2117	02	00536	21700002	A	DATTA1	CI,7	2	P1 =2
2118	02	00537	69300540			BNEZ	DATTA2	
2119	02	00538	357019A0			STW,7	PATTYPE	RANDOM PATTERN
2120	02	00539	32700202	A		LW,7	:P2	SEED IF P1 =2
2121	02	0053A	6930053C			BNEZ	DATTA1A	
2122				*		ERROR SEED P2 =0		
2123	02	0053B	68000556			B	DATTA5	P2 IN ERROR
2124	02	0053C	3570199F		DATTA1A	STW,7	PATTSED	
2125	02	0053D	35701D39			STW,7	:PATID+1	SEED
2126	02	0053E	35201D38			STW,2	:PATID	TYPE RANDOM
2127	02	0053F	6800055C			B	DATTA9	
2128	02	00540	21700000	A	DATTA2	CI,7	0	P1 =0
2129	02	00541	69300548			BNEZ	DATTA3	
2130	02	00542	357019A0			STW,7	PATTYPE	FIXED PATTERN
2131	02	00543	35701D38			STW,7	:PATID	TYPE OF PATTERN
2132	02	00544	32700202	A		LW,7	:P2	FIXED PATTERN IF P1 =0
2133	02	00545	35701D39			STW,7	:PATID+1	WORD TO SMEAR
2134	02	00546	357019A4			STW,7	PATTFIX	PATTERN =0 OR NEGATIVE OK
2135	02	00547	6800055C			B	DATTA9	
2136	02	00548	21700005	A	DATTA3	CI,7	5	
2137	02	00549	6830054E			BEZ	DATTA4	
2138				*		ERROR IF P1 IS NOT 0,2,5		
2139	02	0054A	3510030A	A		STW,1	:PIT10	P1 IN ERROR
2140	02	0054B	EAF00229	A		BAL,15	*:PREPORT	REPORT BAD PARAMETER
2141	02	0054C	00000328			DATA	:DIC+8	
2142	02	0054D	E8000214	A		B	*:MONITOR	GO TO MONITOR
2143	02	0054E	357019A0		DATTA4	STW,7	PATTYPE	P1 =5
2144	02	0054F	32700202	A		LW,7	:P2	BIT CROWDING
2145	02	00550	21700012	A		CI,7	X'12'	MINIMUM
2146	02	00551	69100556			BCS,1	DATTA5	
2147	02	00552	21700076	A		CI,7	X'76'	MAXIMUM
2148	02	00553	69200556			BCS,2	DATTA5	
2149	02	00554	357019A1			STW,7	PATTK	STORE TRACKS TO CROWD
2150	02	00555	68000558			B	DATTA6	
2151				*		ERROR TRACKS NOT WITHIN LIMITS		
2152	02	00556	3520030A	A	DATTA5	STW,2	:PIT10	P2 IN ERROR
2153	02	00557	6800054B			B	DATTA3+3	
2154	02	00558	32700203	A	DATTA6	LW,7	:P3	BINARY STRING FOR 1 ST DIGIT
2155	02	00559	357019A2			STW,7	PATTS1	
2156	02	0055A	32700204	A		LW,7	:P4	BINARY STRING FOR 2 ND DIGIT
2157	02	0055B	357019A3			STW,7	PATTS2	
2158	02	0055C	E8000214	A	DATTA9	B	*:MONITOR	GO TO MONITOR
2159				*				
2160				*				
2161				*				
2162				*				
2163				*				
2164				*		*****LIMIT DIRECTIVE*****		
2165				*		THIS DIRECTIVE ALLOWS THE USER TO LIMIT PROGRAM OPERATIONS		
2166				*		SPECIFIED BY PARAMETERS P1 AND P2.		
2167				*				
2168				*		P1 =1 LIMIT COMPARE ERROR PRINTOUT TO P2 LINES.		
2169	02	0055D	3520030A	A	:LIMIT	STW,2	:PIT10	SET ILLEGAL PARAMETER NO.
2170	02	0055E	72820211	A		LB,8	:PSW,1	FETCH PAR COUNT
2171	02	0055F	21800002	A		CI,8	2	
2172	02	00560	68300564			BE	:LIM1	B: PAR COUNT =2
2173	02	00561	EAF00229	A	:LIM0	BAL,15	*:PREPORT	REPORT PAR ERROR
2174	02	00562	0000032E			DATA	:DIC+14	
2175	02	00563	E8000214	A		B	*:MONITOR	RETURN TO MONITOR
2176	02	00564	3510030A	A	:LIM1	STW,1	:PIT10	SET PAR NO =1
2177	02	00565	31100201	A		CW,1	:P1	
2178	02	00566	69300561			BNE	:LIM0	B: PAR ERROR P1>1
2179	02	00567	32800202	A		LW,8	:P2	FETCH PAR P2
2180	02	00568	6920056A			BGZ	:LIM2	B: P2 =0
2181	02	00569	2280FFFF	A		LI,8	X'FFFF'	SET LIMIT TO HI NUMBER
2182	02	0056A	35801DBE	A	:LIM2	STW,8	:COMPLIN	SAVE COMPARE LIMIT COUNT
2183	02	0056B	E8000214	A		B	*:MONITOR	RETURN TO PROGRAM
2184				*				

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42	AUG 03, '70		SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			34
2185								
2186								
2187								
2188								
2189								
2190								
2191								
2192								
2193								
2194								
2195								
2196								
2197								
2198								
2199								
2200								
2201								
2202	02	0056C	22500020	A	:T1ST01	LI,5	X'20'	AIO
2203	02	0056D	6D501100	A		WD,5	X'1100'	DISABLE I/O INTERRUPT
2204	02	0056E	6EC00000	A		AIO,12	0	AIO
2205	02	0056F	69800575	A		BCS,8	T1ST0102	NO IP
2206								
2207	02	00570	EAF0021B	A		ERROR EXIT		
2208	02	00571	00000065	A		BAL,15	*:ERROR	#0101
2209	02	00572	EAF0021D	A		DATA	0101	NO INTERRUPT EXPECTED ON AIO
2210	02	00573	2E000000	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2211	02	00574	6800056C	A		WAIT		HALT ON ERROR IF SS3 RESET
2212	02	00575	6AF01640	A		B	:T1ST01	LOOP ON ERROR
2213	02	00576	32E0208F	A	T1ST0102	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2214	02	00577	6AF01BA9	A		LW,14	=X'E700C000'	MASK AUTOMATIC ONLY
2215	02	00578	6800057E	A		BAL,15	:HIO	HIO
2216								
2217	02	00579	EAF0021B	A		ERROR EXIT		
2218	02	0057A	00000066	A		BAL,15	*:ERROR	#0102
2219	02	0057B	EAF0021D	A		DATA	0102	INCORRECT STATUS RESPONSE ON HIO
2220	02	0057C	2E000000	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2221	02	0057D	68000575	A		WAIT		HALT ON ERROR IF SS3 RESET
2222	02	0057E	6AF01640	A		B	T1ST0102	LOOP ON ERROR
2223	02	0057F	32E02090	A	T1ST0103	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2224	02	00580	6AF01B9E	A		LW,14	=X'EF00C000'	MASK AUTOMATIC ONLY
2225	02	00581	68000587	A		BAL,15	:TIO	TIO
2226								
2227	02	00582	EAF0021B	A		ERROR EXIT		
2228	02	00583	00000067	A		BAL,15	*:ERROR	#0103
2229	02	00584	EAF0021D	A		DATA	0103	INCORRECT STATUS RESPONSE ON TIO
2230	02	00585	2E000000	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2231	02	00586	68000575	A		WAIT		HALT ON ERROR IF SS3 RESET
2232	02	00587	6AF01640	A		B	T1ST0102	LOOP ON ERROR, REPEAT HIO
2233	02	00588	32E02091	A	T1ST0104	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2234	02	00589	6AF01BB4	A		LW,14	=X'BB00C000'	WRITE PERMIT AND LOAD PT OK
2235	02	0058A	68000591	A		BAL,15	:TDV	
2236								
2237	02	0058B	EAF0021B	A		ERROR EXIT		
2238	02	0058C	00000068	A		BAL,15	*:ERROR	#0104
2239	02	0058D	EAF0021D	A		DATA	0104	INCORRECT STATUS RESPONSE ON TDV
2240	02	0058E	2E000000	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2241	02	0058F	68000587	A		WAIT		HALT ON ERROR IF SS3 RESET
2242	02	00590	6AF01640	A		B	T1ST0104	LOOP ON ERROR
2243	02	00591	68000382	A	T1ST0105	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2244								GO TO SEQUENCER
2245								
2246								
2247								
2248								
2249								
2250								
2251								
2252								
2253								
2254								

TST1,1 AIO,HIO,TIO,TDV TEST

* CHECK THE ABILITY OF THE 7-TRACK MAG TAPE SYSTEM TO CORRECTLY
 * RESPOND TO THE AIO, HIO AND THE TDV INSTRUCTIONS. AIO WILL ONLY
 * CHECK THE NO INTERRUPT PENDING CONDITION. VERIFY ADDRESS RECOGNITION
 * AND STATUS RESPONSE TO THESE INSTRUCTIONS. ANY ERROR IN THIS TEST
 * MAY INDICATE A POSSIBLE PROBLEM IN THE SUB-CONTROLLER AREA.

TST1,2 INVALID ORDER TEST

* CHECK THE INVALID ORDER DETECTION BY ISSUING TWO SIO'S WITH INVALID
 * ORDER CODES (X'0C',X'03'). THIS TEST IS DESIGNED TO CHECK ORDER
 * DECODING, ORDER-OUTPUT AND ORDER-INPUT PHASES IN THE CONTROLLER AND
 * UNUSUAL END DETECTION. THE REMAINING BYTE COUNT WILL BE TESTED TO
 * VERIFY THAT NO DATA PHASES WERE EXECUTED. CHECK THE ABILITY OF THE
 * HIO TO RESET UE CONDITION.

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70	35
2255					*			
2256					*			
2257					*			
2258	02	00592	32E0208F		:T1ST02	LW,14	=X'E700C000'	AUTOMATIC ONLY
2259	02	00593	22000BC7			LI,0	DA(TWR1)	INVALID READ BACKWARD
2260	02	00594	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2261	02	00595	6AF01B93			BAL,15	:SIO	
2262	02	00596	6800059A			B	\$+4	
2263	02	00597	EAF0021B A			BAL,15	*:ERROR	0201
2264	02	00598	000000C9 A			DATA	0201	SIO NOT ACCEPTED
2265	02	00599	6800059F			B	\$+6	
2266	02	0059A	6AF01EC4			BAL,15	:ERROR	TEST
2267	02	00598	00005E10			DATA	BA(TSE0034)	NO INTERRUPT PENDING , UE
2268	02	0059C	680005A2			B	T1ST0201	
2269					*	ERROR EXIT		
2270	02	0059D	EAF0021B A			BAL,15	*:ERROR	0202
2271	02	0059E	000000CA A			DATA	0202	STATUS ERROR
2272	02	0059F	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2273	02	005A0	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2274	02	005A1	68000592			B	:T1ST02	LOOP ON ERROR
2275	02	005A2	CFA018B5		T1ST0201	H10,10	*:DEVADDR	H10 TO RESET UE
2276	02	005A3	CDC018B5			T10,12	*:DEVADDR	UE SHOULD BE RESET
2277	02	005A4	31D02092			CW,13	=X'08000000'	
2278	02	005A5	684005AB			BCR,4	T1ST0202	UE SHOULD BE RESET
2279					*	ERROR EXIT		
2280	02	005A6	EAF0021B A			BAL,15	*:ERROR	0203
2281	02	005A7	000000CB A			DATA	0203	INCORRECT STATUS RESPONSE
2282	02	005A8	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCHES
2283	02	005A9	2E000000 A			WAIT		HALT
2284	02	005AA	68000592			B	:T1ST02	
2285	02	005AB	32E0208F		T1ST0202	LW,14	=X'E700C000'	AUTOMATIC ONLY
2286	02	005AC	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2287	02	005AD	22000BC8			LI,0	DA(TWR2)	INVALID SET CORRECTION
2288	02	005AE	6AF01B93			BAL,15	:SIO	
2289	02	005AF	680005B3			B	\$+4	
2290	02	00580	EAF0021B A			BAL,15	*:ERROR	0204
2291	02	005B1	000000CC A			DATA	0204	SIO NOT ACCEPTED
2292	02	005B2	680005B8			B	\$+6	
2293	02	005B3	6AF01EC4			BAL,15	:ERROR	TEST
2294	02	005B4	00005E10			DATA	BA(TSE0034)	NO INTERRUPT PENDING , UE
2295	02	005B5	680005B8			B	T1ST0203	
2296					*	ERROR EXIT		
2297	02	005B6	EAF0021B A			BAL,15	*:ERROR	0205
2298	02	005B7	000000CD A			DATA	0205	INCORRECT STATUS RESPONSE ON SIO
2299	02	005B8	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2300	02	005B9	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2301	02	005BA	680005AB			B	T1ST0202	LOOP ON ERROR
2302	02	005BB	6AF01640		T1ST0203	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2303	02	005BC	680003B2			B	:TIM	GO TO SEQUENCER
2304					*			
2305					*			
2306					*			
2307					*			
2308					*			
2309					*			
2310					*			
2311					*			
2312					*			
2313					*			
2314					*			
2315					*			
2316					*			
2317					*			
2318	02	005BD	32E02093		:T1ST03	LW,14	=X'0000C000'	AUTOMATIC ONLY
2319	02	005BE	22000BC8			LI,0	DA(TSE3)	SET ERASE BC = 2 NO INTERRUPT
2320	02	005BF	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2321	02	005C0	6AF01B93			BAL,15	:SIO	SET ERASE
2322	02	005C1	680005C7			B	T1ST0302	
2323					*	ERROR EXIT		
2324	02	005C2	EAF0021B A			BAL,15	*:ERROR	#0301

TST1,3 ERASE ORDER TEST

* CHECK THE EXECUTION OF THE FIRST VALID ORDER. THIS TEST IS DESIGNED *
 * TO FURTHER CHECK ORDER DECODING, ORDER-OUTPUT AND ORDER-INPUT PHASES *
 * IN THE CONTROLLER, AND ORDER TERMINATION WITHOUT UNUSUAL END. THE *
 * REMAINING BYTE COUNT WILL BE TESTED TO VERIFY THAT NO DATA PHASES *
 * WERE EXECUTED. THE STATUS RESPONSE WILL BE TESTED. *

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	36
2325	02	005C3	0000012D	A		DATA	0301	INCORRECT STATUS RESPONSE ON S10
2326	02	005C4	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2327	02	005C5	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2328	02	005C6	680005B0			B	:T1ST03	LOOP ON ERROR
2329	02	005C7	22E00032	A	T1ST0302	L1,14	50	DELAY
2330	02	005C8	6AF01E26			BAL,15	:DELAY	WAIT NO INTERRUPT
2331	02	005C9	680005CA			B	\$+1	
2332	02	005CA	6AF01EC4			BAL,15	:ERROR	TEST
2333	02	005CB	00005DF8			DATA	BAITSEQ030)	READY, BC=2 , NO UE
2334	02	005CC	680005D2			B	T1ST0304	
2335					*		ERROR EXIT	
2336	02	005CD	EAF0021B	A		BAL,15	*:ERROR	#0302
2337	02	005CE	0000012E	A		DATA	0302	INCORRECT STATUS RESPONSE ON T10
2338	02	005CF	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2339	02	005D0	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2340	02	005D1	680005B0			B	:T1ST03	LOOP ON ERROR
2341	02	005D2	6AF01640		T1ST0304	BAL,15	CLRDM	CLEAR AND DISARM INTERRUPT
2342	02	005D3	680003B2			B	:TIM	GO TO SEQUENCER
2343					*			
2344					*			
2345					*			
2346					*			TST1,4 NO OPERATION TEST
2347					*			
2348					*			
2349	02	005D4	680003B2		:T1ST04	B	:TIM	GO TO SEQUENCER
2350					*			
2351					*			
2352					*			
2353					*			TST1,5 NO OPERATION TEST
2354					*			
2355					*			
2356					*			
2357	02	005D5	680003B2		:T1ST05	B	:TIM	GO TO SEQUENCER
2358					*			
2359					*			
2360					*			
2361					*			
2362					*			
2363					*			TST1,6 NO OPERATION
2364					*			
2365					*			
2366					*			
2367	02	005D6	680003B2		:T1ST06	B	:TIM	NO TEST
2368					*			
2369					*			
2370					*			TST1,7 INTERRUPT ON UE, CE AND A10 *
2371					*			
2372					*			
2373					*			
2374					*			CHECK THE ABILITY OF THE CONTROLLER TO GENERATE AN INTERRUPT ON
2375					*			UNUSUAL END AND CHANNEL END USING A READ BACKWARD AND
2376					*			THE SET ERASE ORDER IN THAT SEQUENCE. CHECK THE EXECUTION
2377					*			OF THE A10 INSTRUCTION. VERIFY THAT A10 AND H10 CAN RESET THE
2378					*			INTERRUPT PENDING CONDITION. ALL STATUS RESPONSES WILL BE TESTED.
2379					*			
2380	02	005D7	6AF01638		:T1ST07	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2381	02	005D8	22000BC9			L1,0	DA(TWR3)	READ BKW WITH UE SET
2382	02	005D9	32E02093			LW,14	=X'0000C000'	DEVICE ADDRESS OK
2383	02	005DA	6AF01B93			BAL,15	:S10	WRITE BKW UE SET
2384	02	005DB	680005E1			B	T1ST0702	
2385					*		ERROR EXIT	
2386	02	005DC	EAF0021B	A		BAL,15	*:ERROR	#0701
2387	02	005DD	000002BD	A		DATA	0701	INCORRECT STATUS RESPONSE ON S10
2388	02	005DE	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2389	02	005DF	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2390	02	005E0	680005D7			B	:T1ST07	LOOP ON ERROR
2391	02	005E1	22E00064	A	T1ST0702	L1,14	100	100 MS DELAY
2392	02	005E2	6AF01E26			BAL,15	:DELAY	
2393	02	005E3	680005E9			B	T1ST0703	
2394					*		ERROR EXIT TIMEOUT	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	37
2395	02	005E4	EAF0021B A			BAL,15	*:ERROR	#0702
2396	02	005E5	000002BE A			DATA	0702	TIMEOUT ON S10
2397	02	005E6	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2398	02	005E7	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2399	02	005E8	680005D7			B	:T1ST07	LOOP ON ERROR
2400	02	005E9	6AF01EC4		T1ST0703	BAL,15	:ERRORT	
2401	02	005EA	00005D48			DATA	BA(TSE0001)	A10-IUE, H10-IP RESET-UE SET
2402					*			T10- UE RESET (BY H10)
2403	02	005EB	680005F1			B	T1ST0704	
2404					*		ERROR EXIT	
2405	02	005EC	EAF0021B A			BAL,15	*:ERROR	#0703
2406	02	005ED	000002BF A			DATA	0703	INCORRECT BITS ON TEST
2407	02	005EE	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2408	02	005EF	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2409	02	005F0	680005D7			B	:T1ST07	LOOP ON ERROR
2410	02	005F1	22000BCC		T1ST0704	LI,0	DA(TSE)	
2411	02	005F2	32E02093			LW,14	=X'0000C000'	DEVICE ADDRESS OK
2412	02	005F3	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2413	02	005F4	6AF01B93			BAL,15	:S10	ERASE CE SET
2414	02	005F5	680005FB			B	T1ST0705	
2415					*		ERROR EXIT	
2416	02	005F6	EAF0021B A			BAL,15	*:ERROR	#0704
2417	02	005F7	000002C0 A			DATA	0704	INCORRECT STATUS RESPONSE ON S10
2418	02	005F8	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2419	02	005F9	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2420	02	005FA	680005F1			B	T1ST0704	LOOP ON ERROR
2421	02	005FB	22E00064 A		T1ST0705	LI,14	100	100 MSDELAY
2422	02	005FC	6AF01E26			BAL,15	:DELAY	
2423	02	005FD	68000603			B	T1ST0706	
2424					*		ERROR EXIT	TIMEOUT
2425	02	005FE	EAF0021B A			BAL,15	*:ERROR	#0705
2426	02	005FF	000002C1 A			DATA	0705	TIMEOUT ON S10
2427	02	00600	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2428	02	00601	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2429	02	00602	680005F1			B	T1ST0704	LOOP ON ERROR
2430	02	00603	6AF01EC4		T1ST0706	BAL,15	:ERRORT	
2431	02	00604	00005D4C			DATA	BA(TSE0002)	A10,ICE,T10 IP RESET
2432	02	00605	68000608			B	T1ST0710	
2433					*		ERROR EXIT	
2434	02	00606	EAF0021B A			BAL,15	*:ERROR	#0706
2435	02	00607	000002C2 A			DATA	0706	INCORRECT BITS ON TEST
2436	02	00608	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2437	02	00609	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2438	02	0060A	680005F1			B	T1ST0704	LOOP ON ERROR
2439					*		INTERRUPT ON ZBC CHECKED LATER	
2440	02	0060B	6AF01640		T1ST0710	BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
2441	02	0060C	32E02093			LW,14	=X'0000C000'	DEVICE ADDRESS OK
2442	02	0060D	22000BC9			LI,0	DA(TWR3)	READ BKW WITH UE SET
2443	02	0060E	6AF01B93			BAL,15	:S10	S10
2444	02	0060F	22E00064 A			LI,14	100	
2445	02	00610	6AF01E26			BAL,15	:DELAY	DELAY
2446	02	00611	68000612			B	\$+1	
2447	02	00612	CFC018B5			H10,12	*:DEVADDR	H10
2448	02	00613	22EFFF38 A			LI,14	-200	DELAY
2449	02	00614	65E00614			BIR,14	\$	
2450	02	00615	31D02094			CW,13	=X'88000000'	UE AND IP SET
2451	02	00616	6940061C			BCS,4	T1ST0711	
2452					*		ERROR EXIT	
2453	02	00617	EAF0021B A			BAL,15	*:ERROR	0710
2454	02	00618	000002C6 A			DATA	0710	INCORRECT BITS ON TEST
2455	02	00619	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2456	02	0061A	2E000000 A			WAIT		
2457	02	0061B	68000608			B	T1ST0710	LOOP ON ERROR
2458	02	0061C	CDC018B5		T1ST0711	T10,12	*:DEVADDR	T10
2459	02	0061D	31D02095			CW,13	=X'80000000'	IP SET
2460	02	0061E	68400624			BCR,4	T1ST0712	
2461					*		ERROR EXIT	
2462	02	0061F	EAF0021B A			BAL,15	*:ERROR	0711
2463	02	00620	000002C7 A			DATA	0711	
2464	02	00621	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			38
2465	02	00622	2E000000	A		WAIT		
2466	02	00623	6800060B			B	T1ST0710	LOOP ON ERROR
2467	02	00624	6AF01640		T1ST0712	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2468	02	00625	680003B2			B	:TIM	GO TO SEQUENCER
2469					*			
2470					*			
2471					*			TST1,8 I/O INTERRUPT TEST
2472					*			-----
2473					*			
2474					*			CHECK THE ABILITY OF THE IOP AND CPU TO INTERRUPT THE PROGRAM
2475					*			WHENEVER AN INTERRUPT CALL IS GENERATED BY THE CONTROLLER, VERIFY
2476					*			PROPER OPERATION OF INTERRUPT ARM/DISARM AND ENABLE/DISABLE MODES.
2477					*			
2478					*			
2479	02	00626	6AF01640		:T1ST08	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2480	02	00627	220008E6			LI,0	DA(TWRUE)	
2481	02	00628	CCC018B5			SIO,12	*:DEVADDR	READ BKW UE SET
2482	02	00629	228FFFC4	A		LI,8	-60	DELAY
2483	02	0062A	6580062A			BIR,8	\$	
2484	02	0062B	CDC018B5			TIO,12	*:DEVADDR	TIO
2485	02	0062C	32E02096			LW,14	L(X'98000002')	
2486	02	0062D	31E00000	A		CW,14	13	AUTOMATIC AND UE SET- IP SET
2487	02	0062E	68300634			BEZ	T1ST0802	
2488					*		ERROR EXIT	
2489	02	0062F	EAF0021B	A		BAL,15	*:ERROR	#0801
2490	02	00630	00000321	A		DATA	0801	INCORRECT STATUS RESPONSE ON TIO
2491	02	00631	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2492	02	00632	2E000000	A		WAIT		HALT ON ERROR IF S53 RESET
2493	02	00633	68000626			B	:T1ST08	LOOP ON ERROR
2494	02	00634	22F00020	A	T1ST0802	LI,15	X'20'	
2495	02	00635	6DF01300	A		WD,15	X'1300'	ARM AND DISABLE INTERRUPT
2496	02	00636	CDC018B5			TIO,12	*:DEVADDR	TIO
2497	02	00637	32E02096			LW,14	L(X'98000002')	
2498	02	00638	31E00000	A		CW,14	13	
2499	02	00639	6830063F			BEZ	T1ST0803	
2500					*		ERROR EXIT	
2501	02	0063A	EAF0021B	A		BAL,15	*:ERROR	#0802
2502	02	0063B	00000322	A		DATA	0802	INCORRECT STATUS RESPONSE ON TIO
2503	02	0063C	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2504	02	0063D	2E000000	A		WAIT		HALT ON ERROR IF S53 RESET
2505	02	0063E	68000626			B	:T1ST08	LOOP ON ERROR
2506	02	0063F	22F00020	A	T1ST0803	LI,15	X'20'	
2507	02	00640	6DF01400	A		WD,15	X'1400'	ENABLE INTERRUPT
2508	02	00641	22E0012C	A		LI,14	300	300 MS DELAY
2509	02	00642	6AF01E26			BAL,15	:DELAY	
2510	02	00643	68000649			B	T1ST0804	
2511					*		ERROR EXIT TIMEOUT	
2512	02	00644	EAF0021B	A		BAL,15	*:ERROR	#0803
2513	02	00645	00000323	A		DATA	0803	TIMEOUT ON TIO
2514	02	00646	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2515	02	00647	2E000000	A		WAIT		HALT ON ERROR IF S53 RESET
2516	02	00648	68000626			B	:T1ST08	LOOP ON ERROR
2517	02	00649	6AF01640		T1ST0804	BAL,15	CLRDARM	CLEAR AND DISARM AND DISABLE INT
2518	02	0064A	680003B2			B	:TIM	GO TO SEQUENCER
2519					*			
2520					*			
2521					*			
2522					*			TST1,9 COMMAND CHAINING
2523					*			-----
2524					*			
2525					*			TEST THE COMMAND CHAINING ABILITY OF THE CONTROLLER BY ISSUING AN
2526					*			SET ERASE/ READ BACKWARD ORDER SEQUENCE. TEST THE TERMINATION OF
2527					*			THE COMMAND CHAINING SEQUENCE BY ISSUING A READ-BKW/ SET ERASE
2528					*			ORDER SEQUENCE. ALL STATUS RESPONSES WILL BE TESTED
2529					*			
2530					*			
2531	02	0064B	6AF01638		:T1ST09	BAL,15	CLRRM	CLEAR AND ARM INTERRUPT
2532	02	0064C	32E02093			LW,14	=X'0000C000'	DEVICE ADDRESS OK
2533	02	0064D	220008CD			LI,0	DA(TSECC)	
2534	02	0064E	6AF01893			BAL,15	:SIO	SIO CC SET ERASE, READ BKW

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 39
2535	02	0064F	68000655			B	T1ST0902	
2536				*		ERROR EXIT		
2537	02	00650	EAF0021B A			BAL,15	*:ERROR	#0901
2538	02	00651	00000385 A			DATA	0901	INCORRECT STATUS RESPONSE ON SIO
2539	02	00652	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2540	02	00653	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2541	02	00654	68000648			B	:T1ST09	LOOP ON ERROR
2542	02	00655	22E00064 A		T1ST0902	LI,14	100	100 MS DELAY
2543	02	00656	6AF01E26			BAL,15	:DELAY	
2544	02	00657	6800065D			B	T1ST0903	
2545				*		ERROR EXIT TIMEOUT		
2546	02	00658	EAF0021B A			BAL,15	*:ERROR	#0902
2547	02	00659	00000386 A			DATA	0902	TIMEOUT ON SIO
2548	02	0065A	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2549	02	0065B	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2550	02	0065C	68000648			B	:T1ST09	LOOP ON ERROR
2551	02	0065D	CDC018B5		T1ST0903	T10,12	*:DEVADDR	T10
2552	02	0065E	21C00BCE			CI,12	DA(TWBK)	LAST DA ADDRESS
2553	02	0065F	68300665			BEZ	T1ST0904	
2554				*		ERROR EXIT		
2555	02	00660	EAF0021B A			BAL,15	*:ERROR	#0903
2556	02	00661	00000387 A			DATA	0903	INCORRECT LAST OPERATION ON CC
2557	02	00662	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2558	02	00663	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2559	02	00664	68000648			B	:T1ST09	LOOP ON ERROR
2560	02	00665	6AF01638		T1ST0904	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2561	02	00666	32E02093			LW,14	=X'0000C000'	DEVICE ADDRESS OK
2562	02	00667	22000B00			LI,0	DA(TWRCC)	
2563	02	00668	6AF01893			BAL,15	:SIO	SIO CC READ BKW, SET ERASE
2564	02	00669	6800066F			B	T1ST0905	
2565				*		ERROR EXIT		
2566	02	0066A	EAF0021B A			BAL,15	*:ERROR	#0904
2567	02	0066B	00000388 A			DATA	0904	INCORRECT STATUS RESPONSE ON SIO
2568	02	0066C	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2569	02	0066D	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2570	02	0066E	68000665			B	T1ST0904	LOOP ON ERROR
2571	02	0066F	22E00064 A		T1ST0905	LI,14	100	100 MS DELAY
2572	02	00670	6AF01E26			BAL,15	:DELAY	
2573				*		ERROR EXIT TIMEOUT		
2574	02	00671	68000677			B	T1ST0906	
2575	02	00672	EAF0021B A			BAL,15	*:ERROR	#0905
2576	02	00673	00000389 A			DATA	0905	TIMEOUT ON SIO
2577	02	00674	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2578	02	00675	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2579	02	00676	68000665			B	T1ST0904	LOOP ON ERROR
2580	02	00677	CDC018B5		T1ST0906	T10,12	*:DEVADDR	T10
2581	02	00678	21C00B0D			CI,12	DA(TWRCC)	LAST DOUBLE WORD
2582	02	00679	6830067F			BEZ	T1ST0907	
2583				*		ERROR EXIT		
2584	02	0067A	EAF0021B A			BAL,15	*:ERROR	#0906
2585	02	0067B	0000038A A			DATA	0906	INCORRECT LAST OPERATION ON CC
2586	02	0067C	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2587	02	0067D	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2588	02	0067E	68000665			B	T1ST0904	LOOP ON ERROR
2589	02	0067F	6AF01640		T1ST0907	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2590	02	00680	68000382			B	:TIM	GO TO SEQUENCER
2591				*				
2592				*				
2593				*				
2594				*				T1ST,10 NO OPERATION
2595				*				-----
2596				*				
2597				*				
2598	02	00681	68000382		:T1ST10	B	:TIM	GO TO SEQUENCER
2599				*				
2600				*				
2601				*				
2602				*				T1ST,11 REWIND TEST
2603				*				-----
2604				*				CHECK THE EXECUTION OF A REWIND ON-LINE ORDER. THE TEST WILL VERIFY * * THAT THE TAPE IS POSITIONED AT LOAD POINT AFTER COMPLETION OF THE *

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42 AUG 03, '70						SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70 40
2605								* REWIND ORDER CHECK THE EXECUTION OF A REWIND AND INTERRUPT ORDER.
2606								* THIS TEST WILL VERIFY THAT THE TAPE REMAINS AT LOAD POINT AND THAT
2607								* THE DEVICE INITIATES AN INTERRUPT REQUEST. VERIFY THAT AN AIO AND HIO
2608								* INSTRUCTION CAN RESET THE INTERRUPT PENDING CONDITION IN THE TAPE
2609								* CONTROLLER AND THE TAPE STATION. VERIFY THAT DEVICE END STATUS IS
2610								* RETURNED DURING THE AIO. ALL STATUS RESPONSES WILL BE TESTED.
2611								
2612								
2613								
2614	02	00682	6AF01638		T1ST11	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2615	02	00683	22000802			LI,0	DA(TRWOL)	REWIND ON LINE
2616	02	00684	CCCO18B5			SIO,12	*:DEVADDR	SIO
2617	02	00685	CDA018B5		T1ST1102	TIO,10	*:DEVADDR	TIO FOR BUSY
2618	02	00686	32E02097			LW,14	=X'66000000'	BUSY OR REWINDING
2619	02	00687	31E0000B A			CW,14	11	STATUS
2620	02	00688	69400685			BCS,4	T1ST1102	LOOP TILL NOT BUSY
2621	02	00689	32E02098			LW,14	=X'04000000'	LOAD POINT ONLY
2622	02	0068A	CECO18B5			TDV,12	*:DEVADDR	TDV AFTER REWIND
2623	02	0068B	31D0000E A			CW,13	14	
2624	02	0068C	69400692			BCS,4	T1ST1103	
2625								
2626	02	0068D	EAF0021B A			BAL,15	*:ERROR	#1101
2627	02	0068E	00000440 A			DATA	1101	INCORRECT BITS ON TEST
2628	02	0068F	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2629	02	00690	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2630	02	00691	68000682			B	T1ST11	LOOP ON ERROR
2631	02	00692	6AF01640		T1ST1103	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2632	02	00693	220008D3			LI,0	DA(TRWAI)	REWIND AND INTERRUPT
2633	02	00694	CCCO18B5			SIO,12	*:DEVADDR	
2634	02	00695	227FFF9C A			LI,7	-100	DELAY
2635	02	00696	65700696			BIR,7	\$	
2636	02	00697	CDA018B5		T1ST1104	TIO,10	*:DEVADDR	INTERRUPT PENDING
2637	02	00698	32E02095			LW,14	=X'80000000'	STATUS INT PENDING SET
2638	02	00699	31E0000B A			CW,14	11	
2639	02	0069A	694006A0			BCS,4	T1ST1105	
2640								
2641	02	0069B	EAF0021B A			BAL,15	*:ERROR	#1102
2642	02	0069C	0000044E A			DATA	1102	INCORRECT STATUS RESPONSE ON TIO
2643	02	0069D	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2644	02	0069E	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2645	02	0069F	68000692			B	T1ST1103	LOOP ON ERROR
2646	02	006A0	CFA018B5		T1ST1105	HIO,10	*:DEVADDR	INTERRUPT PENDING
2647	02	006A1	32E02095			LW,14	=X'80000000'	TIO
2648	02	006A2	CDC018B5			TIO,12	*:DEVADDR	
2649	02	006A3	48E0000D A			AND,14	13	
2650	02	006A4	683006AA			BEZ	T1ST1106	
2651								
2652	02	006A5	EAF0021B A			BAL,15	*:ERROR	#1103
2653	02	006A6	0000044F A			DATA	1103	INCORRECT STATUS RESPONSE ON HIO
2654	02	006A7	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2655	02	006A8	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2656	02	006A9	68000692			B	T1ST1103	LOOP ON ERROR
2657	02	006AA	6AF01640		T1ST1106	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2658	02	006AB	220008D3			LI,0	DA(TRWAI)	REWIND AND INTERRUPT
2659	02	006AC	CCCO18B5			SIO,12	*:DEVADDR	
2660	02	006AD	227FFF9C A			LI,7	-100	DELAY
2661	02	006AE	657006AE			BIR,7	\$	
2662	02	006AF	CFA018B5			TIO,10	*:DEVADDR	INTERRUPT PENDING
2663	02	006B0	32E02095			LW,14	=X'80000000'	STATUS INT PENDING SET
2664	02	006B1	31E0000B A			CW,14	11	
2665	02	006B2	69400688			BCS,4	T1ST1107	
2666								
2667	02	006B3	EAF0021B A			BAL,15	*:ERROR	AIO
2668	02	006B4	00000450 A			DATA	1104	#1104
2669	02	006B5	EAF0021D A			BAL,15	*:SENSE	INCORRECT STATUS RESPONSE ON SIO
2670	02	006B6	2E000000 A			WAIT		CHECK SENSE SWITCH SETTINGS
2671	02	006B7	680006AA			B	T1ST1106	HALT ON ERROR IF SS3 RESET
2672	02	006B8	6E800000 A		T1ST1107	AIO,11	0	LOOP ON ERROR
2673	02	006B9	32E02099			LW,14	=X'40000000'	AIO
2674	02	006BA	31E0000B A			CW,14	11	DEVICE END
								STATUS DEVICE END SET

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	41
2675	02	006BB	694006C1			BCS,4	TIST1108	
2676				*		ERROR EXIT		
2677	02	006BC	EAF0021B A			BAL,15	*:ERROR	#1105
2678	02	006BD	00000451 A			DATA	1105	INCORRECT STATUS RESPONSE ON A10
2679	02	006BE	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2680	02	006BF	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2681	02	006C0	680006AA			B	TIST1106	LOOP ON ERROR
2682	02	006C1	CDA018B5		TIST1108	T10,10	*:DEVADDR	T10
2683	02	006C2	32E02095			LW,14	=X'80000000'	INTERRUPT PENDING
2684	02	006C3	31E0000B A			CH,14	11	STATUS INT PENDING
2685	02	006C4	684006CA			BCR,4	TIST1109	
2686				*		ERROR EXIT		
2687	02	006C5	EAF0021B A			BAL,15	*:ERROR	#1106
2688	02	006C6	00000452 A			DATA	1106	INCORRECT STATUS RESPONSE ON T10
2689	02	006C7	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2690	02	006C8	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2691	02	006C9	680006C1			B	TIST1108	LOOP ON ERROR
2692	02	006CA	32E02098		TIST1109	LW,14	=X'04000000'	LOAD POINT ONLY
2693	02	006CB	CEC018B5			TDV,12	*:DEVADDR	TDV AFTER REWIND
2694	02	006CC	31D0000E A			CH,13	14	
2695	02	006CD	694006D3			BCS,4	TIST1110	
2696				*		ERROR EXIT		
2697	02	006CE	EAF0021B A			BAL,15	*:ERROR	#1107
2698	02	006CF	00000453 A			DATA	1107	INCORRECT BITS ON TEST
2699	02	006D0	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2700	02	006D1	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2701	02	006D2	680006AA			B	TIST1106	LOOP ON ERROR
2702	02	006D3	6AF01640		TIST1110	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2703	02	006D4	680003B2			B	:TIM	GO TO SEQUENCER
2704				*				
2705				*				
2706				*				
2707				*				
2708				*				
2709				*				
2710				*				
2711				*				
2712				*				
2713				*				
2714				*				
2715				*				
2716				*				
2717				*				
2718				*				
2719				*				
2720	02	006D5	6AF0160C		:TIST12	BAL,15	RWLP	REWIND AND TEST FOR LOAD POINT
2721	02	006D6	6AF01638		TIST1203	BAL,15	CLARM	CLEAR AND ARM INTERRUPT
2722	02	006D7	22000C09			LI,0	DA(SBR1)	SPACE BKW UE SET BC=2
2723	02	006D8	6AF01CA2			BAL,15	:IOEXEC	EXECUTE S10
2724	02	006D9	32E00064 A			LW,14	100	100 MS DELAY
2725	02	006DA	6AF01E26			BAL,15	:DELAY	
2726	02	006DB	680006E1			B	TIST1204	
2727				*		ERROR EXIT	TIMEOUT	
2728	02	006DC	EAF0021B A			BAL,15	*:ERROR	#1203
2729	02	006DD	000004B3 A			DATA	1203	TIMEOUT ON S10
2730	02	006DE	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2731	02	006DF	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2732	02	006E0	680006D6			B	TIST1203	LOOP ON ERROR
2733	02	006E1	6AF01EC4		TIST1204	BAL,15	:ERROR	TEST
2734	02	006E2	00005D5C			DATA	BAITSE0006)	UE,LOAD PT, BYTECOUNT =2
2735	02	006E3	680006E9			B	TIST1205	
2736				*		ERROR EXIT		
2737	02	006E4	EAF0021B A			BAL,15	*:ERROR	#1204
2738	02	006E5	000004B4 A			DATA	1204	INCORRECT BITS ON TEST
2739	02	006E6	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2740	02	006E7	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
2741	02	006E8	680006D6			B	TIST1203	LOOP ON ERROR
2742	02	006E9	6AF01638		TIST1205	BAL,15	CLARM	CLEAR AND ARM INTERRUPT
2743	02	006EA	22000C0A			LI,0	DA(SBF1)	SPACE FILE BACKWARD
2744	02	006EB	6AF01CA2			BAL,15	:IOEXEC	EXECUTE S10

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 42
2745	02	006EC	32E00064	A		LW,14	100	100 MS DELAY
2746	02	006ED	6AF01E26	A		BAL,15	:DELAY	
2747	02	006EE	680006F4	A		B	T1ST1206	
2748					*			ERROR EXIT TIMEOUT
2749	02	006EF	EAF0021B	A		BAL,15	*:ERROR	#1205
2750	02	006F0	00000485	A		DATA	1205	TIMEOUT ON SIO
2751	02	006F1	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2752	02	006F2	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2753	02	006F3	680006E9	A		B	T1ST1205	LOOP ON ERROR
2754	02	006F4	6AF01EC4	A	T1ST1206	BAL,15	:ERRORT	TEST
2755	02	006F5	00005D64	A		DATA	BA(TSEQ007)	UE,LP, NO EOF
2756	02	006F6	680006FC	A		B	T1ST1207	
2757					*			ERROR EXIT
2758	02	006F7	EAF0021B	A		BAL,15	*:ERROR	#1206
2759	02	006F8	00000486	A		DATA	1206	INCORRECT BITS ON TEST
2760	02	006F9	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2761	02	006FA	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2762	02	006FB	680006E9	A		B	T1ST1205	LOOP ON ERROR
2763	02	006FC	6AF01640	A	T1ST1207	BAL,15	CLRDRAM	CLEAR AND DISARM INTERRUPT
2764	02	006FD	680003B2	A		B	:TIM	GO TO SEQUENCER
2765					*			
2766					*			
2767					*			
2768					*			
2769					*			
2770					*			
2771					*			
2772					*			
2773					*			
2774					*			
2775					*			
2776					*			
2777					*			
2778					*			
2779					*			
2780	02	006FE	6AF0160C	A	:T1ST13	BAL,15	RWTLF	REWIND TAPE TEST FOR LOAD PT
2781	02	006FF	6AF01638	A		BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2782	02	00700	22000BD4	A		L1,0	DA(TWTM)	WRITE TAPE MARK CE SET BC=2
2783	02	00701	6AF01CA2	A		BAL,15	:IOEXEC	EXECUTE SIO
2784	02	00702	22E0012C	A		L1,14	300	300 MS
2785	02	00703	6AF01E26	A		BAL,15	:DELAY	
2786	02	00704	68000708	A		B	T1ST1302	
2787					*			ERROR EXIT TIMEOUT
2788	02	00705	6AF01620	A		BAL,15	RESETS	RESET WITH HIO, TAPE RUNAWAY
2789	02	00706	EAF0021B	A		BAL,15	*:ERROR	#1301
2790	02	00707	00000515	A		DATA	1301	TIMEOUT ON SIO
2791	02	00708	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2792	02	00709	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2793	02	0070A	680006FE	A		B	:T1ST13	LOOP ON ERROR
2794	02	0070B	6AF01EC4	A	T1ST1302	BAL,15	:ERRORT	TEST
2795	02	0070C	00005D68	A		DATA	BA(TSEQ008)	DEV AND CONTR READY, BC=2
2796	02	0070D	68000713	A		B	T1ST1303	
2797					*			ERROR EXIT
2798	02	0070E	EAF0021B	A		BAL,15	*:ERROR	#1302
2799	02	0070F	00000516	A		DATA	1302	INCORRECT BITS ON TEST
2800	02	00710	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2801	02	00711	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
2802	02	00712	680006FE	A		B	:T1ST13	LOOP ON ERROR
2803	02	00713	6AF01640	A	T1ST1303	BAL,15	CLRDRAM	CLEAR AND DISARM INTERRUPT
2804	02	00714	680003B2	A		B	:TIM	GO TO SEQUENCER
2805					*			
2806					*			
2807					*			
2808					*			
2809					*			
2810					*			
2811					*			
2812					*			
2813					*			
2814					*			

TST1,13 WRITE TAPE MARK TEST AT BOT

 * CHECK THE EXECUTION OF A WRITE TAPE MARK ORDER. THE TEST WILL *
 * VERIFY THAT TAPE CAN BE MOVED OFF LOAD POINT AND THAT THE ORDER CAN *
 * BE TERMINATED WITH BOTH CONTROLLER AND STATION RETURNING TO READY. *
 * IF TAPE RUN-AWAY, ISSUE HIO. REWIND TAPE AND TEST LOAD POINT. END *
 * OF FILE STATUS WILL NOT BE TESTED. THE BYTE COUNT FOR THE ORDER *
 * MUST REMAIN UNCHANGED. *
 *

TST1,14 SPACE RECORD FORWARD TEST

 * CHECK THE EXECUTION OF A SPACE FORWARD ORDER. THE TEST WILL VERIFY *
 * THAT TAPE CAN BE MOVED OFF THE LOAD POINT AND THAT THE ORDER CAN BE *
 * TERMINATED WITH BOTH CONTROLLER AND STATION RETURNING TO READY. *
 *

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00		7/30/70	43
2815								* IF TAPE RUN-AWAY, ISSUE H1C. REWIND TAPE AND TEST FOR LOAD POINT.
2816								* END OF FILE AND UNUSUAL END STATUS WILL NOT BE TESTED. THE BYTE
2817								* COUNT FOR THE ORDER MUST REMAIN UNCHANGED.
2818								*
2819								*
2820	02	00715	6AF0160C		:T1ST14	BAL,15	RWTLF	REWIND TAPE AND TEST FOR LOAD PT
2821	02	00716	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2822	02	00717	22000BD4			LI,0	DA(TWTH)	WRITE TAPE MARK
2823	02	00718	6AF01CA2			BAL,15	:IOEXEC	EXECUTE S10
2824	02	00719	22E0012C A			LI,14	300	300 MS DELAY
2825	02	0071A	6AF01E26			BAL,15	:DELAY	
2826	02	0071E	68000722			B	T1ST1401	
2827					*		ERROR EXIT TIMEOUT	
2828	02	0071C	6AF01620			BAL,15	RESETS	RESET WITH H10, TAPE RUNAWAY
2829	02	0071D	EAF0021B A			BAL,15	*:ERROR	#1401
2830	02	0071E	00000579 A			DATA	1401	TIMEOUT ON TEST
2831	02	0071F	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2832	02	00720	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
2833	02	00721	68000715			B	:T1ST14	LOOP ON ERROR
2834	02	00722	6AF0160C		T1ST1401	BAL,15	RWTLF	REWIND AND TEST FOR LOAD POINT
2835	02	00723	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2836	02	00724	22000C08			LI,0	DA(SFRI)	SPACE FWD CE SET, BC=2
2837	02	00725	6AF01CA2			BAL,15	:IOEXEC	EXECUTE S10
2838	02	00726	22E0012C A			LI,14	300	DELAY
2839	02	00727	6AF01E26			BAL,15	:DELAY	
2840	02	00728	6800072F			B	T1ST1402	
2841					*		ERROR EXIT TIMEOUT	
2842	02	00729	6AF01620			BAL,15	RESETS	RESET WITH H10, TAPE RUNAWAY
2843	02	0072A	EAF0021B A			BAL,15	*:ERROR	1402
2844	02	0072B	0000057A A			DATA	1402	
2845	02	0072C	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCHES
2846	02	0072D	2E000720			WAIT	\$	
2847	02	0072E	68000715			B	:T1ST14	LOOP ON ERROR
2848	02	0072F	CDA01885		T1ST1402	T10,10	*:DEVADDR	T10
2849	02	00730	21800002 A			CI,11	2	BC=2
2850	02	00731	69400735			BCS,4	\$+4	
2851	02	00732	EAF0021B A			BAL,15	*:ERROR	1403 CC NOT 2
2852	02	00733	0000057B A			DATA	1403	
2853	02	00734	68000739			B	T1ST1403-3	
2854	02	00735	3180209A			CW,11	=X'E6000000'	READY
2855	02	00736	6840073C			BCR,4	T1ST1403	
2856					*		ERROR EXIT	
2857	02	00737	EAF0021B A			BAL,15	*:ERROR	1404 INCORRECT STATUS ON T10
2858	02	00738	0000057C A			DATA	1404	
2859	02	00739	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2860	02	0073A	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
2861	02	0073B	68000715			B	:T1ST14	LOOP ON ERROR
2862	02	0073C	6AF0160C		T1ST1403	BAL,15	RWTLF	REWIND TAPE AND TEST FOR LOAD PT
2863	02	0073D	6AF01640			BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
2864	02	0073E	68000382			B	:TIM	GO TO SEQUENCER
2865					*			
2866					*			
2867					*			
2868					*			
2869					*			TST1,15 WRITE TEST (BYTE 1 TO 64)
2870					*			
2871					*			* CHECK THE EXECUTION OF WRITE ORDERS USING X'FF' AS DATA PATTERN AND
2872					*			* A STARTING AT A BYTE OF ONE UP TO A MAXIMUM BYTE COUNT OF 64. THE
2873					*			* TEST WILL VERIFY THAT TAPE CAN BE MOVED OFF THE LOAD POINT, THAT THE
2874					*			* ORDER CAN BE TERMINATED WITH BOTH CONTROLLER AND TAPE STATION
2875					*			* RETURNING TO READY, THAT A DATA-OUTPUT OPERATION IS ACTUALLY
2876					*			* PERFORMED, AND THAT THE BYTE COUNT IS ALWAYS REDUCED TO ZERO. VERIFY
2877					*			* THAT INCORRECT LENGTH IS NOT DETECTED. REWIND TAPE AND TEST FOR LOAD
2878					*			* POINT.
2879					*			* TE (TRANSMISSION ERRORS) NOT CHECKED IN THIS TEST.
2880					*			* INTERRUPT ON ZBC CHECKED IN THIS SUBTEST.
2881					*			*
2882					*			*
2883	02	0073F	6AF01651		:T1ST15	BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
2884	02	00740	32F0209B			LW,15	=X'0000B300'	REMOVE TE FROM TEST

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 44
2885	02	00741	35F0206C			STW,15	:SAVETAB+4	
2886	02	00742	32F0209C			LW,15	=X'0000BF00'	REMOVE TE IN OSB TEST
2887	02	00743	35F0206A			STW,15	:SAVETAB+2	
2888	02	00744	6AF0160C			BAL,15	RWTLP	REWIND TAPE, TEST FOR LOAD POINT
2889	02	00745	551217AD			STH,1	TWBC+1,1	SET BYTE COUNT =1 OF TWBC
2890	02	00746	6AF01638		T1ST1502	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2891	02	00747	220008D6			LI,0	DA(TWBC)	WRITE RECORD 1 TO 64 BYTES
2892	02	00748	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
2893	02	00749	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
2894	02	0074A	6AF01EC4		T1ST1503	BAL,15	:ERRORT	TEST
2895	02	0074B	00005D78			DATA	BAITSE0010)	DEV,CONTR READY,LENGTH OK, BC=00
2896	02	0074C	68000757			B	T1ST1504	
2897					*		ERROR EXIT	
2898	02	0074D	12C017AC			LD,12	TWBC	IOCD PRINTOUT
2899	02	0074E	6AF01EAF			BAL,15	IOCDMSG	
2900	02	0074F	EAF0021B A			BAL,15	*:ERROR	1501
2901	02	00750	000005D0 A			DATA	1501	INCORRECT BITS SET ON TEST
2902	02	00751	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2903	02	00752	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
2904	02	00753	68000755			B	\$+2	
2905	02	00754	68000757			B	T1ST1504	CONTINUE
2906	02	00755	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
2907	02	00756	68000746			B	T1ST1502	LOOP ON ERROR
2908	02	00757	331017AD		T1ST1504	MTW,1	TWBC+1	BC=BC+1
2909	02	00758	22700040 A			LI,7	64	
2910	02	00759	517217AD			CH,7	TWBC+1,1	BC =64
2911	02	0075A	69300746			BNE	T1ST1502	
2912	02	0075B	6AF01638		T1ST1505	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2913	02	0075C	220008D7			LI,0	DA(TW64)	WRITE 64 BYTES AND INTERRUPT ON ZBC
2914	02	0075D	6AF01CA2			BAL,15	:IOEXEC	T10, S10
2915	02	0075E	22E0012C A			LI,14	300	DELAY TILL INTERRUPT
2916	02	0075F	6AF01E26			BAL,15	:DELAY	
2917	02	00760	68000766			B	T1ST1506	
2918					*		ERROR EXIT DELAY TIMEOUT	
2919	02	00761	EAF0021B A			BAL,15	*:ERROR	NO INTERRUPT ON ZBC
2920	02	00762	000005DE A			DATA	1502	1502
2921	02	00763	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2922	02	00764	2E000000 A			WAIT		
2923	02	00765	6800075B			B	T1ST1505	LOOP ON ERROR
2924	02	00766	22F01D4C A		T1ST1506	LI,15	7500 DELAY FOR CE	
2925	02	00767	64F00767			BDR,15	\$	
2926	02	00768	6AF01EC4			BAL,15	:ERRORT	TEST
2927	02	00769	00005D50			DATA	BA(TSEQ003)	A10-ZBC, T10-IP RESET
2928	02	0076A	68000770			B	T1ST1507	
2929					*		ERROR EXIT	
2930	02	0076B	EAF0021B A			BAL,15	*:ERROR	1503
2931	02	0076C	000005DF A			DATA	1503	
2932	02	0076D	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2933	02	0076E	2E000000 A			WAIT		
2934	02	0076F	6800075B			B	T1ST1505	LOOP ON ERROR
2935	02	00770	6AF0160C		T1ST1507	BAL,15	RWTLP	REWIND TO LOAD POINT
2936	02	00771	6AF01640			BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
2937	02	00772	680003B2			B	:TIM	GO TO SEQUENCER
2938					*			
2939					*			
2940					*			
2941					*			
2942					*			
2943					*			
2944					*			
2945					*			
2946					*			
2947					*			
2948					*			
2949					*			
2950					*			
2951					*			
2952	02	00773	6AF01651		:T1ST16	BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
2953	02	00774	32F0209B			LW,15	=X'0000B300'	REMOVE TE FROM TEST
2954	02	00775	35F0206C			STW,15	:SAVETAB+4	

TST1,16 READ TEST

TEST THE EXECUTION OF READ ORDERS USING A STARTING BYTE COUNT OF ONE UP TO A MAXIMUM COUNT OF 64. WRITE 64 RECORDS WITH A FIXED BYTE COUNT OF 100 BYTES (PATTERN =X'FF') AND REWIND TAPE. THIS TEST WILL CHECK THE RESPONSE TO A READ FORWARD OPERATION (OFF LOAD POINT, ORDER TRANSMISSION, DATA INPUT OPERATION, BYTE COUNT REDUCED TO ZERO). REWIND TAPE AND TEST LOAD POINT. TE (TRANSMISSION ERRORS) NOT CHECKED IN THIS TEST.

XDS 901682

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	U R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	45
2955	02	00776	32F0209C			LW,15	=X'0000BF00'	REMOVE TE IN OSB TEST
2956	02	00777	35F0206A			STW,15	:SAVETAB+2	
2957	02	00778	6AF0160C		TIST1602	BAL,15	RWTLP	REWIND TAPE, TEST FOR LOAD POINT
2958	02	00779	22AFFFC0 A			LI,10	-64	
2959	02	0077A	6AF01638		TIST1603	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2960	02	0077B	22000B08			LI,0	DA(TW100B)	WRITE 100 BYTES ALL BITS ON
2961	02	0077C	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
2962	02	0077D	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
2963	02	0077E	6AF01EC4		TIST1604	BAL,15	:ERRORT	TEST
2964	02	0077F	00005E20			DATA	BA(TSEQ036)	NO UE, BC=00, READY
2965	02	00780	68000786			B	TIST1605	
2966				*		FRROR EXIT		
2967	02	00781	EAF0021B A			BAL,15	*:ERROR	1601
2968	02	00782	00000641 A			DATA	1601	INCORRECT BITS SET ON TEST
2969	02	00783	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2970	02	00784	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
2971	02	00785	6800077A			B	TIST1603	LOOP ON ERROR
2972	02	00786	65A0077A		TIST1605	BIR,10	TIST1603	DO 64 RECORDS OF 100 BYTES
2973	02	00787	6AF0160C		TIST1606	BAL,15	RWTLP	REWIND TAPE, TEST FOR LOAD POINT
2974	02	00788	551217DD			STH,1	TRFBC+1,1	SET BYTE COUNT =1
2975	02	00789	22AFFFC0 A			LI,10	-64	
2976	02	0078A	6AF01638		TIST1607	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
2977	02	0078B	22000BEE			LI,0	DA(TRFBC)	READ FORWARD 100 BYTES WITH BC=1-64
2978	02	0078C	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
2979	02	0078D	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
2980	02	0078E	6AF01EC4		TIST1608	BAL,15	:ERRORT	TEST
2981	02	0078F	00005D8C			DATA	BA(TSEQ012)	READY,UE,NO ZBC, INCORRECT LENGTH
2982	02	00790	6800079B			B	TIST1609	
2983				*		ERROR EXIT		
2984	02	00791	12C017DC			LD,12	TRFBC	PRINTOUT IOCD
2985	02	00792	6AF01EAF			BAL,15	IOCDMSG	
2986	02	00793	EAF0021B A			BAL,15	*:ERROR	1602
2987	02	00794	00000642 A			DATA	1602	INCORRECT BITS SET ON TEST
2988	02	00795	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
2989	02	00796	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
2990	02	00797	68000799			B	\$+2	
2991	02	00798	6800079B			B	TIST1609	CONTINUE
2992	02	00799	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
2993	02	0079A	6800078A			B	TIST1607	LOOP ON ERROR
2994	02	0079B	331017DD		TIST1609	MTW,1	TRFBC+1	BYTE COUNT =BYTE CONT+1
2995	02	0079C	65A0078A			BIR,10	TIST1607	DO 1 TO 64 BYTES
2996	02	0079D	6AF0160C			BAL,15	RWTLP	REWIND AND TEST FOR LOAD POINT
2997	02	0079E	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
2998	02	0079F	680003B2			B	:TIM	GO TO SEQUENCER
2999				*				
3000				*				
3001				*				
3002				*				
3003				*				TST1,17 NO OPERATION TEST
3004				*				-----
3005				*				
3006				*				
3007	02	007A0	680003B2		:TIST17	B	:TIM	GO TO SEQUENCER
3008				*				
3009				*				TST1,18 WRITE READ DATA TEST
3010				*				-----
3011				*				
3012				*				* WRITE N RECORDS WITH A FIXED BYTE COUNT AND DATA PATTERN OF X'FF'.
3013				*				* REWIND TAPE AND READ N RECORDS IN THE FORWARD DIRECTION. VERIFY THAT
3014				*				* DATA CAN BE RECORDED AND READ FROM EACH TRACK.
3015				*				* TE (TRANSMISSION ERRORS) NOT CHECKED IN THIS TEST.
3016				*				
3017				*				
3018	02	007A1	6AF01651		:TIST18	BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
3019	02	007A2	32F02098			LW,15	=X'0000B300'	REMOVE TE FROM TEST
3020	02	007A3	35F0206C			STW,15	:SAVETAB+4	
3021	02	007A4	32F0209C			LW,15	=X'0000BF00'	REMOVE TE IN OSB TEST
3022	02	007A5	35F0206A			STW,15	:SAVETAB+2	
3023	02	007A6	311019CE			CW,1	MODEFLAG	PACKED BINARY SET
3024	02	007A7	683007AB			BE	\$+4	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 46
3025	02	007A8	32E0207D			LW,14	BUFF2	
3026	02	007A9	20E00019	A		AT,14	25	
3027	02	007AA	680007AC			B	\$+2	
3028	02	007AB	22E021A6			LI,14	BUFF1+225	
3029	02	007AC	35E0198C			STW,14	RESLOC	COMPARE ADDRESS
3030	02	007AD	225FFFFA	A		LI,5	-6	FETCH -6
3031	02	007AE	22600000	A		LI,6	0	CLEAR TALLY ERROR AREA
3032	02	007AF	356A1B61			STW,6	:TALLYO+6,5	
3033	02	007B0	655007AF			BIR,5	\$-1	
3034	02	007B1	6AF0160C		T1ST1802	BAL,15	RWTLP	RWIND TAPE, TEST FOR LOAD POINT
3035	02	007B2	22AFFF9C	A		LI,10	-100	
3036	02	007B3	6AF01638		T1ST1803	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3037	02	007B4	22000B08			LI,0	DA(TW100B)	WRITE 100 BYTES ALL BITS ON
3038	02	007B5	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
3039	02	007B6	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
3040	02	007B7	6AF01EC4		T1ST1804	BAL,15	:ERROR	GO TO SUBR.
3041	02	007B8	00005E20			DATA	BA(TSEQ036)	NO UE, BC=00, READY
3042	02	007B9	680007BC			B	T1ST1805	
3043					*	ERROR EXIT		
3044	02	007BA	EAF00218	A		BAL,15	*:ERROR	1801
3045	02	007BB	00000709	A		DATA	1801	INCORRECT BITS SET ON TEST
3046	02	007BC	65A007B3		T1ST1805	BIR,10	T1ST1803	
3047	02	007BD	6AF0160C			BAL,15	RWTLP	REWIND TAPE, TEST FOR LOAD POINT
3048	02	007BE	22AFFF9C	A		LI,10	-100	
3049	02	007BF	6AF01638		T1ST1806	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3050	02	007C0	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
3051	02	007C1	22000BEF			LI,0	DA(TRF100B)	READ FORWARD 100 BYTES ALL ON
3052	02	007C2	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
3053	02	007C3	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
3054	02	007C4	35101DBD			STW,1	:COMFLAG	INHIBIT PRINTOUT
3055	02	007C5	6AF01D47		T1ST1807	BAL,15	:COMPARE	COMPARE INFORMATION
3056	02	007C6	680007D4			B	T1ST1808	
3057					*	ERROR EXIT		
3058	02	007C7	311019CE			CW,1	MODEFLAG	PACKED OPTION SET
3059	02	007C8	693007CA			BNE	\$+2	
3060	02	007C9	6AF01717			BAL,15	UNPACK	UNPACK INFORMATION
3061	02	007CA	225FFFFA	A		LI,5	-6	FETCH -6
3062	02	007CB	22800020			LI,8	X'20'	FETCH X'20'
3063	02	007CC	226FFF9C	A		LI,6	-100	FETCH -100
3064	02	007CD	32E0198C			LW,14	RESLOC	
3065	02	007CE	F18C000E	A		CB,8	*14,6	COMPARE
3066	02	007CF	694007D1			BCS,4	\$+2	BRANCH CONDITION CODE SET
3067	02	007D0	331A1B61			MTW,1	:TALLYO+6,5	TALLYO+1
3068	02	007D1	656007CE			BIR,6	\$-3	BRANCH INCREMENT REG.
3069	02	007D2	2580027F	A		SCS,8	-1	SHIFT ONE SPACE
3070	02	007D3	655007CC			BIR,5	\$-7	BRANCH INCREMENT REGISTER
3071	02	007D4	65A007BF		T1ST1808	BIR,10	T1ST1806	READ 100 RECORDS
3072	02	007D5	225FFFFA	A		LI,5	-6	FETCH -6
3073	02	007D6	22A02710	A		LI,10	10000	FETCH 10000
3074	02	007D7	35AA1B58			STW,10	:TALLYE+6,5	STORE 10000 INTO TALLYE
3075	02	007D8	655007D7			BIR,5	\$-1	BRANCH INCREMENT REG.5
3076	02	007D9	32A0209D			LW,10	=X'3F3F3F3F'	FETCH WORD
3077	02	007DA	35A01B53			STW,10	:TALLYP	STORE INTO TALLP
3078	02	007DB	22A00012	A		LI,10	18	FETCH TEST NO.
3079	02	007DC	35A01B54			STW,10	TESTNO	STORE INTO TESTNO
3080	02	007DD	22801B88			LI,8	T1ST18M	FETCH MSG
3081	02	007DE	35801B45			STW,8	:TALLYMA	STORE INTO TALLYMA
3082	02	007DF	6AF01B09			BAL,15	ERRPNT1	GO TO ERROR PRINT SUBR.
3083	02	007E0	680007E4			B	T1ST1809	BRANCH
3084	02	007E1	EAF0021D	A		BAL,15	*:SENSE	TEST SENSE SW
3085	02	007E2	2E0007E2			WAIT	\$	
3086	02	007E3	680007A1			B	:T1ST18	LOOP ON ERROR
3087	02	007E4	22000000	A	T1ST1809	LI,0	0	FETCH ZERO
3088	02	007E5	35001DBD			STW,0	:COMFLAG	RESET COMFLAG
3089	02	007E6	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3090	02	007E7	6AF01640			BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
3091	02	007E8	6AF003B2			BAL,15	:TIM	GO TO SEQUENCER
3092					*			
3093					*			
3094					*			

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00	7/30/70 47
3095					*			
3096					*			
3097					*			TST1,19 WRITE, READ DATA TEST
3098					*			DATA X'00' TO X'20'
3099					*			-----
3100					*			
3101					*			
3102					*			WRITE N RECORDS WITH A FIXED BYTE COUNT AND THE CURRENT DATA PATTERN *
3103					*			DATA WILL BE VARIED FROM X'00' THRU X'20'. REWIND TAPE AND READ N *
3104					*			RECORDS IN THE FORWARD DIRECTION. VERIFY FOR EACH PASS THAT ONLY ONE *
3105					*			TRACK CONTAINS INFORMATION AND THAT ALL OTHER TRACKS ARE ZERO. AFTER *
3106					*			EACH PASS LOOP ON THE DATA PATTERN WHICH HAS CAUSED AN ERROR AND *
3107					*			CONTINUE TESTING UNTIL A SUCCESSFUL PASS HAS BEEN MADE. *
3108					*			*
3109	02	007E9	227018E0		:TIST19	LI,7	PT00	
3110	02	007EA	22F00000	A		LI,15	0	
3111	02	007EB	35F018F5			STW,15	SPFLAG	RESET FLAG
3112	02	007EC	557207F6			STH,7	TIST1903,1	STARTING ADDRESS OF PATTERN
3113	02	007ED	22701979			LI,7	PBTSAT	
3114	02	007EE	557207FD			STH,7	TIST1904,1	PACKED BINARY SET UP
3115	02	007EF	22700000	A		LI,7	0	CLEAR ERROR TALLIES
3116	02	007F0	357018A5			STW,7	FLG1	CLEAR I ONLY FLAG
3117	02	007F1	22600000	A	TIST1901	LI,6	0	CLEAR TALLY AREA
3118	02	007F2	22700000	A		LI,7	0	
3119	02	007F3	156018DC			STD,6	PT00T	
3120	02	007F4	156018DE			STD,6	PT00T+2	
3121	02	007F5	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3122	02	007F6	327018E0		TIST1903	LW,7	PT00	
3123	02	007F7	35701D39			STW,7	:PATID+1	
3124	02	007F8	6AF0164F			BAL,15	SMEARSP	SMEAR SPECIAL PATTERN
3125	02	007F9	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
3126	02	007FA	69300806			BNE	TIST1902	
3127	02	007FB	22800004	A		LI,8	4	
3128	02	007FC	35801D38			STW,8	:PATID	3 WORD PATTERN
3129	02	007FD	22801979		TIST1904	LI,8	PBTSAT	3 WORD PATTERN ADDRESS
3130	02	007FE	35801D39			STW,8	:PATID+1	
3131	02	007FF	22800022	A		LI,8	34	
3132	02	00800	35801D38			STW,8	:PATWC	WORD COUNT
3133	02	00801	6AF01CF9			BAL,15	:PATTERN	SMEAR 3 WORD PACKED PATTERN
3134	02	00802	22E021A6			LI,14	BUFF1+225	
3135	02	00803	35E019BC			STW,14	RESLOC	SET UP PACKED COMPARE
3136	02	00804	35701D39			STW,7	:PATID+1	
3137	02	00805	68000809			B	\$+4	
3138	02	00806	32E0207D		TIST1902	LW,14	BUFF2	
3139	02	00807	20E00019	A		AI,14	25	
3140	02	00808	35E019BC			STW,14	RESLOC	SET UP UNPACKED COMPARE
3141	02	00809	225FFFFA	A		LI,5	-6	
3142	02	0080A	22600000	A		LI,6	0	CLEAR TALLY ERROR AREA
3143	02	0080B	356A1861			STW,6	:TALLY0+6,5	
3144	02	0080C	65500808			BIR,5	\$-1	
3145	02	0080D	22AFF9C	A		LI,10	-100	
3146	02	0080E	6AF01638		TIST1906	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3147	02	0080F	22000808			LI,0	DA(TRF100B)	WRITE 100 BYTES
3148	02	00810	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
3149	02	00811	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
3150	02	00812	CDC018B5		TIST1907	T10,12	*:DEVADDR	TEST FOR ERRORS
3151	02	00813	31D0209E			CW,13	=X'00400000'	TE ONLY
3152	02	00814	68400816			BCR,4	TIST1909	
3153	02	00815	331018DC		TIST1908	MTW,1	PT00T	WRITE ERROR TALLY+1
3154	02	00816	65A0080E		TIST1909	BIR,10	TIST1906	WRITE 100 RECORDS
3155	02	00817	6AF0160C			BAL,15	RWTLP	REWIND AND TEST FOR LOAD POINT
3156	02	00818	22AFF9C	A		LI,10	-100	
3157	02	00819	6AF01638		TIST1910	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3158	02	0081A	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
3159	02	0081B	22000BEF			LI,0	DA(TRF100B)	READ FORWARD 100 BYTES
3160	02	0081C	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
3161	02	0081D	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
3162	02	0081E	CDC018B5		TIST1911	T10,12	*:DEVADDR	TEST FOR ERRORS
3163	02	0081F	31D0209E			CW,13	=X'00400000'	TE ONLY
3164	02	00820	68400822			BCR,4	\$+2	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	48
3165	02	00821	331018DD		T1ST1912	MTW,1	PT00T+1	READ ERROR TALLY+1
3166	02	00822	351010BD			STW,1	:COMFLAG	INHIBIT PRINTOUT
3167	02	00823	6AF01D47			BAL,15	:COMPARE	COMPARE INFORMATION
3168	02	00824	68000838			B	T1ST1915	
3169					*	ERROR EXIT, DATA INCORRECT		
3170	02	00825	311019CE			CW,1	MODEFLAG	PACKED FLAG OPTION
3171	02	00826	69300828			BNE	\$+2	
3172	02	00827	6AF01717			BAL,15	UNPACK	
3173	02	00828	331018DE		T1ST1914	MTW,1	PT00T+2	INFO ERROR TALLY+1
3174	02	00829	225FFFFFA A			LI,5	-6	FETCH -6
3175	02	0082A	22800020 A			LI,8	X'20'	FETCH X'20'
3176	02	0082B	226FFFF9C A		T1ST1917	LI,6	-100	FETCH TOTAL NUMBER OF BYTES
3177	02	0082C	71801D39			CB,8	:PATID+1	COMPARE PATTERNS
3178	02	0082D	68300834			BE	T1ST1913	
3179	02	0082E	32E019BC		T1ST1905	LW,14	RESLOC	COMPARE ADDRESS
3180	02	0082F	F18C000E A			CB,8	*14,6	COMPARE
3181	02	00830	68400832			BCR,4	\$+2	
3182	02	00831	331A1B61			MTW,1	:TALLY0+6,5	ADD 1 TO ERROR NO. COUNT
3183	02	00832	6560082F			BIR,6	\$-3	
3184	02	00833	68000839			B	T1ST1915-2	OK
3185	02	00834	32E019BC		T1ST1913	LW,14	RESLOC	COMPARE ADDRESS
3186	02	00835	F18C000E A			CB,8	*14,6	COMPARE
3187	02	00836	69400838			BCS,4	\$+2	
3188	02	00837	331A1B61			MTW,1	:TALLY0+6,5	ADD 1 TO ERROR NO. COUNT
3189	02	00838	E3600835			BIR,6	\$-3	
3190	02	00839	2580027F A			SCS,8	-1	SHIFT ONE BIT
3191	02	0083A	65500828			BIR,5	T1ST1917	
3192	02	0083B	65A00819		T1ST1915	BIR,10	T1ST1910	READ 100 RECORDS
3193					*	PRINTOUT	PATTERN THAT FAILED, WRITE ERRORS, READ ERRORS	
3194	02	0083C	326018DC			LW,6	PT00T	
3195	02	0083D	306018DD			AW,6	PT00T+1	
3196	02	0083E	306018DE			AW,6	PT00T+2	
3197	02	0083F	68300868			BEZ	T1ST1916	NO PRINTOUT ON THIS PATTERN
3198	02	00840	331018F5			MTW,1	SPFLAG	ERROR +1
3199	02	00841	EAF00218 A			BAL,15	*:ERROR	1901
3200	02	00842	0000076D A			DATA	1901	WRITE, READ, OR INFO ERRORS
3201	02	00843	32C01D39			LW,12	:PATID+1	
3202	02	00844	EAF00218 A			BAL,15	*:HEXC	CONVERT FOR MESSAGE
3203	02	00845	35F01AB9			STW,15	MESER+3	
3204	02	00846	32C018DC			LW,12	PT00T	
3205	02	00847	EAF00217 A			BAL,15	*:DECC	CONVERT FOR PRINTOUT
3206	02	00848	35F01ABC			STW,15	MESER+6	
3207	02	00849	32C018DD			LW,12	PT00T+1	
3208	02	0084A	EAF00217 A			BAL,15	*:DECC	CONVERT FOR PRINTOUT
3209	02	0084B	35F01ABF			STW,15	MESER+9	
3210	02	0084C	32C018DE			LW,12	PT00T+2	
3211	02	0084D	EAF00217 A			BAL,15	*:DECC	CONVERT FOR PRINTOUT
3212	02	0084E	35F01AC2			STW,15	MESER+12	
3213	02	0084F	EAF0021C A			BAL,15	*:PRINT	PRINT MESSAGE
3214	02	00850	00001AAB			DATA	MSERI	
3215	02	00851	EAF0021C A			BAL,15	*:PRINT	PRINT OUT MESSAGE
3216	02	00852	00001AB6			DATA	MESER	
3217	02	00853	EAF0021C A			BAL,15	*:PRINT	PRINT
3218	02	00854	00001AAB			DATA	MSERI	
3219	02	00855	22800020 A			LI,8	X'20'	FETCH NO. X'20'
3220	02	00856	225FFFFFA A			LI,5	-6	FETCH -6
3221	02	00857	22A00000 A			LI,10	0	FETCH EXP. COUNT
3222	02	00858	71801D39			CB,8	:PATID+1	COMPARE BYTES
3223	02	00859	6830085C			BE	\$+3	
3224	02	0085A	35AA1B5B			STW,10	:TALLYE+6,5	STORE EXP. COUNT
3225	02	0085B	6800085E			B	\$+3	
3226	02	0085C	22802710 A			LI,11	10000	FETCH EXP. COUNT
3227	02	0085D	35BA1B5B			STW,11	:TALLYE+6,5	STORE EXP. COUNT
3228	02	0085E	2580027F A			SCS,8	-1	SHIFT ONE BIT
3229	02	0085F	65500858			BIR,5	\$-7	
3230	02	00860	32A01D39			LW,10	:PATID+1	FETCH PATTERN
3231	02	00861	35A01B53			STW,10	:TALLYP	STORE PATTERN
3232	02	00862	22A00013 A			LI,10	19	FETCH TEST NO.
3233	02	00863	35A01B54			STW,10	TESTNO	STORE TEST NO.
3234	02	00864	22801888			LI,8	T1ST18M	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00 7/30/70	49
3235	02	00865	35801845			STW,8	:TALLYMA	
3236	02	00866	6AF01809			BAL,15	ERRPNTI	
3237	02	00867	68000868			B	\$+1	
3238				*		CHANGE	PATTERN	
3239	02	00868	331007F6		T1ST1916	MTW,1	T1ST1903	DO NEXT PATTERN
3240	02	00869	333007FD			MTW,3	T1ST1904	GO TO NEXT PACKED PATTERN
3241	02	0086A	227018E7			LI,7	PT80-1	
3242	02	0086B	517207F6			CH,7	T1ST1903,1	
3243	02	0086C	692007F1			BG	T1ST1901	
3244	02	0086D	32F018F5			LW,15	SPFLAG	
3245	02	0086E	68300872			BEZ	\$+4	
3246	02	0086F	EAF0021D A			BAL,15	*:SENSE	
3247	02	00870	2E000870			WAIT	\$	
3248	02	00871	680007E9			B	:T1ST19	
3249	02	00872	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3250	02	00873	680003B2			B	:TIM	GO TO SEQUENCER
3251				*				
3252				*				
3253				*				T1ST,20 SET ERASE-WRITE TEST
3254				*				-----
3255				*				
3256				*				* CHECK THE CAPABILITY OF THE TAPE STATION TO SKIP OVER AN AREA ON THE *
3257				*				* TAPE BY CHECKING THE DELAY BETWEEN THE START OF THE WRITE ORDER AND *
3258				*				* THE START OF THE DATA TRANSFER. *
3259				*				*
3260				*				*
3261	02	00874	22500000 A		:T1ST20	LI,5	0	CLEAR TALLY
3262	02	00875	226FFFF0 A			LI,6	-16	
3263	02	00876	328018A1			LW,8	CLOCK	CHANGE CLOCK INTERRUPT FOR THIS SECT
3264	02	00877	35800055 A			STW,8	X'55'	
3265	02	00878	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3266	02	00879	22000BCA			LI,0	DAITSEI)	SET ERASE
3267	02	0087A	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
3268	02	0087B	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
3269	02	0087C	6AF01638		T1ST2001	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3270	02	0087D	22000BD9			LI,0	DA(TWIB)	WRITE 1 BYTE BCZ SET
3271	02	0087E	22F01040 A			LI,15	X'1040'	ARM AND ENABLE CLOCK
3272	02	0087F	6DF01200 A			WD,15	X'1200'	
3273	02	00880	22800000 A			LI,8	0	
3274	02	00881	CCA018B5			SIO,10	*:DEVADDR	SIO
3275	02	00882	46700008 A			XW,7	8	
3276	02	00883	32F01EA6			LW,15	:INTRECF	INTERRUPT RECEIVED FLAG
3277	02	00884	68300883			BCR,3	\$-1	
3278	02	00885	46800007 A			XW,8	7	R8 NOW HAS TALLY
3279	02	00886	22F01040 A			LI,15	X'1040'	DISARM INTERRUPT
3280	02	00887	6DF01100 A			WD,15	X'1100'	
3281	02	00888	30500008 A			AW,5	8	
3282	02	00889	CDC018B5			TIO,12	*:DEVADDR	WAIT FOR DEVICE
3283	02	0088A	69C00889			BCS,12	\$-1	
3284	02	0088B	65600878			BIR,6	T1ST2001-4	DO 16 TIMES
3285	02	0088C	2550007D A			SLS,5	-3	R5 HAS AVERAGE TIME IN MS
3286	02	0088D	31501880		T1ST2002	CW,5	ERTMIN	MINIMUM
3287	02	0088E	69100894			BL	T1ST2003	
3288	02	0088F	315018AF			CW,5	ERTMAX	MAXIMUM
3289	02	00890	691008A4			BL	T1ST2004	
3290				*		ERROR EXIT	TOO LONG	
3291	02	00891	EAF0021B A			BAL,15	*:ERROR	2001
3292	02	00892	000007D1 A			DATA	2001	ERASE TIME TOO LONG
3293	02	00893	68000896			B	T1ST2003+2	GO TO MESSAGE PRINTOUT
3294				*		ERROR EXIT	TOO SHORT	
3295	02	00894	EAF0021B A		T1ST2003	BAL,15	*:ERROR	2002
3296	02	00895	000007D2 A			DATA	2002	ERASE TIME TOO SHORT
3297	02	00896	32C00005 A			LW,12	5	ERASE TIME IN MS
3298	02	00897	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
3299	02	00898	35F01A99			STW,15	MESEGT+3	
3300	02	00899	32C01880			LW,12	ERTMIN	MINIMUM
3301	02	0089A	EAF00217 A			BAL,15	*:DECC	CONVERT
3302	02	0089B	35F01A9E			STW,15	MESEGT+8	STORE
3303	02	0089C	32C018AF			LW,12	ERTMAX	MAXIMUM
3304	02	0089D	EAF00217 A			BAL,15	*:DECC	CONVERT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	50
3305	02	0089E	35F01AA0			STW,15	MESEGT+10	STORE
3306	02	0089F	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
3307	02	008A0	00001A96			DATA	MESEGT	
3308	02	008A1	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3309	02	008A2	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3310	02	008A3	68000874			B	:T1ST20	
3311	02	008A4	6AF01640		T1ST2004	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3312	02	008A5	32801E43			LW,8	:DELMTH	RESTORE CLOCK FOR DELAY
3313	02	008A6	35800055	A		STW,8	X'55'	
3314	02	008A7	680003B2			B	:TIM	GO TO SEQUENCER
3315								
3316								TST1,21 WRITE,SPACE FWD AND BKW TEST
3317								
3318								
3319								
3320								
3321								
3322								
3323								
3324								
3325								
3326								
3327								
3328	02	008A8	6AF0160C		:T1ST21	BAL,15	RWTLP	REWIND TO LOAD POINT
3329	02	008A9	6AF01651			BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
3330	02	008AA	228FFF9C	A		LI,8	-100	
3331	02	008AB	6AF01638		T1ST2101	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3332	02	008AC	22000B08			LI,0	DA(TW100B)	WRITE 100 BYTES
3333	02	008AD	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3334	02	008AE	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3335	02	008AF	6AF01EC4		T1ST2102	BAL,15	:ERROR	TEST
3336	02	008B0	00005D84			DATA	BA(TSEQ011)	NO UE, READY, BC=00
3337	02	008B1	680008B7			B	T1ST2103	
3338								
3339	02	008B2	EAF0021B	A		BAL,15	*:ERROR	#2101
3340	02	008B3	00000835	A		DATA	2101	INCORRECT BITS ON TEST
3341	02	008B4	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3342	02	008B5	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3343	02	008B6	680008AB			B	T1ST2101	LOOP ON ERROR
3344	02	008B7	658008AB		T1ST2103	BIR,8	T1ST2101	DO 100 RECORDS
3345	02	008B8	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3346	02	008B9	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3347	02	008BA	22000C0C			LI,0	DA(SF100)	SPACE RECORD FORWARD
3348	02	008BB	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3349	02	008BC	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3350	02	008BD	6AF01EC4		T1ST2104	BAL,15	:ERROR	TEST
3351	02	008BE	00005D84			DATA	BA(TSEQ011)	NO UE, READY, BC=00
3352	02	008BF	680008C6			B	T1ST2105	
3353								
3354	02	008C0	EAF0021B	A		BAL,15	*:ERROR	#2102
3355	02	008C1	00000836	A		DATA	2102	INCORRECT BITS ON TEST
3356	02	008C2	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3357	02	008C3	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3358	02	008C4	680008B8			B	T1ST2103+1	LOOP ON ERROR
3359	02	008C5	68000904			B	T1ST2117+3	GO TO END OF TEST
3360	02	008C6	6AF01638		T1ST2105	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3361	02	008C7	22000C0D			LI,0	DA(SB100)	SPACE RECORD BACKWARD
3362	02	008C8	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3363	02	008C9	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3364	02	008CA	6AF01EC4		T1ST2107	BAL,15	:ERROR	TEST
3365	02	008CB	00005D84			DATA	BA(TSEQ011)	NO UE, READY, BC=00
3366	02	008CC	680008D3			B	T1ST2108	
3367								
3368	02	008CD	EAF0021B	A		BAL,15	*:ERROR	#2103
3369	02	008CE	00000837	A		DATA	2103	INCORRECT BITS ON TEST
3370	02	008CF	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3371	02	008D0	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3372	02	008D1	680008B8			B	T1ST2103+1	LOOP ON ERROR
3373	02	008D2	68000904			B	T1ST2117+3	GO TO END OF TEST
3374	02	008D3	6AF01638		T1ST2108	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	51
3375	02	008D4	22000C0D			LI,0	DA(SB100)	SPACE RECORD BACKWARD
3376	02	008D5	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3377	02	008D6	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3378	02	008D7	6AF01EC4		T1ST2110	BAL,15	:ERRORT	TEST
3379	02	008D8	00005D9C			DATA	BA(TSEQ014)	UE AND LOAD POINT
3380	02	008D9	680008E0			B	T1ST2109	
3381					*	ERROR EXIT		
3382	02	008DA	EAF0021B	A		BAL,15	*:ERROR	#2104
3383	02	008DB	00000838	A		DATA	2104	INCORRECT BITS ON TEST
3384	02	008DC	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3385	02	008DD	2E000000	A		WAIT		HALT ON ERROR IF S53 RESET
3386	02	008DE	68000888			B	T1ST2103+1	LOOP ON ERROR
3387	02	008DF	68000904			B	T1ST2117+3	GO TO END OF TEST
3388	02	008E0	228FFF9C	A	T1ST2109	LI,8	-100	
3389	02	008E1	6AF01638		T1ST2111	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3390	02	008E2	22F00000	A		LI,15	0	
3391	02	008E3	35F018F5			STW,15	SPFLAG	RESET FLAG
3392	02	008E4	22000C0C			LI,0	DA(SF100)	SPACE FORWARD 100 BYTES
3393	02	008E5	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3394	02	008E6	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3395	02	008E7	6AF01EC4		T1ST2113	BAL,15	:ERRORT	TEST
3396	02	008E8	00005D84			DATA	BA(TSEQ011)	NO UE,READY, BC=00
3397	02	008E9	680008ED			B	T1ST2112	
3398					*	ERROR EXIT		
3399	02	008EA	EAF0021B	A		BAL,15	*:ERROR	#2105
3400	02	008EB	00000839	A		DATA	2105	INCORRECT BITS ON TEST
3401	02	008EC	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3402	02	008ED	658008E1		T1ST2112	BIR,8	T1ST2111	SPACE FWD 100 RECORDS
3403	02	008EE	32F018F5			LW,15	SPFLAG	
3404	02	008EF	683008F6			BEZ	T1ST2114-1	ERROR FLAG =0
3405	02	008F0	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3406	02	008F1	2E000000	A		WAIT		
3407	02	008F2	680008F4			B	%+2	LOOP ON ERROR BRANCH
3408	02	008F3	68000904			B	T1ST2117+3	GO TO END OF TEST
3409	02	008F4	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3410	02	008F5	680008E0			B	T1ST2109	
3411	02	008F6	228FFF9C	A		LI,8	-100	
3412	02	008F7	6AF01638		T1ST2114	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3413	02	008F8	22000C0D			LI,0	DA(SB100)	SPACE RECORD BACKWARD
3414	02	008F9	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3415	02	008FA	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3416	02	008FB	6AF01EC4		T1ST2116	BAL,15	:ERRORT	TEST
3417	02	008FC	00005D84			DATA	BA(TSEQ011)	NO UE, READY, BC=00
3418	02	008FD	68000901			B	T1ST2117	
3419					*	ERROR EXIT		
3420	02	008FE	EAF0021B	A		BAL,15	*:ERROR	#2106
3421	02	008FF	0000083A	A		DATA	2106	INCORRECT BITS ON TEST
3422	02	00900	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3423	02	00901	658008F7		T1ST2117	BIR,8	T1ST2114	SPACE 100 RECORDS FORWARD
3424	02	00902	32F018F5			LW,15	SPFLAG	
3425	02	00903	693008F0			BNEZ	T1ST2112+3	
3426	02	00904	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3427	02	00905	6AF01640			BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
3428	02	00906	680003B2			B	:TIM	GO TO SEQUENCER
3429					*			
3430					*			
3431					*			
3432					*			
3433					*			
3434					*			
3435					*			
3436					*			
3437					*			
3438	02	00907	6AF0160C		:T1ST22	BAL,15	RWTLP	REWIND TO LOAD POINT
3439	02	00908	228FFF9C	A		LI,8	-100	
3440	02	00909	6AF01638		T1ST2201	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3441	02	0090A	220008D4			LI,0	DA(IWTM)	WRITE TM
3442	02	0090B	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3443	02	0090C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3444	02	0090D	6AF01EC4		T1ST2203	BAL,15	:ERRORT	TEST

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 52
3445	02	0090E	00005DA0			DATA	BA(TSE0015)	READY, NO UE, TM
3446	02	0090F	68000915			B	T1ST2204	
3447				*		ERROR EXIT		
3448	02	00910	EAF0021B	A		BAL,15	*:ERROR	#2201
3449	02	00911	00000899	A		DATA	2201	INCORRECT BITS ON TEST
3450	02	00912	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3451	02	00913	2E000000	A		WAIT		HALT ON ERROR IF 553 RESET
3452	02	00914	68000909			B	T1ST2201	LOOP ON ERROR
3453	02	00915	65800909		T1ST2204	BIR,8	T1ST2201	WRITE 100 TAPE MARKS
3454	02	00916	228FFF9C	A		LI,8	-100	SPACE 100 RECORDS BACKWARD
3455	02	00917	6AF01638		T1ST2205	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3456	02	00918	22000C19			LI,0	DA(SPBRAND)	SPACE BKH OVER TAPE MARK
3457	02	00919	6AF01CA2			BAL,15	:IOEXEC	T10,S10
3458	02	0091A	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3459	02	0091B	6AF01EC4			BAL,15	:ERRORT	TEST
3460	02	0091C	00005E30			DATA	BA(TSE0038)	UE, TAPE MARK, NO TE
3461	02	0091D	68000923			B	T1ST2206	
3462				*		ERROR EXIT		
3463	02	0091E	EAF0021B	A		BAL,15	*:ERROR	#2202
3464	02	0091F	0000089A	A		DATA	2202	
3465	02	00920	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3466	02	00921	2E000000	A		WAIT		
3467	02	00922	68000923			B	\$+1	CANNOT LOOP ON ERROR
3468	02	00923	65800917		T1ST2206	BIR,8	T1ST2205	DO 100 TIMES
3469	02	00924	228FFF9C	A		LI,8	-100	READ 100 RECORDS FWD
3470	02	00925	6AF01638		T1ST2207	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3471	02	00926	22000BF6			LI,0	DA(RF100B)	READ FWD OVER TAPE MARK
3472	02	00927	6AF01CA2			BAL,15	:IOEXEC	T10,S10
3473	02	00928	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3474	02	00929	6AF01EC4			BAL,15	:ERRORT	TEST
3475	02	0092A	00005E28			DATA	BA(TSE0037)	UE, TAPE MARK
3476	02	0092B	68000931			B	T1ST2208	
3477				*		ERROR EXIT		
3478	02	0092C	EAF0021B	A		BAL,15	*:ERROR	#2203
3479	02	0092D	00000898	A		DATA	2203	
3480	02	0092E	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3481	02	0092F	2E000000	A		WAIT		
3482	02	00930	68000931			B	\$+1	CANNOT LOOP ON ERROR
3483	02	00931	65800925		T1ST2208	BIR,8	T1ST2207	DO 100 TIMES
3484	02	00932	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3485	02	00933	68000382			B	:TIM	GO TO SEQUENCER
3486				*				
3487				*				
3488				*				
3489				*				
3490				*				
3491				*				
3492				*				
3493				*				
3494				*				
3495				*				
3496				*				
3497				*				
3498				*				
3499				*				
3500				*				
3501				*				
3502				*				
3503				*				
3504				*				
3505	02	00934	6AF0160C		:T1ST23	BAL,15	RWTLF	REWIND TO LOAD POINT
3506	02	00935	228FFF9C	A		LI,8	-100	
3507	02	00936	6AF01638		T1ST2301	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3508	02	00937	22000BD4			LI,0	DA(TWTH)	WRITE TM
3509	02	00938	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3510	02	00939	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3511	02	0093A	6AF01EC4		T1ST2303	BAL,15	:ERRORT	TEST
3512	02	0093B	00005DA0			DATA	BA(TSE0015)	READY, TAPE MARK, NO UE
3513	02	0093C	68000942			B	T1ST2304	
3514				*		ERROR EXIT		

TST1,23 WRITE TAPE MARK -SPACE FILE AND SPACE RECORD TEST

* WRITE N TAPE MARKS AND REWIND TO LOAD POINT. SPACE FILE IN THE *
 * FORWARD DIRECTION AND VERIFY END OF FILE AND NO UNUSUAL END STATUS. *
 * SPACE FILE BACKWARD AND CHECK END OF FILE AND NO UNUSUAL END. SPACE *
 * FILE BACKWARD AGAIN AND CHECK END OF FILE, BEGINNING OF TAPE AND NO *
 * UNUSUAL END. VERIFY ALL OTHER STATUS. VERIFY THAT UNUSUAL END AND *
 * END OF FILE STATUS IS REPORTED WHEN SPACING OR READING OVER A TAPE *
 * MARK. WRITE N RECORDS FOLLOWED BY A TAPE MARK. VERIFY SPACE RECORD *
 * IN BOTH DIRECTIONS. *

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	53
3515	02	0093D	EAF0021B A			BAL,15	*:ERROR	#2301
3516	02	0093E	000008FD A			DATA	2301	INCORRECT BITS ON TEST
3517	02	0093F	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3518	02	00940	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
3519	02	00941	68000936			B	T1ST2301	LOOP ON ERROR
3520	02	00942	65800936		T1ST2304	BIR,8	T1ST2301	WRITE 100 TAPE MARKS
3521	02	00943	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3522	02	00944	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3523	02	00945	22000C0E			LI,0	DA(TSFF)	SPACE FILE FWD
3524	02	00946	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3525	02	00947	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3526	02	00948	6AF01EC4		T1ST2306	BAL,15	:ERRORT	TEST
3527	02	00949	00005DA0			DATA	BA(TSEQ015)	READY, NO UE, TAPE MARK
3528	02	0094A	68000951			B	T1ST2307	
3529					*	ERROR EXIT		
3530	02	0094B	EAF0021B A			BAL,15	*:ERROR	#2302
3531	02	0094C	000008FE A			DATA	2302	INCORRECT BITS ON TEST
3532	02	0094D	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3533	02	0094E	2E000000 A			WAIT		
3534	02	0094F	68000943			B	T1ST2304+1	LOOP ON ERROR
3535	02	00950	680009A6			B	T1ST2326	GO TO END OF TEST
3536	02	00951	22000C0F		T1ST2307	LI,0	DA(TSFB)	SPACE FILE BKW
3537	02	00952	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3538	02	00953	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3539	02	00954	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3540	02	00955	6AF01EC4		T1ST2309	BAL,15	:ERRORT	TEST
3541	02	00956	00005DA0			DATA	BA(TSEQ015)	READY, NO UE, TAPE MARK
3542	02	00957	6800095E			B	T1ST2310	
3543					*	ERROR EXIT		
3544	02	00958	EAF0021B A			BAL,15	*:ERROR	#2303
3545	02	00959	000008FF A			DATA	2303	INCORRECT BITS ON TEST
3546	02	0095A	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3547	02	0095B	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
3548	02	0095C	68000943			B	T1ST2304+1	LOOP ON ERROR
3549	02	0095D	680009A6			B	T1ST2326	GO TO END OF TEST
3550	02	0095E	22000C0F		T1ST2310	LI,0	DA(TSFB)	SPACE FILE BKW AT BOT
3551	02	0095F	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3552	02	00960	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3553	02	00961	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3554	02	00962	6AF01EC4		T1ST2312	BAL,15	:ERRORT	TEST
3555	02	00963	00005E18			DATA	BA(TSEQ035)	EOF,LP, NO UE
3556	02	00964	6800096B			B	T1ST2313	
3557					*	ERROR EXIT		
3558	02	00965	EAF0021B A			BAL,15	*:ERROR	#2304
3559	02	00966	00000900 A			DATA	2304	INCORRECT BITS ON TEST
3560	02	00967	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3561	02	00968	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
3562	02	00969	68000943			B	T1ST2304+1	LOOP ON ERROR
3563	02	0096A	680009A6			B	T1ST2326	GO TO END OF TEST
3564	02	0096B	228FFFECA		T1ST2313	LI,8	-20	
3565	02	0096C	6AF01638		T1ST2314	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3566	02	0096D	22000BD8			LI,0	DA(TW100B)	WRITE 100 BYTES
3567	02	0096E	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3568	02	0096F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3569	02	00970	6AF01EC4		T1ST2316	BAL,15	:ERRORT	TEST
3570	02	00971	00005D84			DATA	BA(TSEQ011)	NO UE, BC=00
3571	02	00972	68000978			B	T1ST2317	
3572					*	ERROR EXIT		
3573	02	00973	EAF0021B A			BAL,15	*:ERROR	#2305
3574	02	00974	00000901 A			DATA	2305	INCORRECT BITS ON TEST
3575	02	00975	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3576	02	00976	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
3577	02	00977	6800096C			B	T1ST2314	LOOP ON ERROR
3578	02	00978	6580096C		T1ST2317	BIR,8	T1ST2314	WRITE 20 RECORDS
3579	02	00979	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3580	02	0097A	22000BD4			LI,0	DA(TWTM)	WRITE TAPE MARK
3581	02	0097B	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3582	02	0097C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3583	02	0097D	6AF01EC4		T1ST2319	BAL,15	:ERRORT	TEST
3584	02	0097E	00005DA0			DATA	BA(TSEQ015)	READY, TAPE MARK

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70
3585	02	0097F	68000988			B	T1ST2320	
3586					*	ERROR EXIT		
3587	02	00980	EAF0021B A			BAL,15	*:ERROR	#2306
3588	02	00981	00000902 A			DATA	2306	INCORRECT BITS ON TEST
3589	02	00982	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3590	02	00983	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
3591	02	00984	68000986			B	\$+2	LOOP ON ERROR BRANCH
3592	02	00985	680009A6			B	T1ST2326	GO TO END OF TEST
3593	02	00986	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3594	02	00987	6800096C			B	T1ST2314	
3595	02	00988	6AF01638		T1ST2320	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3596	02	00989	22000C0D			LI,0	DA(SB100)	SPACE RECORD BACKWARD
3597	02	0098A	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3598	02	0098B	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3599	02	0098C	6AF01EC4		T1ST2322	BAL,15	:ERRORT	TEST
3600	02	0098D	00005DA4			DATA	BA(TSEQ0016)	UE, READY, TAPE MARK
3601	02	0098E	68000997			B	T1ST2323	
3602					*	ERROR EXIT		
3603	02	0098F	EAF0021B A			BAL,15	*:ERROR	#2307
3604	02	00990	00000903 A			DATA	2307	INCORRECT BITS ON TEST
3605	02	00991	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3606	02	00992	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
3607	02	00993	68000995			B	\$+2	LOOP ON ERROR
3608	02	00994	680009A6			B	T1ST2326	GO TO END OF TEST
3609	02	00995	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3610	02	00996	6800096C			B	T1ST2314	
3611	02	00997	6AF01638		T1ST2323	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3612	02	00998	22000C0C			LI,0	DA(SF100)	SPACE RECORD FORWARD
3613	02	00999	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3614	02	0099A	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3615	02	0099B	6AF01EC4		T1ST2325	BAL,15	:ERRORT	TEST
3616	02	0099C	00005DA4			DATA	BA(TSEQ0016)	UE, READY, TAPE MARK
3617	02	0099D	680009A6			B	T1ST2326	
3618					*	ERROR EXIT		
3619	02	0099E	EAF0021B A			BAL,15	*:ERROR	#2308
3620	02	0099F	00000904 A			DATA	2308	INCORRECT BITS ON TEST
3621	02	009A0	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3622	02	009A1	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
3623	02	009A2	680009A4			B	\$+2	LOOP ON ERROR
3624	02	009A3	680009A6			B	T1ST2326	GO TO END OF TEST
3625	02	009A4	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
3626	02	009A5	6800096C			B	T1ST2314	
3627	02	009A6	6AF01640		T1ST2326	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3628	02	009A7	680003B2			B	:TIM	GO TO SEQUENCER
3629					*			
3630					*			
3631					*			
3632					*			
3633					*			
3634					*			
3635					*			
3636					*			
3637					*			
3638					*			
3639					*			
3640					*			
3641					*			
3642	02	009A8	6AF01640		:T1ST24	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3643	02	009A9	2270000A A			LI,7	10	DO 10 TIMES
3644	02	009AA	22000C2E		T1ST2402	LI,0	DA(TPDM)	REWIND, CC WRITE WITH DATA CHAIN
3645	02	009AB	CCA018B5			S10,10	*:DEVADDR	
3646	02	009AC	CDC018B5			T10,12	*:DEVADDR	T10
3647	02	009AD	69C009AC			BDS,12	\$-1	WAIT TILL DONE
3648	02	009AE	647009AA			BDR,7	T1ST2402	
3649	02	009AF	6AF01EC4			BAL,15	:ERRORT	TEST
3650	02	009B0	00005E05			DATA	BA(TSEQ0033)	READY, NO UE
3651	02	009B1	68000987			B	T1ST2403	GOOD EXIT
3652					*	ERROR EXIT		
3653	02	009B2	EAF0021B A			BAL,15	*:ERROR	2401
3654	02	009B3	00000961 A			DATA	2401	INCORRECT BITS IN TEST

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 55
3655	02	009B4	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3656	02	009B5	2E000000 A			WAIT		
3657	02	009B6	680009B7			B	\$+1	CANNOT LOOP ON THIS ERROR
3658	02	009B7	6AF01640		T1ST2403	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3659	02	009B8	680003B2			B	:TIM	RETURN TO SEQUENCER
3660					*			
3661					*			
3662					*			
3663					*			
3664					*			
3665					*			
3666					*			TST1,25 NO OPERATION TEST
3667					*			-----
3668					*			
3669					*			
3670					*			
3671					*			
3672	02	009B9	680003B2		:T1ST25	B	:TIM	GO TO SEQUENCER
3673					*			
3674					*			
3675					*			TST1,26 INCORRECT LENGTH TEST
3676					*			-----
3677					*			
3678					*			* WRITE A RECORD AND READ IN THE FORWARD DIRECTION USING A BYTE COUNT-1*
3679					*			* BYTE COUNT +1 FOR THE READ ORDERS. VERIFY INCORRECT LENGTH AND ALL *
3680					*			* OTHER STATUS INDICATIONS. SUPPRESS INCORRECT LENGTH FEATURE IN THE *
3681					*			* IOP WILL ALSO BE TESTED. *
3682					*			*
3683					*			*
3684	02	009BA	6AF01638		:T1ST26	BAL,15	CLRRM	CLEAR AND ARM INTERRUPT
3685	02	009BB	22F00000 A			LI,15	0	
3686	02	009BC	35F018F5			STW,15	SPFLAG	CLEAR ERROR FLAG
3687	02	009BD	6AF01651			BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
3688	02	009BE	22000BE4			LI,0	DA(WR96B)	WRITE 96 BYTES
3689	02	009BF	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3690	02	009C0	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3691	02	009C1	6AF01EC4		T1ST2603	BAL,15	:ERRORT	TEST
3692	02	009C2	00005D84			DATA	BA(TSEQ011)	READY,BC=00, NO UE
3693	02	009C3	680009C9			B	T1ST2604	
3694					*		ERROR EXIT	
3695	02	009C4	EAF0021B A			BAL,15	*:ERROR	#2601
3696	02	009C5	00000A29 A			DATA	2601	INCORRECT BITS ON TEST
3697	02	009C6	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3698	02	009C7	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
3699	02	009C8	680009BA			B	:T1ST26	LOOP ON ERROR
3700	02	009C9	6AF01638		T1ST2604	BAL,15	CLRRM	CLEAR AND ARM INTERRUPT
3701	02	009CA	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
3702	02	009CB	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3703	02	009CC	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3704	02	009CD	6AF01EC4		T1ST2606	BAL,15	:ERRORT	TEST
3705	02	009CE	00005D84			DATA	BA(TSEQ011)	READY, NO UE
3706	02	009CF	680009D3			B	T1ST2607	
3707					*		ERROR EXIT	
3708	02	009D0	EAF0021B A			BAL,15	*:ERROR	#2602
3709	02	009D1	00000A2A A			DATA	2602	INCORRECT BITS ON TEST
3710	02	009D2	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3711	02	009D3	6AF01638		T1ST2607	BAL,15	CLRRM	CLEAR AND ARM INTERRUPT
3712	02	009D4	22000BFA			LI,0	DA(RF96B)	READ FWD 96 BYTES
3713	02	009D5	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3714	02	009D6	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3715	02	009D7	6AF01EC4		T1ST2609	BAL,15	:ERRORT	TEST
3716	02	009D8	00005D78			DATA	BA(TSEQ010)	BC=00,READY,NO UE, NO INC LENGTH
3717	02	009D9	680009D0			B	T1ST2610	
3718					*		ERROR EXIT	
3719	02	009DA	EAF0021B A			BAL,15	*:ERROR	#2603
3720	02	009DB	00000A2B A			DATA	2603	INCORRECT BITS ON TEST
3721	02	009DC	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3722	02	009DD	6AF01638		T1ST2610	BAL,15	CLRRM	CLEAR AND ARM INTERRUPT
3723	02	009DE	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
3724	02	009DF	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 56
3725	02	009E0	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3726	02	009E1	6AF01EC4		T1ST2612	BAL,15	:ERRORT	TEST
3727	02	009E2	00005D84			DATA	BA(TSE0011)	READY, NO UE
3728	02	009E3	680009E7			B	T1ST2613	
3729					*	ERROR EXIT		
3730	02	009E4	EAF0021B A			BAL,15	*:ERROR	#2604
3731	02	009E5	00000A2C A			DATA	2604	INCORRECT BITS ON TEST
3732	02	009E6	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3733	02	009E7	6AF01638		T1ST2613	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3734	02	009E8	22000BF0			LI,0	DA(RF95B)	READ FWD 95 BYTES
3735	02	009E9	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3736	02	009EA	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3737	02	009EB	6AF01EC4		T1ST2615	BAL,15	:ERRORT	TEST
3738	02	009EC	00005D8C			DATA	BA(TSE0012)	BC=0, INC LENGTH, UE, READY
3739	02	009ED	680009F1			B	T1ST2616	
3740					*	ERROR EXIT		
3741	02	009EE	EAF0021B A			BAL,15	*:ERROR	#2605
3742	02	009EF	00000A2D A			DATA	2605	INCORRECT BITS ON TEST
3743	02	009F0	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3744	02	009F1	6AF01638		T1ST2616	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3745	02	009F2	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
3746	02	009F3	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3747	02	009F4	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3748	02	009F5	6AF01EC4		T1ST2618	BAL,15	:ERRORT	TEST
3749	02	009F6	00005D84			DATA	BA(TSE0011)	READY, NO UE
3750	02	009F7	680009FB			B	T1ST2619	
3751					*	ERROR EXIT		
3752	02	009F8	EAF0021B A			BAL,15	*:ERROR	#2606
3753	02	009F9	00000A2E A			DATA	2606	INCORRECT BITS ON TEST
3754	02	009FA	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3755	02	009FB	6AF01638		T1ST2619	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3756	02	009FC	22000BF1			LI,0	DA(RF97B)	READ FWD 97 BYTES
3757	02	009FD	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3758	02	009FE	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3759	02	009FF	6AF01EC4		T1ST2621	BAL,15	:ERRORT	TEST
3760	02	00A00	00005D8B			DATA	BA(TSE0017)	BC=1, NO UE, INC LENGTH SET
3761	02	00A01	68000A05			B	T1ST2622	
3762					*	ERROR EXIT		
3763	02	00A02	EAF0021B A			BAL,15	*:ERROR	#2607
3764	02	00A03	00000A2F A			DATA	2607	INCORRECT BITS ON TEST
3765	02	00A04	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3766	02	00A05	6AF01638		T1ST2622	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3767	02	00A06	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
3768	02	00A07	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3769	02	00A08	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3770	02	00A09	6AF01EC4		T1ST2624	BAL,15	:ERRORT	TEST
3771	02	00A0A	00005D84			DATA	BA(TSE0011)	READY, NO UE
3772	02	00A0B	68000A0F			B	T1ST2625	
3773					*	ERROR EXIT		
3774	02	00A0C	EAF0021B A			BAL,15	*:ERROR	#2608
3775	02	00A0D	00000A30 A			DATA	2608	INCORRECT BITS ON TEST
3776	02	00A0E	331018F5			MTW,1	SPFLAG	ERROR +1
3777	02	00A0F	6AF01638		T1ST2625	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3778	02	00A10	22000BF2			LI,0	DA(RF95B5)	READ FWD 95 BYTES, SUP INC LENGTH
3779	02	00A11	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3780	02	00A12	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3781	02	00A13	6AF01EC4		T1ST2627	BAL,15	:ERRORT	TEST
3782	02	00A14	00005D84			DATA	BA(TSE0019)	READY, NO UE, BC=00, INC LENGTH
3783	02	00A15	68000A19			B	T1ST2627+6	
3784					*	ERROR EXIT		
3785	02	00A16	EAF0021B A			BAL,15	*:ERROR	#2609
3786	02	00A17	00000A31 A			DATA	2609	INCORRECT BITS ON TEST
3787	02	00A18	331018F5			MTW,1	SPFLAG	ERROR +1
3788	02	00A19	32F018F5			LW,15	SPFLAG	ERROR FLAG =0
3789	02	00A1A	68300A1E			BEZ	T1ST2628	CHECK SENSE SWITCH SETTINGS
3790	02	00A1B	EAF0021D A			BAL,15	*:SENSE	HALT ON ERROR IF S53 RESET
3791	02	00A1C	2E000000 A			WAIT		
3792	02	00A1D	680009BA			B	:T1ST26	
3793	02	00A1E	6AF01640		T1ST2628	BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
3794	02	00A1F	680003B2			B	:TIM	GO TO SEQUENCER

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0		16:42 AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			57
3795								
3796								
3797								
3798								
3799								
3800								TST1,27 DATA CHAINING TEST
3801								-----
3802								* TEST THE DATA CHAINING CAPABILITY OF THE IOP USING WRITE AND READ
3803								* ORDERS.
3804								
3805								
3806								
3807	02	00A20	6AF01638		T1ST27	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3808	02	00A21	22F00000	A		LI,15	0	
3809	02	00A22	35F018F5			STW,15	SPFLAG	RESET FLAG
3810	02	00A23	6AF01651			BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
3811	02	00A24	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
3812	02	00A25	35F019A7			STW,15	NOPKPRT	
3813	02	00A26	22700018	A		LI,7	24	24 WORDS TO COMPARE
3814	02	00A27	357010BA			STW,7	:COMM CNT	
3815	02	00A28	220008DA			LI,0	DA(TWDC02)	WRITE 2 DATA CHAIN 94 BYTES
3816	02	00A29	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3817	02	00A2A	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3818	02	00A2B	6AF01EC4		T1ST2703	BAL,15	:ERRORT	TEST
3819	02	00A2C	00005084			DATA	BA(TSEQ011)	BC=0, READY, NO UE
3820	02	00A2D	68000A35			B	T1ST2704	
3821								* ERROR EXIT
3822	02	00A2E	EAF00218	A		BAL,15	*:ERROR	#2701
3823	02	00A2F	00000A80	A		DATA	2701	INCORRECT BITS ON TEST
3824	02	00A30	EAF00210	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3825	02	00A31	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3826	02	00A32	68000A20			B	:T1ST27	LOOP ON ERROR
3827	02	00A33	22700000	A		LI,7	0	
3828	02	00A34	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
3829	02	00A35	6AF01638		T1ST2704	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3830	02	00A36	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
3831	02	00A37	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3832	02	00A38	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3833	02	00A39	6AF01EC4		T1ST2706	BAL,15	:ERRORT	TEST
3834	02	00A3A	00005084			DATA	BA(TSEQ011)	READY, NO UE
3835	02	00A3B	68000A3F			B	T1ST2708	
3836								* ERROR EXIT
3837	02	00A3C	EAF00218	A		BAL,15	*:ERROR	#2702
3838	02	00A3D	00000A8E	A		DATA	2702	INCORRECT BITS ON TEST
3839	02	00A3E	331018F5			MTW,1	SPFLAG	ERROR +1
3840	02	00A3F	6AF01638		T1ST2708	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3841	02	00A40	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
3842	02	00A41	220008FB			LI,0	DA(TRFDC48)	READ FWD DC 48 BYTES
3843	02	00A42	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3844	02	00A43	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3845	02	00A44	6AF01EC4		T1ST2709	BAL,15	:ERRORT	TEST
3846	02	00A45	00005078			DATA	BA(TSEQ010)	READY,NO UE, NO INC. LENGTH, BC=00
3847	02	00A46	68000A4A			B	T1ST2710	
3848								* ERROR EXIT
3849	02	00A47	EAF00218	A		BAL,15	*:ERROR	#2704
3850	02	00A48	00000A90	A		DATA	2704	INCORRECT BITS ON TEST
3851	02	00A49	331018F5			MTW,1	SPFLAG	ERROR +1
3852	02	00A4A	6AF01D47		T1ST2710	BAL,15	:COMPARE	COMPARE INFORMATION
3853	02	00A4B	68000A4F			B	T1ST2710+5	
3854								* ERROR EXIT INFO INCORRECT
3855	02	00A4C	EAF00218	A		BAL,15	*:ERROR	#2705
3856	02	00A4D	00000A91	A		DATA	2705	INCORRECT INFORMATION
3857	02	00A4E	331018F5			MTW,1	SPFLAG	ERROR +1
3858	02	00A4F	32F018F5			LW,15	SPFLAG	
3859	02	00A50	68300A54			BEZ	T1ST2711	ERROR FLAG =0
3860	02	00A51	EAF00210	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3861	02	00A52	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3862	02	00A53	68000A20			B	:T1ST27	RESTART TEST
3863	02	00A54	6AF01640		T1ST2711	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
3864	02	00A55	680003B2			B	:TIM	GO TO SEQUENCER

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00	7/30/70 58
3865					*			
3866					*			
3867					*			TST1,28 BYTE BOUNDRY TEST
3868					*			-----
3869					*			
3870					*			
3871					*			THIS TEST PERFORMS READ AND WRITE OPERATIONS FROM ALL POSSIBLE
3872					*			MEMORY BOUNDARIES.
3873					*			
3874	02	00A56	6AF01651		:T1ST28	BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
3875	02	00A57	32F0189C			LH,15	FLGRG	REGULAR PRINTOUT FLAG
3876	02	00A58	35F019A7			STW,15	NOPKPTR	
3877	02	00A59	22808314			LI,8	BA(BUFF1)	BC=4, WORD ADDRESS CHANGES
3878	02	00A5A	32701788			LH,7	WFBAD	
3879	02	00A5B	4870208D			AND,7	=X'FF000000'	
3880	02	00A5C	30700008	A		AH,7	8	
3881	02	00A5D	35701788			STW,7	WFBAD	INITIALIZE BYTE ADDRESS
3882	02	00A5E	3270207D			LH,7	BUFF2	OBSERVED PATTERN
3883	02	00A5F	25700002	A		SLS,7	2	
3884	02	00A60	328017E6			LH,8	RFBAD	
3885	02	00A61	4880208D			AND,8	=X'FF000000'	
3886	02	00A62	30800007	A		AH,8	7	
3887	02	00A63	358017E6			STW,8	RFBAD	
3888	02	00A64	22500000	A		LI,5	0	
3889	02	00A65	355018CC			STW,5	NOREAD	RESET READ FLAG
3890	02	00A66	35501DBD			STW,5	:COMFLAG	PRINTOUT FLAG
3891	02	00A67	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
3892	02	00A68	69300A6C			BNE	\$+4	
3893	02	00A69	22700005	A		LI,7	5	
3894	02	00A6A	2260198E			LI,6	COMPSPD	PACKED INFORMATION
3895	02	00A6B	68000A6E			B	\$+3	
3896	02	00A6C	22700004	A		LI,7	4	
3897	02	00A6D	226020C5			LI,6	BUFF1	UNPACKED INFORMATION
3898	02	00A6E	35601DBB			STW,6	:COMBFRA	SET UP COMPARE
3899	02	00A6F	3280209F			LH,8	=X'12131415'	UNPACKED BINARY
3900	02	00A70	329020A0			LH,9	=X'32333435'	
3901	02	00A71	557217E7			STW,7	RFBAD+1,1	
3902	02	00A72	358020C5			STW,8	BUFF1	
3903	02	00A73	359020C6			STW,9	BUFF1+1	
3904	02	00A74	22500002	A		LI,5	2	
3905	02	00A75	35501DBA			STW,5	:COMWCNT	SET UP COMPARE
3906	02	00A76	226FFFFC	A		LI,6	-4	
3907	02	00A77	6AF01638		T1ST2801	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3908	02	00A78	22F00000	A		LI,15	0	
3909	02	00A79	35F018F5			STW,15	SPFLAG	RESET FLAG
3910	02	00A7A	22000BDC			LI,0	DA(WFBAD)	WRITE FROM WA, WA+1, WA+2, WA+3
3911	02	00A7B	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3912	02	00A7C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3913	02	00A7D	6AF01EC4		T1ST2803	BAL,15	:ERRORT	TEST
3914	02	00A7E	00005D84			DATA	BA(TSE0011)	BC=0, READY, NO UE
3915	02	00A7F	68000A85			B	T1ST2804	
3916					*		ERROR EXIT	
3917	02	00A80	EAF0021B	A		BAL,15	*:ERROR	#2801
3918	02	00A81	0000AF1	A		DATA	2801	INCORRECT BITS ON TEST
3919	02	00A82	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3920	02	00A83	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
3921	02	00A84	68000A77			B	T1ST2801	LOOP ON ERROR
3922	02	00A85	6AF01638		T1ST2804	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3923	02	00A86	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
3924	02	00A87	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3925	02	00A88	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3926	02	00A89	6AF01EC4		T1ST2806	BAL,15	:ERRORT	TEST
3927	02	00A8A	00005D84			DATA	BA(TSE0011)	READY, NO UE
3928	02	00A8B	68000A8F			B	T1ST2808	
3929					*		ERROR EXIT	
3930	02	00A8C	EAF0021B	A		BAL,15	*:ERROR	#2802
3931	02	00A8D	0000AF2	A		DATA	2802	INCORRECT BITS ON TEST
3932	02	00A8E	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3933	02	00A8F	6AF01638		T1ST2808	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3934	02	00A90	9580007D			STD,8	*BUFF2	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	59
3935	02	00A91	22000BF3			LI,0	DA(RFBAD)	READ INTO WA, WA+1, WA+2, WA+3
3936	02	00A92	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3937	02	00A93	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3938	02	00A94	6AF01EC4		T1ST2810	BAL,15	:ERRORT	TEST
3939	02	00A95	00005D78			DATA	BAITSE0010)	NO INC LENGTH, READY, NO UE, BC=00
3940	02	00A96	68000A9A			B	T1ST2811	
3941					*		ERROR EXIT	
3942	02	00A97	EAF0021B A			BAL,15	*:ERROR	#2804
3943	02	00A98	00000AF4 A			DATA	2804	INCORRECT BITS ON TEST
3944	02	00A99	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3945	02	00A9A	6AF01D47		T1ST2811	BAL,15	:COMPARE	COMPARE
3946	02	00A9B	68000A9F			B	T1ST2812-5	GO CHECK ERROR FLAG
3947	02	00A9C	EAF0021B A			BAL,15	*:ERROR	#2805
3948	02	00A9D	00000AF5 A			DATA	2805	INCORRECT INFORMATION
3949	02	00A9E	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
3950	02	00A9F	32F018F5			LW,15	SPFLAG	
3951	02	00AA0	68300AA4			BEZ	T1ST2812	NO ERRORS
3952	02	00AA1	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3953	02	00AA2	2E000000 A			WAIT		HALT ON ERROR IF 5S3 RESET
3954	02	00AA3	68000A77			B	T1ST2801	LOOP ON ERROR
3955	02	00AA4	33101788		T1ST2812	MTW,1	WFBAD	WA= WA+1 BYTE, ETC
3956	02	00AA5	331017E6			MTW,1	RFBAD	
3957	02	00AA6	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
3958	02	00AA7	69300AA9			BNE	\$+2	
3959	02	00AA8	33201DBB			MTW,2	:COMBFRA	NEXT PACKED COMPARE
3960	02	00AA9	65600A77			BIR,6	T1ST2801	DO 4 TIMES
3961	02	00AAA	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
3962	02	00AAB	68300AAF			BE	\$+3	
3963	02	00AAC	32F0209D			LW,15	=X'3F3F3F3F'	UNPACKED BINARY
3964	02	00AAD	68000AAF			B	\$+2	
3965	02	00AAE	32F020A1			LW,15	=X'FFFFFFF'	PACKED BINARY
3966	02	00AAF	3A9018CB			MAX,9	MAXREAD	MAXIMUM WORDS IN BUFFER AREA
3967	02	00AB0	22700000 A			LI,7	0	
3968	02	00AB1	35FE20C5			STW,15	BUFF1,7	STORE WORD
3969	02	00AB2	33100007 A			MTW,1	7	
3970	02	00AB3	65900AB1			BIR,9	\$-2	
3971	02	00AB4	22A020C5			LI,10	BUFF1	CORRECT INFORMATION ON COMPARE
3972	02	00AB5	35A01DBB			STW,10	:COMBFRA	
3973	02	00AB6	32A0207D			LW,10	BUFF2	
3974	02	00AB7	35A01DBC			STW,10	:COMBFRB	OBSERVED INFORMATION
3975					*			WORD ADDRESS, BYTE COUNT CHANGES
3976					*			START WITH 1 WORD IN THIS SECTION
3977	02	00AB8	22400004 A			LI,4	4	START WITH 1 WORD
3978	02	00AB9	554217BB			STH,4	WBCC+1,1	
3979	02	00ABA	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
3980	02	00ABB	69300ABD			BNE	\$+2	
3981	02	00ABC	33100004 A			MTW,1	4	BYTE COUNT +1
3982	02	00ABD	554217E9			STH,4	RFCC+1,1	
3983	02	00ABE	35101DBA			STW,1	:COMWCNT	COMPARE 1 WORD
3984	02	00ABF	6AF01638		T1ST2813	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
3985	02	00AC0	22F00000 A			LI,15	0	
3986	02	00AC1	35F018F5			STW,15	SPFLAG	CLEAR ERROR FLAG
3987	02	00AC2	22000BDD			LI,0	DA(WBCC)	WRITE RECORD, BYTE COUNT CHANGES
3988	02	00AC3	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
3989	02	00AC4	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
3990	02	00AC5	6AF01EC4		T1ST2815	BAL,15	:ERRORT	TEST
3991	02	00AC6	00005DB4			DATA	BAITSE0011)	BC=0, READY, NO UE
3992	02	00AC7	68000ACD			B	T1ST2816	
3993					*		ERROR EXIT	
3994	02	00AC8	EAF0021B A			BAL,15	*:ERROR	#2806
3995	02	00AC9	00000AF6 A			DATA	2806	INCORRECT BITS ON TEST
3996	02	00ACA	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
3997	02	00ACB	2E000000 A			WAIT		HALT ON ERROR IF 5S3 RESET
3998	02	00ACC	68000ABF			B	T1ST2813	LOOP ON ERROR
3999	02	00ACD	311018CC		T1ST2816	CW,1	NOREAD	RECORD TOO LARGE TO READ
4000	02	00ACE	68300AEE			BEZ	T1ST2828	BYPASS READS
4001	02	00ACF	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4002	02	00AD0	22000C19			LI,0	DA(SPBRAND)	SPACE BKM
4003	02	00AD1	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
4004	02	00AD2	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 60
4005	02	00AD3	6AF01EC4		T1ST2818	BAL,15	:ERRORT	TEST
4006	02	00AD4	00005D84			DATA	BAITSEQ011)	READY, NO UE
4007	02	00AD5	68000AD9			B	T1ST2822	
4008					*		ERROR EXIT	
4009	02	00AD6	EAF0021B	A		BAL,15	*:ERROR	#2807
4010	02	00AD7	00000AF7	A		DATA	2807	INCORRECT BITS ON TEST
4011	02	00AD8	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
4012	02	00AD9	6AF01638		T1ST2822	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4013	02	00ADA	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
4014	02	00ADB	22000BF4			LI,0	DAIRFCC)	
4015	02	00ADC	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
4016	02	00ADD	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4017	02	00ADE	6AF01EC4		T1ST2824	BAL,15	:ERRORT	TEST
4018	02	00ADF	00005D78			DATA	BAITSEQ010)	NO INC LENGTH, READY, NO UE, BC=00
4019	02	00AE0	68000AE4			B	T1ST2825	
4020					*		ERROR EXIT	
4021	02	00AE1	EAF0021B	A		BAL,15	*:ERROR	2809
4022	02	00AE2	00000AF9	A		DATA	2809	INCORRECT BITS SET ON TEST
4023	02	00AE3	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
4024	02	00AE4	6AF01D47		T1ST2825	BAL,15	:COMPARE	COMPARE INFORMATION
4025	02	00AE5	68000AE9			B	T1ST2828-5	
4026					*		INFO ERROR	
4027	02	00AE6	EAF0021B	A		BAL,15	*:ERROR	2810
4028	02	00AE7	00000AFA	A		DATA	2810	INCORRECT INFO ON READ FWD.
4029	02	00AE8	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
4030	02	00AE9	32F018F5			LW,15	SPFLAG	
4031	02	00AEA	68300AEE			BEZ	T1ST2828	NO ERROR SET
4032	02	00AEB	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4033	02	00AEC	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4034	02	00AED	68000ABF			B	T1ST2813	LOOP ON ERROR
4035	02	00AEE	327017BB		T1ST2828	LW,7	WBCC+1	
4036	02	00AEF	4B7020A2			AND,7	=X'000FFFFF'	OLD BYTE COUNT
4037	02	00AF0	25700001	A		SLS,7	1	SHIFT 1 BIT TO LEFT
4038	02	00AF1	317018C8			CW,7	MAXBYT	RECORD GREATER THAN I/O AREA
4039	02	00AF2	69200AFE			BCC,2	T1ST2830	
4040	02	00AF3	317018CA			CW,7	MAXREADB	RECORD TOO LARGE TO READ
4041	02	00AF4	69100AF6			BCC,1	T1ST2829	
4042	02	00AF5	351018CC			STW,1	NOREAD	
4043	02	00AF6	557217BB		T1ST2829	STH,7	WBCC+1,1	STORE NEW BYTE COUNT
4044	02	00AF7	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
4045	02	00AF8	69300AFA			BNE	\$+2	
4046	02	00AF9	33100007	A		MTW,1	7	BYTE COUNT +1
4047	02	00AFA	557217E9			STH,7	RFCC+1,1	
4048	02	00AFB	2570007E	A		SLS,7	-2	DEVIDE BY 4
4049	02	00AFC	357010BA			STW,7	:COMWCNT	WORD COUNT FOR COMPARE
4050	02	00AFD	68000ABF			B	T1ST2813	
4051	02	00AFE	6AF01640		T1ST2830	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
4052	02	00AFF	680003B2			B	:TIM	GO TO SEQUENCER
4053					*			
4054					*			
4055					*			
4056					*			
4057					*			
4058					*			
4059					*			
4060					*			
4061					*			TST1,29 DECIMAL (BCD) MODE DATA TEST
4062					*			
4063					*			
4064					*			
4065					*			
4066					*			
4067					*			
4068					*			
4069	02	00B00	327018BC		:T1ST29	LW,7	STDBCD	CHECK TO SEE IF OPTION ON SYSTEM
4070	02	00B01	69300B04			BNEZ	\$+3	
4071	02	00B02	327018BF			LW,-	OPTBCD	
4072	02	00B03	68300B8A			BEZ	T1ST2912	
4073					*			
4074	02	00B04	352019A7			STW,2	NOPKPR	BYPASS TEST WRITE BCD TRANSLATION CHARACTER SET SET NO PACKED PRINTOUT FLAG

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 61
4075	02	00B05	22A00010	A		LI,10	16	
4076	02	00B06	35A01DBA			STW,10	:COMWCNT	WORD COUNT
4077	02	00B07	22A01947			LI,10	BCDVALID	
4078	02	00B08	35A01DBB			STW,10	:COMBFRA	EXPECTED PATTERN
4079	02	00B09	32A0207D			LW,10	BUFF2	
4080	02	00B0A	35A01DBC			STW,10	:COMBFRB	OBSERVED INFORMATION
4081	02	00B0B	228FFF9C	A		LI,8	-100	
4082	02	00B0C	6AF01638		T1ST2901	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4083	02	00B0D	22000BEC			LI,0	DA(TWBCD)	WRITE BCD CHARACTER SET
4084	02	00B0E	6AF01CA2			BAL,15	:IOEXEC	TIO SIO
4085	02	00B0F	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
4086	02	00B10	6AF01FC4			RAI,15	:ERRORT	TEST
4087	02	00B11	00005D84			DATA	BA(TSE0011)	READY, NOUE, BC=0
4088	02	00B12	68000B18			B	T1ST2902	
4089					*		ERROR EXIT	
4090	02	00B13	EAF00218	A		BAL,15	*:ERROR	#2901
4091	02	00B14	00000B55	A		DATA	2901	INCORRECT BITS ON TEST
4092	02	00B15	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4093	02	00B16	2E000000	A		WAIT		
4094	02	00B17	68000B0C			B	T1ST2901	LOOP ON ERROR
4095	02	00B18	22700000	A	T1ST2902	LI,7	0	
4096	02	00B19	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4097	02	00B1A	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4098	02	00B1B	22000C0D			LI,0	DA(SB100)	SPACE BKW OVER RECORD
4099	02	00B1C	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4100	02	00B1D	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
4101	02	00B1E	6AF01EC4			BAL,15	:ERRORT	TEST
4102	02	00B1F	00005D84			DATA	BA(TSE0011)	READY, NO UE
4103	02	00B20	68000B24			B	T1ST2903	
4104					*		ERROR EXIT	
4105	02	00B21	EAF00218	A		BAL,15	*:ERROR	#2902
4106	02	00B22	00000B56	A		DATA	2902	INCORRECT BITS ON TEST
4107	02	00B23	331018F5			MTW,1	SPFLAG	
4108	02	00B24	6AF01638		T1ST2903	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4109	02	00B25	22000C03			LI,0	DA(TRBCD)	READ BCD CHARACTER SET
4110	02	00B26	6AF01CA2			BAL,15	:IOEXEC	TIO SIO
4111	02	00B27	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
4112	02	00B28	6AF01EC4			BAL,15	:ERRORT	TEST
4113	02	00B29	00005D78			DATA	BA(TSE0010)	READY, NO INC. LENGTH NO UE
4114	02	00B2A	68000B2E			B	T1ST2904	
4115					*		ERROR EXIT	
4116	02	00B2B	EAF00218	A		BAL,15	*:ERROR	#2903
4117	02	00B2C	00000B57	A		DATA	2903	INCORRECT BITS ON TEST
4118	02	00B2D	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
4119	02	00B2E	6AF01D47		T1ST2904	BAL,15	:COMPARE	COMPARE INFORMATION
4120	02	00B2F	68000B33			B	T1ST2904+5	
4121					*		INFORMATION ERROR	
4122	02	00B30	EAF00218	A		BAL,15	*:ERROR	#2904
4123	02	00B31	00000B58	A		DATA	2904	INFORMATION ERROR
4124	02	00B32	331018F5			MTW,1	SPFLAG	ERROR+1
4125	02	00B33	327018F5			LW,7	SPFLAG	CHECK ERROR FLAG
4126	02	00B34	68300B39			BEZ	T1ST2905-4	
4127	02	00B35	EAF0021D	A		BAL,15	*:SENSE	
4128	02	00B36	2E000000	A		WAIT		CHECK SENSE SWITCH SETTINGS
4129	02	00B37	68000B18			B	T1ST2902	LOOP ON ERROR
4130	02	00B38	65800B0C			BIR,8	T1ST2901	DO 100 TIMES
4131					*			CHECK READ WITHOUT TRANSLATION
4132	02	00B39	22A01959			LI,10	DCDNOTRN	
4133	02	00B3A	35A01DBB			STW,10	:COMBFRA	EXPECTED PATTERN
4134	02	00B3B	22700000	A		LI,7	0	CLEAR ERROR FLAG
4135	02	00B3C	357018F5			STW,7	SPFLAG	CHECK READ WITHOUT TRANSLATION
4136	02	00B3D	6AF01638		T1ST2905	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4137	02	00B3E	22000C0D			LI,0	DA(SB100)	SPACE BKW OVER BCD RECORD
4138	02	00B3F	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4139	02	00B40	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
4140	02	00B41	6AF01EC4			BAL,15	:ERRORT	TEST
4141	02	00B42	00005D84			DATA	BA(TSE0011)	READY, NO UE
4142	02	00B43	68000B47			B	T1ST2906	
4143					*		ERROR EXIT	
4144	02	00B44	EAF00218	A		BAL,15	*:ERROR	#2905

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0		16:42 AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	62
4145	02	00B45	00000B59	A		DATA	2905	INCORRECT BITS IN TEST
4146	02	00B46	331018F5			MTW,1	SPFLAG	ERROR+1
4147	02	00B47	6AF01638		T1ST2906	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4148	02	00B48	22000C04			LI,0	DA(1RBCDWT)	READ BCD RECORD WITHOUT TRANSLATION
4149	02	00B49	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4150	02	00B4A	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4151	02	00B4B	6AF01EC4			BAL,15	:ERRORT	TEST
4152	02	00B4C	00005DCC			DATA	BA(1SEQ023)	TRANSMISSION ERRORS EXPECTED
4153	02	00B4D	68000B51			B	T1ST2907	
4154					*	ERROR EXIT		
4155	02	00B4E	EAF0021B	A		BAL,15	*:ERROR	#2906
4156	02	00B4F	00000B5A	A		DATA	2906	
4157	02	00B50	331018F5			MTW,1	SPFLAG	ERROR+1
4158	02	00B51	6AF01D47		T1ST2907	BAL,15	:COMPARE	COMPARE INFORMATION
4159	02	00B52	68000B56			B	T1ST2907+5	
4160					*	INFORMATION ERROR		
4161	02	00B53	EAF0021B	A		BAL,15	*:ERROR	#2907
4162	02	00B54	00000B5B	A		DATA	2907	INCORRECT INFORMATION
4163	02	00B55	331018F5			MTW,1	SPFLAG	ERROR+1
4164	02	00B56	327018F5			LW,7	SPFLAG	CHECK ERROR FLAG
4165	02	00B57	68300B5B			BEZ	T1ST2908	
4166	02	00B58	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4167	02	00B59	2E000000	A		WAIT		
4168	02	00B5A	68000B3B	A		B	T1ST2905-2	LOOP ON ERROR
4169					*	ERROR EXIT		
4170	02	00B5B	22A01958		T1ST2908	LI,10	CPBCDZ	CHECK ZERO TRANSLATION
4171	02	00B5C	35A010BB			STW,10	:COMBFRA	EXPECTED PATTERN
4172	02	00B5D	35101DBA			STW,1	:COMWCNT	WORD COUNT
4173	02	00B5E	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4174	02	00B5F	22000BED			LI,0	DA(1WB CDZ)	WRITE RECORD BCD ZERO TRANSLATION
4175	02	00B60	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4176	02	00B61	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4177	02	00B62	6AF01EC4			BAL,15	:ERRORT	TEST
4178	02	00B63	00005D84			DATA	BA(1SEQ011)	READY, NO UE
4179	02	00B64	68000B6A			B	T1ST2909-2	
4180					*	ERROR EXIT		
4181	02	00B65	EAF0021B	A		BAL,15	*:ERROR	#2908
4182	02	00B66	00000B5D	A		DATA	2908	INCORRECT BITS IN TEST
4183	02	00B67	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4184	02	00B68	2E000000	A		WAIT		
4185	02	00B69	68000B5B			B	T1ST2908	LOOP ON ERROR
4186	02	00B6A	22700000	A		LI,7	0	
4187	02	00B6B	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4188	02	00B6C	6AF01638		T1ST2909	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4189	02	00B6D	22000C0D			LI,0	DA(1SB100)	SPACE BKW OVER RECORD
4190	02	00B6E	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4191	02	00B6F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4192	02	00B70	6AF01EC4			BAL,15	:ERRORT	TEST
4193	02	00B71	00005D84			DATA	BA(1SEQ011)	READY, NO UE
4194	02	00B72	68000B76			B	T1ST2910	
4195					*	ERROR EXIT		
4196	02	00B73	EAF0021B	A		BAL,15	*:ERROR	#2909
4197	02	00B74	00000B5D	A		DATA	2909	INCORRECT BITS IN TEST
4198	02	00B75	331018F5			MTW,1	SPFLAG	ERROR +1
4199	02	00B76	6AF01638		T1ST2910	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4200	02	00B77	22000C05			LI,0	DA(1RBCDZ)	READ RECORD BCD ZERO TRANSLATION
4201	02	00B78	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4202	02	00B79	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4203	02	00B7A	6AF01EC4			BAL,15	:ERRORT	TEST
4204	02	00B7B	00005D78			DATA	BA(1SEQ010)	READY, NO INC. LENGTH; NO UE
4205	02	00B7C	68000B80			B	T1ST2911	
4206					*	ERROR EXIT		
4207	02	00B7D	EAF0021B	A		BAL,15	*:ERROR	#2911
4208	02	00B7E	00000B5F	A		DATA	2911	INCORRECT BITS IN TEST
4209	02	00B7F	331018F5			MTW,1	SPFLAG	ERROR +1
4210	02	00B80	6AF01D47		T1ST2911	BAL,15	:COMPARE	COMPARE INFORMATION
4211	02	00B81	68000B85			B	T1ST2911+5	
4212					*	INFORMATION ERROR		
4213	02	00B82	EAF0021B	A		BAL,15	*:ERROR	#2912
4214	02	00B83	00000B60	A		DATA	2912	INCORRECT INFORMATION

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 63
4215	02	00884	331018F5			MTW,1	SPFLAG	ERROR+1
4216	02	00885	327018F5			LW,7	SPFLAG	CHECK ERROR FLAG
4217	02	00886	6830088A			BEZ	T1ST2912	
4218	02	00887	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4219	02	00888	2E000000 A			WAIT		
4220	02	00889	6800066A			B	T1ST2909-2	LOOP ON ERROR
4221	02	0088A	6AF01640		T1ST2912	BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
4222	02	0088B	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
4223	02	0088C	35F019A7			STW,15	NOPKPR	
4224	02	0088D	680003B2			B	:TIM	GO TO SEQUENCER
4225					*			
4226					*			
4227					*			
4228					*			
4229					*			
4230					*			
4231					*			TST1,30 BINARY MODE DATA TEST
4232					*			
4233					*			
4234					*			
4235					*			
4236					*			
4237					*			
4238					*			
4239					*			
4240	02	0088E	3270188C		:T1ST30	LW,7	STDBCD	CHECK TO SEE IF BINARY ON SYSTEM
4241	02	0088F	69300892			BNEZ	\$+3	
4242	02	00890	3270188F			LW,7	OPTBCD	
4243	02	00891	683008F0			BEZ	T1ST3009	BYPASS TEST
4244	02	00892	352019A7			STW,2	NOPKPR	SET NO PACKED PRINTOUT FLAG
4245	02	00893	225FFFF0 A			LI,5	-16	
4246	02	00894	22700000 A			LI,7	0	
4247	02	00895	32C020A3			LW,12	=X'00010203'	SMEAR PATTERN 00-3F FOR BINARY TEST
4248	02	00896	35CE20C5			STW,12	BUFF1,7	
4249	02	00897	30C020A4			AW,12	=X'04040404'	
4250	02	00898	33100007 A			MTW,1	7	
4251	02	00899	65500896			BIR,5	\$-3	
4252	02	0089A	22A00010 A			LI,10	16	
4253	02	0089B	35A01DBA			STW,10	:COMWCNT	WORDS TO COMPARE
4254	02	0089C	22A020C5			LI,10	BUFF1	
4255	02	0089D	35A01DBB			STW,10	:COMBFRA	CORRECT INFORMATION
4256	02	0089E	32A0207D			LW,10	BUFF2	
4257	02	0089F	35A01DBC			STW,10	:COMBFRB	OBSERVED INFORMATION
4258	02	008A0	228FFF9C A			LI,8	-100	
4259	02	008A1	6AF01638		T1ST3001	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4260	02	008A2	220008EB			LI,0	DA(WBINT)	WRITE BINARY RECORD 00-3F
4261	02	008A3	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
4262	02	008A4	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4263	02	008A5	6AF01EC4			BAL,15	:ERRORT	TEST
4264	02	008A6	00005D84			DATA	BA(TSEQ011)	READY, NO UE
4265	02	008A7	68000BAD			B	T1ST3002-2	
4266					*			
4267	02	008A8	EAF0021B A			BAL,15	*:ERROR	#3001
4268	02	008A9	000008B9 A			DATA	3001	INCORRECT BITS IN TEST
4269	02	008AA	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4270	02	008AB	2E000000 A			WAIT		
4271	02	008AC	680008A1			B	T1ST3001	LOOP ON ERROR
4272	02	008AD	22700000 A			LI,7	0	
4273	02	008AE	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4274	02	008AF	6AF01638		T1ST3002	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4275	02	008B0	22000C0D			LI,0	DA(SB100)	SPACE OVER RECORD
4276	02	008B1	6AF01CA2			BAL,15	:IOEXEC	T10,S10
4277	02	008B2	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4278	02	008B3	6AF01EC4			BAL,15	:ERRORT	TEST
4279	02	008B4	00005D84			DATA	BA(TSEQ011)	READY, NO UE
4280	02	008B5	680008B9			B	T1ST3003	
4281					*			
4282	02	008B6	331018F5			MTW,1	SPFLAG	
4283	02	008B7	EAF0021B A			BAL,15	*:ERROR	#3002
4284	02	008B8	000008BA A			DATA	3002	INCORRECT BITS ON TEST

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70
4285	02	00BB9	6AF01638		T1ST3003	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4286	02	00BBA	22000C01			LI,0	DA(RBINT)	READ FWD BINARY RECORD 00-3F
4287	02	00BBB	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4288	02	00BBC	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4289	02	00BBD	6AF01EC4			BAL,15	:ERRORT	TEST
4290	02	00BBE	00005D78			DATA	BA(TSEQ010)	NO INC LENGTH, READY, NO UE
4291	02	00BBF	68000BC3			B	T1ST3004	
4292					*	ERROR EXIT		
4293	02	00BC0	331018F5			MTW,1	SPFLAG	ERROR+1
4294	02	00BC1	EAF0021B	A		BAL,15	*:ERROR	#3003
4295	02	00BC2	00000BBB	A		DATA	3003	INCORRECT BITS ON TEST
4296	02	00BC3	6AF01D47		T1ST3004	BAL,15	:COMPARE	COMPARE INFORMATION
4297	02	00BC4	68000BC8			B	T1ST3004+5	
4298					*	INFORMATION ERROR		
4299	02	00BC5	EAF0021B	A		BAL,15	*:ERROR	#3004
4300	02	00BC6	00000BBC	A		DATA	3004	INCORRECT INFORMATION
4301	02	00BC7	331018F5			MTW,1	SPFLAG	ERROR+1
4302	02	00BC8	327018F5			LW,7	SPFLAG	
4303	02	00BC9	68300BCD			BEZ	T1ST3005	
4304	02	00BCA	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4305	02	00BCB	2E000000	A		WAIT		
4306	02	00BCC	68000BAD			B	T1ST3002-2	
4307	02	00BCD	65800BA1		T1ST3005	BIR,8	T1ST3001	DO 100 TIMES
4308					*			CHECK READ WITH TRANSLATION
4309	02	00BCE	22700000	A		LI,7	0	
4310	02	00BCF	22A01969			LI,10	BINTRLS	
4311	02	00BD0	35A010BB			STW,10	:COMBFR	CORRECT INFORMATION
4312	02	00BD1	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4313	02	00BD2	6AF01638		T1ST3006	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4314	02	00BD3	22000C0D			LI,0	DA(SB100)	SPACE OVER RECORD
4315	02	00BD4	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4316	02	00BD5	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4317	02	00BD6	6AF01EC4			BAL,15	:ERRORT	TEST
4318	02	00BD7	00005D84			DATA	BA(TSEQ011)	READY, NO UE
4319	02	00BD8	68000BDC			B	T1ST3007	
4320					*	ERROR EXIT		
4321	02	00BD9	EAF0021B	A		BAL,15	*:ERROR	#3005
4322	02	00BDA	00000BDD	A		DATA	3005	INCORRECT BITS IN TEST
4323	02	00BDB	331018F5			MTW,1	SPFLAG	ERROR+1
4324	02	00BDC	6AF01638		T1ST3007	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4325	02	00BDD	22000C02			LI,0	DA(REPOPR)	READ ODD P RECORD WITH EVEN P (BCD)
4326	02	00BDE	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4327	02	00BDF	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
4328	02	00BE0	6AF01EC4			BAL,15	:ERRORT	TEST
4329	02	00BE1	00005DCC			DATA	BA(TSEQ023)	TE EXPECTED
4330	02	00BE2	68000BE6			B	T1ST3008	
4331					*	ERROR EXIT		
4332	02	00BE3	EAF0021B	A		BAL,15	*:ERROR	#3006
4333	02	00BE4	00000BDE	A		DATA	3006	INCORRECT BITS IN TEST
4334	02	00BE5	331018F5			MTW,1	SPFLAG	ERROR+1
4335	02	00BE6	6AF01D47		T1ST3008	BAL,15	:COMPARE	COMPARE INFORMATION
4336	02	00BE7	68000BE8			B	T1ST3008+5	
4337					*	INFORMATION ERROR		
4338	02	00BE8	EAF0021B	A		BAL,15	*:ERROR	3007
4339	02	00BE9	00000BBF	A		DATA	3007	INCORRECT INFORMATION
4340	02	00BEA	331018F5			MTW,1	SPFLAG	ERROR+1
4341	02	00BEB	327018F5			LW,7	SPFLAG	CHECK ERROR FLAG
4342	02	00BEC	68300BF0			BEZ	T1ST3009	
4343	02	00BED	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4344	02	00BEE	2E000000	A		WAIT		
4345	02	00BEF	68000BCE			B	T1ST3006-4	LOOP ON ERROR
4346	02	00BF0	6AF01640		T1ST3009	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
4347	02	00BF1	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
4348	02	00BF2	35F019A7			STW,15	NOPKPRT	
4349	02	00BF3	680003B2			B	:TIM	GO TO SEQUENCER
4350					*			
4351					*			
4352					*			
4353					*			
4354					*			

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00 7/30/70	65
4355					*			
4356					*			
4357					*			TST1,31 PACKED BINARY DATA TEST
4358					*			
4359					*			
4360					*			THIS TEST WILL WRITE DATA X'00' - X'FF' USING THE PACKED BINARY
4361					*			MODE. THE DATA WILL BE READ AND VERIFIED. THIS SUBTEST WILL BE
4362					*			BY PASSED IF NOT APPLICABLE TO THE SYSTEM.
4363					*			
4364					*			
4365	02	00BF4	3270188D		:TIST31	LW,7	STDPB	CHECK FOR PACKED BINARY STD OR OPT
4366	02	00BF5	693008F8			RNF7	TIST3101	
4367	02	00BF6	3270188E			LW,7	OTPB	
4368	02	00BF7	68300C77			BEZ	TIST3113	BY PASS TEST
4369	02	00BF8	22700000	A	TIST3101	LI,7	0	SMEAR PATTERN 00-FF
4370	02	00BF9	22AFFFE0	A		LI,10	-32	
4371	02	00BFA	32C020A3			LW,12	=X'00010203'	
4372	02	00BFB	3AD0000C	A		LCW,13	12	
4373	02	00BFC	35CE20C5			STW,12	BUFF1,7	STORE WORD
4374	02	00BFD	35DE20E5			STW,13	BUFF1+32,7	
4375	02	00BFE	30C020A4			AW,12	=X'04040404'	
4376	02	00BFF	33100007	A		MTW,1	7	
4377	02	00C00	65A008F8			BIR,10	\$-5	
4378	02	00C01	351019A7			STW,1	NOPKPR	
4379	02	00C02	22A00040	A		LI,10	64	
4380	02	00C03	35A01DBA			STW,10	:COMWCNT	WORDS TO COMPARE
4381	02	00C04	22A020C5			LI,10	BUFF1	
4382	02	00C05	35A01DBB			STW,10	:COMBFRA	CORRECT INFORMATION
4383	02	00C06	32A0207D			LW,10	BUFF2	
4384	02	00C07	35A01DBC			STW,10	:COMBFRB	OBSERVED INFORMATION
4385	02	00C08	228FFF9C	A		LI,8	-100	
4386	02	00C09	6AF01638		TIST3102	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4387	02	00C0A	22000BE7			LI,0	DA(WPBT)	WRITE PACKED BINARY RECORD 00-FF
4388	02	00C0B	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4389	02	00C0C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4390	02	00C0D	6AF01EC4			BAL,15	:ERRORT	TEST
4391	02	00C0E	00005D84			DATA	BA(TSEQ011)	BC=0, READY, NO UE
4392	02	00C0F	68000C15			B	TIST3103-2	
4393					*	ERROR	EXIT	
4394	02	00C10	EAF0021B	A		BAL,15	*:ERROR	#3101
4395	02	00C11	00000C10	A		DATA	3101	INCORRECT BITS IN TEST
4396	02	00C12	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4397	02	00C13	2E000000	A		WAIT		
4398	02	00C14	68000C09			B	TIST3102	LOOP ON ERROR
4399	02	00C15	22700000	A		LI,7	0	
4400	02	00C16	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4401	02	00C17	6AF01638		TIST3103	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4402	02	00C18	22000C0D			LI,0	DA(SB100)	SPACE BKW OVER RECORD
4403	02	00C19	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4404	02	00C1A	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4405	02	00C1B	6AF01EC4			BAL,15	:ERRORT	TEST
4406	02	00C1C	00005D84			DATA	BA(TSEQ011)	READY, NO UE
4407	02	00C1D	68000C21			B	TIST3104	
4408					*	ERROR	EXIT	
4409	02	00C1E	331018F5			MTW,1	SPFLAG	ERRCR+1
4410	02	00C1F	EAF0021B	A		BAL,15	*:ERROR	#3102
4411	02	00C20	00000C1E	A		DATA	3102	INCORRECT BITS IN TEST
4412	02	00C21	6AF01638		TIST3104	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4413	02	00C22	220008FD			LI,0	DA(RPBT)	READ FWD PACKED BINARY RECORD 00-FF
4414	02	00C23	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4415	02	00C24	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4416	02	00C25	6AF01EC4			BAL,15	:ERRORT	TEST
4417	02	00C26	00005D78			DATA	BA(TSEQ010)	NO INC LENGTH, READY, NO UE
4418	02	00C27	68000C2B			B	TIST3105	
4419					*	ERROR	EXIT	
4420	02	00C28	331018F5			MTW,1	SPFLAG	ERRCR+1
4421	02	00C29	EAF0021B	A		BAL,15	*:ERROR	#3103
4422	02	00C2A	00000C1F	A		DATA	3103	INCORRECT BITS IN TEST
4423	02	00C2B	6AF01D47		TIST3105	BAL,15	:COMPARE	COMPARE INFORMATION
4424	02	00C2C	68000C30			B	TIST3105+5	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70
								66
4425					*	INFORMATION ERROR		
4426	02	00C2D	EAF0021B A			BAL,15	*:ERROR	#3104
4427	02	00C2E	00000C20 A			DATA	3104	INCORRECT INFORMATION
4428	02	00C2F	331018F5			MTW,1	SPFLAG	ERROR+1
4429	02	00C30	327018F5			LW,7	SPFLAG	CHECK ERROR FLAG
4430	02	00C31	68300C35			BEZ	T1ST3106	
4431	02	00C32	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4432	02	00C33	2E000000 A			WAIT		
4433	02	00C34	68000C15			B	T1ST3103-2	LOOP ON ERROR
4434	02	00C35	65800C09		T1ST3106	BIR,8	T1ST3102	DO 100 RECORDS
4435					*			END CONDITION TEST
4436	02	00C36	35301DBA			STW,3	:COMWCNT	WORD COUNT
4437	02	00C37	22701996			LI,7	COPEC	COMPARE INFORMATION
4438	02	00C38	35701DB8			STW,7	:COMBFRA	
4439	02	00C39	22A00003 A			LI,10	3	
4440	02	00C3A	22700006 A			LI,7	6	6 BYTES
4441	02	00C3B	557217CB			STW,7	WSPKEC+1,1	WRITE 6,7,8 BYTES
4442	02	00C3C	5572180D			STW,7	RSPKEC+1,1	READ 6,8,9 BYTES
4443	02	00C3D	328020A5		T1ST3107	LW,8	=X'AAAAAAA'	WRITE PATTERN
4444	02	00C3E	329020A1			LW,9	=X'FFFFFFF'	SMEAR IN READ IN AREA
4445	02	00C3F	225FFFFD A			LI,5	-3	3 WORDS
4446	02	00C40	22600000 A			LI,6	0	
4447	02	00C41	358C20C5			STW,8	BUFF1,6	
4448	02	00C42	B59C207D			STW,9	*BUFF2,6	
4449	02	00C43	33100006 A			MTW,1	6	
4450	02	00C44	65500C41			BIR,5	\$-3	
4451	02	00C45	6AF01638		T1ST3108	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4452	02	00C46	22000BE5			LI,0	DA(WSPKEC)	WRITE 6 BYTES FOR END CONDITION
4453	02	00C47	6AF01CA2			BAL,15	:IOEXEC	T10,S10
4454	02	00C48	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4455	02	00C49	6AF01EC4			BAL,15	:ERRORT	TEST
4456	02	00C4A	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
4457	02	00C4B	68000C51			B	T1ST3109	
4458					*	ERROR EXIT		
4459	02	00C4C	EAF0021B A			BAL,15	*:ERROR	3105
4460	02	00C4D	00000C21 A			DATA	3105	INCORRECT BITS ON TEST
4461	02	00C4E	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCHES
4462	02	00C4F	2E000000 A			WAIT		
4463	02	00C50	68000C45			B	T1ST3108	LOOP ON ERROR
4464	02	00C51	22800000 A		T1ST3109	LI,8	0	
4465	02	00C52	358018F5			STW,8	SPFLAG	CLEAR ERROR FLAG
4466	02	00C53	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4467	02	00C54	22000C0D			LI,0	DA(SB100)	SPACE BKW OVER RECORD
4468	02	00C55	6AF01CA2			BAL,15	:IOEXEC	T10,S10
4469	02	00C56	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4470	02	00C57	6AF01EC4			BAL,15	:ERRORT	TEST
4471	02	00C58	00005D78			DATA	BA(TSEQ010)	READY, NO UE
4472	02	00C59	68000C5D			B	T1ST3110	
4473					*	ERROR EXIT		
4474	02	00C5A	EAF0021B A			BAL,15	*:ERROR	3106
4475	02	00C5B	00000C22 A			DATA	3106	INCORRECT BITS ON TEST
4476	02	00C5C	331018F5			MTW,1	SPFLAG	ERROR +1
4477	02	00C5D	6AF01638		T1ST3110	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4478	02	00C5E	22000C06			LI,0	DA(RSPKEC)	READ 6 BYTES END CONDITION
4479	02	00C5F	6AF01CA2			BAL,15	:IOEXEC	T10,S10
4480	02	00C60	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4481	02	00C61	6AF01EC4			BAL,15	:ERRORT	TEST
4482	02	00C62	00005D78			DATA	BA(TSEQ010)	READY, NO UE
4483	02	00C63	68000C67			B	T1ST3111	
4484					*	ERROR EXIT		
4485	02	00C64	EAF0021B A			BAL,15	*:ERROR	3107
4486	02	00C65	00000C23 A			DATA	3107	INCORRECT BITS ON TEST
4487	02	00C66	331018F5			MTW,1	SPFLAG	ERROR +1
4488	02	00C67	6AF01D47		T1ST3111	BAL,15	:COMPARE	COMPARE INFORMATION
4489	02	00C68	68000C6C			B	T1ST3111+5	
4490					*	INFORMATION ERROR		
4491	02	00C69	EAF0021B A			BAL,15	*:ERROR	3108
4492	02	00C6A	00000C24 A			DATA	3108	INFORMATION ERROR
4493	02	00C6B	331018F5			MTW,1	SPFLAG	ERROR +1
4494	02	00C6C	32F018F5			LW,15	SPFLAG	CHECK ERROR FLAG

LINE NO.	MEM PRCT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	68
4565	02	00C9D	EAF0021B	A		BAL,15	*:ERROR	#3202
4566	02	00C9E	00000C82	A		DATA	3202	INCORRECT BITS IN TEST
4567	02	00C9F	331018F5			MTW,1	SPFLAG	ERROR+1
4568	02	00CA0	6AF01638		T1ST3203	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4569	02	00CA1	22000BFE			LI,0	DA(LRCPK)	READ FWD LRC RECORD PACKED BINARY
4570	02	00CA2	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4571	02	00CA3	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4572	02	00CA4	6AF01EC4			BAL,15	:ERRORT	TEST
4573	02	00CA5	00005D78			DATA	BA(TSEQ010)	READY, NO UE, BC =0
4574	02	00CA6	68000CAA			B	T1ST3204	
4575					*		ERROR EXIT	
4576	02	00CA7	EAF0021B	A		BAL,15	*:ERROR	#3203
4577	02	00CA8	00000C83	A		DATA	3203	INCORRECT BITS IN TEST
4578	02	00CA9	331018F5			MTW,1	SPFLAG	ERROR+1
4579	02	00CAA	6AF01D47		T1ST3204	BAL,15	:COMPARE	COMPARE INFORMATION
4580	02	00CAB	68000CAF			B	T1ST3204+5	
4581					*		INFORMATION ERROR	
4582	02	00CAC	EAF0021B	A		BAL,15	*:ERROR	#3204
4583	02	00CAD	00000C84	A		DATA	3204	INCORRECT INFORMATION
4584	02	00CAE	331018F5			MTW,1	SPFLAG	ERROR+1
4585	02	00CAF	32E018F5			LW,14	SPFLAG	CHECK ERROR FLAG
4586	02	00CB0	68300CB4			BEZ	T1ST3205	
4587	02	00CB1	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4588	02	00CB2	2E000000	A		WAIT		
4589	02	00CB3	68000C94			B	T1ST3202-2	LOOP ON ERROR
4590	02	00CB4	32C017D0		T1ST3205	LW,12	WLRCPK	NEXT RECORD
4591	02	00CB5	20C00000	A		AI,12	12	
4592	02	00CB6	35C017D0			STW,12	WLRCPK	STORE
4593	02	00CB7	33301D8B			MTW,3	:COMBFRA	NEXT COMPARE
4594	02	00CB8	65800C88			BIR,8	T1ST3201	
4595					*			
4596	02	00CB9	32C0188F			LW,12	OPTBCD	BINARY -ODD PARITY SECTION
4597	02	00CBA	69300C8D			BNEZ	\$+3	CHECK FOR DECIMAL OPTION OR STD
4598	02	00CBB	32C0188C			LW,12	STDBCD	
4599	02	00CBC	68300CF3			BEZ	T1ST3210+3	BYPASS SECTION
4600	02	00CBD	352019A7			STW,2	NOPKPR	SET NO PACKED PRINTOUT FLAG
4601	02	00CBE	35101D8A			STW,1	:COMWCNT	WORDS TO COMPARE
4602	02	00CBF	227064E4			LI,7	BA(LRCOP)	SET UP WRITE
4603	02	00CC0	557217D2			STH,7	WLRCOP,1	
4604	02	00CC1	22A01939			LI,10	LRCOP	
4605	02	00CC2	35A01D8B			STW,10	:COMBFRA	CORRECT INFORMATION
4606	02	00CC3	228FFFF9	A		LI,8	-7	
4607	02	00CC4	6AF01638		T1ST3206	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4608	02	00CC5	22000BE9			LI,0	DA(WLRCOP)	WRITE LRC ODD PARITY BINARY MODE
4609	02	00CC6	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4610	02	00CC7	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4611	02	00CC8	6AF01EC4			BAL,15	:ERRORT	TEST
4612	02	00CC9	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
4613	02	00CCA	68000CDD			B	T1ST3207-2	
4614					*		ERROR EXIT	
4615	02	00CCB	EAF0021B	A		BAL,15	*:ERROR	#3205
4616	02	00CCC	00000C85	A		DATA	3205	CHECK SENSE SWITCH SETTINGS
4617	02	00CCD	EAF0021D	A		BAL,15	*:SENSE	
4618	02	00CCE	2E000000	A		WAIT		
4619	02	00CCF	68000CC4			B	T1ST3206	LOOP ON ERROR
4620	02	00CD0	22700000	A		LI,7	0	
4621	02	00CD1	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4622	02	00CD2	6AF01638		T1ST3207	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4623	02	00CD3	22000C0D			LI,0	DA(SB100)	SPACE BKW OVER RECORD
4624	02	00CD4	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4625	02	00CD5	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4626	02	00CD6	6AF01EC4			BAL,15	:ERRORT	TEST
4627	02	00CD7	00005D78			DATA	BA(TSEQ010)	READY, NO UE
4628	02	00CD8	68000CDD			B	T1ST3208	
4629					*		ERROR EXIT	
4630	02	00CD9	331018F5			MTW,1	SPFLAG	ERROR+1
4631	02	00CDA	EAF0021B	A		BAL,15	*:ERROR	#3206
4632	02	00CDB	00000C86	A		DATA	3206	CLEAR AND ARM INTERRUPT
4633	02	00CDC	6AF01638		T1ST3208	BAL,15	CLRARM	READ FWD ODD PARITY
4634	02	00CDD	22000BFF			LI,0	DA(LRCPK)	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 69
4635	02	00CDE	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4636	02	00CDF	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4637	02	00CE0	6AF01EC4			BAL,15	:ERRORT	TEST
4638	02	00CE1	00005D78			DATA	BA(TSEQ010)	READY, NO UE, BC=0
4639	02	00CE2	68000CE6			B	TIST3209	
4640				*			ERROR EXIT	
4641	02	00CE3	331018F5			MTW,1	SPFLAG	ERROR+1
4642	02	00CE4	EAF0021B	A		BAL,15	*:ERROR	#3207
4643	02	00CE5	00000C87	A		DATA	3207	
4644	02	00CE6	6AF01D47		TIST3209	BAL,15	:COMPARE	COMPARE INFORMATION
4645	02	00CE7	68000CEB			B	TIST3209+5	
4646				*			INFORMATION ERROR	
4647	02	00CE8	EAF0021B	A		BAL,15	*:ERROR	#3208
4648	02	00CE9	00000C88	A		DATA	3208	
4649	02	00CEA	331018F5			MTW,1	SPFLAG	ERROR+1
4650	02	00CEB	32E018F5			LW,14	SPFLAG	CHECK ERROR FLAG
4651	02	00CEC	68300CF0			BEZ	TIST3210	
4652	02	00CED	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4653	02	00CEE	2E000000	A		WAIT		
4654	02	00CEF	68000CD0			B	TIST3207-2	LOOP ON ERROR
4655	02	00CF0	334017D2		TIST3210	MTW,4	WLRCEP	NEXT RECORD
4656	02	00CF1	33101DBB			MTW,1	:COMBFRA	NEXT COMPARE
4657	02	00CF2	65800CC4			BIR,8	TIST3206	
4658				*				DECIMAL (BCD), EVEN PARITY SECTION
4659	02	00CF3	32C0188C			LW,12	STDBCD	
4660	02	00CF4	69300CF7			BNEZ	\$+3	
4661	02	00CF5	32C0188F			LW,12	OPTBCD	CHECK IF BCD-EVEN PARITY AVAILABLE
4662	02	00CF6	68300D2D			BEZ	TIST3216	BYPASS TEST
4663	02	00CF7	352019A7			STW,2	NOPKPR	SET NO PACKED PRINTOUT FLAG
4664	02	00CF8	228FFFF9	A		LI,8	-7	
4665	02	00CF9	35101DBA			STW,1	:COMWCNT	WORDS TO COMPARE
4666	02	00CFA	22706500			LI,7	BA(LRCEP)	SET UP WRITE
4667	02	00CFB	557217D4			STW,7	WLRCEP,1	
4668	02	00CFC	22A01940			LI,10	LRCEP	
4669	02	00CFD	35A01DBB			:COMBFRA		CORRECT INFORMATION
4670	02	00CFE	6AF01638		TIST3211	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4671	02	00CFE	22000BEA			LI,0	DA(WLRCEP)	WRITE LRC EVEN PARITY MODE
4672	02	00D00	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4673	02	00D01	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4674	02	00D02	6AF01EC4			BAL,15	:ERRORT	TEST
4675	02	00D03	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
4676	02	00D04	68000D0A			B	TIST3212-2	
4677				*			ERROR EXIT	
4678	02	00D05	EAF0021B	A		BAL,15	*:ERROR	#3209
4679	02	00D06	00000C89	A		DATA	3209	
4680	02	00D07	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4681	02	00D08	2E000000	A		WAIT		
4682	02	00D09	68000CFE			B	TIST3211	LOOP ON ERROR
4683	02	00D0A	2270000C	A		LI,7	0	
4684	02	00D0B	357018F5			STW,7	SPFLAG	CLEAR ERROR FLAG
4685	02	00D0C	6AF01638		TIST3212	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4686	02	00D0D	22000C0D			LI,0	DA(SB100)	SPACE BKW OVER RECORD
4687	02	00D0E	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4688	02	00D0F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4689	02	00D10	6AF01EC4			BAL,15	:ERRORT	TEST
4690	02	00D11	00005D78			DATA	BA(TSEQ010)	READY, NO UE
4691	02	00D12	68000D16			B	TIST3213	
4692				*			ERROR EXIT	
4693	02	00D13	331018F5			MTW,1	SPFLAG	
4694	02	00D14	EAF0021B	A		BAL,15	*:ERROR	#3210
4695	02	00D15	00000C8A	A		DATA	3210	
4696	02	00D16	6AF01638		TIST3213	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4697	02	00D17	22000C00			LI,0	DA(RLRCEP)	READ LRC RECORD EVEN PARITY
4698	02	00D18	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
4699	02	00D19	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4700	02	00D1A	6AF01EC4			BAL,15	:ERRORT	TEST
4701	02	00D1B	00005D78			DATA	BA(TSEQ010)	READY, NO UE, BC=0
4702	02	00D1C	68000D20			B	TIST3214	
4703				*			ERROR EXIT	
4704	02	00D1D	EAF0021B	A		BAL,15	*:ERROR	#3211

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 70
4705	02	00D1E	00000C8B	A		DATA	3211	
4706	02	00D1F	331018F5			MTW,1	SPFLAG	ERROR+1
4707	02	00D20	6AF01D47		T1ST3214	BAL,15	:COMPARE	COMPARE INFORMATION
4708	02	00D21	68000D25			B	T1ST3214+5	
4709					*		INFORMATION ERROR	
4710	02	00D22	EAF0021B	A		BAL,15	*:ERROR	#3212
4711	02	00D23	00000C8C	A		DATA	3212	
4712	02	00D24	331018F5			MTW,1	SPFLAG	ERROR +1
4713	02	00D25	327018F5			LW,7	SPFLAG	
4714	02	00D26	68300D2A			BEZ	T1ST3215	
4715	02	00D27	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4716	02	00D28	2E000000	A		WAIT		
4717	02	00D29	68000D0A			B	T1ST3212-2	LOOP ON ERROR
4718	02	00D2A	334017D4		T1ST3215	MTW,4	WLRCEP	NEXT RECORD
4719	02	00D2B	33101DBB			MTW,1	:COMBFRA	NEXT COMPARE
4720	02	00D2C	65800CFE			BIR,8	T1ST3211	
4721	02	00D2D	6AF01640		T1ST3216	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
4722	02	00D2E	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
4723	02	00D2F	35F019A7			STW,15	NOPKPRT	
4724	02	00D30	680003B2			B	:TIM	GO TO SEQUENCER
4725					*			
4726					*			
4727					*			
4728					*			
4729					*			
4730					*			
4731					*			
4732					*			
4733					*			
4734					*			
4735					*			
4736					*			
4737					*			
4738					*			
4739					*			
4740					*			
4741					*			
4742	02	00D31	6AF0160C		:T1ST33	BAL,15	RWTLF	REWIND TO LOAD POINT
4743	02	00D32	22500000	A		LI,5	0	
4744	02	00D33	35501DBD			STW,5	:COMFLAG	PRINTOUT ERRORS
4745	02	00D34	227020C5			LI,7	WA(BUFF1)	
4746	02	00D35	35701DBB			STW,7	:COMBFRA	BUFFER EXPECTED
4747	02	00D36	3270207D			LW,7	BUFF2	
4748	02	00D37	35701DBC			STW,7	:COMBFRB	BUFFER OBSERVED
4749	02	00D38	22700003	A		LI,7	3	3 WORDS
4750	02	00D39	35701DBA			STW,7	:COMWCNT	
4751	02	00D3A	22600000	A		LI,6	0	
4752	02	00D3B	22C018E0			LI,12	PT00	SET UP FIRST TRK SATURATION PTRN
4753	02	00D3C	55C20D43			STH,12	T1ST3301,1	
4754	02	00D3D	22C01979			LI,12	PBTSAT	
4755	02	00D3E	55C20D54			STH,12	T1ST3306,1	
4756	02	00D3F	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
4757	02	00D40	35F019A7			STW,15	NOPKPRT	
4758	02	00D41	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
4759	02	00D42	68300D40			BE	T1ST3306-7	
4760	02	00D43	32E018E0		T1ST3301	LW,14	PT00	PATTERNS 00 TO 20
4761	02	00D44	22DFFFFF6	A		LI,13	-10	10 WORDS EACH TRACK
4762	02	00D45	35EC20C5			STW,14	BUFF1,6	STORE PATTERN
4763	02	00D46	33100006	A		MTW,1	6	
4764	02	00D47	65D00D45			BIR,13	\$-2	
4765	02	00D48	33100D43			MTW,1	T1ST3301	CHANGE PATTERN
4766	02	00D49	228018E7			LI,8	PT80-1	LAST PATTERN DONE
4767	02	00D4A	51820D43			CH,8	T1ST3301,1	
4768	02	00D4B	69200D43			BG	T1ST3301	
4769	02	00D4C	68000D5D			B	T1ST3303-10	
4770	02	00D4D	225FFFFF9	A		LI,5	-7	
4771	02	00D4E	22800021	A		LI,8	33	
4772	02	00D4F	35801D38			STW,8	:PATWC	WORD COUNT
4773	02	00D50	22800004	A		LI,8	4	
4774	02	00D51	35801D38			STW,8	:PATID	3 WORD PACKED PATTERN

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 71
4775	02	00D52	228020C5			LI,8	BUFF1	STARTING BUFFER AREA
4776	02	00D53	35801D3C			STW,8	:PATBFR	
4777	02	00D54	22801979		T1ST3306	LI,8	PBTSAT	3 WORD PACKED PATTERN
4778	02	00D55	35801D39			STW,8	:PATID+1	
4779	02	00D56	6AF01CF9			BAL,15	:PATTERN	SMEAR PATTERN
4780	02	00D57	20600021	A		AI,6	33	
4781	02	00D58	33300D54			MTW,3	T1ST3306	
4782	02	00D59	32801D3C			LW,8	:PATBFR	
4783	02	00D5A	20800021	A		AI,8	33	NEXT SPREAD AREA
4784	02	00D5B	35801D3C			STW,8	:PATBFR	
4785	02	00D5C	65500D54			BIR,5	T1ST3306	DO 7 TIMES
4786	02	00D5D	3A5018CB			LW,5	MAXREAD	MAXIMUM RECORD SIZE
4787	02	00D5E	32E020A6			LW,14	=X'51F99F15'	PATTERN TO SHIFT
4788	02	00D5F	3270188D			LW,7	STDPB	CHECK FOR PACKED BINARY
4789	02	00D60	69300D67			BNEZ	T1ST3303	
4790	02	00D61	3270188E			LW,7	OPTPB	OPTION PACKED BINARY
4791	02	00D62	69300D67			BNEZ	T1ST3303	
4792	02	00D63	35E0000D	A		STW,14	13	UNPACKED BINARY
4793	02	00D64	48D0209D			AND,13	=X'3F3F3F3F'	
4794	02	00D65	35DC20C5			STW,13	BUFF1,6	STORE UNPACKED
4795	02	00D66	68000D68			B	T1ST3303+1	
4796	02	00D67	35EC20C5		T1ST3303	STW,14	BUFF1,6	STORE PACKED BINARY
4797	02	00D68	25E00201	A		SCS,14	1	SHIFT CIRCULAR
4798	02	00D69	33100006	A		MTW,1	6	
4799	02	00D6A	65500D5F			BIR,5	\$-11	SMEAR MAXIMUM I/O AREA
4800	02	00D6B	2250000C	A		LI,5	12	12 BYTES
4801	02	00D6C	5552178D			STH,5	TWNP+1,1	
4802	02	00D6D	555217EB			STH,5	RFNP+1,1	
4803	02	00D6E	22900000	A		LI,9	0	CLEAR RETRY TALLY
4804	02	00D6F	6AF01638		T1ST3302	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4805	02	00D70	22000BDE			LI,0	DA(TWNP)	WRITE RECORD WITH SPECIAL PATTERN
4806	02	00D71	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
4807	02	00D72	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4808	02	00D73	6AF01EC4		T1ST3304	BAL,15	:ERRORT	TEST
4809	02	00D74	00005D84			DATA	BA(TSE0011)	BC=0, READY, NO UE
4810	02	00D75	68000D88			B	T1ST3305-1	
4811					*		ERROR EXIT	
4812	02	00D76	EAF00218	A		BAL,15	*:ERROR	#3301
4813	02	00D77	00000CE5	A		DATA	3301	INCORRECT BITS IN TEST
4814	02	00D78	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4815	02	00D79	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4816	02	00D7A	68000D7C			B	\$+2	LOOP ON ERROR
4817	02	00D7B	68000D88			B	T1ST3305-1	CONTINUE
4818					*			WRITE RETRY
4819	02	00D7C	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4820	02	00D7D	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
4821	02	00D7E	6AF01CA2			BAL,15	:IOEXEC	T10, S10
4822	02	00D7F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4823	02	00D80	33100009	A		MTW,1	9	TALLY +1
4824	02	00D81	21900005	A		CI,9	5	TALLY =5
4825	02	00D82	69100D6F			BL	T1ST3302	
4826	02	00D83	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4827	02	00D84	22000BCA			LI,0	DA(TSE1)	SET ERASE
4828	02	00D85	6AF01CA2			BAL,15	:IOEXEC	T10, S10
4829	02	00D86	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
4830	02	00D87	68000D6E			B	T1ST3302-1	GO RETRY AFTER SET ERASE
4831	02	00D88	22900000	A		LI,9	0	CLEAR RETRY TALLY
4832	02	00D89	6AF01638		T1ST3305	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4833	02	00D8A	22F00000	A		LI,15	0	
4834	02	00D8B	35F018F5			STW,15	SPFLAG	CLEAR ERROR FLAG
4835	02	00D8C	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
4836	02	00D8D	22000C19			LI,0	DA(SPBRAND)	SPACE BKW OVER RECORD
4837	02	00D8E	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
4838	02	00D8F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4839	02	00D90	6AF01EC4		T1ST3307	BAL,15	:ERRORT	TEST
4840	02	00D91	00005D84			DATA	BA(TSE0011)	READY, NO UE
4841	02	00D92	68000DA5			B	T1ST3309	
4842					*		ERROR EXIT	
4843	02	00D93	EAF00218	A		BAL,15	*:ERROR	#3302
4844	02	00D94	00000CE6	A		DATA	3302	INCORRECT BITS IN TEST

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 72
4845	02	00D95	331018F5			MTW,1	SPFLAG	ERROR +1
4846	02	00D96	32F018F5			LW,15	SPFLAG	
4847	02	00D97	68300DA4			BE	T1ST3309-1	
4848	02	00D98	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4849	02	00D99	2E000000	A		WAIT		HALT ON ERROR IF S53 RESET
4850	02	00D9A	68000D9C			B	\$+2	LOOP ON ERROR
4851	02	00D9B	68000DC5			B	T1ST3313	GO TO NEXT SIZE RECORD
4852								READ BACKWARD RETRY
4853	02	00D9C	33100009	A		MTW,1	9	TALLY +1
4854	02	00D9D	21900006	A		CI,9	6	
4855	02	00D9E	68300DC5			BE	T1ST3313	GO TO NEXT SIZE RECORD
4856	02	00D9F	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4857	02	00DA0	22000C1A			LI,0	DA(SPFRAND)	SPACE FWD
4858	02	00DA1	6AF01CA2			BAL,15	:IOEXEC	T10, S10
4859	02	00DA2	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4860	02	00DA3	68000D89			B	T1ST3305	RETRY READ
4861	02	00DA4	22900000	A		LI,9	0	CLEAR RETRY TALLY
4862	02	00DA5	6AF01638		T1ST3309	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4863	02	00DA6	22F00000	A		LI,15	0	
4864	02	00DA7	35F018F5			STW,15	SPFLAG	RESET FLAG
4865	02	00DA8	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
4866	02	00DA9	22000BF5			LI,0	DA(RFNP)	READ RECORD FORWARD
4867	02	00DAA	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
4868	02	00DAB	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4869	02	00DAC	6AF01EC4		T1ST3311	BAL,15	:ERROR	TEST
4870	02	00DAD	00005D78			DATA	BAITSEQ010)	NO UE, BC=00,READY, NO INC LENGHT
4871	02	00DAE	68000DB2			B	T1ST3312	
4872							ERROR EXIT	
4873	02	00DAF	EAF0021B	A		BAL,15	*:ERROR	#3303
4874	02	00DB0	00000CE7	A		DATA	3303	INCORRECT BITS ON TEST
4875	02	00DB1	331018F5			MTW,1	SPFLAG	ERROR +1
4876	02	00DB2	6AF01D47		T1ST3312	BAL,15	:COMPARE	COMPARE INFORMATION
4877	02	00DB3	68000DB7			B	T1ST3312+5	
4878							INFORMATION ERROR	
4879	02	00DB4	EAF0021B	A		BAL,15	*:ERROR	#3304
4880	02	00DB5	00000CE8	A		DATA	3304	INCORRECT INFORMATION
4881	02	00DB6	331018F5			MTW,1	SPFLAG	ERROR +1
4882	02	00DB7	32F018F5			LW,15	SPFLAG	
4883	02	00DB8	68300DC5			BEZ	T1ST3313	NO ERRORS
4884	02	00DB9	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4885	02	00DBA	2E000000	A		WAIT		HALT ON ERROR IF S53 RESET
4886	02	00DBB	68000DBD			B	\$+2	LOOP ON ERROR
4887	02	00DBC	68000DC5			B	T1ST3313	GO TO NEXT SIZE RECORD
4888								READ FORWARD RETRY
4889	02	00DBD	33100009	A		MTW,1	9	TALLYH61
4890	02	00DBE	21900006	A		CI,9	6	
4891	02	00DBF	68300DC5			BE	T1ST3313	GO TO NEXT SIZE RECORD
4892	02	00DC0	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4893	02	00DC1	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
4894	02	00DC2	6AF01CA2			BAL,15	:IOEXEC	T10, S10
4895	02	00DC3	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
4896	02	00DC4	68000DA5			B	T1ST3309	RETRY READ
4897	02	00DC5	32701DBA		T1ST3313	LW,7	:COMWCNT	INCREMENT RECORD SIZE
4898	02	00DC6	2070000C	A		AI,7	12	12 WORDS
4899	02	00DC7	35701DBA			STW,7	:COMWCNT	
4900	02	00DC8	527217BD			LH,7	THNP+1,1	48 BYTES
4901	02	00DC9	20700030	A		AI,7	48	
4902	02	00DCA	557217BD			STW,7	THNP+1,1	
4903	02	00DCB	557217EB			STW,7	RFNP+1,1	
4904	02	00DCC	317018CA			CH,7	MAXREADB	RECORD TOO LARGE TO READ
4905	02	00DCD	69100D6E			BCS,1	T1ST3302-1	BRANCH IF LESS THAN MAXIMUM BYTES
4906	02	00DCE	6AF0160C		T1ST3314	BAL,15	RWTLF	REWIND TO LOAD POINT
4907	02	00DCF	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
4908	02	00DD0	680003B2			B	:TIM	GO TO SEQUENCER
4909								
4910								
4911								
4912								
4913								
4914								

TST1, 34 READY - BUSY TEST

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			73
4915								
4916								
4917								
4918								
4919								
4920								
4921								
4922	02	00DD1	22AFFFF6	A	:T1ST34	LI,10	-10	
4923	02	00DD2	6AF01651			BAL,15	SMEARPTR	SMEAR PATTERN
4924	02	00DD3	6AF01638		T1ST3401	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4925	02	00DD4	22000BE0			LI,0	DA(TW1000)	WRITE 1000 BYTES
4926	02	00DD5	CCC018B5			SIO,12	*:DEVADDR	SIO
4927	02	00DD6	225FFFE2	A		LI,5	-30	
4928	02	00DD7	65500DD7			BIR,5	\$	
4929	02	00DD8	CD8018B5		T1ST3402	TIO,8	*:DEVADDR	TIO WITH CONTROLLER BUSY
4930	02	00DD9	4B9020A7			AND,9	=X'60000000'	DEVICE BUSY
4931	02	00DDA	319020A7			CW,9	=X'60000000'	
4932	02	00DD8	68300DE1			BEZ	T1ST3403	
4933								
4934	02	00DDC	EAF0021B	A		BAL,15	*:ERROR	3401
4935	02	00DDD	00000D9A	A		DATA	3401	INCORRECT RESPONSE ON TIO
4936	02	00DDE	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4937	02	00DDF	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4938	02	00DE0	68000DD3			B	T1ST3401	LOOP ON ERROR
4939	02	00DE1	22E0012C	A	T1ST3403	LI,14	300	300 MS
4940	02	00DE2	6AF01E26			BAL,15	:DELAY	DELAY
4941	02	00DE3	68000DE9			B	T1ST3404	
4942								
4943	02	00DE4	EAF0021B	A		BAL,15	*:ERROR	3402
4944	02	00DE5	00000D4A	A		DATA	3402	TIMEOUT ON SIO
4945	02	00DE6	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4946	02	00DE7	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4947	02	00DE8	68000DD3			B	T1ST3401	LOOP ON ERROR
4948	02	00DE9	6AF01EC4		T1ST3404	BAL,15	:ERRORT	TEST
4949	02	00DEA	00005D84			DATA	BA(TSEQ011)	READY, NO UE BC=00
4950	02	00DEB	68000DF1			B	T1ST3405	
4951								
4952	02	00DEC	EAF0021B	A		BAL,15	*:ERROR	3403
4953	02	00DED	00000D4B	A		DATA	3403	INCORRECT BITS ON TEST
4954	02	00DEE	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4955	02	00DEF	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4956	02	00DF0	68000DD3			B	T1ST3401	LOOP ON ERROR
4957	02	00DF1	65A00DD3		T1ST3405	BIR,10	T1ST3401	DO 10 TIMES
4958	02	00DF2	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4959	02	00DF3	22000BE0			LI,0	DA(TW1000)	WRITE 1000 BYTES
4960	02	00DF4	CCC018B5			SIO,12	*:DEVADDR	SIO
4961	02	00DF5	22000BF6		T1ST3406	LI,0	DA(RF100B)	READ FWD
4962	02	00DF6	CC8018B5			SIO,8	*:DEVADDR	SIO BUSY CHANNEL
4963	02	00DF7	4B9020B5			AND,9	=X'06000000'	BUSY
4964	02	00DF8	319020B5			CW,9	=X'06000000'	CONTROLLER BUSY
4965	02	00DF9	68300DF1			BEZ	T1ST3407	
4966								
4967	02	00DFA	EAF0021B	A		BAL,15	*:ERROR	3404
4968	02	00DFB	00000D4C	A		DATA	3404	INCORRECT STATUS RESPONSE ON SIO
4969	02	00DFC	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4970	02	00DFD	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4971	02	00DFE	68000DF2			B	T1ST3405+1	LOOP ON ERROR
4972	02	00DFE	22E00258	A	T1ST3407	LI,14	600	DELAY
4973	02	00E00	6AF01E26			BAL,15	:DELAY	DELAY
4974	02	00E01	68000E07			B	T1ST3408	
4975								
4976	02	00E02	EAF0021B	A		BAL,15	*:ERROR	3405
4977	02	00E03	00000D4D	A		DATA	3405	TIMEOUT ON SIO
4978	02	00E04	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4979	02	00E05	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
4980	02	00E06	68000DF2			B	T1ST3405+1	LOOP ON ERROR
4981	02	00E07	22E0001E	A	T1ST3408	LI,14	30	DELAY
4982	02	00E08	6AF01E26			BAL,15	:DELAY	
4983	02	00E09	68000E0A			B	\$+1	
4984	02	00E0A	22EFC950	A		LI,14	-14000	WAIT

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 74
4985	02	00E0B	65E00E0B			BIR,14	\$	
4986	02	00E0C	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
4987	02	00E0D	22000B03			LI,0	DA(TRWAI)	REWIND NO INTERRUPT
4988	02	00E0E	CCC018B5			SIO,12	*:DEVADDR	SIO
4989	02	00E0F	22000BE0			LI,0	DA(TW1000)	WRITE RECORD
4990	02	00E10	CC8018B5			SIO,8	*:DEVADDR	SIO WHILE REWINDING
4991	02	00E11	4B902085			AND,9	=X'06000000'	CONTROLLER BUSY
4992	02	00E12	31902085			CW,9	=X'06000000'	
4993	02	00E13	68300E1A			BEZ	TIST3409	
4994				*		ERROR EXIT		
4995	02	00E14	EAF0021B A			BAL,15	*:ERROR	3406
4996	02	00E15	00000D4F A			DATA	3406	INCORRECT STATUS RESPONSE ON SIO
4997	02	00E16	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
4998	02	00E17	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
4999	02	00E18	68000DF2			B	TIST3405+1	LOOP ON ERROR
5000	02	00E19	68000E2C			B	TIST3410+6	GO TO END DELAY ON CONTINUE
5001	02	00E1A	225FFFE2 A		TIST3409	LI,5	-30	TIME DELAY TILL DEVICE BUSY
5002	02	00E1B	65500E1B			BIR,5	\$	
5003	02	00E1C	CD8018B5			TIO,8	*:DEVADDR	TIO WHILE REWINDING
5004	02	00E1D	4B9020A7			AND,9	=X'60000000'	DEVICE BUSY
5005	02	00E1E	319020A7			CW,9	=X'60000000'	
5006	02	00E1F	68300E26			BEZ	TIST3410	
5007				*		ERROR EXIT		
5008	02	00E20	EAF0021B A			BAL,15	*:ERROR	3407
5009	02	00E21	00000D4F A			DATA	3407	INCORRECT STATUS RESPONSE ON TIO
5010	02	00E22	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5011	02	00E23	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5012	02	00E24	68000DF2			B	TIST3405+1	LOOP ON ERROR
5013	02	00E25	68000E2C			B	TIST3410+6	GO TO END DELAY ON CONTINUE
5014	02	00E26	CE8018B5		TIST3410	TDV,8	*:DEVADDR	TEST TILL LOAD POINT
5015	02	00E27	4B902098			AND,9	=X'04000000'	
5016	02	00E28	68300E26			BEZ	TIST3410	WAIT FOR LOAD POINT
5017	02	00E29	CD8018B5			TIO,8	*:DEVADDR	DEVICE OR CONTROLER BUSY
5018	02	00E2A	31902097			CW,9	=X'66000000'	
5019	02	00E2B	69400E29			BCS,4	\$-2	
5020	02	00E2C	227FFFE0C A			LI,7	-500	WAIT FOR TAPE TO STOP
5021	02	00E2D	65700E2D			BIR,7	\$	
5022	02	00E2E	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
5023	02	00E2F	680003B2			B	:TIM	GO TO SEQUENCER
5024				*				
5025				*				
5026				*				
5027				*				
5028				*				
5029				*				TST1,35 TAPE CREEP TEST
5030				*				
5031				*				
5032				*				
5033				*				
5034				*				
5035				*				
5036				*				
5037				*				
5038				*				
5039				*				
5040				*				
5041				*				
5042				*				
5043	02	00E30	6AF01577		:TIST35	BAL,15	GETTIME	GET TIMES ON LOOPS
5044	02	00E31	329020A8			LW,9	=X'0F0F0F0F'	CHECKERBOARD PATTERN
5045	02	00E32	35901D39			STW,9	:PATID+1	
5046	02	00E33	6AF0164F			BAL,15	SMEARSP	SMEAR SPECIAL PATTERN A
5047	02	00E34	3280209D			LW,8	=X'3F3F3F3F'	
5048	02	00E35	224FFFFC A			LI,4	-4	PATTERN FOR RECORD B
5049	02	00E36	3588212D			STW,8	BUFF1+104,4	
5050	02	00E37	65400E36			BIR,4	\$-1	
5051	02	00E38	22700018 A			LI,7	24	24 WORDS TO COMPARE
5052	02	00E39	35701DBA			STW,7	:COMWCNT	
5053	02	00E3A	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
5054	02	00E3B	35F019A7			STW,15	NOPKPRT	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL		MAG TAPE TEST 705735-11/51A00	7/30/70 75
5055	02	00E3C	6AF01638		T1ST3502	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5056	02	00E3D	22000BE4			LI,0	DA(WR96B)	WRITE 96 BYTES REC A
5057	02	00E3E	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5058	02	00E3F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5059	02	00E40	6AF01EC4		T1ST3504	BAL,15	:ERRORT	TEST
5060	02	00E41	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
5061	02	00E42	68000E48			B	T1ST3505	
5062					*		ERROR EXIT	
5063	02	00E43	EAF0021B	A		BAL,15	*:ERROR	#3501
5064	02	00E44	00000DAD	A		DATA	3501	INCORRECT BITS ON TEST
5065	02	00E45	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5066	02	00E46	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
5067	02	00E47	68000E3C			B	T1ST3502	LOOP ON ERROR
5068	02	00E48	6AF01638		T1ST3505	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5069	02	00E49	22000BCA			LI,0	DA(TSE11)	SET ERASE
5070	02	00E4A	6AF01CA2			BAL,15	:IOEXEC	T10, S10
5071	02	00E4B	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5072	02	00E4C	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5073	02	00E4D	22000BE1			LI,0	DA(TWCREP)	WRITE RECORD B
5074	02	00E4E	6AF01CA2			BAL,15	:IOEXEC	T10,S10
5075	02	00E4F	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
5076	02	00E50	6AF01EC4			BAL,15	:ERRORT	TEST
5077	02	00E51	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
5078	02	00E52	68000E58			B	T1ST3508	
5079					*		ERROR EXIT	
5080	02	00E53	EAF0021B	A		BAL,15	*:ERROR	3502
5081	02	00E54	00000DAE	A		DATA	3502	INCORRECT BITS IN TEST
5082	02	00E55	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH
5083	02	00E56	2E000000	A		WAIT		
5084	02	00E57	68000E3C			B	T1ST3502	LOOP ON ERROR
5085	02	00E58	6AF01638		T1ST3508	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5086	02	00E59	22000C08			LI,0	DA(SB16B)	SPACE BKW OVER REC B
5087	02	00E5A	6AF01CA2			BAL,15	:IOEXEC	T10,S10
5088	02	00E5B	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
5089	02	00E5C	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5090	02	00E5D	22000C07			LI,0	DA(SB100B)	SPACE BKW OVER REC A
5091	02	00E5E	6AF01CA2			BAL,15	:IOEXEC	T10,S10
5092	02	00E5F	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
5093					*		POSITIONED FOR COMPUTING TIME 1	
5094	02	00E60	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5095	02	00E61	22000BF6			LI,0	DA(RF100B)	READ FWD REC A
5096	02	00E62	6AF01CA2			BAL,15	:IOEXEC	T10,S10
5097	02	00E63	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
5098	02	00E64	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN AREA
5099	02	00E65	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5100	02	00E66	32A0209D			LW,10	=X'3F3F3F3F'	
5101	02	00E67	22000BF7			LI,0	DA(RF16B)	READ FWD REC B
5102	02	00E68	22500000	A		LI,5	0	TALLY IN R5
5103	02	00E69	22400000	A		LI,4	0	
5104	02	00E6A	CCC018B5			S10,12	*:DEVADDR	READ RECORD B
5105	02	00E6B	33100005	A		MTW,1	5	TALLY =TALLY+1
5106	02	00E6C	F1A0207D			CB,10	*BUFF2	INFO IN YET ON READ
5107	02	00E6D	69300E6B			BNEZ	\$-2	
5108	02	00E6E	32C01EA6			LW,12	:INTRECF	WAIT FOR INTERRUPT
5109	02	00E6F	68300E6E			BCR,3	\$-1	
5110	02	00E70	374018D4			MW,4	TIME2	R5 HAS TIME IN US
5111	02	00E71	22AFFFC0	A		LI,10	-64	
5112	02	00E72	6AF01638		T1ST3506	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5113	02	00E73	22000C08			LI,0	DA(SB16B)	SPACE BKW OVER RECORD B
5114	02	00E74	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5115	02	00E75	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5116	02	00E76	6AF01638		T1ST3509	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5117	02	00E77	22000BE1			LI,0	DA(TWCREP)	REWRITE RECORD B
5118	02	00E78	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5119	02	00E79	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5120	02	00E7A	6AF01EC4		T1ST3511	BAL,15	:ERRORT	TEST
5121	02	00E7B	00005D84			DATA	BA(TSEQ011)	READY, BC=00, NO UE
5122	02	00E7C	68000E7F			B	T1ST3512	
5123					*		ERROR EXIT	
5124	02	00E7D	EAF0021B	A		BAL,15	*:ERROR	#3503

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	76
5125	02	00E7E	00000DAF	A		DATA	3503	INCORRECT BITS ON TEST
5126	02	00E7F	65A00E72		T1ST3512	B1R,10	T1ST3506	
5127	02	00E80	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5128	02	00E81	22000C08			L1,0	DA(SB16B)	SPACE BKH OVER RECORD B
5129	02	00E82	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5130	02	00E83	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5131	02	00E84	6AF01EC4		T1ST3514	BAL,15	:EPRORT	TEST
5132	02	00E85	00005D84			DATA	BA(TSEQ011)	READY, BC=00, NO UE
5133	02	00E86	68000E89			B	T1ST3515	
5134					*	ERROR EXIT		
5135	02	00E87	EAF0021B	A		BAL,15	*:ERROR	#3504
5136	02	00E88	00000DB0	A		DATA	3504	INCORRECT BITS ON TEST
5137	02	00E89	6AF01638		T1ST3515	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5138	02	00E8A	22000C07			L1,0	DA(SB100B)	SPACE BKH OVER RECORD A
5139	02	00E8B	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5140	02	00E8C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5141	02	00E8D	6AF01EC4		T1ST3517	BAL,15	:ERRORT	TEST
5142	02	00E8E	00005D84			DATA	BA(TSEQ011)	READY, BC=0, NO UE
5143	02	00E8F	68000E92			B	T1ST3518	
5144					*	ERROR EXIT		
5145	02	00E90	EAF0021B	A		BAL,15	*:ERROR	#3505
5146	02	00E91	00000DB1	A		DATA	3505	INCORRECT BITS ON TEST
5147	02	00E92	6AF01638		T1ST3518	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5148	02	00E93	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
5149	02	00E94	22000BFA			L1,0	DA(RF96B)	READ FWD 96 BYTES REC A
5150	02	00E95	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5151	02	00E96	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5152	02	00E97	6AF01EC4		T1ST3520	BAL,15	:ERRORT	TEST
5153	02	00E98	00005D78			DATA	BA(TSEQ010)	READY, NO UE, BC=0, NO INC LENGTH
5154	02	00E99	68000E9C			B	T1ST3521	
5155					*	ERROR EXIT		
5156	02	00E9A	EAF0021B	A		BAL,15	*:ERROR	#3506
5157	02	00E9B	00000DB2	A		DATA	3506	INCORRECT BITS ON TEST
5158	02	00E9C	6AF01D47		T1ST3521	BAL,15	:COMPARE	COMPARE INFORMATION
5159	02	00E9D	68000EA0			B	T1ST3522	
5160					*	INFORMATION ERROR		
5161	02	00E9E	EAF0021B	A		BAL,15	*:ERROR	#3507
5162	02	00E9F	00000DB3	A		DATA	3507	INCORRECT INFORMATION
5163	02	00EA0	6AF01638		T1ST3522	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5164	02	00EA1	22000BF7			L1,0	DA(RF16B)	READ FWD 12 BYTES
5165	02	00EA2	32A0209D			LW,10	=X'3F3F3F3F'	B PATTERN
5166	02	00EA3	22800000	A		L1,8	0	
5167	02	00EA4	22900000	A		L1,9	0	
5168	02	00EA5	CCC018B5			S10,12	*:DEVADDR	INIATE WRITE
5169	02	00EA6	33100009	A		MTW,1	9	TALLY =TALLY+1
5170	02	00EA7	F1A0207D			CB,10	*BUFF2	INFO IN YET
5171	02	00EA8	69300EA6			BNEZ	\$-2	
5172	02	00EA9	378018D4			MW,8	TIME2	R9 HAS TIME IN US
5173	02	00EAA	35900008	A		STW,9	8	R8=R9
5174	02	00EAB	35500006	A		STW,5	6	R5 = R6
5175	02	00EAC	38900005	A		SW,9	5	T2-T1
5176	02	00EAD	69100EB4			BLZ	\$+7	
5177	02	00EAE	2590007A	A		SLS,9	-6	TIME/64
5178	02	00EAF	32C01EA6			LW,12	:INTRECF	WAIT FOR INTERRUPT
5179	02	00EB0	68300EAF			BCR,3	\$-1	
5180	02	00EB1	389018D8			SW,9	STOPDIF	- REVERSE DIFFERENTIAL
5181	02	00EB2	68300ED0			BEZ	T1ST3525	NO CREEP
5182	02	00EB3	69200EC1			BCS,2	T1ST3523	POSITIVE CREEP
5183	02	00EB4	38600008	A		SW,6	8	T1-T2
5184	02	00EB5	69100EB9			BLZ	\$+4	
5185	02	00EB6	2560007A	A		SLS,6	-6	TIME/64
5186	02	00EB7	316020A9			CW,6	=X'00000014'	NEGATIVE TOLLERANCE
5187	02	00EB8	68200ED0			BLE	T1ST3525	OK
5188	02	00EB9	EAF0021B	A		BAL,15	*:ERROR	NEGATIVE CREEP PRINTOUT
5189	02	00EBA	00000DB5	A		DATA	3509	
5190	02	00EBB	32C00006	A		LW,12	6	
5191	02	00EBC	EAF00217	A		BAL,15	*:DECC	CONVERT TO DECIMAL
5192	02	00EBD	35F01A7D			STW,15	MESNCR+3	STORE
5193	02	00EBE	EAF0021C	A		BAL,15	*:PRINT	NEGATIVE CREEP PRINTOUT
5194	02	00EBF	00001A7A			DATA	MESNCR	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 77
5195	02	00EC0	68000E0D			B	T1ST3525-3	GO CHECK SENSE SWITCHES
5196	02	00EC1	319018B3		T1ST3523	CH,9	CRPMAX	MAXIMUM
5197	02	00EC2	69100E0D			BL	T1ST3525	
5198					*		ERROR EXIT FOR TAPE CREEP	
5199	02	00EC3	EAF0021B	A	T1ST3524	BAL,15	*:ERROR	3508
5200	02	00EC4	00000DB4	A		DATA	3508	TAPE CREEP ERROR
5201	02	00EC5	32C00009	A		LW,12	9	
5202	02	00EC6	EAF00217	A		BAL,15	*:DECC	CONVERT TO DECIMAL
5203	02	00EC7	35F01A73			STW,15	MESTPC+3	
5204	02	00EC8	32C018B3			LW,12	CRPMAX	
5205	02	00EC9	EAF00217	A		BAL,15	*:DECC	CONVERT TO DECIMAL
5206	02	00ECA	35F01A78			STW,15	MESTPC+8	
5207	02	00ECB	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
5208	02	00ECC	00001A70			DATA	MESTPC	
5209	02	00ECD	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5210	02	00ECE	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
5211	02	00ECF	68000E3C			B	T1ST3502	RESTART TEST
5212	02	00ED0	6AF01640		T1ST3525	BAL,15	CLRARM	CLEAR AND DISARM INTERRUPT
5213	02	00ED1	680003B2			B	:TIM	GO TO SEQUENCER
5214					*			
5215					*			
5216					*			
5217					*			
5218					*			TST1,36 NO OPERATION TEST
5219					*			
5220					*			
5221	02	00ED2	680003B2		:T1ST36	B	:TIM	GO TO SEQUENCER
5222					*			
5223					*			
5224					*			
5225					*			
5226					*			
5227					*			
5228					*			TST1,37 GAP LENGTH TIMING TEST
5229					*			
5230					*			
5231					*			
5232					*			
5233					*			
5234					*			
5235					*			
5236					*			OPERATOR INTERVENTION REQUIRED
5237					*			IF SSI IS SET.
5238	02	00ED3	6AF01577		:T1ST37	BAL,15	GETTIME	GET TIMES ON LOOPS
5239	02	00ED4	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
5240	02	00ED5	35F019A7			STW,15	NOPKPR	
5241	02	00ED6	22AFFFF0	A		LI,10	-16	
5242	02	00ED7	329020AA			LW,9	=X'30303030'	SPEC PATTERN
5243	02	00ED8	224FFFFC	A		LI,4	-4	SMEAR PATTERN
5244	02	00ED9	3598212D			STW,9	BUFF1+104,4	
5245	02	00EDA	65400ED9			BIR,4	\$-1	
5246	02	00EDB	22EFB9B0	A		LI,14	-18000	STOP TAPE
5247	02	00EDC	65E00EDC			BIR,14	\$	
5248					*			
5249	02	00EDD	6AF01638		T1ST3702	BAL,15	CLRARM	START TIME
5250	02	00EDE	22000BE1			LI,0	DA(TWCREP)	CLEAR AND ARM INTERRUPT
5251	02	00EDF	6AF01CA2			BAL,15	:IOEXEC	WRITE 12 BYTES
5252	02	00EE0	6AF0162F			BAL,15	MYDELAY	EXECUTE T10,S10
5253	02	00EE1	6AF01EC4		T1ST3704	BAL,15	:ERROR	WAIT FOR INTERRUPT
5254	02	00EE2	00005D84			DATA	BA(TSE0011)	TEST
5255	02	00EE3	68000EE9			B	T1ST3705	NO UE, READY, BC=0
5256					*		ERROR EXIT	
5257	02	00EE4	EAF0021B	A		BAL,15	*:ERROR	#3701
5258	02	00EE5	00000E75	A		DATA	3701	INCORRECT BITS ON TEST
5259	02	00EE6	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5260	02	00EE7	2E000000	A		WAIT		HALT ON ERROR IF SS3 RESET
5261	02	00EE8	68000E0D			B	T1ST3702	LOOP ON ERROR
5262	02	00EE9	65A00EDB		T1ST3705	BIR,10	T1ST3702-2	DO 16 TIMES
5263	02	00EEA	22AFFFF0	A		LI,10	-16	
5264	02	00EEB	6AF01638		T1ST3706	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	78
5265	02	00EEC	22000C08			LI,0	DA(SB16B)	SPACE BKW OVER RECORD
5266	02	00EED	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5267	02	00EEE	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5268	02	00EEF	6AF01EC4		T1ST3708	BAL,15	:ERRORT	TEST
5269	02	00EF0	00005D84			DATA	BA(TSEQ011)	NO UE, READY, BC=0
5270	02	00EF1	68000EF4			B	T1ST3709	
5271					*		ERROR EXIT	
5272	02	00EF2	EAF0021B A			BAL,15	*:ERROR	#3702
5273	02	00EF3	00000E76 A			DATA	3702	INCORRECT BITS ON TEST
5274	02	00EF4	65A00EEB		T1ST3709	BIR,10	T1ST3706	DO 16 TIMES
5275	02	00EF5	326020AA			LW,6	=X'30303030'	
5276	02	00EF6	22AFFFF0 A			LI,10	-16	
5277	02	00EF7	22400000 A			LI,4	0	
5278	02	00EF8	22500000 A			LI,5	0	
5279	02	00EF9	6AF01638		T1ST3710	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5280	02	00EFA	22EFB9B0 A		T1ST3711	LI,14	-18000	STOP TAPE
5281	02	00EFB	65E00EFB			BIR,14	\$	
5282	02	00EFC	22900000 A			LI,9	0	NO INTERRUPT EXPECTED
5283	02	00EFD	B590207D			STW,9	*BUFF2	CLEAR AREA
5284	02	00EFE	22000BF7			LI,0	DA(RF16B)	READ FWD 12 BYTES
5285	02	00EFF	CCC018B5			S10,12	*:DEVADDR	S10
5286	02	00F00	33100005 A			MTW,1	5	TALLY =TALLY+1
5287	02	00F01	F160207D		T1ST3712	CB,6	*BUFF2	INFO IN YET
5288	02	00F02	69300F00			BNE	T1ST3712-1	
5289	02	00F03	32C01EA6			LW,12	:INTRECF	WAIT FOR INTERRUPT
5290	02	00F04	68300F03			BCR,3	\$-1	
5291	02	00F05	65A00EF9			BIR,10	T1ST3710	DO 16 TIMES
5292	02	00F06	2550007C A			SLS,5	-4	R5/16
5293	02	00F07	374018D4			MW,4	TIME2	R5 HAS TIME IN US
5294	02	00F08	385018B4			SW,5	WRT	- WRITE TO READ TIME
5295	02	00F09	205FFA24 A			AI,5	-1500	- WRITE DELAY TIME
5296	02	00FOA	355018A7			STW,5	STRTME	START TIME
5297	02	00F0B	22AFFFF7 A		T1ST3714	LI,10	-9	IRG TIME
5298	02	00F0C	22E00010 A			LI,14	16	16 MS TO STOP TAPE
5299	02	00F0D	6AF01E26			BAL,15	:DELAY	DELAY
5300	02	00F0E	68000F0F			B	\$+1	
5301	02	00F0F	22000BE1		T1ST3715	LI,0	DA(TWCREP)	WRITE 12 BYTES
5302	02	00F10	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5303	02	00F11	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5304	02	00F12	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5305	02	00F13	6AF01EC4		T1ST3716	BAL,15	:ERRORT	TEST
5306	02	00F14	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
5307	02	00F15	68000F1B			B	T1ST3717	
5308					*		ERROR EXIT	
5309	02	00F16	EAF0021B A			BAL,15	*:ERROR	#3703
5310	02	00F17	00000E77 A			DATA	3703	INCORRECT BITS ON TEST
5311	02	00F18	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5312	02	00F19	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5313	02	00F1A	68000F0F			B	T1ST3715	LOOP ON ERROR
5314	02	00F1B	65A00F0C		T1ST3717	BIR,10	T1ST3714+1	LOOP
5315	02	00F1C	22600000 A			LI,6	0	
5316	02	00F1D	356018AE			STW,6	IRGTM	CLEAR TIME
5317	02	00F1E	22AFFFF7 A			LI,10	-9	
5318	02	00F1F	6AF01638		T1ST3718	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5319	02	00F20	22000C08			LI,0	DA(SB16B)	SPACE BKW OVER RECORD
5320	02	00F21	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5321	02	00F22	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5322	02	00F23	6AF01EC4		T1ST3719	BAL,15	:ERRORT	TEST
5323	02	00F24	00005D84			DATA	BA(TSEQ011)	READY, NO UE, BC=0
5324	02	00F25	68000F28			B	T1ST3720	
5325					*		ERROR EXIT	
5326	02	00F26	EAF0021B A			BAL,15	*:ERROR	#3704
5327	02	00F27	00000E78 A			DATA	3704	INCORRECT BITS ON TEST
5328	02	00F28	65A00F1F		T1ST3720	BIR,10	T1ST3718	LOOP
5329	02	00F29	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5330	02	00F2A	22600000 A			LI,6	0	
5331	02	00F2B	22700000 A			LI,7	0	
5332	02	00F2C	22000C10			LI,0	DA(SF16CC)	SPACE FWD 9 RECORDS USING CC
5333	02	00F2D	CC4018B5			S10,4	*:DEVADDR	S10
5334	02	00F2E	33100007 A			MTW,1	7	TALLY =TALLY+1

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 79
5335	02	00F2F	CDC018B5			T10,12	*:DEVADDR	WAIT WHILE BUSY
5336	02	00F30	69C00F2E			BCS,12	\$-2	
5337	02	00F31	376018D5			MW,6	TIME3	R7 HAS TIME IN US
5338	02	00F32	387018A7			SW,7	STRTIME	- START TIME
5339	02	00F33	387018D6			SW,7	CHARTR	- CHARACTER TIME FOR 9 RECORDS
5340	02	00F34	387018B4			SW,7	WTRT	- WRITE TO READ TIME
5341	02	00F35	207FFA24 A			AI,7	-1500	- WRITE DELAY TIME
5342	02	00F36	2570007D A			SLS,7	-3	TIME/8
5343	02	00F37	357018AE		T1ST3721	STW,7	IRGTM	SAVE IRG TIME
5344				*		COMPARE	TIMES TO CORRECT	TIMES AND PRINTOUT IF INCORRECT
5345	02	00F38	317018B2			CW,7	IRGMIN	MINIMUM
5346	02	00F39	69100F3C			BL	\$+3	
5347	02	00F3A	317018B1			CW,7	IRGMAX	MAXIMUM
5348	02	00F3B	69100F65			BL	T1ST3726	GO TO END OF TEST
5349				*		ERROR EXIT		
5350	02	00F3C	EAF0021B A			BAL,15	*:ERROR	ERROR PRINTOUT
5351	02	00F3D	00000E79 A			DATA	3705	TIME NOT WITHIN TOLERANCE
5352	02	00F3E	32C018A7			LW,12	STRTIME	START TIME
5353	02	00F3F	EAF00217 A			BAL,15	*:DECC	CONVERT
5354	02	00F40	35F01A6D			STW,15	MESSTRT+5	STORE
5355	02	00F41	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5356	02	00F42	35F01A6C			STW,15	MESSTRT+4	
5357	02	00F43	32C018AE			LW,12	IRGTM	IRG TIME
5358	02	00F44	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5359	02	00F45	35F01A5E			STW,15	MESIRG+4	STORE
5360	02	00F46	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5361	02	00F47	35F01A5D			STW,15	MESIRG+3	
5362	02	00F48	32C018B1			LW,12	IRGMAX	IRG MAXIMUM
5363	02	00F49	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5364	02	00F4A	35F01A67			STW,15	MESIRG+13	STORE
5365	02	00F4B	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5366	02	00F4C	35F01A66			STW,15	MESIRG+12	
5367	02	00F4D	32C018B2			LW,12	IRGMIN	IRG MINIMUM
5368	02	00F4E	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5369	02	00F4F	35F01A64			STW,15	MESIRG+10	STORE
5370	02	00F50	EAF00217 A			BAL,15	*:DECC	CONVERT TO DECIMAL
5371	02	00F51	35F01A63			STW,15	MESIRG+9	
5372	02	00F52	EAF0021C A			BAL,15	*:PRINT	PRINT MESSAGE
5373	02	00F53	00001A5A			DATA	MESIRG	
5374	02	00F54	EAF0021C A			BAL,15	*:PRINT	
5375	02	00F55	00001A68			DATA	MESSTRT	START TIME
5376				*				PRINTOUT START TIME, IRG TIMES
5377				*				IF SSI SET OPERATOR CAN SCOPE
5378				*				-----
5379				*				
5380				*				START/STOP TIMES. 1000 RECORDS
5381	02	00F56	EAF0021D A			BAL,15	*:SENSE	CHECK SSI AND SS3
5382	02	00F57	2E000000 A			WAIT		
5383	02	00F58	68000F5A			B	T1ST3722	SSI ON
5384	02	00F59	68000F65			B	T1ST3726	BYPASS SCOPING AID FOR START/STOP
5385	02	00F5A	6AF0160C		T1ST3722	BAL,15	RWTLP	REWIND TO LOAD POINT
5386	02	00F5B	226FFC18 A			LI,6	-1000	
5387	02	00F5C	6AF01638		T1ST3723	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5388	02	00F5D	22000BDF			LI,0	DAITW16B)	WRITE 16 BYTES
5389	02	00F5E	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5390	02	00F5F	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5391	02	00F60	65600F5C		T1ST3724	BIR,6	T1ST3723	
5392	02	00F61	6AF0160C		T1ST3725	BAL,15	RWTLP	REWIND TO LOAD POINT
5393	02	00F62	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5394	02	00F63	2E000000 A			WAIT		
5395	02	00F64	68000ED4			B	:T1ST37+1	RESTART TEST
5396	02	00F65	6AF01640		T1ST3726	BAL,15	CLRDMR	CLEAR AND DISARM INTERRUPT
5397	02	00F66	680003B2			B	:TIM	GO TO SEQUENCER
5398				*				
5399				*				
5400				*				TST1,38 END OF TAPE TEST
5401				*				-----
5402				*				
5403				*				* THIS TEST WILL CONTINUE TO WRITE N RECORDS UNTIL THE END OF TAPE
5404				*				* INDICATOR IS DETECTED. ONE ADDITIONAL RECORD WILL BE RECORDED AND

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00		7/30/70	80
5405								* THE EOT CONDITION WILL BE VERIFIED AGAIN. TWO RECORDS WILL BE SPACED *
5406								* IN THE BACKWARD DIRECTION. AFTER THE SECOND SPACE, THE EOT *
5407								* INDICATOR SHOULD BE RESET. THE TAPE WILL BE REWOUND. *
5408								*
5409								*
5410	02	00F67	6AF0160C		T1ST38	BAL,15	RWTLF	REWIND TO LOAD POINT
5411	02	00F68	6AF01638		T1ST3802	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5412	02	00F69	22000BE0			LI,0	DA(TW1000)	WRITE RECORD FROM BUFFER 1
5413	02	00F6A	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5414	02	00F6B	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5415	02	00F6C	CEA018B5		T1ST3803	TDV,10	*:DEVADDR	TDV
5416	02	00F6D	31B02089			CW,11	=X'02000000'	EOT SET
5417	02	00F6E	69400F77			BCS,4	T1ST3804	
5418	02	00F6F	CDA018B5			T10,10	*:DEVADDR	T10
5419	02	00F70	31B02092			CW,11	=X'08000000'	UE SET
5420	02	00F71	68400F68			BCR,4	T1ST3802	LOOP TILL EOT
5421								* ERROR EXIT - ERROR NOT EOT
5422	02	00F72	EAF0021B A			BAL,15	*:ERROR	#3801
5423	02	00F73	00000ED9 A			DATA	3801	INCORRECT BITS ON TEST
5424	02	00F74	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5425	02	00F75	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5426	02	00F76	68000F68			B	T1ST3802	LOOP ON ERROR
5427	02	00F77	6AF01638		T1ST3804	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5428	02	00F78	22F00000 A			LI,15	0	
5429	02	00F79	35F018F5			STW,15	SPFLAG	CLEAR ERROR FLAG
5430	02	00F7A	22000BE0			LI,0	DA(TW1000)	WRITE RECORD BEYOND EOT
5431	02	00F7B	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10,S10
5432	02	00F7C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5433	02	00F7D	6AF01EC4		T1ST3805	BAL,15	:ERRORT	TEST
5434	02	00F7E	000050BC			DATA	BA(TSE0020)	EOT SET
5435	02	00F7F	68000F83			B	T1ST3806	
5436								* ERROR EXIT EOT SHOULD BE SET
5437	02	00F80	EAF0021B A			BAL,15	*:ERROR	#3802
5438	02	00F81	00000EDA A			DATA	3802	INCORRECT BITS ON TEST
5439	02	00F82	331018F5			MTW,1	SPFLAG	ERROR +1
5440	02	00F83	6AF01638		T1ST3806	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5441	02	00F84	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
5442	02	00F85	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5443	02	00F86	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5444	02	00F87	6AF01EC4			BAL,15	:ERRORT	TEST
5445	02	00F88	000050BC			DATA	BA(TSE0020)	EOT SET
5446	02	00F89	68000F8D			B	T1ST3807	
5447								* ERROR EXIT EOT SHOULD BE SET
5448	02	00F8A	EAF0021B A			BAL,15	*:ERROR	#3803
5449	02	00F8B	00000EDB A			DATA	3803	INCORRECT BITS ON TEST
5450	02	00F8C	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
5451	02	00F8D	6AF01638		T1ST3807	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5452	02	00F8E	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
5453	02	00F8F	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5454	02	00F90	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5455	02	00F91	6AF01EC4		T1ST3808	BAL,15	:ERRORT	TEST
5456	02	00F92	000050C0			DATA	BA(TSE0021)	EOT RESET
5457	02	00F93	68000F97			B	T1ST3808+6	
5458								* ERROR EXIT - EOT NOT RESET
5459	02	00F94	EAF0021B A			BAL,15	*:ERROR	#3804
5460	02	00F95	00000EDC A			DATA	3804	INCORRECT BITS ON TEST
5461	02	00F96	331018F5			MTW,1	SPFLAG	ERROR FLAG +1
5462	02	00F97	32F018F5			LW,15	SPFLAG	
5463	02	00F98	68300FA4			BEZ	T1ST3809	
5464	02	00F99	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5465	02	00F9A	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5466	02	00F9B	68000F9D			B	\$+2	LOOP ON ERROR
5467	02	00F9C	68000FA4			B	T1ST3809	CONTINUE
5468	02	00F9D	22BFFFE8 A			LI,11	-20	SPACE BACKWARD 20 RECORDS FOR RETRY
5469	02	00F9E	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5470	02	00F9F	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
5471	02	00FA0	6AF01CA2			BAL,15	:IOEXEC	T10, S10
5472	02	00FA1	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5473	02	00FA2	65B00F9E			BIR,11	\$-4	
5474	02	00FA3	68000F68			B	T1ST3802	GO RETRY EOT TEST

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	81
5475	02	00FA4	6AF0160C		T1ST3809	BAL,15	RWTLP	REWIND TO LOAD POINT
5476	02	00FA5	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
5477	02	00FA6	680003B2			B	:TIM	GO TO SEQUENCER
5478					*			
5479					*			
5480					*			TST1,39 MO OPERATION TEST
5481					*			-----
5482					*			
5483					*			
5484	02	00FA7	680003B2		:T1ST39	B	:TIM	GO TO SEQUENCER
5485					*			
5486					*			
5487					*			
5488					*			TST1,40 OPERATOR CONTROL PANEL TEST
5489					*			-----
5490					*			* THIS TEST WILL CHECK EVERY SWITCH ON THE OPERATOR CONTROL PANEL IN
5491					*			* THE SEQUENCE SPECIFIED BY THE PROGRAM AND VERIFY THE WRITE PROTECT
5492					*			* FEATURE
5493					*			
5494					*			OPERATOR INTERVENTION REQUIRED
5495	02	00FA8	229FFFF8 A		:T1ST40	LI,9	-8	
5496	02	00FA9	6AF01651			BAL,15	SMEARPTR	SMEAR PATTERN AND SET UP COMPARE
5497	02	00FAA	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
5498	02	00FAB	35F019A7			STW,15	NOPKPRT	
5499	02	00FAC	328018B5			LW,8	:DEVADDR	SAVE DEVICE ADDRESS
5500	02	00FAD	22700018 A			LI,7	24	24 WORDS TO COMPARE
5501	02	00FAE	35701DBA			STW,7	:COMWCNT	
5502	02	00FAF	32500008 A			LW,5	8	
5503	02	00FB0	485020AB			AND,5	=X'0000FFFD'	
5504	02	00FB1	355018B5		T1ST4002	STW,5	:DEVADDR	CHANGE DEVICE DESIGNATION
5505	02	00FB2	32C00005 A			LW,12	5	
5506	02	00FB3	EAF00218 A			BAL,15	*:HEXC	CONVERT FOR MESSAGE
5507	02	00FB4	35F01AA6			STW,15	OPMESG7+4	
5508	02	00FB5	EAF0021C A			BAL,15	*:PRINT	PRINT MESSAGE
5509	02	00FB6	00001AA2			DATA	OPMESG7	
5510					*			MESSAGE TO OPERATOR TO DESIGNATE UNIT 0(1,2,3,4,5,6,7)
5511	02	00FB7	2E000000 A			WAIT		
5512	02	00FB8	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5513	02	00FB9	22000BE4			LI,0	DA(WR96B)	WRITE 96 BYTES DEV 0,1,2,3,4,5,6,7
5514	02	00FBA	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5515	02	00FBB	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5516	02	00FBC	6AF01EC4		T1ST4003	BAL,15	:ERRORT	TEST
5517	02	00FBD	00005D84			DATA	BA(TSEQ011)	NO UE, BC=0, READY
5518	02	00FBE	68000FC4			B	T1ST4004	
5519					*			ERROR EXIT
5520	02	00FBF	EAF0021B A			BAL,15	*:ERROR	#4001
5521	02	00FC0	00000FA1 A			DATA	4001	INCORRECT BITS ON TEST
5522	02	00FC1	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5523	02	00FC2	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5524	02	00FC3	68000FB8			B	T1ST4003-4	LOOP ON ERROR
5525	02	00FC4	6AF01638		T1ST4004	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5526	02	00FC5	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
5527	02	00FC6	22000C19			LI,0	DA(SPBRAND)	SPACE BKN
5528	02	00FC7	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5529	02	00FC8	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5530	02	00FC9	6AF01EC4		T1ST4005	BAL,15	:ERRORT	TEST
5531	02	00FCA	00005D84			DATA	BA(TSEQ011)	READY AND NO UE
5532	02	00FCB	68000FD1			B	T1ST4007	
5533					*			ERROR EXIT
5534	02	00FCC	EAF0021B A			BAL,15	*:ERROR	#4002
5535	02	00FCD	00000FA2 A			DATA	4002	INCORRECT BITS ON TEST
5536	02	00FCE	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5537	02	00FCF	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5538	02	00FD0	68000FB8			B	T1ST4003-4	LOOP ON ERROR
5539	02	00FD1	6AF01638		T1ST4007	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5540	02	00FD2	6AF01CE8			BAL,15	:CLEAR	CLEAR READ IN BUFFER
5541	02	00FD3	22000BFA			LI,0	DA(RF96B)	READ FWD 96 BYTES
5542	02	00FD4	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5543	02	00FD5	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5544	02	00FD6	6AF01EC4		T1ST4008	BAL,15	:ERRORT	TEST

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	82
5545	02	00FD7	00005D78			DATA	BAITSE0010	NO UE, BC=0, READY, NO INC LENGTH
5546	02	00FD8	68000FDE			B	T1ST4009	
5547					*	ERROR EXIT		
5548	02	00FD9	EAF0021B A			BAL,15	*:ERROR	#4004
5549	02	00FDA	00000FA4 A			DATA	4004	INCORRECT BITS ON TEST
5550	02	00FDB	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5551	02	00FDC	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5552	02	00FDD	68000FDE			B	\$+1	CANNOT LOOP ON THIS ERROR
5553	02	00FDE	6AF01D47		T1ST4009	BAL,15	:COMPARE	COMPARE
5554	02	00FDF	68000FE5			B	T1ST4010	
5555					*	INFORMATION ERROR		
5556	02	00FE0	EAF0021B A			BAL,15	*:ERROR	#4005
5557	02	00FE1	00000FA5 A			DATA	4005	INCORRECT INFORMATION
5558	02	00FE2	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5559	02	00FE3	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5560	02	00FE4	68000FB8			B	T1ST4003-4	LOOP ON ERROR
5561	02	00FE5	33100005 A		T1ST4010	MTW,1	5	
5562	02	00FE6	32700005 A			LW,7	5	
5563	02	00FE7	4B7020AC			AND,7	=X'0000000F'	
5564	02	00FE8	21700007 A			C1,7	7	LAST DEVICE ADDRESS USED
5565	02	00FE9	68200FB1			BLE	T1ST4002	
5566	02	00FEA	358018B5			STW,8	:DEVADDR	RESTORE UNIT DESIGNATION
5567					*	MESSAGE TO OPERATOR	TO REMOVE WRITE RING MAKE CORRECT UNIT MESSAGE TO OPERATOR	
5568	02	00FEB	EAF0021C A			BAL,15	*:PRINT	
5569	02	00FEC	00001A50			DATA	OPMESG6	
5570	02	00FED	2E000000 A			WAIT		WAIT FOR OPERATOR
5571	02	00FEE	6AF01638		T1ST4011	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5572	02	00FEF	22000BD8			LI,0	DA(TW100B)	WRITE 100 BYTES
5573	02	00FF0	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5574	02	00FF1	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5575	02	00FF2	6AF01EC4		T1ST4012	BAL,15	:ERRORT	TEST
5576	02	00FF3	00005DE0			DATA	BA(TSE0026)	READY, UE, WRITE PROTECT
5577	02	00FF4	68000FFA			B	T1ST4013	
5578					*	ERROR EXIT		
5579	02	00FF5	EAF0021B A			BAL,15	*:ERROR	#4006
5580	02	00FF6	00000FA6 A			DATA	4006	INCORRECT BITS ON TEST
5581	02	00FF7	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5582	02	00FF8	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5583	02	00FF9	68000FEB			B	T1ST4011-3	LOOP ON ERROR
5584	02	00FFA	6AF01638		T1ST4013	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5585	02	00FFB	22000BD5			LI,0	DA(TWTM3)	WRITE TAPE MARK CE AND UE
5586	02	00FFC	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5587	02	00FFD	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5588	02	00FFE	6AF01EC4		T1ST4014	BAL,15	:ERRORT	TEST
5589	02	00FFF	00005DE0			DATA	BA(TSE0026)	READY, UE, WRITE PROTECT
5590	02	01000	68001006			B	T1ST4015	
5591					*	ERROR EXIT		
5592	02	01001	EAF0021B A			BAL,15	*:ERROR	#4007
5593	02	01002	00000FA7 A			DATA	4007	INCORRECT BITS ON TEST
5594	02	01003	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5595	02	01004	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5596	02	01005	68000FFA			B	T1ST4013	LOOP ON ERROR
5597	02	01006	EAF0021C A		T1ST4015	BAL,15	*:PRINT	MESSAGE TO OPERATOR
5598	02	01007	00001A2A			DATA	OPMESG5	
5599					*	MESSAGE TO OPERATOR	RESET, ATTENTION, START TO GENERATE INT.	
5600	02	01008	2E000000 A			WAIT		WAIT FOR OPERATOR
5601	02	01009	22E0012C A			LI,14	300	300 MS
5602	02	0100A	6AF01E26			BAL,15	:DELAY	DELAY
5603	02	0100B	68001011			B	T1ST4016	
5604					*	ERROR EXIT	NO INTERRUPT RECEIVED	
5605	02	0100C	EAF0021B A			BAL,15	*:ERROR	#4008
5606	02	0100D	00000FA8 A			DATA	4008	TIMEOUT ON S10
5607	02	0100E	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5608	02	0100F	2E000000 A			WAIT		HALT ON ERROR IF SS3 RESET
5609	02	01010	68001006			B	T1ST4015	LOOP ON ERROR
5610	02	01011	EAF0021C A		T1ST4016	BAL,15	*:PRINT	MESSAGE TO OPERATOR
5611	02	01012	00001A1C			DATA	OPMESG3	
5612					*	MESSAGE FOR OPERATOR	TO MAKE UNIT READY, WRITE RING, UNIT OK	
5613	02	01013	2E000000 A			WAIT		WAIT FOR OPERATOR
5614	02	01014	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 83
5615	02	01015	22000C1B			LI,0	DA(TRWOF)	REWIND AND PUT OFFLINE (MANUAL)
5616	02	01016	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
5617	02	01017	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5618	02	01018	6AF01EC4		T1ST4017	BAL,15	:ERROR	TEST
5619	02	01019	00005DE8			DATA	BA(TSEQ027)	DEVICE MANUAL, CONTROLLER READY
5620	02	0101A	68001020			B	T1ST4018	
5621				*			ERROR EXIT	
5622	02	0101B	EAF0021B A			BAL,15	*:ERROR	#4009
5623	02	0101C	00000FA9 A			DATA	4009	INCORRECT BITS ON TEST
5624	02	0101D	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5625	02	0101E	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
5626	02	0101F	68001014			B	T1ST4017 4	LOOP ON ERROR
5627	02	01020	EAF0021C A		T1ST4018	BAL,15	*:PRINT	MESSAGE TO OPERATOR
5628	02	01021	00001A24			DATA	OPMMSG4	
5629				*			MESSAGE TO OPERATOR TO PUT	DEVICE AUTOMATIC
5630	02	01022	2E000000 A			WAIT		WAIT FOR OPERATOR
5631	02	01023	6AF01EC4			BAL,15	:ERROR	TEST
5632	02	01024	00005D58			DATA	BA(TSEQ005)	LOAD POINT
5633	02	01025	6800102B			B	T1ST4019	
5634				*			ERROR EXIT	
5635	02	01026	EAF0021B A			BAL,15	*:ERROR	#4010
5636	02	01027	00000FAA A			DATA	4010	INCORRECT BITS ON TEST
5637	02	01028	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5638	02	01029	2E000000 A			WAIT		HALT ON ERROR IF S53 RESET
5639	02	0102A	68001020			B	T1ST4018	
5640				*				DENSITY DIAL TEST
5641	02	0102B	31101891		T1ST4019	CH,1	FL75IPS	75 IPS
5642	02	0102C	69301087			BNE	T1ST4028	
5643	02	0102D	22E01A44			LI,14	ERMSG1	
5644	02	0102E	35E0104F			STW,14	T1ST4022	
5645	02	0102F	311019CE			CH,1	MODEFLAG	PACKED FLAG SET
5646	02	01030	68301033			BE	\$+3	
5647	02	01031	22E01983			LI,14	TOL8001	
5648	02	01032	68001034			B	\$+2	
5649	02	01033	22E019AF			LI,14	TOL800	SET UP TOLERANCE
5650	02	01034	55E21048			STH,14	T1ST4021,1	
5651	02	01035	32E019AC			LW,14	OPPI	SET UP MESSAGE
5652	02	01036	35E01038			STW,14	\$+2	
5653	02	01037	EAF0021C A		T1ST4020	BAL,15	*:PRINT	
5654	02	01038	00001A32			DATA	OPMESGA	
5655	02	01039	2E000000 A			WAIT		
5656	02	0103A	32E018A1			LW,14	CLOCK	
5657	02	0103B	35E00055 A			STW,14	X'55'	CHANGE CLOCK INTERRUPT.
5658	02	0103C	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5659	02	0103D	22000BE0			LI,0	DA(TW1000)	WRITE 1000 BYTES
5660	02	0103E	22F01040 A			LI,15	X'1040'	ARM AND ENABLE CLOCK
5661	02	0103F	6DF01200 A			WD,15	X'1200'	
5662	02	01040	22800000 A			LI,8	0	
5663	02	01041	CCA018B5			S10,10	*:DEVADDR	S10
5664	02	01042	46700008 A			XW,7	8	
5665	02	01043	32F01EA6			LW,15	:INTRECF	INTERRUPT FLAG
5666	02	01044	68301043			BCR,3	\$-1	
5667	02	01045	46800007 A			XW,8	7	R8 HAS TALLY
5668	02	01046	22F01040 A			LI,15	X'1040'	DISARM INTERRUPT
5669	02	01047	6DF01100 A			WD,15	X'1100'	
5670	02	01048	318019AF		T1ST4021	CH,8	TOL800	800,556,200 TOLERANCE
5671	02	01049	6920104C			BG	T1ST4022-3	ERROR
5672	02	0104A	B1821048			CH,8	*T1ST4021,1	
5673	02	0104B	68101053			BGE	T1ST4023	
5674				*			ERROR EXIT	
5675	02	0104C	EAF0021B A			BAL,15	*:ERROR	4013
5676	02	0104D	00000FAD A			DATA	4013	NOT CORRECT DENSITY
5677	02	0104E	EAF0021C A			BAL,15	*:PRINT	
5678	02	0104F	00001A44		T1ST4022	DATA	ERMSG1	
5679	02	01050	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5680	02	01051	2E000000 A			WAIT		
5681	02	01052	68001037			B	T1ST4020	LOOP ON ERROR
5682	02	01053	32801E43		T1ST4023	LW,8	:DELMTW	RESTORE CLOCK
5683	02	01054	35800055 A			STW,8	X'55'	
5684	02	01055	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	84
5685	02	01056	22000BE4			LI,0	DA(WR96B)	WRITE 96 BYTES
5686	02	01057	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
5687	02	01058	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5688	02	01059	6AF01EC4			BAL,15	:ERRORT	TEST
5689	02	0105A	00005D84			DATA	BA(TSEQ011)	NO UE, BC=0, READY
5690	02	0105B	68001061			B	TIST4024	
5691				*		ERROR EXIT		
5692	02	0105C	EAF0021B A			BAL,15	*:ERROR	4014
5693	02	0105D	00000FAE A			DATA	4014	INCORRECT BITS IN TEST
5694	02	0105E	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5695	02	0105F	2E000000 A			WAIT		
5696	02	01060	68001055			B	TIST4023+2	
5697	02	01061	6AF01638		TIST4024	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5698	02	01062	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
5699	02	01063	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
5700	02	01064	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5701	02	01065	6AF01EC4			BAL,15	:ERRORT	TEST
5702	02	01066	00005D84			DATA	BA(TSEQ011)	READY AND NO UE
5703	02	01067	6800106D			B	TIST4025	
5704				*		ERROR EXIT		
5705	02	01068	EAF0021B A			BAL,15	*:ERROR	4015
5706	02	01069	00000FAF A			DATA	4015	INCORRECT BITS IN TEST
5707	02	0106A	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5708	02	0106B	2E000000 A			WAIT		
5709	02	0106C	68001055			B	TIST4023+2	LOOP ON ERROR
5710	02	0106D	6AF01CE8		TIST4025	BAL,15	:CLEAR	CLEARAREA
5711	02	0106E	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
5712	02	0106F	22000BFA			LI,0	DA(RF96B)	READ FWD 96 BYTES
5713	02	01070	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
5714	02	01071	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
5715	02	01072	6AF01EC4			BAL,15	:ERRORT	TEST
5716	02	01073	00005D78			DATA	BA(TSEQ010)	NO UE, BC=0, NO INC LENGTH
5717	02	01074	6800107A			B	TIST4026	
5718				*		ERROR EXIT		
5719	02	01075	EAF0021B A			BAL,15	*:ERROR	4016
5720	02	01076	00000FB0 A			DATA	4016	INCORRECT BITS IN TEST
5721	02	01077	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5722	02	01078	2E000000 A			WAIT		
5723	02	01079	6800107A			B	\$+1	CANT LOOP IN TEST
5724	02	0107A	6AF01D47		TIST4026	BAL,15	:COMPARE	COMPARE INFORMATION
5725	02	0107B	68001081			B	TIST4027	
5726				*		INFORMATION ERROR		
5727	02	0107C	EAF0021B A			BAL,15	*:ERROR	4017
5728	02	0107D	00000FB1 A			DATA	4017	INFORMATION ERROR
5729	02	0107E	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
5730	02	0107F	2E000000 A			WAIT		
5731	02	01080	68001055			B	TIST4023+2	LOOP ON ERROR
5732	02	01081	33601038		TIST4027	MTW,6	TIST4020+1	CHANGE MESSAGE
5733	02	01082	3340104F			MTW,4	TIST4022	
5734	02	01083	33101048			MTW,1	TIST4021	CHANGE TOLERANCE
5735	02	01084	22901A50			LI,9	ERMSG3+4	DO 200, 556, 800 BPI
5736	02	01085	5192104F			CH,9	TIST4022,1	
5737	02	01086	69201037			BG	TIST4020	
5738	02	01087	6AF01640		TIST4028	BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
5739	02	01088	680003B2			B	:TIM	GO TO SEQUENCER
5740				*				
5741				*				
5742				*				
5743				*				
5744				*				
5745	02	01089	680003B2		:TIST41	B	:TIM	GO TO SEQUENCER
5746				*				
5747				*				
5748				*				
5749				*				
5750				*				
5751				*				
5752				*				
5753				*				
5754				*				

THIS TEST PROVIDES A MEANS OF OPERATING A MAGNETIC TAPE SYSTEM WITH PSEUDO-RANDOM OPERATION, ORDER SEQUENCE, DATA PATTERN, I/O AREA, TIME DELAY, AND *

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			85 RECORD SIZE FOR THE PURPOSE OF DETECTING INTERMITTENT FAILURES AND EXERCISING ALL TAPE UNITS.
5755								
5756								
5757								
5758								THE RANDOM EXERCISER TEST WILL REPORT ERRORS AS THEY OCCUR, BUT ONLY AS TO THE FUNCTION THAT FAILED. NO ERROR LOOPING IS PROVIDED EXCEPT FOR LIMITED RETRIES.
5759								
5760								
5761								
5762								
5763								D1 =NUMBER OF CYCLES, SET TO 1000 IF 0.
5764								D2 =NUMBER OF ERROR RETRIES.
5765								
5766								FROM THE RANDOM SEED THE FOLLOWING MASKS ARE USED TO GET TYPE OF OPERATION, WORD SIZE OF RECORD, AND TIME DELAY IN MILLISECONDS
5767								X'00003FF0' TO GET RANDOM RECORD WORD SIZE
5768								X'001F0000' TO GET RANDOM TIME DELAY IN MILLISECONDS
5769								X'0000000F' TO GET RANDOM OPERATION SET
5770								
5771								0 WRITE,WRITE,WRITE,WRITE,WRITE
5772								1 WRITE,WRITE,WRITE,WRITE,SPACE BKW
5773								2 WRITE,WRITE,WRITE,SPACE BKW,SPACE BKW
5774								3 WRITE,WRITE,WRITE,SPACE BKW,READ FWD
5775								4 WRITE,WRITE,SPACE BKW,READ FWD,SPACE BKW
5776								5 WRITE,WRITE,SPACE BKW,SPACE BKW,READ FWD
5777								6 WRITE,WRITE,SPACE BKW,SPACE BKW,SPACE FWD
5778								7 WRITE,SPACE BKW,READ FWD,WRITE,WRITE
5779								8 WRITE,SPACE BKW,READ FWD,WRITE,SPACE BKW
5780								9 WRITE,SPACE BKW,WRITE,SPACE BKW,READ FWD
5781								A WRITE,SPACE BKW,READ FWD,SPACE BKW,WRITE
5782								B WRITE,SPACE BKW,READ FWD,SPACE BKW,READ FWD
5783								C WRITE,SPACE BKW,SPACE FWD,WRITE,WRITE
5784								D WRITE,SPACE BKW,WRITE,SPACE BKW,SPACE FWD
5785								E WRITE,SPACE BKW,READ FWD,SPACE BKW,READ FWD
5786								F WRITE,SPACE BKW,SPACE FWD,SPACE BKW,READ FWD
5787								
5788								
5789	02	0108A	32C020AD		T2RE	LW,12	=X'12B9B0A1'	M1
5790	02	0108B	32D020AE			LW,13	=X'1033C4D7'	M2
5791	02	0108C	32E020AF			LW,14	=X'544B2FBA'	SEED
5792	02	0108D	6AF01CD7			BAL,15	:RANDOMY	1ST RANDOM SEED ALWAYS THE SAME
5793	02	0108E	226010C6			LI,6	T2RE02	SET UP EOT
5794	02	0108F	5562120F			STW,6	T2RE06C,1	
5795	02	01090	22600000	A		LI,6	0	CLEAR TALLY
5796	02	01091	356018F3			STW,6	NZFLAG	SET RE FLAG
5797	02	01092	35101885			STW,1	LOOPTLY	SET FIRST LOOP TO 1
5798	02	01093	3560189E			STW,6	REWONLY	RESET FLAG TO REWIND UNITS
5799	02	01094	227FFFE0	A		LI,7	-32	
5800	02	01095	356E1884			STW,6	TWTALLY+32,7	CLEAR TALLY
5801	02	01096	65701095			BIR,7	\$-1	
5802	02	01097	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
5803	02	01098	35F019A7			STW,15	NOPKPRT	
5804	02	01099	6800109B			B	T2RE01+1	
5805	02	0109A	6AF01CDA		T2RE01	BAL,15	:RANDOMX	RANDOM SEED RETURNS IN R14
5806	02	0109B	35E018A8			STW,14	SAVESEED	SAVE SEED FOR NEXT PASS
5807	02	0109C	35E0000D	A		STW,14	13	SEED IN R14 AND R13
5808	02	0109D	48D020AC		T2RE01A	AND,13	=X'0000000F'	GET RANDOM OPERATION SET
5809	02	0109E	35D01889			STW,13	OPFLAG	
5810	02	0109F	35E0000D	A		STW,14	13	
5811	02	010A0	25D0007C	A		SLS,13	-4	
5812	02	010A1	48D020B0			AND,13	=X'00003FF'	GET RANDOM WORD SIZE
5813	02	010A2	693010A4			BNEZ	T2RE01B	
5814	02	010A3	20D00001	A		AI,13	1	DO AT LEAST 1 WORD
5815	02	010A4	35D018A9		T2RE01B	STW,13	REWORDS	
5816	02	010A5	35D01DBA			STW,13	:COMM CNT	COMPARE WORD COUNT
5817	02	010A6	35D01CF4			STW,13	:CLRSIZE	CLEAR BUFFER WORD COUNT
5818	02	010A7	35D01D3B			STW,13	:PATWC	SPREAD PATTERN SIZE
5819	02	010A8	25D00002	A		SLS,13	2	GET BYTE COUNT
5820	02	010A9	55D217C5			STW,13	WRRAND+1,1	WRITE
5821	02	010AA	55D217F1			STW,13	RFRAND+1,1	READ FWD
5822	02	010AB	32F0207D			LW,15	BUFF2	
5823	02	010AC	35F01CF3			STW,15	:CLRADDR	CLEAR ADDRESS
5824	02	010AD	35E0000D	A		STW,14	13	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 86
5825	02	010AE	25000070	A		SLS,13	-16	
5826	02	010AF	48002081			AND,13	=X'0000001F'	
5827	02	010B0	35001888			STW,13	RETIME	RANDOM TIME DELAY 0 - 1023 MS
5828	02	010B1	35201038			STW,2	:PATID	SET UP RANDOM PATTERNED AREA
5829	02	010B2	35C01039			STW,14	:PATID+1	
5830	02	010B3	22C020C5			LI,12	WA(BUFF1)	
5831	02	010B4	35C0103C			STW,12	:PATBFR	RANDOM PATTERN
5832	02	010B5	35C0108B			STW,12	:COMBFRA	COMPARE EXPECTED BUFFER
5833	02	010B6	32C0207D			LW,12	BUFF2	
5834	02	010B7	35C0108C			STW,12	:COMBFRB	COMPARE OBSERVED PATTERN
5835	02	010B8	22C00000	A		LI,12	0	
5836	02	010B9	35C0108D			STW,12	:COMFLAG	ERROR PRINTOUT
5837	02	010BA	6AF01CF9			BAL,15	:PATTERN	SMEAR PATTERN
5838	02	010BB	311019CE			CW,1	MODEFLAG	PACKED BINARY
5839	02	010BC	683010C4			BE	T2RE02-2	
5840								NO PACKED BINARY STD OR OPTION
5841	02	010BD	32C0108A			LW,12	:COMWCNT	NUMBER OF WORDS
5842	02	010BE	22D020C5			LI,13	BUFF1	
5843	02	010BF	B2E0000D	A	T2RE01C	LW,14	*13	
5844	02	010C0	48E0209D			AND,14	=X'3F3F3F3F'	MASK FOR BINARY
5845	02	010C1	B5E0000D	A		STW,14	*13	
5846	02	010C2	3310000D	A		MTW,1	13	
5847	02	010C3	64C010BF			BDR,12	T2RE01C	MASK ALL WORDS
5848								
5849								
5850	02	010C4	3110189E			CW,1	REWONLY	REWIND UNIT
5851	02	010C5	683010C0			BE	T2RE04+3	
5852	02	010C6	6AF01648		T2RE02	BAL,15	DOALL	DO ALL UNITS
5853	02	010C7	680010C9			B	T2RE03+1	
5854	02	010C8	6AF0164A		T2RE03	BAL,15	DOALL1	SET UP 1 UNIT
5855	02	010C9	6AF0160C			BAL,15	RWTLF	REWIND TO LOAD POINT
5856	02	010CA	20700001	A	T2RE04	A1,7	1	DO NEXT UNIT
5857	02	010CB	655010C8			BIR,5	T2RE03	DO ALL UNITS
5858	02	010CC	3510189E			STW,1	REWONLY	SET NO REWIND FLAG
5859								
5860								
5861	02	010CD	32401889			LW,4	OPFLAG	SET OF OPERATIONS
5862	02	010CE	683010DF			BEZ	T2RE050	OP = 0
5863	02	010CF	680810CF			B	\$,4	
5864	02	010D0	680010EF			B	T2RE051	OP = 1
5865	02	010D1	680010FF			B	T2RE052	OP = 2
5866	02	010D2	6800110F			B	T2RE053	OP = 3
5867	02	010D3	6800111F			B	T2RE054	OP = 4
5868	02	010D4	6800112F			B	T2RE055	OP = 5
5869	02	010D5	6800113F			B	T2RE056	OP = 6
5870	02	010D6	6800114F			B	T2RE057	OP = 7
5871	02	010D7	6800115F			B	T2RE058	OP = 8
5872	02	010D8	6800116F			B	T2RE059	OP = 9
5873	02	010D9	6800117F			B	T2RE05A	OP = A
5874	02	010DA	6800118F			B	T2RE05B	OP = B
5875	02	010DB	6800119F			B	T2RE05C	OP = C
5876	02	010DC	680011AF			B	T2RE05D	OP = D
5877	02	010DD	680011BF			B	T2RE05E	OP = E
5878	02	010DE	680011CF			B	T2RE05F	OP = F
5879								
5880								
5881								
5882								
5883	02	010DF	224010E2		T2RE050	LI,4	\$+3	RETURN ADDRESS
5884	02	010E0	5542121D			STH,4	T2REWR,1	
5885	02	010E1	68001207			B	T2REW	WRITE A RECORD
5886	02	010E2	224010E5			LI,4	\$+3	
5887	02	010E3	5542121D			STH,4	T2REWR,1	
5888	02	010E4	68001207			B	T2REW	WRITE A RECORD
5889	02	010E5	224010E8			LI,4	\$+3	
5890	02	010E6	5542121D			STH,4	T2REWR,1	
5891	02	010E7	68001207			B	T2REW	WRITE A RECORD
5892	02	010E8	224010E8			LI,4	\$+3	
5893	02	010E9	5542121D			STH,4	T2REWR,1	
5894	02	010EA	68001207			B	T2REW	WRITE A RECORD

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 87
5895	02	010EB	224010EE			LI,4	\$+3	
5896	02	010EC	5542121D			STH,4	T2REWR,1	
5897	02	010ED	68001207			B	T2REW	WRITE A RECORD
5898	02	010EE	6800110F			B	T2RE60A	GO TO TALLY AND NEW SET
5899								
5900	02	010EF	224010F2		T2RE051	LI,4	\$+3	RETURN ADDRESS
5901	02	010F0	5542121D			STH,4	T2REWR,1	
5902	02	010F1	68001207			B	T2REW	WRITE A RECORD
5903	02	010F2	224010F5			LI,4	\$+3	
5904	02	010F3	5542121D			STH,4	T2REWR,1	
5905	02	010F4	68001207			B	T2REW	WRITE A RECORD
5906	02	010F5	224010F8			LI,4	\$+3	
5907	02	010F6	5542121D			STH,4	T2REWR,1	
5908	02	010F7	68001207			B	T2REW	WRITE A RECORD
5909	02	010F8	224010F8			LI,4	\$+3	
5910	02	010F9	5542121D			STH,4	T2REWR,1	
5911	02	010FA	68001207			B	T2REW	WRITE A RECORD
5912	02	010FB	224010FE			LI,4	\$+3	
5913	02	010FC	5542122E			STH,4	T2RESBR,1	
5914	02	010FD	6800121E			B	T2RESB	SPACE BKW OVER RECORD
5915	02	010FE	6800110F			B	T2RE60A	GO TO TALLY AND NEW SET
5916								
5917	02	010FF	22401102		T2RE052	LI,4	\$+3	RETURN ADDRESS
5918	02	01100	5542121D			STH,4	T2REWR,1	
5919	02	01101	68001207			B	T2REW	WRITE A RECORD
5920	02	01102	22401105			LI,4	\$+3	
5921	02	01103	5542121D			STH,4	T2REWR,1	
5922	02	01104	68001207			B	T2REW	WRITE A RECORD
5923	02	01105	22401108			LI,4	\$+3	
5924	02	01106	5542121D			STH,4	T2REWR,1	
5925	02	01107	68001207			B	T2REW	WRITE A RECORD
5926	02	01108	22401108			LI,4	\$+3	
5927	02	01109	5542122E			STH,4	T2RESBR,1	
5928	02	0110A	6800121E			B	T2RESB	SPACE BKW OVER RECORD
5929	02	0110B	2240110E			LI,4	\$+3	
5930	02	0110C	5542122E			STH,4	T2RESBR,1	
5931	02	0110D	6800121E			B	T2RESB	SPACE RECORD BKW
5932	02	0110E	6800110F			B	T2RE60A	GO TO TALLY AND NEW SET
5933								
5934	02	0110F	22401112		T2RE053	LI,4	\$+3	RETURN ADDRESS
5935	02	01110	5542121D			STH,4	T2REWR,1	
5936	02	01111	68001207			B	T2REW	WRITE A RECORD
5937	02	01112	22401115			LI,4	\$+3	
5938	02	01113	5542121D			STH,4	T2REWR,1	
5939	02	01114	68001207			B	T2REW	WRITE A RECORD
5940	02	01115	22401118			LI,4	\$+3	
5941	02	01116	5542121D			STH,4	T2REWR,1	
5942	02	01117	68001207			B	T2REW	WRITE A RECORD
5943	02	01118	22401118			LI,4	\$+3	
5944	02	01119	5542122E			STH,4	T2RESBR,1	
5945	02	0111A	6800121E			B	T2RESB	SPACE BKW OVER RECORD
5946	02	0111B	2240111E			LI,4	\$+3	
5947	02	0111C	5542125E			STH,4	T2RERFR,1	
5948	02	0111D	68001240			B	T2RERF	READ RECORD FWD
5949	02	0111E	6800110F			B	T2RE60A	GO TO TALLY AND NEW SET
5950								
5951	02	0111F	22401122		T2RE054	LI,4	\$+3	RETURN ADDRESS
5952	02	01120	5542121D			STH,4	T2REWR,1	
5953	02	01121	68001207			B	T2REW	WRITE A RECORD
5954	02	01122	22401125			LI,4	\$+3	
5955	02	01123	5542121D			STH,4	T2REWR,1	
5956	02	01124	68001207			B	T2REW	WRITE A RECORD
5957	02	01125	22401128			LI,4	\$+3	
5958	02	01126	5542122E			STH,4	T2RESBR,1	
5959	02	01127	6800121E			B	T2RESB	SPACE BKW OVER RECORD
5960	02	01128	22401128			LI,4	\$+3	
5961	02	01129	5542125E			STH,4	T2RERFR,1	
5962	02	0112A	68001240			B	T2RERF	READ RECORD FWD
5963	02	0112B	2240112E			LI,4	\$+3	
5964	02	0112C	5542122E			STH,4	T2RESBR,1	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL		MAG TAPE TEST 705735-11/51A00 7/30/70	88
5965	02	0112D	6800121E			B	T2RESB	SPACE RECORD BKW
5966	02	0112E	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
5967					*			
5968	02	0112F	22401132		T2RE055	LI,4	\$+3	RETURN ADDRESS
5969	02	01130	5542121D			STH,4	T2REWR,1	WRITE A RECORD
5970	02	01131	68001207			B	T2REW	
5971	02	01132	22401135			LI,4	\$+3	
5972	02	01133	5542121D			STH,4	T2REWR,1	WRITE A RECORD
5973	02	01134	68001207			B	T2REW	
5974	02	01135	22401138			LI,4	\$+3	
5975	02	01136	5542122E			STH,4	T2RESBR,1	SPACE BKW OVER RECORD
5976	02	01137	6800121E			B	T2RESB	
5977	02	01138	22401138			LI,4	\$+3	
5978	02	01139	5542122E			STH,4	T2RESBR,1	SPACE RECORD BKW
5979	02	0113A	6800121E			B	T2RESB	
5980	02	0113B	2240113E			LI,4	\$+3	
5981	02	0113C	5542125E			STH,4	T2RERFR,1	READ RECORD FWD
5982	02	0113D	68001240			B	T2RERF	GO TO TALLY AND NEW SET
5983	02	0113E	680011DF			B	T2RE60A	
5984					*			
5985	02	0113F	22401142		T2RE056	LI,4	\$+3	RETURN ADDRESS
5986	02	01140	5542121D			STH,4	T2REWR,1	WRITE A RECORD
5987	02	01141	68001207			B	T2REW	
5988	02	01142	22401145			LI,4	\$+3	
5989	02	01143	5542121D			STH,4	T2REWR,1	WRITE A RECORD
5990	02	01144	68001207			B	T2REW	
5991	02	01145	22401148			LI,4	\$+3	
5992	02	01146	5542122E			STH,4	T2RESBR,1	SPACE BKW OVER RECORD
5993	02	01147	6800121E			B	T2RESB	
5994	02	01148	22401148			LI,4	\$+3	
5995	02	01149	5542122E			STH,4	T2RESBR,1	SPACE RECORD BKW
5996	02	0114A	6800121E			B	T2RESB	
5997	02	0114B	2240114E			LI,4	\$+3	
5998	02	0114C	5542123F			STH,4	T2RESFR,1	SPACE FWD OVER RECORD
5999	02	0114D	6800122F			B	T2RESF	GO TO TALLY AND NEW SET
6000	02	0114E	680011DF			B	T2RE60A	
6001					*			
6002	02	0114F	22401152		T2RE057	LI,4	\$+3	RETURN ADDRESS
6003	02	01150	5542121D			STH,4	T2REWR,1	WRITE A RECORD
6004	02	01151	68001207			B	T2REW	
6005	02	01152	22401155			LI,4	\$+3	
6006	02	01153	5542122E			STH,4	T2RESBR,1	SPACE BKW OVER RECORD
6007	02	01154	6800121E			B	T2RESB	
6008	02	01155	22401158			LI,4	\$+3	
6009	02	01156	5542125E			STH,4	T2RERFR,1	READ RECORD FWD
6010	02	01157	68001240			B	T2RERF	
6011	02	01158	22401158			LI,4	\$+3	
6012	02	01159	5542121D			STH,4	T2REWR,1	WRITE A RECORD
6013	02	0115A	68001207			B	T2REW	
6014	02	0115B	2240115E			LI,4	\$+3	
6015	02	0115C	5542121D			STH,4	T2REWR,1	WRITE A RECORD
6016	02	0115D	68001207			B	T2REW	GO TO TALLY AND NEW SET
6017	02	0115E	680011DF			B	T2RE60A	
6018					*			
6019	02	0115F	22401162		T2RE058	LI,4	\$+3	RETURN ADDRESS
6020	02	01160	5542121D			STH,4	T2REWR,1	WRITE A RECORD
6021	02	01161	68001207			B	T2REW	
6022	02	01162	22401165			LI,4	\$+3	
6023	02	01163	5542122E			STH,4	T2RESBR,1	SPACE BKW OVER RECORD
6024	02	01164	6800121E			B	T2RESB	
6025	02	01165	22401168			LI,4	\$+3	
6026	02	01166	5542125E			STH,4	T2RERFR,1	READ RECORD FWD
6027	02	01167	68001240			B	T2RERF	
6028	02	01168	22401168			LI,4	\$+3	
6029	02	01169	5542121D			STH,4	T2REWR,1	WRITE A RECORD
6030	02	0116A	68001207			B	T2REW	
6031	02	0116B	2240116E			LI,4	\$+3	
6032	02	0116C	5542122E			STH,4	T2RESBR,1	SPACE BKW OVER RECORD
6033	02	0116D	6800121E			B	T2RESB	GO TO TALLY AND NEW SET
6034	02	0116E	680011DF			B	T2RE60A	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00		7/30/70	89
6035				*				
6036	02	0116F	22401172		T2RE059	LI,4	\$+3	RETURN ADDRESS
6037	02	01170	5542121D			STH,4	T2REWR,1	
6038	02	01171	68001207			B	T2REW	WRITE A RECORD
6039	02	01172	22401175			LI,4	\$+3	
6040	02	01173	5542122E			STH,4	T2RESBR,1	
6041	02	01174	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6042	02	01175	22401178			LI,4	\$+3	
6043	02	01176	5542121D			STH,4	T2REWR,1	
6044	02	01177	68001207			B	T2REW	WRITE A RECORD
6045	02	01178	22401178			LI,4	\$+3	
6046	02	01179	5542122E			STH,4	T2RESBR,1	
6047	02	0117A	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6048	02	0117B	2240117E			LI,4	\$+3	
6049	02	0117C	5542125E			STH,4	T2RERFR,1	
6050	02	0117D	68001240			B	T2RERF	READ RECORD FWD
6051	02	0117E	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6052				*				
6053	02	0117F	22401182		T2RE05A	LI,4	\$+3	RETURN ADDRESS
6054	02	01180	5542121D			STH,4	T2REWR,1	
6055	02	01181	68001207			B	T2REW	WRITE A RECORD
6056	02	01182	22401185			LI,4	\$+3	
6057	02	01183	5542122E			STH,4	T2RESBR,1	
6058	02	01184	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6059	02	01185	22401188			LI,4	\$+3	
6060	02	01186	5542125E			STH,4	T2RERFR,1	
6061	02	01187	68001240			B	T2RERF	READ RECORD FWD
6062	02	01188	22401188			LI,4	\$+3	
6063	02	01189	5542122E			STH,4	T2RESBR,1	
6064	02	0118A	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6065	02	0118B	2240118E			LI,4	\$+3	
6066	02	0118C	5542121D			STH,4	T2REWR,1	
6067	02	0118D	68001207			B	T2REW	WRITE A RECORD
6068	02	0118E	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6069				*				
6070	02	0118F	22401192		T2RE05B	LI,4	\$+3	RETURN ADDRESS
6071	02	01190	5542121D			STH,4	T2REWR,1	
6072	02	01191	68001207			B	T2REW	WRITE A RECORD
6073	02	01192	22401195			LI,4	\$+3	
6074	02	01193	5542122E			STH,4	T2RESBR,1	
6075	02	01194	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6076	02	01195	22401198			LI,4	\$+3	
6077	02	01196	5542125E			STH,4	T2RERFR,1	
6078	02	01197	68001240			B	T2RERF	READ RECORD FWD
6079	02	01198	22401198			LI,4	\$+3	
6080	02	01199	5542122E			STH,4	T2RESBR,1	
6081	02	0119A	6800121E			B	T2RESB	SPACE RECORD BKW
6082	02	0119B	2240119E			LI,4	\$+3	
6083	02	0119C	5542125E			STH,4	T2RERFR,1	
6084	02	0119D	68001240			B	T2RERF	READ RECORD FWD
6085	02	0119E	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6086				*				
6087	02	0119F	224011A2		T2RE05C	LI,4	\$+3	RETURN ADDRESS
6088	02	011A0	5542121D			STH,4	T2REWR,1	
6089	02	011A1	68001207			B	T2REW	WRITE A RECORD
6090	02	011A2	224011A5			LI,4	\$+3	
6091	02	011A3	5542122E			STH,4	T2RESBR,1	
6092	02	011A4	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6093	02	011A5	224011A8			LI,4	\$+3	
6094	02	011A6	5542123F			STH,4	T2RESFR,1	
6095	02	011A7	6800122F			B	T2RESF	SPACE FWD OVER RECORD
6096	02	011A8	224011AB			LI,4	\$+3	
6097	02	011A9	5542121D			STH,4	T2REWR,1	
6098	02	011AA	68001207			B	T2REW	WRITE A RECORD
6099	02	011AB	224011AE			LI,4	\$+3	
6100	02	011AC	5542121D			STH,4	T2REWR,1	
6101	02	011AD	68001207			B	T2REW	WRITE A RECORD
6102	02	011AE	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6103				*				
6104	02	011AF	224011B2		T2RE05D	LI,4	\$+3	RETURN ADDRESS

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 90
6105	02	011B0	5542121D			STH,4	T2REWR,1	
6106	02	011B1	68001207			B	T2REW	WRITE A RECORD
6107	02	011B2	224011B5			LI,4	\$+3	
6108	02	011B3	5542122E			STH,4	T2RESBR,1	
6109	02	011B4	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6110	02	011B5	224011B8			LI,4	\$+3	
6111	02	011B6	5542121D			STH,4	T2REWR,1	
6112	02	011B7	68001207			B	T2REW	WRITE A RECORD
6113	02	011B8	224011B8			LI,4	\$+3	
6114	02	011B9	5542122E			STH,4	T2RESBR,1	
6115	02	011BA	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6116	02	011BB	224011BE			LI,4	\$+3	
6117	02	011BC	5542123F			STH,4	T2RESFR,1	
6118	02	011BD	6800122F			B	T2RESF	SPACE FWD OVER RECORD
6119	02	011BE	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6120								
6121	02	011BF	224011C2		T2RE05E	LI,4	\$+3	RETURN ADDRESS
6122	02	011C0	5542121D			STH,4	T2REWR,1	
6123	02	011C1	68001207			B	T2REW	WRITE A RECORD
6124	02	011C2	224011C5			LI,4	\$+3	
6125	02	011C3	5542122E			STH,4	T2RESBR,1	
6126	02	011C4	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6127	02	011C5	224011C8			LI,4	\$+3	
6128	02	011C6	5542125E			STH,4	T2RERFR,1	
6129	02	011C7	68001240			B	T2REF	READ RECORD FWD
6130	02	011C8	224011CB			LI,4	\$+3	
6131	02	011C9	5542122E			STH,4	T2RESBR,1	
6132	02	011CA	6800121E			B	T2RESB	SPACE RECORD BKW
6133	02	011CB	224011CE			LI,4	\$+3	
6134	02	011CC	5542125E			STH,4	T2RERFR,1	
6135	02	011CD	68001240			B	T2REF	READ RECORD FWD
6136	02	011CE	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6137								
6138	02	011CF	224011D2		T2RE05F	LI,4	\$+3	RETURN ADDRESS
6139	02	011D0	5542121D			STH,4	T2REWR,1	
6140	02	011D1	68001207			B	T2REW	WRITE A RECORD
6141	02	011D2	224011D5			LI,4	\$+3	
6142	02	011D3	5542122E			STH,4	T2RESBR,1	
6143	02	011D4	6800121E			B	T2RESB	SPACE RECORD BKW
6144	02	011D5	224011D8			LI,4	\$+3	
6145	02	011D6	5542123F			STH,4	T2RESFR,1	
6146	02	011D7	6800122F			B	T2RESF	SPACE RECORD FWD
6147	02	011D8	224011DB			LI,4	\$+3	
6148	02	011D9	5542122E			STH,4	T2RESBR,1	
6149	02	011DA	6800121E			B	T2RESB	SPACE BKW OVER RECORD
6150	02	011DB	224011DE			LI,4	\$+3	
6151	02	011DC	5542125E			STH,4	T2RERFR,1	
6152	02	011DD	68001240			B	T2REF	READ RECORD FWD
6153	02	011DE	680011DF			B	T2RE60A	GO TO TALLY AND NEW SET
6154								
6155								
6156	02	011DF	680011E0		T2RE60A	B	\$+1	INCREMENT TALLY AND GO TO NEXT SET
6157	02	011E0	22E00000	A		LI,14	0	
6158	02	011E1	35E01EA6			STW,14	:INTRECF	CLEAR INTERRUPT FLAG
6159	02	011E2	32E01888			LW,14	RETIME	RANDOM DELAY TIME
6160	02	011E3	6AF01E26			BAL,15	:DELAY	DELAY
6161	02	011E4	680011E5			B	\$+1	
6162	02	011E5	33101885			MTW,1	LOOPTLY	TALLY OF PASSES +1
6163	02	011E6	32601885			LW,6	LOOPTLY	
6164	02	011E7	31601888			CW,6	NMLOOP	
6165	02	011E8	6820109A			BLE	T2RE01	
6166	02	011E9	32601887			LW,6	CRTRY	NUMBER OF RETRIES
6167	02	011EA	68201200			BLE	T2RE60C-2	NO RETRIES NO PRINTOUT
6168	02	011EB	22700000	A	T2RE60B	LI,7	0	PRINTOUT ERROR TALLIES
6169	02	011EC	3A5018BE			LCW,5	SAVNUMB	NUMBER OF DEVICES
6170	02	011ED	32CE1886			LW,12	SAVDEV,7	DEVICE
6171	02	011EE	EAF00218	A		BAL,15	*:HEXC	CONVERT
6172	02	011EF	35F01ADC			STW,15	REMMSG3+2	
6173	02	011F0	32CE186C			LW,12	PWTALLY,7	PERM WRITE ERROR TALLY
6174	02	011F1	EAF00217	A		BAL,15	*:DECC	CONVERT

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 92
6245								
6246	02	0122F	6AF01648		T2RESF	BAL,15	DOALL	SET UP ALL UNITS
6247	02	01230	68001232			B	T2RE15A+1	
6248	02	01231	6AF0164A		T2RE15A	BAL,15	DOALL	SET UP 1 UNIT
6249	02	01232	22000C1A			LI,0	DA(SPFAND)	SPACE FWD OVER RECORD
6250	02	01233	6AF01CA2			BAL,15	:IOEXEC	EXECUTE TIO, SIO
6251	02	01234	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
6252	02	01235	CDA018B5			TIO,10	*:DEVADDR	TIO
6253	02	01236	31B019CD			CW,11	CHKBIT	UE,INC LENGTH,IOP,MEMORY ERRORS
6254	02	01237	68401230			BCR,4	T2RE17	
6255	02	01238	12C01834			LD,12	SPFRAND	SET UP IOCD PRINTOUT
6256	02	01239	6AF01669			BAL,15	MYERROR	PRINTOUT ERROR ROUTINE
6257	02	0123A	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
6258	02	0123B	2E000000	A			WAIT	
6259	02	0123C	68001230			B	\$+1	CANNOT LOOP ON ERROR
6260	02	0123D	20700001	A	T2RE17	A1,7	I	
6261	02	0123E	65501231			B1R,5	T2RE15A	DO ALL UNITS
6262	02	0123F	6800123F		T2RESFR	B	\$	RETURN TO OPERATION SET
6263								
6264								
6265								
6266								
6267	02	01240	6AF01648		T2RERF	BAL,15	DOALL	SET UP ALL UNITS
6268	02	01241	68001243			B	T2RE18B+1	
6269	02	01242	6AF0164A		T2RE18B	BAL,15	DOALL	SET UP 1 UNIT
6270	02	01243	6AF01CE8			BAL,15	:CLEAR	CLEAR BUFFER
6271	02	01244	22000BF8			LI,0	DA(RFRAND)	READ RECORD FWD
6272	02	01245	6AF01CA2			BAL,15	:IOEXEC	EXECUTE TIO, SIO
6273	02	01246	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
6274	02	01247	CDA018B5			TIO,10	*:DEVADDR	TIO
6275	02	01248	31B019CD			CW,11	CHKBIT	UE,INC LENGTH,IOP,MEMORY ERRORS
6276	02	01249	69401250			BCS,4	\$+7	
6277	02	0124A	CEE018B5			TDV,14	*:DEVADDR	TDV
6278	02	0124B	31F02092			CW,15	=X'08000000'	UNCORRECTABLE READ ERROR
6279	02	0124C	694015EF			BCS,4	RFRTRY	
6280	02	0124D	31B0209E			CW,11	=X'00400000'	TRANSMISSION ERROR ONLY
6281	02	0124E	694015EF			BCS,4	RFRTRY	GO TO RETRY SUBROUTINE
6282	02	0124F	68001255			B	T2RE18D	
6283	02	01250	12C017F0		T2RE017E	LD,12	RFRAND	SET UP IOCD PRINTOUT
6284	02	01251	6AF01669			BAL,15	MYERROR	ERROR PRINTOUT
6285	02	01252	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
6286	02	01253	2E000000	A			WAIT	
6287	02	01254	68001255			B	\$+1	CANNOT LOOP ON ERROR
6288	02	01255	6AF01D47		T2RE18D	BAL,15	:COMPARE	COMPARE INFO
6289	02	01256	6800125C			B	T2RE18C	
6290							INFORMATION ERROR EXIT	
6291	02	01257	12C017F0			LD,12	RFRAND	SET UP IOCD INFORMATION
6292	02	01258	6AF01669			BAL,15	MYERROR	PRINTOUT INFO ON ERROR
6293	02	01259	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
6294	02	0125A	2E000000	A			WAIT	
6295	02	0125B	6800125C			B	\$+1	CANNOT LOOP ON ERROR
6296	02	0125C	20700001	A	T2RE18C	A1,7	I	
6297	02	0125D	65501242			B1R,5	T2RE18B	DO ALL UNITS
6298	02	0125E	6800125E		T2RERFR	B	\$	RETURN TO OPERATION SET
6299								
6300								
6301								
6302								
6303								
6304								
6305								
6306								
6307								
6308								
6309								
6310								
6311								
6312								
6313								
6314								

UTILITY TESTS TST3

THE UTILITY TEST ROUTINE ALLOWS THE USER TO SELECT A SPECIFIC FUNCTION AND TO CONTROL THE DATA PATTERN (SEE DATA DIRECTIVE) AND THE RECORD LENGTH (SEE 'LEN' DIRECTIVE).

PARAMETERS D1 UTILITY TEST SELECTION
D1 1 TAPE TEST
D1 2 DESKEW TEST
D1 3 SYNC ON A CHARACTER TEST

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			93
6315								D1 4 COMPATABILITY AND NOISE PATTERN TEST
6316								D1 5 READ/SPACE TEST
6317								D2 OPERATIONS REQUESTED ACCORDING TO TEST
6318								D3 PARAMETER REQUESTED ACCORDING TO TEST
6319								D4 PARAMETER REQUESTED ACCORDING TO TEST
6320								
6321								
6322								
6323								TST3.1 -TAPE TEST
6324								
6325								THIS TEST ALLOWS THE USER TO WRITE, READ FORWARD, SPACE BACKWARD, READ FORWARD AND SPACE BACKWARD, OR WRITE FOLLOWED BY REWIND, READ FORWARD AND SPACE BACKWARD N RECORDS OR UNTIL EOT IS REACHED.
6326								
6327								
6328								
6329								
6330								D1 1 TAPE TEST
6331								D2 0 WRITE, REWIND, READ FORWARD, SPACE BACKWARD D3 RECORDS.
6332								1 WRITE D3 RECORDS.
6333								2 READ FORWARD D3 RECORDS.
6334								3 SPACE BACKWARD D3 RECORDS
6335								4 READ FORWARD AND SPACE BACKWARD D3 RECORDS IN SEQUENCE.
6336								8 WRITE, REWIND, READ FWD, SPACE BKW D3 RECORDS (BCD).
6337								9 WRITE D3 RECORDS (BCD).
6338								10 READ FWD D3 RECORDS (BCD).
6339								12 READ FWD, SPACE BKW D3 RECORDS (BCD)
6340								D3 NUMBER OF RECORDS TO BE WRITTEN OR READ. IF D3 =0 CONTINUE UNTIL EOT OR BOT IS REACHED.
6341								D4 DELAY IN MILLISECONDS BETWEEN OPERATION SETS.
6342								EXAMPLE TST3.1,1,1000,5
6343								
6344								WRITE 1000 RECORDS WITH A 5 MILLISECOND DELAY AFTER EACH WRITE OPERATION
6345								
6346								
6347								
6348								
6349								
6350								
6351								
6352								
6353								
6354	02	0125F	32F0189C		TST31	LW,15	FLGRG	REGULAR PRINTOUT FLAG
6355	02	01260	35F019A7			STW,15	NOPKPRT	
6356	02	01261	32700204 A			LW,7	:P4	TIME DELAY
6357	02	01262	68101268			BGEZ	TST3102	
6358				*		ERROR P4	INCORRECT	P3 NEGATIVE
6359	02	01263	22700004 A			LI,7	4	
6360	02	01264	3570030A A			STW,7	:PIT10	REPORT BAD PARAMETER
6361	02	01265	EAF00229 A			BAL,15	*:PREPORT	
6362	02	01266	00000326			DATA	:DIC+6	
6363	02	01267	E8000214 A			B	*:MONITOR	GO TO MONITOR
6364	02	01268	32700203 A		TST3102	LW,7	:P3	NUMBER OF RECORDS TO BE WRITTEN
6365	02	01269	6920126C			BGZ	TST3103	PO >0
6366	02	0126A	327020A2			LW,7	=X'FFFFFF'	P3 =0 WRITE TILL EOT, BOT
6367	02	0126B	35700203 A			STW,7	:P3	P3 SET TO LARGEST BYTE
6368	02	0126C	32600202 A		TST3103	LW,6	:P2	
6369	02	0126D	21600008 A			CI,6	8	8 BIT SET
6370	02	0126E	68401275			BCR,4	\$+7	
6371	02	0126F	2270000E A			LI,7	X'0E'	BCD OPTION
6372	02	01270	2280000D A			LI,8	X'0D'	
6373	02	01271	352019A7			STW,2	NOPKPRT	
6374	02	01272	206FFFF8 A			AI,6	-8	
6375	02	01273	35600202 A			STW,6	:P2	
6376	02	01274	68001277			B	\$+3	
6377	02	01275	727017DC			LB,7	TRFBC	REGULAR READ
6378	02	01276	728017AC			LB,8	TWBC	REGULAR WRITE
6379	02	01277	758017C6			STB,8	TST3WRT	SET UP WRITE
6380	02	01278	757017F2			STB,7	TST3RF	SET UP READ
6381	02	01279	21600004 A			CI,6	4	P2 >4
6382	02	0127A	6820127D			BLE	\$+3	
6383	02	0127B	22700002 A			LI,7	2	
6384	02	0127C	68001264			B	TST3102-4	GO TO ERROR PRINTOUT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	DR I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 94
6385	02	0127D	326019A6			LW,6	LENGTH	CHECK ODD BYTE COUNT
6386	02	0127E	48600003	A		AND,6	3	
6387	02	0127F	21600003	A		CI,6	3	
6388	02	01280	68401286			BCR,4	TST3101A	
6389	02	01281	68301288			BE	TST3101B	
6390	02	01282	21600001	A		CI,6	1	
6391	02	01283	6830128A			BE	TST3101C	
6392	02	01284	32802082			LW,8	=X'FFFF0000'	+2 BYTES
6393	02	01285	68001288			B	TST3101C+1	
6394	02	01286	328020A1		TST3101A	LW,8	=X'FFFFFFF'	+0 BYTES
6395	02	01287	68001288			B	TST3101C+1	
6396	02	01288	32802083		TST3101B	LW,8	=X'FFFFFFF0'	+3 BYTES
6397	02	01289	68001288			B	TST3101C+1	
6398	02	0128A	3280208D		TST3101C	LW,8	=X'FF000000'	+1 BYTES
6399	02	0128B	358019A8			STW,8	MASKBYT	SAVE MASK
6400	02	0128C	327019A6			LW,7	LENGTH	LENGTH OF RECORD
6401	02	0128D	31702084			CW,7	=X'00000003'	ODD BYTE SIZE
6402	02	0128E	68401290			BCR,4	\$+2	
6403	02	0128F	20700004	A		AI,7	4	GO TO NEXT WORD SIZE FOR COMPARE
6404	02	01290	2570007E	A		SLS,7	-2	GET WORD SIZE
6405	02	01291	228020C5			LI,8	BUFF1	WRITE AREA
6406	02	01292	30800007	A		AW,8	7	WORD COUNT
6407	02	01293	33F00008	A		MTW,-1	8	
6408	02	01294	358018D7			STW,8	LASTWDW	LOCATION OF LAST WORD WRITTEN
6409	02	01295	3280207D			LW,8	BUFF2	READ AREA
6410	02	01296	30800007	A		AW,8	7	WORD COUNT
6411	02	01297	33F00008	A		MTW,-1	8	
6412	02	01298	358018D9			STW,8	LASTWDR	LOCATION OF LAST WORD IN READ AREA
6413	02	01299	317018C8		TST3104	CW,7	MAXREAD	RECORD TOO LARGE TO READ
6414	02	0129A	6820129C			BCR,2	\$+2	
6415	02	0129B	327018C8			LW,7	MAXREAD	SET UP LARGEST RECORD SIZE
6416	02	0129C	35701D3B			STW,7	:PATWC	SET UP WORD SIZE IN SMEAR
6417	02	0129D	35701CF4			STW,7	:CLRSIZE	SET UP WORD SIZE FOR CLEAR
6418	02	0129E	35701DBA			STW,7	:COMWCNT	SET UP WORD SIZE IN COMPARE
6419	02	0129F	228020C5			LI,8	BUFF1	
6420	02	012A0	35801D3C			STW,8	:PATBFR	BUFFER FOR PATTERN
6421								COMPARE INFORMATION SETUP
6422	02	012A1	35801DBB			STW,8	:COMBFRA	CORRECT INFORMATION
6423	02	012A2	3270207D			LW,7	BUFF2	OBSERVED PATTERN
6424	02	012A3	35701DBC			STW,7	:COMBFRB	OBSERVED INFORMATION
6425	02	012A4	35701CF3			STW,7	:CLRADDR	CLEAR ADDRESS
6426	02	012A5	32E019A6			LW,14	LENGTH	BYTE SIZE
6427	02	012A6	55E217C7			STH,14	TST3WRT+1,1	SET UP IOCD
6428	02	012A7	55E217F3			STH,14	TST3RF+1,1	
6429	02	012A8	22700000	A		LI,7	0	
6430	02	012A9	35701DBD			STW,7	:COMFLAG	PRINTOUT ERRORS
6431	02	012AA	327019A0			LW,7	PATTYPE	CHECK PATTERN TYPE
6432	02	012AB	21700000	A		CI,7	0	
6433	02	012AC	6930128C			BNEZ	TST3105	
6434	02	012AD	327019A4			LW,7	PATFIX	FIXED PATTERN
6435	02	012AE	72E017C6			LB,14	TST3WRT	BCD CHECK
6436	02	012AF	71E020B5			CB,14	=X'0D000000'	MASK
6437	02	012B0	68301284			BE	\$+4	
6438	02	012B1	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
6439	02	012B2	68301284			BE	\$+2	
6440	02	012B3	4870209D			AND,7	=X'3F3F3F3F'	MASK
6441	02	012B4	35701D39			STW,7	:PATID+1	PATTERN TO SPREAD
6442	02	012B5	22800000	A		LI,8	0	
6443	02	012B6	35801D38			STW,8	:PATID	FIXED WORD PATTERN
6444	02	012B7	6AF01CF9			BAL,15	:PATTERN	SMEAR PATTERN
6445	02	012B8	828018D7			LW,8	*LASTWDW	
6446	02	012B9	488019A8			AND,8	MASKBYT	MASK ODD BYTE COUNT
6447	02	012BA	858018D7			STW,8	*LASTWDW	
6448	02	012BB	680012FE			B	TST3111	
6449	02	012BC	21700002	A	TST3105	CI,7	2	DATA PI =2 RANDOM PATTERN
6450	02	012BD	693012C6			BNEZ	TST3107	
6451	02	012BE	35201D38			STW,2	:PATID	RANDOM PATTERN
6452	02	012BF	3270199F			LW,7	PATISED	
6453	02	012C0	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
6454	02	012C1	683012C3			BE	\$+2	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	95
6455	02	012C2	4870209D			AND,7	=X'3F3F3F3F'	MASK SEED
6456	02	012C3	35701D39			STW,7	:PATID+1	SEED FOR RANDOM PATTERN
6457	02	012C4	357020C5			STW,7	BUFF1	
6458	02	012C5	680012FE			B	TST3111	
6459	02	012C6	327019A1		TST3107	LW,7	PATTTK	DATA P1=5 BIT CROWDING
6460	02	012C7	2570007C A			SLS,7	-4	SHIFT
6461	02	012C8	2170000A A			CI,7	10	
6462	02	012C9	691012C8			BL	TST3108	
6463					*	ERROR	:P3 TOO LARGE	
6464	02	012CA	E8000214 A			B	*:MONITOR	
6465	02	012CB	329E18E0		TST3108	LW,9	PT00,7	X'01010101' TO X'80808080'
6466	02	012CC	25900068 A			SLS,9	-24	R9 1ST TRACK INFO
6467	02	012CD	327019A1			LW,7	PATTTK	
6468	02	012CE	487020AC			AND,7	=X'0000000F'	
6469	02	012CF	2170000A A			CI,7	10	
6470	02	012D0	691012D2			BL	TST3109	
6471					*	ERROR	:P4 TOO LARGE	
6472	02	012D1	E8000214 A			B	*:MONITOR	
6473	02	012D2	32AE18E0		TST3109	LW,10	PT00,7	X'01010101' TO X'80808080'
6474	02	012D3	25A00068 A			SLS,10	-24	R10 2ND TRACK INFO
6475	02	012D4	22600000 A			LI,6	0	
6476	02	012D5	22500000 A			LI,5	0	
6477	02	012D6	22EFFFFC A		TST3109A	LI,14	-4	
6478	02	012D7	22700000 A			LI,7	0	
6479	02	012D8	22800000 A			LI,11	0	
6480	02	012D9	32C019A2		TST3110	LW,12	PATTTT1	1ST TRACK PATTERN
6481	02	012DA	32D019A3			LW,13	PATTTT2	2ND TRACK PATTERN
6482	02	012DB	25CC0061 A			SLS,12	-31,6	
6483	02	012DC	25DC0061 A			SLS,13	-31,6	
6484	02	012DD	31C00001 A			CW,12	1	
6485	02	012DE	684012E0			BCR,4	\$+2	
6486	02	012DF	49B00009 A			OR,11	9	
6487	02	012E0	31D00001 A			CW,13	1	
6488	02	012E1	684012E3			BCR,4	\$+2	
6489	02	012E2	49B0000A A			OR,11	10	
6490	02	012E3	20700001 A			AI,7	1	
6491	02	012E4	21700004 A			CI,7	4	
6492	02	012E5	683012E7			BE	\$+2	BYPASS SHIFT
6493	02	012E6	25B00008 A			SLS,11	8	SHIFT WORD
6494	02	012E7	20600001 A			AI,6	1	
6495	02	012E8	65E012D9			BIR,14	TST3110	
6496	02	012E9	35BA19B0			STW,11	CSMEAR,5	STORE INFO FOR BOTH TRACKS
6497	02	012EA	20500001 A			AI,5	1	
6498	02	012EB	21500008 A			CI,5	8	
6499	02	012EC	691012D6			BL	TST3109A	LOOP
6500					*			8 WORDS OF TRACK INFO TO SMEAR
6501	02	012ED	32A01D38			LW,10	:PATWC	WORD SIZE
6502	02	012EE	31A00003 A			CW,10	3	ODD WORD COUNT
6503	02	012EF	684012F1			BCR,4	\$+2	
6504	02	012F0	20A00008 A			AI,10	8	
6505	02	012F1	25A0007D A			SLS,10	-3	NUMBER OF LOOPS
6506	02	012F2	22700000 A			LI,7	0	
6507	02	012F3	228FFFF8 A		TST310A	LI,8	-8	
6508	02	012F4	22600000 A			LI,6	0	
6509	02	012F5	329C19B0			LW,9	CSMEAR,6	LOAD BIT STRING WORD
6510	02	012F6	359E20C5			STW,9	BUFF1,7	STORE
6511	02	012F7	33100006 A			MTW,1	6	
6512	02	012F8	33100007 A			MTW,1	7	
6513	02	012F9	658012F5			BIR,8	TST310A+2	8 WORDS EACH PASS
6514	02	012FA	64A012F3			BDR,10	TST310A	FILL WORD COUNT
6515	02	012FB	B28018D7			LW,8	*LASTWDW	SET UP ODD BYTES
6516	02	012FC	488019A8			AND,8	MASKBYT	
6517	02	012FD	B58018D7			STW,8	*LASTWDW	
6518	02	012FE	31100202 A		TST3111	CW,1	:P2	WRITE ONLY P2 =1
6519	02	012FF	68101305			BGE	TST3112	BRANCH IF P2 =0,1
6520	02	01300	31200202 A			CW,2	:P2	READ FORWARD ONLY P2 =2
6521	02	01301	6830133A			BEZ	TST3116-2	REWIND, READ RECORDS FWD
6522	02	01302	31300202 A			CW,3	:P2	SPACE BACKWARD ONLY P2 =3
6523	02	01303	68301387			BE	TST3119	
6524	02	01304	6800133A			B	TST3116-2	P2 =4 READ FWD AND SPACE BKW

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00 7/30/70	96
6525								WRITE RECORD
6526	02	01305	6AF0160C		TST3112	BAL,15	RWTLP	REWIND TO LOAD POINT
6527	02	01306	22A00000	A		LI,10	0	
6528	02	01307	312019A0			CW,2	PATTYPT	RANDOM PATTERN
6529	02	01308	69301312			BNE	\$+10	
6530	02	01309	32E020C5			LW,14	BUFF1	CHANGE RANDOM SEED
6531	02	0130A	21A00000	A		CI,10	0	FIRST PASS
6532	02	0130B	68301310			BE	\$+5	
6533	02	0130C	6AF01CD9			BAL,15	:RANDOM	GET NEW SEED
6534	02	0130D	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
6535	02	0130E	68301310			BE	\$+2	
6536	02	0130F	48E0209D			AND,14	=X'3F3F3F3F'	MASK WORD
6537	02	01310	35E01D39			STW,14	:PATID+1	STORE
6538	02	01311	6AF01CF9			BAL,15	:PATTERN	CHANGE PATTERN
6539	02	01312	B28018D7			LW,8	*LASTWDW	
6540	02	01313	488019A8			AND,8	MASKBYT	MASK ODD BYTE COUNT
6541	02	01314	B58018D7			STW,8	*LASTWDW	
6542	02	01315	22900000	A		LI,9	0	CLEAR RETRY TALLY
6543	02	01316	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6544	02	01317	22000BE3			LI,0	DA(TST3WRT)	WRITE RECORD
6545	02	01318	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
6546	02	01319	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
6547	02	0131A	CEE018B5			TDV,14	*:DEVADDR	TDV
6548	02	0131B	31F02089			CW,15	=X'02000000'	EOT SET
6549	02	0131C	69401336			BCS,4	TST3115-1	GO TO REWIND
6550	02	0131D	6AF01EC4			BAL,15	:ERRORT	TEST
6551	02	0131E	00005D84			DATA	BA(TSE0011)	READY, NO UE, ETC
6552	02	0131F	6800132E			B	TST3114	
6553							ERROR NOT EOT	
6554	02	01320	12C017C6			LD,12	TST3WRT	IOCD PRINTOUT
6555	02	01321	6AF01EAF			BAL,15	IOCDMSG	
6556								SPACE BACKWARD TO LOOP ON ERROR
6557	02	01322	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6558	02	01323	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
6559	02	01324	6AF01CA2			BAL,15	:IOEXEC	T10, S10
6560	02	01325	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
6561	02	01326	33100009	A		MTW,1	9	TALLY +1
6562	02	01327	21900006	A		CI,9	6	
6563	02	01328	69101310			BL	TST3112+11	GO WRITE RECORD
6564	02	01329	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6565	02	0132A	22000BCA			LI,0	DA(TSE1)	SET ERASE
6566	02	0132B	6AF01CA2			BAL,15	:IOEXEC	T10, S10
6567	02	0132C	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
6568	02	0132D	6800130F			B	TST3112+10	LOOP ON ERROR
6569	02	0132E	20A00001	A	TST3114	A1,10	1	
6570	02	0132F	22F00000	A		LI,15	0	
6571	02	01330	35F01EA6			STW,15	:INTRECF	CLEAR INTERRUPT FLAG
6572	02	01331	32E00204	A		LW,14	:P4	ALL RECORDS WRITTEN
6573	02	01332	6AF01E26			BAL,15	:DELAY	DELAY P4 MS
6574	02	01333	68001334			B	\$+1	
6575	02	01334	31A00203	A		CW,10	:P3	LOOP TILL EOT OR RECORD COUNT DONE
6576	02	01335	69101307			BL	TST3112+2	
6577	02	01336	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
6578	02	01337	31100202	A	TST3115	CW,1	:P2	END OF WRITE ONLY P2 = 1
6579	02	01338	6930133A			BNE	TST3116-2	
6580	02	01339	680013A6			B	TST3122+1	RETURN TO CONTROL PROGRAM
6581								P2=2 READ RECORD FORWARD
6582	02	0133A	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
6583	02	0133B	22A00000	A		LI,10	0	
6584	02	0133C	22900000	A	TST3116	LI,9	0	CLEAR RETRY TALLY
6585	02	0133D	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6586	02	0133E	6AF01CE8			BAL,15	:CLEAR	CLEAR AREA
6587	02	0133F	B28018D7			LW,8	*LASTWDW	SET UP FOR ODD BYTE SIZE
6588	02	01340	488019A8			AND,8	MASKBYT	MASK ODD BYTE COUNT
6589	02	01341	B58018D9			STW,8	*LASTWDR	
6590	02	01342	22000BF9			LI,0	DA(TST3RF)	READ RECORD FORWARD
6591	02	01343	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
6592	02	01344	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
6593	02	01345	CEE018B5			TDV,14	*:DEVADDR	TDV
6594	02	01346	31F02089			CW,15	=X'02000000'	EOT SET

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	97
6595	02	01347	69401383			BCS,4	TST3119-4	
6596	02	01348	311019CE		TST3117	CW,1	MODEFLAG	PACKED OPTION SET
6597	02	01349	6930134D			BNE	\$+4	
6598	02	0134A	CDE018B5			T10,14	*:DEVADDR	T10
6599	02	0134B	31F0208B			CW,15	=X'087F0000'	ELIMINATE INCORRECT LENGTH
6600	02	0134C	6840135A			BCR,4	TST3117A	
6601	02	0134D	6AF01EC4			BAL,15	:ERROR	TEST
6602	02	0134E	00005078			DATA	BA(TSEQ010)	READY, NO UE
6603	02	0134F	6800135A			B	TST3117A	
6604				*			ERROR EXIT NOT EOT	
6605	02	01350	12C017F2			LD,12	TST3RF	IOCD PRINTOUT
6606	02	01351	6AF01EAF			BAL,15	IOCDMSG	
6607				*				SPACE BACKWARD TO LOOP ON ERROR
6608	02	01352	33100009	A		MTW,1	9	TALLY +1
6609	02	01353	21900006	A		C1,9	6	
6610	02	01354	6830135A			BE	TST3117A	RETRIES DONE
6611	02	01355	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6612	02	01356	22000C19			LI,0	DA(SPBRAND)	SPACE BACKWARD
6613	02	01357	6AF01CA2			BAL,15	:IOEXEC	T10, S10
6614	02	01358	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
6615	02	01359	6800133D			B	TST3116+1	GO RETRY READ
6616				*				COMPARE INFORMATION
6617	02	0135A	312019A0		TST3117A	CW,2	PATTYPE	RANDOM PATTERN
6618	02	0135B	69301362			BNE	TST3117A+8	
6619	02	0135C	B280207D			LW,8	*BUFF2	GET SEED FOR RECORD
6620	02	0135D	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
6621	02	0135E	68301360			BE	\$+2	
6622	02	0135F	48802090			AND,8	=X'3F3F3F3F'	MASK SEED
6623	02	01360	35801D39			STW,8	:PATID+1	STORE WORD SEED
6624	02	01361	6AF01CF9			BAL,15	:PATTERN	SPREAD PATTERN FOR COMPARE
6625	02	01362	72E017C6			LB,14	TST3WR	BCD WRITE
6626	02	01363	71E02085			CB,14	=X'0D000000'	MASK
6627	02	01364	6830136E			BE	TST3117B-6	BYPASS MASK
6628	02	01365	311019CE			CW,1	MODEFLAG	PACKED FLAG SET
6629	02	01366	6830136E			BE	\$+8	
6630	02	01367	3A801DBA			LCW,8	:COMM CNT	WORDS COMPARE
6631	02	01368	22600000	A		LI,6	0	
6632	02	01369	32EC20C5			LW,14	BUFF1,6	
6633	02	0136A	4BE0209D			AND,14	=X'3F3F3F3F'	MASK SEED
6634	02	0136B	35EC20C5			STW,14	BUFF1,6	STORE WORD
6635	02	0136C	33100006	A		MTW,1	6	
6636	02	0136D	65801369			BIR,8	\$-4	
6637	02	0136E	B28018D7			LW,8	*LASTWDW	
6638	02	0136F	488019A8			AND,8	MASKBYT	MASK ODD BYTE COUNT
6639	02	01370	B58018D7			STW,8	*LASTWDW	
6640	02	01371	B28018D9			LW,8	*LASTWDR	
6641	02	01372	488019A8			AND,8	MASKBYT	MASK ODD BYTE COUNT
6642	02	01373	B58018D9			STW,8	*LASTWDR	
6643	02	01374	6AF01D47		TST3117B	BAL,15	:COMPARE	
6644	02	01375	6800137B			B	TST3118	
6645				*			INFORMATION ERROR	
6646	02	01376	12C017F2			LD,12	TST3RF	IOCD PRINTOUT
6647	02	01377	6AF01EAF			BAL,15	IOCDMSG	
6648	02	01378	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCHES
6649	02	01379	2E000000	A		WAIT		HALT
6650	02	0137A	6800137B			B	\$+1	CANT LOOP
6651	02	0137B	20A00001	A	TST3118	A1,10	1	
6652	02	0137C	22E00000	A		LI,14	0	
6653	02	0137D	35E01EA6			STW,14	:INTRECF	CLEAR INTERRUPT FLAG
6654	02	0137E	32E00204	A		LW,14	:P4	DELAY IN MS
6655	02	0137F	6AF01E26			BAL,15	:DELAY	
6656	02	01380	68001381			B	\$+1	
6657	02	01381	31A00203	A		CW,10	:P3	LOOP TILL EOT OR RECORD COUNT DONE
6658	02	01382	6910133C			BL	TST3116	
6659	02	01383	31200202	A		CW,2	:P2	
6660	02	01384	69301387			BNE	TST3119	P2 =2 END OF READ FWD
6661	02	01385	6AF0160C			BAL,15	RWTLF	REWIND TO LOAD POINT
6662	02	01386	680013A6			B	TST3122+1	RETURN TO CONTROL PROGRAM
6663				*				READ RECORD BACKWARD
6664	02	01387	22A00000	A	TST3119	LI,10	0	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 98
6665	02	01388	22900000	A		L1,9	0	CLEAR RETRY TALLY
6666	02	01389	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6667	02	0138A	22000C19			L1,0	DA(SPBRAND)	SPACE BACKWARD
6668	02	0138B	6AF01CA2			BAL,15	:IOEXEC	EXECUTE SIO
6669	02	0138C	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
6670	02	0138D	CEE018B5			TDV,14	*:DEVADDR	TDV
6671	02	0138E	31F02098			CW,15	=X'04000000'	BOT SET
6672	02	0138F	694013A5			BCS,4	TST3122	
6673	02	01390	6AF01EC4		TST3120	BAL,15	:ERROR	TEST
6674	02	01391	00005078			DATA	BA(TSEQ010)	READY, NO UE
6675	02	01392	6800139D			B	TST3120A	
6676					*		ERROR EXIT NOT LOAD POINT	
6677	02	01393	12C01832			LD,12	SPBRAND	10CD PRINTOUT
6678	02	01394	6AF01EAF			BAL,15	10CDMSG	
6679					*			SPACE FORWARD TO LOOP ON ERROR TALLY +1
6680	02	01395	33100009	A		MTW,1	9	
6681	02	01396	21900006	A		C1,9	6	
6682	02	01397	6830139D			BE	TST3120A	RETRIES DONE
6683	02	01398	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6684	02	01399	22000C1A			L1,0	DA(SPFRAND)	SPACE FORWARD
6685	02	0139A	6AF01CA2			BAL,15	:IOEXEC	T10, S10
6686	02	0139B	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
6687	02	0139C	68001389			B	TST3119+2	GO RETRY READ
6688					*			COMPARE INFORMATION READ
6689	02	0139D	20A00001	A	TST3120A	AI,10	1	
6690	02	0139E	22E00000	A		L1,14	0	
6691	02	0139F	35E01EA6			STW,14	:INTRECF	CLEAR INTERRUPT FLAG
6692	02	013A0	32E00204	A		LW,14	:P4	DELAY P4 MS
6693	02	013A1	6AF01E26			BAL,15	:DELAY	
6694	02	013A2	680013A3			B	\$+1	
6695	02	013A3	31A00203	A		CW,10	:P3	LOOP TILL BOT OR RECORD COUNT DONE
6696	02	013A4	69101388			BL	TST3119+1	
6697	02	013A5	6AF0160C		TST3122	BAL,15	RWTLF	REWIND TO LOAD POINT
6698	02	013A6	32F0189C			LW,15	FLGRG	REGULAR PRINTOUT FLAG
6699	02	013A7	35F019A7			STW,15	NOPKPRF	
6700	02	013A8	68000511			B	TST36	RETURN TO CONTROL PROGRAM
6701					*			
6702					*			
6703					*			
6704					*			
6705					*			
6706					*			
6707					*			
6708					*			
6709					*			
6710					*			
6711					*			
6712					*			
6713					*			
6714					*			
6715					*			
6716					*			
6717					*			
6718					*			
6719					*			
6720					*			
6721					*			
6722					*			
6723					*			
6724					*			
6725					*			
6726					*			
6727					*			
6728					*			
6729	02	013A9	22700064	A	TST32	L1,7	100	SMEAR PATTERN
6730	02	013AA	328020A1			LW,8	=X'FFFFFFF'	ALL BITS ON
6731	02	013AB	358E20C4			STW,8	BUFF1-1,7	STORE WORD 400 BYTE RECORD
6732	02	013AC	647013AB			BDR,7	\$-1	
6733	02	013AD	32701838			LW,7	TST32W	WRITE
6734	02	013AE	3280183C			LW,8	TST32RF	READ FWD

TST3,2 DESKEW UTILITY TEST

THIS TEST IS PROVIDED AS A SCOPING AID DURING CHECKING AND ADJUSTING THE READ/WRITE SKEW. A PATTERN OF ALL ONES WILL BE RECORDED AS A CONTINUOUS RECORD. AT EOT THE TAPE WILL BE REWOUND.

- D1 2 DESKEW TEST
- D2 0,1 WRITE UNTIL EOT IS REACHED AND REWIND.
- 2 READ FORWARD UTIL EOT AND REWIND.
- 3 SPACE BACKWARD INTIL BOT IS REACHED
- 4 READ FWD TILL EOT, SPACE BKW TILL BOT, NO REWINDS.
- D3 NOT USED
- D4 NOT USED

EXAMPLE

TST3,2,2
READ FORWARD UNTIL EOT AND REWIND

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 99
6735	02	013AF	311019CE			CW,1	MODEFLAG	PACKED BINARY FLAG SET
6736	02	013B0	683013B4			BE	TST3201	
6737	02	013B1	49702086			OR,7	=X'05000000'	BINARY WRITE
6738	02	013B2	49802085			OR,8	=X'06000000'	BINARY READ
6739	02	013B3	680013B6			B	\$+3	
6740	02	013B4	48702086		TST3201	AND,7	=X'01FFFFFF'	PACKED BINARY WRITE
6741	02	013B5	48802087			AND,8	=X'02FFFFFF'	PACKED BINARY READ
6742	02	013B6	35701838			STW,7	TST32W	STORE WRITE
6743	02	013B7	3580183C			STW,8	TST32RF	STORE READ
6744	02	013B8	31100202	A		CW,1	:P2	P2 =0,1 WRITE CONTINUOUS
6745	02	013B9	681013C5			BGE	TST3202	
6746	02	013BA	31200202	A		CW,2	:P2	P2 =2 READ FWD TILL EOT
6747	02	013BB	683013E6			BEZ	TST3205	
6748	02	013BC	31300202	A		CW,3	:P2	P2 =3 SPACE BKW TILL BOT
6749	02	013BD	683013DC			BEZ	TST3203	
6750	02	013BE	32700202	A		LW,7	:P2	
6751	02	013BF	21700004	A		CI,7	4	
6752	02	013C0	683013E7			BE	TST3206	P2 =4 NO REWINDS,READ FWD,READ BKW *
6753							ERROR P2 IS NOT 0,1,2,3,4	REPORT BAD PARAMETER
6754	02	013C1	3520030A	A		STW,2	:PIT10	
6755	02	013C2	EAF00229	A		BAL,15	*:PREPORT	
6756	02	013C3	00000326			DATA	:DIC+6	
6757	02	013C4	E8000214	A		B	*:MONITOR	
6758	02	013C5	6AF0160C		TST3202	BAL,15	RWTLF	REWIND TO LOAD POINT
6759	02	013C6	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6760	02	013C7	22000C1C			LI,0	DA(TST32W)	WRITE RECORD WITH DATA CHAINING
6761	02	013C8	CC8018B5			SIO,8	*:DEVADDR	WRITE
6762	02	013C9	2270E000	A		LI,7	X'E000'	
6763	02	013CA	32C01EA6			LW,12	:INTRECF	WAIT FOR INTERRUPT
6764	02	013CB	693013D4			BNEZ	TST3202A	
6765	02	013CC	647013CA			BDR,7	\$-2	
6766	02	013CD	CFC018B5			HIO,12	*:DEVADDR	HIO
6767	02	013CE	CEA018B5			TDV,10	*:DEVADDR	TDV
6768	02	013CF	31802089			CW,11	=X'02000000'	EOT SET
6769	02	013D0	694013C5			BCS,4	TST3202	
6770	02	013D1	EAF0021C	A		BAL,15	*:PRINT	PRINT OUT TIMEOUT MESSAGE
6771	02	013D2	00001A0A			DATA	TIMEOUT	
6772	02	013D3	680013C6			B	TST3202+1	CONTINUE WITH OPERATION
6773							TAPE WRITTEN ALL BITS ON CONTUOUS	LOOK FOR EOT
6774	02	013D4	CEC018B5		TST3202A	TDV,12	*:DEVADDR	EOT
6775	02	013D5	31D02089			CW,13	=X'02000000'	
6776	02	013D6	694013DA			BCS,4	\$+4	
6777	02	013D7	2270E000	A		LI,7	X'E000'	
6778	02	013D8	6AF01E44			BAL,15	:INTAE	ARM INTERRUPT
6779	02	013D9	680013CA			B	TST3202+5	
6780	02	013DA	CFC018B5			HIO,12	*:DEVADDR	HIO
6781	02	013DB	680013C5			B	TST3202	GO TO REWIND
6782	02	013DC	6AF01638		TST3203	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6783	02	013DD	22000C0A			LI,0	DA(SBF1)	SPACE FILE BKW
6784	02	013DE	CC8018B5			SIO,8	*:DEVADDR	INIATE SPACE BKW
6785	02	013DF	32C01EA6			LW,12	:INTRECF	WAIT FOR INTERRUPT
6786	02	013E0	683013DF			BCR,3	\$-1	
6787	02	013E1	CFC018B5			HIO,12	*:DEVADDR	HIO
6788	02	013E2	CEA018B5			TDV,10	*:DEVADDR	TDV
6789	02	013E3	31802089			CW,11	=X'04000000'	BOT SET
6790	02	013E4	694013E7			BCS,4	TST3206	
6791	02	013E5	680013DC			B	TST3203	CONTINUE WITH OPERATION
6792	02	013E6	6AF0160C		TST3205	BAL,15	RWTLF	REWIND TO LOAD POINT
6793	02	013E7	6AF01638		TST3206	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6794	02	013E8	22000C1E			LI,0	DA(TST32RF)	READ FWD TILL EOT P2 =2
6795	02	013E9	CC8018B5			SIO,8	*:DEVADDR	READ FWD
6796	02	013EA	2270E000	A		LI,7	X'E000'	
6797	02	013EB	32C01EA6			LW,12	:INTRECF	WAIT FOR INTERRUPT
6798	02	013EC	693013F5			BNEZ	TST3206A	
6799	02	013ED	647013EB			BDR,7	\$-2	
6800	02	013EE	CFC018B5			HIO,12	*:DEVADDR	HIO
6801	02	013EF	CEA018B5			TDV,10	*:DEVADDR	TDV
6802	02	013F0	31802089			CW,11	=X'02000000'	EOT SET
6803	02	013F1	694013FC			BCS,4	TST3207	
6804	02	013F2	EAF0021C	A		BAL,15	*:PRINT	PRINT OUT TIMEOUT MESSAGE

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	100
6805	02	013F3	00001A0A			DATA	TIMEOUT	
6806	02	013F4	680013E7			B	TST3206	CONTINUE WITH OPERATION
6807	02	013F5	CEC018B5		TST3206A	TDV,12	*:DEVADDR	LOOK FOR EOT
6808	02	013F6	31D02089			CW,13	=X'02000000'	EOT
6809	02	013F7	694013FB			BCS,4	\$+4	
6810	02	013F8	2270E000	A		LI,7	X'E000'	
6811	02	013F9	6AF01E44			BAL,15	:INTAE	ARM INTERRUPT
6812	02	013FA	680013EB			B	TST3206+4	
6813	02	013FB	CFC018B5			H10,12	*:DEVADDR	
6814	02	013FC	31300202	A	TST3207	CW,3	:P2	P2 =3
6815	02	013FD	6830130C			BE	TST3203	GO SPACE
6816	02	013FE	32700202	A		LW,7	:P2	
6817	02	013FF	21700004	A		CI,7	4	
6818	02	01400	6830130C			BE	TST3203	P2 =4 READ FWD,SPACE BKK,NO REWIND
6819	02	01401	680013E6			B	TST3205	REWIND AND READ FORWARD AGAIN
6820					*			
6821	02	01402	68000511			B	TST36	GO BACK TO CONTROL PROGRAM
6822					*			
6823					*			
6824					*			
6825					*			TST3,3 SYNC ON A CHARACTER UTILITY
6826					*			
6827					*			
6828					*			
6829					*			THIS TEST IS PROVIDED AS A SCOPING AID BY EXECUTING
6830					*			A UNIQUE I/O INSTRUCTION (TDV) AFTER THE BYTE COUNT
6831					*			SPECIFIED IN THE TEST HAS BEEN REACHED.
6832					*			D1 3 SYNC ON A CHARACTER TEST
6833					*			D2 1 READ FORWARD AND SPACE RECORD
6834					*			BACKWARD.
6835					*			D3 BYTE TO SYNC ON.
6836					*			D4 DELAY IN MILLISECONDS BETWEEN SYNC.
6837					*			
6838					*			EXAMPLE
6839					*			-----
6840					*			TST3,3,1,375,10
6841					*			
6842					*			READ FORWARD 375 BYTES, SIGNAL (TDV) AND
6843	02	01403	32700203	A	TST33	LW,7	:P3	GET BYTE COUNT TO SYNC ON
6844	02	01404	68201410			BLEZ	TST3301	
6845	02	01405	32700204	A		LW,7	:P4	P4 =0 OK
6846	02	01406	6810140A			BGEZ	\$+4	
6847	02	01407	22700004	A		LI,7	4	
6848	02	01408	3570030A	A		STW,7	:PIT10	PARAMETER 4 ERROR
6849	02	01409	68001411			B	TST3301+1	
6850	02	0140A	229FFFF5	A		LI,9	-11	MAX BYTE BUFFER AREA
6851	02	0140B	22800000	A		LI,8	0	
6852	02	0140C	308018C8			AW,8	MAXBYT	
6853	02	0140D	6590140C			BIR,9	\$-1	11 X MAXBYTE LIMIT
6854	02	0140E	31800007	A		CW,8	7	
6855	02	0140F	68101414			BGE	TST3302	P3 OK
6856					*	ERROR EXIT	P3 TOO LARGE, NEGATIVE OR ZERO	
6857	02	01410	3530030A	A	TST3301	STW,3	:PIT10	PARAMETER 3 ERROR
6858	02	01411	EAF00229	A		BAL,15	*:PREPORT	
6859	02	01412	00000326			DATA	:DIC+6	
6860	02	01413	E8000214	A		B	*:MONITOR	
6861	02	01414	22700000	A	TST3302	LI,7	0	
6862	02	01415	328018C8			LW,8	MAXBYT	MAX BYTE SIZE OF I/O AREA
6863	02	01416	308020B8			AW,8	=X'91000000'	DC,CE,SKIP
6864	02	01417	225FFFF5	A		LI,5	-11	
6865	02	01418	358E1843			STW,8	TST33R+1,7	SET UP DC FLAG
6866	02	01419	33200007	A		MTW,2	7	
6867	02	0141A	E5501418			BIR,5	\$-2	SET UP DATA CHAIN FLAG IN ALL IOCD
6868	02	0141B	32700203	A		LW,7	:P3	GET BYTE TO SYNC ON
6869	02	0141C	229FFFF5	A		LI,9	-11	
6870	02	0141D	22600000	A		LI,6	0	
6871	02	0141E	328018C8		TST3303	LW,8	MAXBYT	LARGEST RECORD POSSIBLE IN I/O AREA
6872	02	0141F	31800007	A		CW,8	7	
6873	02	01420	68101425			BGE	TST3304	LAST BYTE SET UP
6874	02	01421	387018C8			SW,7	MAXBYT	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 101
6875	02	01422	308018C8			AW,8	MAXBYT	
6876	02	01423	33200006	A		MTW,2	6	
6877	02	01424	6590141E			BIR,9	TST3303	LOOP
6878	02	01425	4B70208E		TST3304	AND,7	=X'00FFFFFF'	GET LAST BYTE COUNT
6879	02	01426	30702089			AW,7	=X'50000000'	ZBC AND CE INTERRUPT
6880	02	01427	357C1843			STW,7	TST33R+1,6	
6881	02	01428	31100202	A		CW,1	:P2	READ FWD, SPACE BKW
6882	02	01429	6830142C			BEZ	TST3306	
6883					*	ERROR IF	PI NOT 1	
6884	02	0142A	3520030A	A		STW,2	:PIT10	REPORT BAD PARAMETER
6885	02	0142B	68001411			B	TST3302-3	
6886					*			FORWARD READ SET UP
6887	02	0142C	22908314		TST3306	LI,9	BA(BUFF1)	BA OF BUFF1
6888	02	0142D	311019CE			CW,1	MODEFLAG	PACKED BINARY FLAG SET
6889	02	0142E	68301431			BE	\$+3	
6890	02	0142F	3090208F			AW,9	=X'06000000'	BINARY READ
6891	02	01430	68001432			B	\$+2	
6892	02	01431	30902089			AW,9	=X'02000000'	PACKED BINARY READ
6893	02	01432	22700000	A		LI,7	0	
6894	02	01433	226FFFF5	A		LI,6	-11	
6895	02	01434	359E1842			STW,9	TST33R,7	SET UP ALL READS
6896	02	01435	33200007	A		MTW,2	7	
6897	02	01436	65601434			BIR,6	\$-2	
6898					*			READ RECORD FORWARD
6899	02	01437	6AF01638		TST3309	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6900	02	01438	22000C21			LI,0	DA(TST33R)	READ
6901	02	01439	CC8018B5			SIO,8	*:DEVADDR	SIO READ
6902	02	0143A	22E02328	A		LI,14	9000	9 SEC DELAY
6903	02	0143B	6AF01E26			BAL,15	:DELAY	WAIT FOR INTERRUPT
6904	02	0143C	6800143E			B	TST3310	
6905					*			DELAY TIMEOUT
6906	02	0143D	68001451			B	TST3311	
6907	02	0143E	CEC018B5		TST3310	TDV,12	*:DEVADDR	TDV SIGNAL AT ZBC
6908	02	0143F	3270208A			LW,7	=X'00FF0000'	DELAY
6909	02	01440	CDC018B5			TIO,12	*:DEVADDR	TIO
6910	02	01441	31D02097			CW,13	=X'66000000'	DEVICE OR CONTROLLER BUSY
6911	02	01442	68401445			BCR,4	\$+3	
6912	02	01443	64701440			BDR,7	\$-3	LOOP
6913	02	01444	68001451			B	TST3311	TIMEOUT ERROR
6914	02	01445	22E00000	A		LI,14	0	
6915	02	01446	35E01EA6			STW,14	:INTRECF	CLEAR INTERRUPT FLAG
6916	02	01447	32E00204	A		LW,14	:P4	DELAY FOR SMALL RECORDS
6917	02	01448	6AF01E26			BAL,15	:DELAY	
6918	02	01449	6800144A			B	\$+1	
6919	02	0144A	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
6920	02	0144B	22000C20			LI,0	DA(TST33S)	SPACE
6921	02	0144C	CC8018B5			SIO,8	*:DEVADDR	SIO SPACE
6922	02	0144D	22E01F40	A		LI,14	8000	8 SEC DELAY
6923	02	0144E	6AF01E26			BAL,15	:DELAY	
6924	02	0144F	68001437			B	TST3309	
6925	02	01450	68000511			B	TST36	
6926	02	01451	CFC018B5		TST3311	HIO,12	*:DEVADDR	HIO
6927	02	01452	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
6928	02	01453	00001A0A			DATA	TIMEOUT	
6929	02	01454	6AF0160C			BAL,15	RTWLP	REWIND TO LOAD POINT
6930	02	01455	68000511			B	TST36	
6931					*			
6932					*			
6933					*			
6934					*			
6935					*			
6936					*			
6937					*			
6938					*			
6939					*			
6940					*			
6941					*			
6942					*			
6943					*			
6944					*			

TST3,4 COMPATABILITY AND NOISE PATTERN TEST

THIS TEST ALLOWS THE USER TO WRITE, READ FORWARD, READ BACKWARD, OR READ FORWARD AND BACKWARD A PRE-DETERMINED INCREMENTED NOISE PATTERN.

D1 4 COMPATABILITY AND NOISE PATTERN TEST
D2 0,1 WRITE,SPACE BACKWARD,AND READ

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00			7/30/70 103
7015								
7016	02	01489	2240148C		TST3406	LI,4	\$+3	SET UP RETURN
7017	02	0148A	5542121D			STH,4	T2REWR,1	
7018	02	0148B	68001207			B	T2REW	WRITE
7019	02	0148C	2240148F			LI,4	\$+3	SET UP RETURN
7020	02	0148D	5542122E			STH,4	T2RESBR,1	
7021	02	0148E	6800121E			B	T2RESB	SPACE BKW OVER RECORD
7022	02	0148F	22401492			LI,4	\$+3	SET UP RETURN
7023	02	01490	5542125E			STH,4	T2RERFR,1	SET UP RETURN
7024	02	01491	68001240			B	T2RERF	READ FORWARD
7025	02	01492	680014AF			B	TST3410	GO TO TALLY
7026	02	01493	22401496		TST3407	LI,4	\$+3	SET UP RETURN
7027	02	01494	5542123F			STH,4	T2RESFR,1	SET UP RETURN
7028	02	01495	6800122F			B	T2RESF	SPACE FWD
7029	02	01496	22401499			LI,4	\$+3	SET UP RETURN
7030	02	01497	5542122E			STH,4	T2RESBR,1	
7031	02	01498	6800121E			B	T2RESB	SPACE BKW OVER RECORD
7032	02	01499	2240149C			LI,4	\$+3	SET UP RETURN
7033	02	0149A	5542125E			STH,4	T2RERFR,1	SET UP RETURN
7034	02	0149B	68001240			B	T2RERF	READ FORWARD
7035	02	0149C	680014AF			B	TST3410	GO TO TALLY
7036	02	0149D	224014A0		TST3408	LI,4	\$+3	SET UP RETURN
7037	02	0149E	5542125E			STH,4	T2RERFR,1	SET UP RETURN
7038	02	0149F	68001240			B	T2RERF	READ FORWARD
7039	02	014A0	224014A3			LI,4	\$+3	SET UP RETURN
7040	02	014A1	5542122E			STH,4	T2RESBR,1	
7041	02	014A2	6800121E			B	T2RESB	SPACE BKW OVER RECORD
7042	02	014A3	224014A6			LI,4	\$+3	SET UP RETURN ADDRESS
7043	02	014A4	5542123F			STH,4	T2RESFR,1	SET UP RETURN
7044	02	014A5	6800122F			B	T2RESF	SPACE FORWARD
7045	02	014A6	680014AF			B	TST3410	GO TO TALLY
7046	02	014A7	224014AA		TST3408A	LI,4	\$+3	SET UP RETURN
7047	02	014A8	5542125E			STH,4	T2RERFR,1	SET UP RETURN
7048	02	014A9	68001240			B	T2RERF	READ FORWARD
7049	02	014AA	680014AF			B	TST3410	GO TO TALLY
7050	02	014AB	224014AE		TST3409	LI,4	\$+3	SET UP RETURN
7051	02	014AC	5542121D			STH,4	T2REWR,1	
7052	02	014AD	68001207			B	T2REW	WRITE
7053	02	014AE	680014AF			B	TST3410	GO TO TALLY
7054								
7055								
7056	02	014AF	529217C5		TST3410	LH,9	WRRAND+1,1	INCREMENT RECORD SIZE
7057	02	014B0	2090000C A			AI,9	12	BYTE COUNT +12
7058	02	014B1	559217C5			STH,9	WRRAND+1,1	SET UP NEW BYTE SIZE
7059	02	014B2	559217F1			STH,9	RFRAND+1,1	
7060								ALL PASSES DONE
7061	02	014B3	32901DBA			LW,9	:COMWCNT	INCREMENT WORD SIZE
7062	02	014B4	20900003 A			AI,9	3	WORD COUNT +3
7063	02	014B5	35901DBA			STW,9	:COMWCNT	COMPARE WORDS
7064	02	014B6	35901CF4			STW,9	:CLRSIZE	CLEAR
7065	02	014B7	33101885			MTW,1	LOOPTLY	
7066	02	014B8	32901885			LW,9	LOOPTLY	
7067	02	014B9	359020C5			STW,9	BUFF1	SET UP NEXT SEQUENCE NO. IN RECORD
7068	02	014BA	359018F8			STW,9	NZSEQNO	
7069	02	014BB	319018F6			CW,9	LOOPMAX	ALL PASSES DONE
7070	02	014BC	68201481			BLE	TST3405	DO ANOTHER LOOP
7071								
7072								ALL PASSES DONE
7073	02	014BD	22700000 A			LI,7	0	PRINTOUT ERROR TALLIES
7074	02	014BE	3A5018BE			LCW,5	SAVNUMB	NUMBER OF UNITS
7075	02	014BF	32CE1886		TST3412	LW,12	SAVDEV,7	DEVICE
7076	02	014C0	EAF00218 A			BAL,15	*:HEXC	CONVERT
7077	02	014C1	35F01ADC			STW,15	REMESG3+2	STORE
7078	02	014C2	32CE186C			LW,12	PWTALLY,7	PERM WRITE TALLY
7079	02	014C3	EAF00217 A			BAL,15	*:DECC	CONVERT
7080	02	014C4	35F01ADF			STW,15	REMESG3+5	STORE
7081	02	014C5	32CE1864			LW,12	TWTALLY,7	TEMP WRITE TALLY
7082	02	014C6	EAF00217 A			BAL,15	*:DECC	CONVERT
7083	02	014C7	35F01AE2			STW,15	REMESG3+8	STORE
7084	02	014C8	32CE1874			LW,12	PRFTALLY,7	PERM READ FWD

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 104
7085	02	014C9	EAF00217	A		BAL,15	*:DECC	CONVERT
7086	02	014CA	35F01AE5			STW,15	REMESG3+11	
7087	02	014CB	32CE187C			LW,12	TRFTALLY,7	TEMP READ FWD
7088	02	014CC	EAF00217	A		BAL,15	*:DECC	CONVERT
7089	02	014CD	35F01AE8			STW,15	REMESG3+14	STORE
7090	02	014CE	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
7091	02	014CF	00001ADA			DATA	REMESG3	
7092	02	014D0	20700001	A		AI,7	1	NEXT DEVICE
7093	02	014D1	655014BF			BIR,5	TST3412	
7094	02	014D2	6AF01648			BAL,15	DOALL	REWIND ALL UNITS
7095	02	014D3	680014D5			B	\$+2	
7096	02	014D4	6AF0164A		TST3411	BAL,15	DOALL1	SET UP ONE UNIT
7097	02	014D5	6AF0160C			BAL,15	RWTLP	REWIND TO LOAD POINT
7098	02	014D6	20700001	A		AI,7	1	DO NEXT UNIT
7099	02	014D7	655014D4			BIR,5	TST3411	DO ALL UNITS
7100	02	014D8	68000511			B	TST36	RETURN TO CONTROL PROGRAM
7101								
7102								
7103								
7104								
7105								
7106								
7107								
7108								
7109								
7110								
7111								
7112								
7113								
7114								
7115								
7116								
7117								
7118								
7119								
7120								
7121								
7122								
7123								
7124								
7125								
7126								
7127								
7128								
7129								
7130								
7131								
7132								
7133	02	014D9	32700202	A	TST35	LW,7	:P2	
7134	02	014DA	21700008	A		CI,7	8	EVEN PARITY REQUESTED
7135	02	014DB	684014E0			BCR,4	\$+5	NO
7136	02	014DC	207FFFF8	A		AI,7	-8	
7137	02	014DD	35700202	A		STW,7	:P2	
7138	02	014DE	2280000E	A		LI,8	X'DE'	READ FWD EVEN PARITY
7139	02	014DF	680014E1			B	\$+2	
7140	02	014E0	728017DC			LB,8	TRFBC	REGULAR READ
7141	02	014E1	75801858			STB,8	RFSPEC	SET UP BCD
7142	02	014E2	7580185A			STB,8	RFSPEC1	
7143	02	014E3	32700202	A		LW,7	:P2	
7144	02	014E4	21700005	A		CI,7	5	
7145	02	014E5	691014EA			BL	TST3501	PARAMETER ERROR
7146								
7147	02	014E6	3520030A	A		STW,2	:PIT10	
7148	02	014E7	EAF00229	A		BAL,15	*:PREPORT	
7149	02	014E8	00000326			DATA	:DIC+6	
7150	02	014E9	E8000214	A		B	*:MONITOR	GO TO MONITOR
7151	02	014EA	32700203	A	TST3501	LW,7	:P3	
7152	02	014EB	692014EE			BGZ	TST3502	PARAMETER ERROR
7153								
7154	02	014EC	3530030A	A		STW,3	:PIT10	

TST3,5 READ/SPACE TEST

THIS TEST ALLOWS THE USER TO READ OR SPACE N RECORDS, WITH OR WITHOUT REWIND. ONLY NON-RECOVERABLE TRANS-MISSION ERRORS WILL CAUSE ERROR PRINTOUT, BACKSPACE, AND A HALT.

- D1 5 READ/SPACE TEST
- D2 0 REWIND AND READ FWD N RECORDS.
- 1 REWIND AND SPACE FWD N RECORDS.
- 2 DONT REWIND, READ FWD N RECORDS
- 3 DONT REWIND, SPACE FWD N RECORDS.
- 4 DONT REWIND, SPACE BKW N RECORDS.
- 8 REWIND, READ FWD N RECORDS WITH EVEN PARITY, DECIMAL (BCD).
- 10 DONT REWIND, READ FWD WITH EVEN PARITY PARITY, DECIMAL (BCD).
- D3 NUMBER OF RECORDS TO READ OR SPACE
- D4 0 DONT PRINTOUT RECORD
- 1 PRINTOUT RECORD IN ERROR.
- 2 PRINTOUT NTH RECORD.

EXAMPLE

TST3,5,0,100,1
REWIND,READ 100 RECORDS.PRINT OUT ERROR REC

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 105
7155	02	014ED	680014E7			B	TST3501-3	
7156	02	014EE	32700204	A	TST3502	LW,7	:P4	
7157	02	014EF	21700003	A		CI,7	3	
7158	02	014F0	691014F4			BL	TST3503	
7159					*			PARAMETER ERROR
7160	02	014F1	22700004	A		LI,7	4	
7161	02	014F2	3570030A	A		STW,7	:PIT10	
7162	02	014F3	680014E7			B	TST3501-3	
7163	02	014F4	351019A8		TST3503	STW,1	TLOOP	START WITH LOOP 1
7164	02	014F5	32700203	A		LW,7	:P3	
7165	02	014F6	357019A9			STW,7	CMAX	
7166	02	014F7	31100202	A		CH,1	:P2	
7167	02	014F8	691014FA			BL	\$+2	
7168	02	014F9	6AF0160C			BAL,15	RWTLF	0,1 REWIND TO LOAD POINT
7169	02	014FA	32700202	A	TST3504	LW,7	:P2	
7170	02	014FB	21700004	A		CI,7	4	
7171	02	014FC	68301545			BE	TST3508	BACKSPACE ONLY
7172	02	014FD	21700001	A		CI,7	1	
7173	02	014FE	69401538			BCS,4	TST3507	SPACE FWD ONLY
7174	02	014FF	22700000	A	TST3505	LI,7	0	
7175	02	01500	357019AA			STW,7	RRTT	CLEAR RETRY TALLY
7176	02	01501	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7177	02	01502	22000C2C			LI,0	DA(RFSPEC)	READ FORWAD INTO MAX I/O AREA
7178	02	01503	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
7179	02	01504	6AF0162F			BAL,15	MYDELAY	WAIT FOR INT ON ZBC OR CE
7180	02	01505	22EFFCE0	A		LI,14	-800	WAIT FOR LONGEST RECORD
7181	02	01506	65E01506			BIR,14	\$	
7182	02	01507	CEA018B5			TDV,10	*:DEVADDR	TDV TO SEE IF AT EOT
7183	02	01508	31B02089			CW,11	=X'02000000'	EOT
7184	02	01509	69401540			BCS,4	TST3510	GO TO HALT,EXIT
7185	02	0150A	CDA018B5			TIO,10	*:DEVADDR	TIO
7186	02	0150B	32C018C8			LW,12	MAXBYT	MAXIMUM BYTES
7187	02	0150C	58C2000B	A		SH,12	11,1	-BYTE COUNT LEFT
7188	02	0150D	35C018DA			STW,12	BYTECN	
7189	02	0150E	328019A8			LW,8	TLOOP	
7190	02	0150F	318019A9			CW,8	CMAX	
7191	02	01510	69301514			BNE	\$+4	
7192	02	01511	31200204	A		CW,2	:P4	PRINTOUT NTH RECORD
7193	02	01512	69301514			BNE	\$+2	
7194	02	01513	6AF0154F			BAL,15	TST3511	GO TO PRINTOUT
7195	02	01514	31B0209E			CW,11	=X'00400000'	TE ONLY
7196	02	01515	68401549			BCR,4	TST3509	
7197					*			TRANSMISSION ERROR RETRY ROUTINE
7198	02	01516	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7199	02	01517	22000C19			LI,0	DA(SPBRAND)	SPACE BKW
7200	02	01518	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
7201	02	01519	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
7202	02	0151A	331019AA			MTW,1	RRTT	RETRY+1
7203	02	0151B	327019AA			LW,7	RRTT	RETRIES MAXIMUM
7204	02	0151C	2170000B	A		CI,7	11	
7205	02	0151D	69101501			BL	TST3505+2	
7206					*			10 RETRIES , PRINTOUT AND HALT
7207	02	0151E	32C019A8			LW,12	TLOOP	RECORD IN ERROR
7208	02	0151F	EAF00217	A		BAL,15	*:DECC	CONVERT
7209	02	01520	35F01A89			STW,15	MRTE+5	STORE
7210	02	01521	EAF00217	A		BAL,15	*:DECC	CONVERT
7211	02	01522	55F21A88			STH,15	MRTE+4,1	STORE
7212	02	01523	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7213	02	01524	22000C2D			LI,0	DA(RFSPEC1)	READ FWD WITH HTE
7214	02	01525	6AF01CA2			BAL,15	:IOEXEC	TIO,SIO
7215	02	01526	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
7216	02	01527	CDA018B5			TIO,10	*:DEVADDR	TIO
7217	02	01528	32C018C8			LW,12	MAXBYT	MAXIMUM BYTES
7218	02	01529	58C2000B	A		SH,12	11,1	- BYTE COUNT FROM TIO
7219	02	0152A	EAF00217	A		BAL,15	*:DECC	CONVERT
7220	02	0152B	35F01A8C			STW,15	MRTE+8	STORE
7221	02	0152C	EAF00217	A		BAL,15	*:DECC	CONVERT
7222	02	0152D	55F21A88			STH,15	MRTE+7,1	STORE
7223	02	0152E	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
7224	02	0152F	00001A84			DATA	MRTE	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 106
7225	02	01530	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7226	02	01531	22000C19			L1,0	DA(SFBRAND)	SPACE BKW
7227	02	01532	6AF01CA2			BAL,15	:IOEXEC	T10,S10
7228	02	01533	6AF0162F			BAL,15	MYDELAY	DELAY FOR INTERRUPT
7229	02	01534	31100204	A		CW,1	:P4	PRINTOUT ERROR RECORD
7230	02	01535	69301537			BNE	\$+2	
7231	02	01536	6AF0154F			BAL,15	TST3511	GO TO PRINTOUT
7232	02	01537	6800154D			B	TST3510	
7233								SPACE FWD N RECORDS
7234					TST3507	LW,7	TLOOP	NTH RECORD
7235	02	01539	317019A9			CW,7	CMAX	
7236	02	0153A	6930153D			BNE	\$+3	NO
7237	02	0153B	31200204	A		CW,2	:P4	YES
7238	02	0153C	683014FF			BE	TST3505	READ NTH RECORD IF P4=2
7239	02	0153D	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7240	02	0153E	22000C1A			L1,0	DA(SFBRAND)	SPACE FWD
7241	02	0153F	6AF01CA2			BAL,15	:IOEXEC	T10,S10
7242	02	01540	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
7243	02	01541	CEA018B5			TDV,10	*:DEVADDR	TDV TO SEE IF AT EOT
7244	02	01542	31802089			CW,11	=X'02000000'	EOT
7245	02	01543	6940154D			BCS,4	TST3510	GO TO HALT,EXIT
7246	02	01544	68001549			B	TST3509	
7247								SPACE BKW N RECORDS
7248	02	01545	6AF01638		TST3508	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7249	02	01546	22000C19			L1,0	DA(SFBRAND)	SPACE BKW
7250	02	01547	6AF01CA2			BAL,15	:IOEXEC	T10,S10
7251	02	01548	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
7252	02	01549	331019A8		TST3509	MTW,1	TLOOP	TALLY+1
7253	02	0154A	327019A8			LW,7	TLOOP	
7254	02	0154B	317019A9			CW,7	CMAX	MAXIMUM LOOPS
7255	02	0154C	682014FA			BLE	TST3504	
7256	02	0154D	2E000000	A	TST3510	WAIT		HALT
7257	02	0154E	68000511			B	TST36	RETURN TO CONTROL PROGRAM
7258								PRINTOUT NTH RECORD OR ERROR RECORD
7259	02	0154F	35F018D2		TST3511	STW,15	ST1155	SAVE RETURN ADDRESS
7260	02	01550	32C018DA			LW,12	BYTECN	NUMBER OF BYTES
7261	02	01551	EAF00217	A		BAL,15	*:DECC	CONVERT
7262	02	01552	35F01A94			STW,15	RECOU+6	STORE
7263	02	01553	EAF00217	A		BAL,15	*:DECC	CONVERT
7264	02	01554	55F21A93			STH,15	RECOU+5,1	STORE
7265	02	01555	32C019A8			LW,12	TLOOP	RECORD NUMBER
7266	02	01556	EAF00217	A		BAL,15	*:DECC	CONVERT
7267	02	01557	35F01A90			STW,15	RECOU+2	STORE
7268	02	01558	EAF00217	A		BAL,15	*:DECC	CONVERT
7269	02	01559	55F21A8F			STH,15	RECOU+1,1	STORE
7270	02	0155A	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
7271	02	0155B	00001A8E			DATA	RECOU	
7272	02	0155C	22600000	A		L1,6	0	
7273	02	0155D	327018DA			LW,7	BYTECN	
7274	02	0155E	25700001	A		SLS,7	1	
7275	02	0155F	21700048	A	TST3514	CI,7	72	
7276	02	01560	68201565			BLE	TST3512	
7277	02	01561	22800048	A		L1,8	75	MAX BYTE COUNT FOR ONE LINE
7278	02	01562	75801AEA			STB,8	OUTMSG	
7279	02	01563	207FFF88	A		A1,7	-72	MESSAGE >72
7280	02	01564	68001568			B	TST3513-2	
7281	02	01565	20700003	A	TST3512	A1,7	3	MESSAGE = 72 BYTES
7282	02	01566	75701AEA			STB,7	OUTMSG	
7283	02	01567	22700000	A		L1,7	0	
7284	02	01568	22BFFFF7	A		L1,11	-9	
7285	02	01569	22500000	A		L1,5	0	
7286	02	0156A	32CC20C5		TST3513	LW,12	BUFF1,6	GET WORD FROM READ AREA
7287	02	0156B	EAF00218	A		BAL,15	*:HEXC	CONVERT
7288	02	0156C	35FA1AEC			STW,15	OUTMSG+2,5	STORE
7289	02	0156D	EAF00218	A		BAL,15	*:HEXC	CONVERT
7290	02	0156E	35FA1AEB			STW,15	OUTMSG+1,5	STORE
7291	02	0156F	33200005	A		MTW,2	5	
7292	02	01570	33100006	A		MTW,1	6	
7293	02	01571	65B0156A			B1R,11	TST3513	
7294	02	01572	EAF0021C	A		BAL,15	*:PRINT	PRINT ONE LINE

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 107
7295	02	01573	00001AEA			DATA	OUTMSG	
7296	02	01574	21700000	A		CI,7	0	
7297	02	01575	E82018D2			BLE	*ST1155	RETURN TO PROGRAM AFTER PRINT
7298	02	01576	6800155F			B	TST3514	
7299					*			
7300					*			
7301					*			
7302					*			
7303					*			
7304					*			SUBROUTINE TO DETERMINE TIMING LOOP
7305					*			-----
7306	02	01577	35F018D2		GETTIME	STW,15	ST1155	SAVE RETURN ADDRESS
7307	02	01578	22F01593			LI,15	GETT2	SET UP RETURN ADDRESS ON ZBC
7308	02	01579	35F015C6			STW,15	STOP2T+2	
7309	02	0157A	22F0158B			LI,15	GETT11	SET UP FIRST TIME ADDRESS
7310	02	0157B	35F015CA			STW,15	STOPIT+2	
7311	02	0157C	22500000	A	GETT1	LI,5	0	CLEAR REGISTERS
7312	02	0157D	22700000	A		LI,7	0	
7313	02	0157E	32E0208B			LW,14	=X'7FFFFFFF'	
7314	02	0157F	22900000	A		LI,9	0	
7315	02	01580	22400000	A		LI,4	0	
7316	02	01581	32D015C3			LW,13	STOP2	
7317	02	01582	32F01E43			LW,15	:DELMTW	
7318	02	01583	35F00055	A		STW,15	X'55'	CLOCK COUNTER INTERRUPT
7319	02	01584	32F015C2			LW,15	STOPI	
7320	02	01585	35F0005B	A		STW,15	X'5B'	INTERRUPT ON ZERO COUNT
7321	02	01586	2280000A	A		LI,8	10	
7322	02	01587	35201E3B			STW,2	:DELTIME	
7323	02	01588	22F01040	A		LI,15	X'1040'	
7324	02	01589	6DF01200	A		WD,15	X'1200'	
7325	02	0158A	6800158A			B	\$	WAIT TO GET IN SYNC.
7326	02	0158B	22F01040	A	GETT11	LI,15	X'1040'	START CLOCK
7327	02	0158C	6DF01200	A		WD,15	X'1200'	
7328	02	0158D	35D0005B	A		STW,13	X'5B'	CHANGE INTERRUPT
7329	02	0158E	35801E3B			STW,8	:DELTIME	RESET TIME TO 10
7330	02	0158F	33100005	A		MTW,1	5	TALLY =TALLY+1
7331	02	01590	CEA018B5			TDV,10	*:DEVADDR	
7332	02	01591	51E2000B	A		CH,14	11,1	
7333	02	01592	6920158F			BOS,2	\$-3	
7334	02	01593	22F01040	A	GETT2	LI,15	X'1040'	DISARM CLOCK
7335	02	01594	6DF01100	A		WD,15	X'1100'	
7336	02	01595	22A00000	A		LI,10	0	
7337	02	01596	32B0208C			LW,11	=20000	SET UP DIVISION IN R10 AND R11
7338	02	01597	36A00005	A		DW,10	5	TIME/ LOOP TALLY
7339	02	01598	35B018D3			STW,11	TIME1	R11 HAS TALLY VALUE
7340	02	01599	22F0159E			LI,15	GETT12	
7341	02	0159A	35F015CA			STW,15	STOPIT+2	
7342	02	0159B	22F015A5			LI,15	GETT3	SET UP RETURN ADDRESS ON ZBC
7343	02	0159C	35F015C6			STW,15	STOP2T+2	
7344	02	0159D	6800157C			B	GETT1	
7345	02	0159E	22F01040	A	GETT12	LI,15	X'1040'	START CLOCK
7346	02	0159F	6DF01200	A		WD,15	X'1200'	
7347	02	015A0	35D0005B	A		STW,13	X'5B'	CHANGE INTERRUPT
7348	02	015A1	35801E3B			STW,8	:DELTIME	RESET TIME TO 10
7349	02	015A2	33100009	A		MTW,1	9	TALLY =TALLY+1
7350	02	015A3	F1A0207D			CB,10	*BUFF2	
7351	02	015A4	693015A2			BNEZ	\$-2	
7352	02	015A5	22F01040	A	GETT3	LI,15	X'1040'	DISARM CLOCK
7353	02	015A6	6DF01100	A		WD,15	X'1100'	
7354	02	015A7	22A00000	A		LI,10	0	
7355	02	015A8	32B0208C			LW,11	=20000	SET UP DIVISION IN R10 AND R11
7356	02	015A9	36A00009	A		DW,10	9	TIME/ LOOP TALLY
7357	02	015AA	35B018D4			STW,11	TIME2	R11 HAS TALLY VALUE
7358	02	015AB	22F01580			LI,15	GETT13	
7359	02	015AC	35F015CA			STW,15	STOPIT+2	
7360	02	015AD	22F015B7			LI,15	GETT4	SET UP RETURN ADDRESS ON ZBC
7361	02	015AE	35F015C6			STW,15	STOP2T+2	
7362	02	015AF	6800157C			B	GETT1	
7363	02	015B0	22F01040	A	GETT13	LI,15	X'1040'	START CLOCK
7364	02	015B1	6DF01200	A		WD,15	X'1200'	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 108
7365	02	015B2	35D0005B A			STW,13	X'5B'	CHANGE INTERRUPT
7366	02	015B3	35801E3B			STW,8	:DELTIME	RESET TIME TO 10
7367	02	015B4	33100007 A			MTW,1	7	TALLY =TALLY+1
7368	02	015B5	CDA018B5			T10,10	*:DEVADDR	
7369	02	015B6	68C015B4			BCR,12	\$-2	
7370	02	015B7	22F01040 A		GETT4	L1,15	X'1040'	DISARM CLOCK
7371	02	015B8	6DF01100 A			WD,10	X'1100'	
7372	02	015B9	22A00000 A			L1,10	0	
7373	02	015BA	32B020BC			LW,11	=20000	SET UP DIVISION IN R10 AND R11
7374	02	015BB	36A00007 A			DW,10	7	TIME/ LOOP TALLY
7375	02	015BC	35B018D5			STW,11	TIME3	R11 HAS TALLY VALUE
7376	02	015BD	32801E43			LW,8	:DELMTW	CLOCK INTERRUPT
7377	02	015BE	35800055 A			STW,8	X'55'	
7378	02	015BF	32801E42			LW,8	:DELXPSD	RESTORE CLOCK 5B INTERRUPT
7379	02	015C0	3580005B A			STW,8	X'5B'	
7380	02	015C1	EAF018D2			BAL,15	*ST1155	GO BACK TO PROGRAM
7381								
7382								
7383								
7384	02	015C2	0F0015C8		STOP1	XPSD,0	STOPIT	
7385	02	015C3	0F0015C4		STOP2	XPSD,0	STOP2T	
7386						BOUND	8	
7387	02	015C4	00000000 A		STOP2T	DATA	0,0,GETT2,0	
	02	015C5	00000000 A					
	02	015C6	00001593					
	02	015C7	00000000 A					
7388						BOUND	8	
7389	02	015C8	00000000 A		STOPIT	DATA	0,0,GETT11,0	
	02	015C9	00000000 A					
	02	015CA	0000158B					
	02	015CB	00000000 A					
7390								
7391								
7392								
7393								
7394								
7395								WRITE RETRY SUBROUTINE
7396								
7397	02	015CC	32601887		TWRTRY	LW,6	CRTRY	NUMBER OF RETRIES
7398	02	015CD	68201216			BLE	T2RE06B	NO RETRIES
7399	02	015CE	15601892			STD,6	T2RYSVE	SAVE R6 AND R7
7400	02	015CF	6AF01638		TWRTRY2	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7401	02	015D0	22000C19			L1,0	DA(SPBRAND)	SPACE BKW
7402	02	015D1	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
7403	02	015D2	6AF0162F			BAL,15	MYDELAY	
7404	02	015D3	6AF01638		TWRTRY3	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7405	02	015D4	22000BE2			L1,0	DA(WRRAND)	RE-WRITE RECORD
7406	02	015D5	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
7407	02	015D6	6AF0162F			BAL,15	MYDELAY	DELAY TILL INTERRUPT
7408	02	015D7	CDE018B5			T10,14	*:DEVADDR	T10
7409	02	015D8	31F019CC			CW,15	CHKBITT	UE,INC LENGTH,TE, ERRORS
7410	02	015D9	684015EA			BCR,4	TWRTRY4	NO ERRORS
7411								ERROR MESSAG NOT DONE HERE
7412	02	015DA	646015CF			BDR,6	TWRTRY2	
7413						PERMANT	WRITE ERROR + 1	
7414	02	015DB	331E186C			MTW,1	PWTALLY,7	PERM WRITE ERROR TALLY +1
7415	02	015DC	12C017C4			LD,12	WRRAND	SET UP IOCD
7416	02	015DD	6AF01669			BAL,15	MYERROR	PRINTOUT PERM ERROR
7417	02	015DE	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
7418	02	015DF	2E000000 A			WAIT		
7419	02	015E0	680015E1			B	\$+1	CANNOT LOOP ON ERROR
7420	02	015E1	32601887			LW,6	CRTRY	RESET RETRY TALLY
7421	02	015E2	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7422	02	015E3	22000C19			L1,0	DA(SPBRAND)	SPACE BKW OVER BAD RECORD
7423	02	015E4	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
7424	02	015E5	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
7425	02	015E6	22000BCA			L1,0	DA(TSE1)	SET ERASE OVER BAD SPOT ON TAPE
7426	02	015E7	6AF01CA2			BAL,15	:IOEXEC	EXECUTE T10, S10
7427	02	015E8	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
7428	02	015E9	680015D3			B	TWRTRY3	WRITE A RECORD WITH ERASE SET

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 109
7429				*		TEMPORARYWRITE ERROR +1		
7430	02	015EA	31601887		TWRTRY4	CW,6	CRTRY	GOOD WRITE
7431	02	015EB	683015ED			BE	\$+2	
7432	02	015EC	331E1864			MTW,1	TWTALLY,7	TEMP WRITE ERROR TALLY +1
7433	02	015ED	12601892		TWRTRY5	LD,6	RTRYSVE	
7434	02	015EE	6800121B			B	T2RE07	RETURN TO PROGRAM
7435				*				
7436				*				
7437				*				READ FORWARD ERROR RETRY SUBROUTINE
7438				*				
7439				*				
7440	02	015EF	32601897		RFRTY	LW,6	CRTRY	NUMBER OF RETRIES =0
7441	02	015F0	68201250			BLE	T2RE017E	NO RETRIES
7442	02	015F1	15601892			STD,6	RTRYSVE	SAVE R6 AND R7
7443	02	015F2	6AF01638		RFRTY2	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7444	02	015F3	22000C19			LI,0	DA(SPBRAND)	SPACE BACKWARD
7445	02	015F4	6AF01CA2			BAL,15	:IOEXEC	EXECUTE TIO, SIO
7446	02	015F5	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
7447	02	015F6	6AF01638		RFRTY3	BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7448	02	015F7	22000BF8			LI,0	DA(RFRAND)	RE-READ RECORD FORWARD
7449	02	015F8	6AF01CA2			BAL,15	:IOEXEC	EXECUTE TIO, SIO
7450	02	015F9	6AF0162F			BAL,15	MYDELAY	WAIT FOR INTERRUPT
7451	02	015FA	CDE018B5			TIO,14	*:DEVADDR	TIO
7452	02	015FB	31F019CD			CW,15	CHKBIT	UE,INC LENGTH,IOP,MEMORY ERRORS
7453	02	015FC	684015FF			BCR,4	\$+3	
7454	02	015FD	331E187C			MTW,1	TRFTALLY,7	TEMP READ FWD TALLY
7455	02	015FE	68001603			B	RFRTY4-6	BRANCH TO ERROR PRINTOUT
7456	02	015FF	31F0209E			CW,15	=X'00400000'	TE ERROR
7457	02	01600	68401609			BCR,4	RFRTY4	NO ERRORS
7458	02	01601	646015F2			BDR,6	RFRTY2	
7459				*	PERMANT	READ FWD ERROR + 1		
7460	02	01602	331E1874			MTW,1	PRFTALLY,7	PERM READ FWD ERROR TALLY +1
7461	02	01603	12C017F0			LD,12	RFRAND	SET UP IOCD
7462	02	01604	6AF01669			BAL,15	MYERROR	PRINTOUT PERM ERROR
7463	02	01605	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCH SETTINGS
7464	02	01606	2E000000 A			WAIT		
7465	02	01607	68001608			B	\$+1	CANNOT LOOP ON ERROR
7466	02	01608	6800160A			B	RFRTY5	
7467	02	01609	331E187C		RFRTY4	MTW,1	TRFTALLY,7	TEMP READ FWD ERROR TALLY +1
7468	02	0160A	12601892		RFRTY5	LD,6	RTRYSVE	RESTORE R6, R7
7469	02	0160B	68001255			B	T2RE18D	RETURN TO PROGRAM
7470				*				
7471				*				
7472				*				
7473				*				
7474				*				
7475				*				
7476				*				
7477				*				
7478				*				
7479				*				REWIND AND TEST FOR LOAD POINT
7480				*				
7481	02	0160C	35F018A0		RWTLP	STW,15	ST15	SAVE RETURN ADDRESS
7482	02	0160D	6AF01640			BAL,15	CLRDARM	CLEAR AND DISARM INTERRUPT
7483	02	0160E	22000BD2			LI,0	DA(TRWOL)	REWIND ON LINE
7484	02	0160F	32E02097			LW,14	=X'66000000'	
7485	02	01610	CCA018B5			SIO,10	*:DEVADDR	SIO
7486	02	01611	CDC018B5			TIO,12	*:DEVADDR	TIO
7487	02	01612	31E0000D A			CW,14	13	BUSY OR REWINDING
7488	02	01613	69401611			BCS,4	\$-2	
7489	02	01614	32E02098		RWTLP1	LW,14	=X'04000000'	LOAD POINT ONLY
7490	02	01615	CEC018B5			TDV,12	*:DEVADDR	TDV AFTER REWIND
7491	02	01616	31D0000E A			CW,13	14	
7492	02	01617	6940161D			BCS,4	RWTLP2	
7493				*		ERROR EXIT	NO LOAD POINT	
7494	02	01618	EAF0021C A			BAL,15	*:PRINT	PRINTOUT MESSAGE
7495	02	01619	00001A0E			DATA	NOLOAD	
7496	02	0161A	EAF0021D A			BAL,15	*:SENSE	CHECK SENSE SWITCHES
7497	02	0161B	2E000000 A			WAIT		
7498	02	0161C	6800161D			B	\$+1	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 110
7499	02	0161D	22FFFED4	A	RHTLP2	LI,15	-300	LOAD POINT DELAY
7500	02	0161E	65F0161E			BIR,15	\$	
7501	02	0161F	E80018A0			B	*ST15	GO BACK TO PROGRAM
7502					*			
7503					*			
7504					*			I/O RESET ROUTINE
7505					*			
7506					*			
7507					*			I/O RESET ROUTINE
7508	02	01620	1540189A		RESETS	STD,4	SAVE45	MYDELAY SUBROUTINE ENTRY
7509	02	01621	35F018A0			STW,15	ST15	SAVE R15
7510	02	01622	225FEC78	A		LI,5	-5000	
7511	02	01623	6D000042	A		WD,0	X'0042'	TURN ON FF
7512	02	01624	65501624			BIR,5	\$	DELAY
7513	02	01625	225FEC78	A		LI,5	-5000	
7514	02	01626	6D000042	A		WD,0	X'0042'	TURN OFF FF
7515	02	01627	65501627			BIR,5	\$	DELAY
7516	02	01628	CFA018B5			HIO,10	*:DEVADDR	HALT I/O OPERATION
7517	02	01629	EAF0021C	A		BAL,15	*:PRINT	TIMEOUT ERROR PRINTOUT
7518	02	0162A	00001A0A			DATA	TIMEOUT	
7519	02	0162B	EAF0021D	A		BAL,15	*:SENSE	CHECK SENSE SWITCHES
7520	02	0162C	2E000000	A		WAIT		
7521	02	0162D	1240189A			LD,4	SAVE45	RESTORE REGISTERS
7522	02	0162E	E80018A0			B	*ST15	RETURN TO PROGRAM
7523					*			
7524					*			
7525					*			DELAY AND WAIT FOR INTERRUPT
7526					*			
7527	02	0162F	15E01898		MYDELAY	STD,14	STDELAY	SAVE R14,R15
7528	02	01630	22E00F00	A		LI,14	X'F00'	ALLOW FOR LARGEST RECORD
7529	02	01631	6AF01E26			BAL,15	:DELAY	DELAY SUBROUTINE
7530	02	01632	68001636			B	MYDELAY1	
7531					*			ERROR MESSAGE TIMEOUT NO INTERRUPT
7532	02	01633	EAF0021C	A		BAL,15	*:PRINT	PRINTOUT MESSAGE
7533	02	01634	00001A12			DATA	DELSUB	
7534	02	01635	6AF01620			BAL,15	RESETS	RESET OR HIO IN CASE OF TAPE RUNAWAY
7535	02	01636	12E01898		MYDELAY1	LD,14	STDELAY	RESTORE REGISTERS
7536	02	01637	E800000F	A		B	*R15	
7537					*			
7538					*	BOUND	8	
7539					*			
7540					*			
7541					*			THIS SUBROUTINE RESETS INTERRUPT
7542					*			CLEAR TEST FLAGS
7543					*			AND ARMS INTERRUPT
7544					*			
7545					*			
7546					*			
7547	02	01638	35F018AD		CLRARM	STW,15	ST151	SAVE RETURN ADDRESS
7548	02	01639	6ED00000	A		AIO,13	0	RESET INTERRUPT IF ANY
7549	02	0163A	6AF02028			BAL,15	:SAVECLR	CLEAR TEST FLAGS
7550	02	0163B	22F00000	A		LI,15	0	
7551	02	0163C	35F01EA6			STW,15	:INTRECF	CLEAR INTERRUPT FLAG
7552	02	0163D	22F00020	A		LI,15	X'20'	ARM INTERRUPT
7553	02	0163E	6DF01200	A		WD,15	X'1200'	
7554	02	0163F	E80018AD			B	*ST151	RETURN TO PROGRAM
7555					*			
7556					*			
7557					*			
7558					*			
7559					*			
7560					*			
7561					*			THIS SUBROUTINE RESETS INTERRUPT
7562					*			CLEAR TEST FLAGS
7563					*			AND DISARMS INTERRUPT
7564					*			
7565					*			
7566					*			
7567	02	01640	35F018AD		CLRARM	STW,15	ST151	SAVE RETURN ADDRESS
7568	02	01641	6ED00000	A		AIO,13	0	RESET INTERRUPT IF ANY

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	111
7569	02	01642	6AF02028			BAL,15	:SAVECLR	CLEAR TEST FLAGS
7570	02	01643	22F00000	A		LI,15	0	
7571	02	01644	35F01EA6			STW,15	:INTRECF	CLEAR INTERRUPT FLAG
7572	02	01645	22F00020	A		LI,15	X'20'	DISARM INTERRUPT
7573	02	01646	6DF01100	A		WD,15	X'1100'	
7574	02	01647	E80018AD			B	*ST151	RETURN TO PROGRAM
7575					.			
7576					.			
7577					.			
7578					.			
7579					.			
7580					.			SUBROUTINE ARMS, SET UP DEV ADDR.
7581					.			
7582					.			
7583	02	01648	22700000	A	DOALL	LI,7	0	CLEAR R7
7584	02	01649	3A5018BE			LCW,5	SAVNUMB	NUMBER OF UNITS LISTED
7585	02	0164A	35F0189F		DOALL1	STW,15	ST1512	SAVE R15
7586	02	0164B	6AF01638			BAL,15	CLRARM	CLEAR AND ARM INTERRUPT
7587	02	0164C	32FE18B6			LW,15	SAVDEV,7	NEXT UNIT
7588	02	0164D	35F018B5			STW,15	:DEVADDR	
7589	02	0164E	E800189F			B	*ST152	RETURN TO PROGRAM
7590					.			
7591					.			
7592					.			
7593					.			
7594					.			
7595					.			SMEAR PATTERN AND SET UP COMPARE
7596					.			
7597	02	0164F	35F018AD		SMEARSP	STW,15	ST151	SAVE RETURN ADDRESS
7598	02	01650	6800165A			B	SMEARPTA+1	
7599	02	01651	35F018AD		SMEARPTR	STW,15	ST151	SAVE RETURN ADDRESS
7600	02	01652	31101880			CW,1	STDPB	PACKED BINARY STANDARD
7601	02	01653	68301658			BE	\$+5	
7602	02	01654	3110188E			CW,1	OPTPB	PACKED BINARY OPTION
7603	02	01655	68301658			BE	\$+3	
7604	02	01656	32F02090			LW,15	=X'3F3F3F3F'	BINARY PATTERN
7605	02	01657	68001659			B	\$+2	
7606	02	01658	32F020A1			LW,15	=X'FFFFFFFF'	ALL BITS ON
7607	02	01659	35F01D39		SMEARPTA	STW,15	:PATID+1	STORE PATTERN
7608	02	0165A	22F00000	A		LI,15	0	
7609	02	0165B	35F01D38			STW,15	:PATID	FIXED WORD PATTERN
7610	02	0165C	35F01DBD			STW,15	:COMFLAG	ERROR PRINTOUT WANTED
7611	02	0165D	22F00019	A		LI,15	25	
7612	02	0165E	35F01D3B			STW,15	:PATWC	WORD COUNT
7613	02	0165F	35F01CF4			STW,15	:CLRSIZE	WORD COUNT FOR BUFFER CLEARING
7614	02	01660	35F01DBA			STW,15	:COMWCNT	NUMBER OF WORDS TO COMPARE
7615	02	01661	22F020C5			LI,15	BUFF1	
7616	02	01662	35F01D3C			STW,15	:PATBFR	EXPECTED PATTERN
7617	02	01663	35F01DBB			STW,15	:COMBFRA	
7618	02	01664	32F0207D			LW,15	BUFF2	
7619	02	01665	35F01CF3			STW,15	:CLRADDR	ADDRESS FOR CLEAR BUFFER
7620	02	01666	35F01DBC			STW,15	:COMBFRB	OBSERVED PATTERN
7621	02	01667	6AF01CF9			BAL,15	:PATTERN	SMEAR PATTERN
7622	02	01668	E80018AD			B	*ST151	RETURN TO PROGRAM
7623					.			
7624					.			
7625					.			
7626					.			
7627					.			RANDOM EXERCISER ERROR MESSAGE
7628					.			
7629	02	01669	35F01894		MYERROR	STW,15	SAVIT	SAVE R15
7630	02	0166A	6AF01EAF			BAL,15	10CDMSG	GET 10CD PRINTOUT
7631	02	0166B	32E020B2			LW,14	=X'FFFFFF0000'	GET T10 PRINTOUT
7632	02	0166C	6AF0189E			BAL,15	:T10	T10
7633	02	0166D	6800166E			B	\$+1	
7634	02	0166E	32E020B2			LW,14	=X'FFFFFF0000'	GET TDV PRINTOUT
7635	02	0166F	6AF018B4			BAL,15	:TDV	TDV
7636	02	01670	68001671			B	\$+1	
7637	02	01671	311018F3			CW,1	NZFLAG	RE OR NOISE PATTERNS
7638	02	01672	6930167E			BNE	MYERROR1	GO TO RE PRINTOUT

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 112
7639	02	01673	32C018B5			LW,12	:DEVADDR	DEVICE
7640	02	01674	EAF00218	A		BAL,15	*:HEXC	CONVERT
7641	02	01675	35F01B00			STW,15	REMMSG32+2	IN PRINTOUT
7642	02	01676	32C018B5			LW,12	LOOPTLY	CURRENT RECORD TALLY
7643	02	01677	EAF00218	A		BAL,15	*:HEXC	CONVERT
7644	02	01678	35F01B07			STW,15	REMMSG32+9	
7645	02	01679	EAF00218	A		BAL,15	*:HEXC	CONVERT
7646	02	0167A	35F01B06			STW,15	REMMSG32+8	
7647	02	0167B	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
7648	02	0167C	00001AFE			DATA	REMMSG32	
7649	02	0167D	6800169D			B	MYERROR2	RETURN TO TEST
7650	02	0167E	32C018A8		MYERROR1	LW,12	SAVESEED	
7651	02	0167F	EAF00218	A		BAL,15	*:HEXC	CONVERT
7652	02	01680	35F01AC8			STW,15	REMMSG1+4	
7653	02	01681	32C018A8			LW,12	SAVESEED	
7654	02	01682	25C00070	A		SLS,12	-16	
7655	02	01683	EAF00218	A		BAL,15	*:HEXC	CONVERT FOR MESSAGE
7656	02	01684	35F01AC7			STW,15	REMMSG1+3	SEED IN PRINTOUT
7657	02	01685	32C018B5			LW,12	:DEVADDR	DEVICE NUMBER
7658	02	01686	EAF00218	A		BAL,15	*:HEXC	CONVERT
7659	02	01687	35F01AC8			STW,15	REMMSG1+7	
7660	02	01688	32C018B5			LW,12	LOOPTLY	CURRENT TALLY OF PASSES
7661	02	01689	EAF00218	A		BAL,15	*:HEXC	CONVERT
7662	02	0168A	35F01AD0			STW,15	REMMSG1+12	STORE
7663	02	0168B	32C018B5			LW,12	LOOPTLY	
7664	02	0168C	25C00070	A		SLS,12	-16	SHIFT
7665	02	0168D	EAF00218	A		BAL,15	*:HEXC	CONVERT
7666	02	0168E	35F01ACF			STW,15	REMMSG1+11	STORE
7667	02	0168F	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
7668	02	01690	00001AC4			DATA	REMMSG1	
7669	02	01691	22C019DA			LI,12	REDAPT	ADDRESS OF FIRST SET
7670	02	01692	30C01889			AW,12	OPFLAG	
7671	02	01693	30C01889			AW,12	OPFLAG	
7672	02	01694	30C01889			AW,12	OPFLAG	
7673	02	01695	B2F0000C	A		LW,15	*12	FIRST WORD OF MESSAGE
7674	02	01696	35F01AD6			STW,15	REMMSG2+4	
7675	02	01697	B2F2000C	A		LW,15	*12,1	SECOND WORD
7676	02	01698	35F01AD7			STW,15	REMMSG2+5	
7677	02	01699	B2F4000C	A		LW,15	*12,2	THIRD WORD OF MESSAGE
7678	02	0169A	35F01AD8			STW,15	REMMSG2+6	
7679	02	0169B	EAF0021C	A		BAL,15	*:PRINT	PRINT MESSAGE
7680	02	0169C	00001AD2			DATA	REMMSG2	
7681	02	0169D	32F01894		MYERROR2	LW,15	SAVIT	RETURN ADDRESS
7682	02	0169E	E800000F	A		B	*R15	RETURN TO PROGRAM
7683								
7684								
7685								
7686								
7687								
7688								
7689								
7690								
7691								
7692								
7693	02	0169F	351020C5		MYTSTPT	STW,1	BUFF1	SET UP FIRST SEQ NO
7694	02	016A0	22600001	A		LI,6	1	WORD COUNT
7695	02	016A1	311019CE			CW,1	MODEFLAG	PACKED INFORMATION
7696	02	016A2	683016D8			BE	MYTSTPT18-3	
7697	02	016A3	229FFFFB	A		LI,9	-5	
7698	02	016A4	22700000	A		LI,7	0	
7699	02	016A5	225FFFFB	A		LI,5	-5	
7700	02	016A6	22D018F9		MYTSTPT1	LI,13	NZDATA1	PULSE CROWDING AND WRITE SKEW
7701	02	016A7	55D216A8			STH,13	MYTSTPT2,1	STARTING PATTERN
7702	02	016A8	32E018F9		MYTSTPT2	LW,14	NZDATA1	DATA PATTERN
7703	02	016A9	35EC20C5			STW,14	BUFF1,6	STORE PATTERN
7704	02	016AA	33100006	A		MTW,1	6	
7705	02	016AB	331016A8			MTW,1	MYTSTPT2	
7706	02	016AC	655016A8			BIR,5	MYTSTPT2	5 PATTERNS
7707	02	016AD	659016A4			BIR,9	MYTSTPT1-2	5 TIMES
7708	02	016AE	22CFFFFF	A		LI,12	-10	

SMEAR NOISE PATTERNS

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 113
7709	02	016AF	229FFFFA	A		LI,9	-6	
7710	02	016B0	22700000	A		LI,7	0	
7711	02	016B1	32EE18FE	A	MYTSTPT4	LW,14	NZDATA2,7	WRITE CROSS TALK AND READ SKEW
7712	02	016B2	35EC20C5	A		STW,14	BUFF1,6	STORE PATTERN
7713	02	016B3	33100006	A		MTW,1	6	
7714	02	016B4	33100007	A		MTW,1	7	
7715	02	016B5	659016B1	A		BIR,9	MYTSTPT4	6 PATTERNS
7716	02	016B6	65C016AF	A		BIR,12	MYTSTPT4-2	10 TIMES
7717	02	016B7	22CFFFFB	A		LI,12	-5	
7718	02	016B8	356018F7	A		STW,6	SAVE6	SAVE WORD LOCATION
7719	02	016B9	22700000	A		LI,7	0	
7720	02	016BA	229FFFCF	A		LI,9	-50	
7721	02	016BB	32EE1904	A	MYTSTPT5	LW,14	NZDATA3,7	BASELINE NOISE PATTERN
7722	02	016BC	35EC20C5	A		STW,14	BUFF1,6	STORE PATTERN
7723	02	016BD	33100006	A		MTW,1	6	
7724	02	016BE	659016BC	A		BIR,9	\$-2	50 WORDS OF PATTERN
7725	02	016BF	33100007	A		MTW,1	7	
7726	02	016C0	65C016BA	A		BIR,12	MYTSTPT5-1	CHANGE PATTERNS
7727	02	016C1	22E03F3F	A		LI,14	X'3F3F'	ALL BITS ON
7728	02	016C2	328018F7	A		LW,8	SAVE6	SAVE WORD LOCATION
7729	02	016C3	208020C5	A		AI,8	BUFF1	
7730	02	016C4	558216C9	A		STH,8	MYTSTPT6,1	
7731	02	016C5	229FFFFB	A		LI,9	-5	
7732	02	016C6	22700000	A		LI,7	0	
7733	02	016C7	552216CA	A		STH,2	MYTSTPT7,1	
7734	02	016C8	22AFFFEF	A		LI,10	-18	DO 18 TIMES
7735	02	016C9	75EE20C5	A	MYTSTPT6	STB,14	BUFF1,7	STORE ALL BITS SPACING YXXXXXX
7736	02	016CA	20700002	A	MYTSTPT7	AI,7	2	CHANGE SPACING
7737	02	016CB	331016CA	A		MTW,1	MYTSTPT7	
7738	02	016CC	65A016C9	A		BIR,10	MYTSTPT6	
7739	02	016CD	20800032	A		AI,8	50	
7740	02	016CE	558216C9	A		STH,8	MYTSTPT6,1	
7741	02	016CF	659016C6	A		BIR,9	MYTSTPT6-3	CHANGE PATTERNS
7742	02	016D0	22500000	A		LI,5	0	
7743	02	016D1	326018CB	A		LW,6	MAXREAD	SMEAR REMAINING I/O AREA
7744	02	016D2	206FFEB1	A		AI,6	-335	
7745	02	016D3	32CA20C6	A		LW,12	BUFF1+1,5	
7746	02	016D4	35CA2214	A		STW,12	BUFF1+335,5	STORE WORD
7747	02	016D5	33100005	A		MTW,1	5	
7748	02	016D6	646016D3	A		BDR,6	\$-3	
7749	02	016D7	E800000F	A		B	*15	RETURN TO PROGRAM
7750								PACKED INFORMATION SMEAR
7751	02	016D8	22600000	A		LI,6	0	
7752	02	016D9	229FFFCF	A		LI,9	-20	
7753	02	016DA	225FFFFD	A		LI,5	-3	20 TIMES FOR 3 PATTERNS
7754	02	016DB	22D01909	A	MYTSTPT8	LI,13	NZPK1	SET UP FIRST PATTERN
7755	02	016DC	55D216DD	A		STH,13	MYTSTPT9,1	
7756	02	016DD	32E01909	A	MYTSTPT9	LW,14	NZPK1	
7757	02	016DE	35EC20C5	A		STW,14	BUFF1,6	STORE WORD
7758	02	016DF	33100006	A		MTW,1	6	
7759	02	016E0	331016DD	A		MTW,1	MYTSTPT9	
7760	02	016E1	655016DD	A		BIR,5	MYTSTPT9	
7761	02	016E2	659016DA	A		BIR,9	MYTSTPT8-1	60 WORDS IN PATTERN
7762	02	016E3	229FFFF1	A		LI,9	-15	
7763	02	016E4	225FFFFC	A		LI,5	-4	4 WORDS 15 TIMES
7764	02	016E5	22D0190C	A		LI,13	NZPK2	
7765	02	016E6	55D216E7	A		STH,13	MYTSTPTA,1	
7766	02	016E7	32E0190C	A	MYTSTPTA	LW,14	NZPK2	
7767	02	016E8	35EC20C5	A		STW,14	BUFF1,6	STORE WORD
7768	02	016E9	33100006	A		MTW,1	6	
7769	02	016EA	331016E7	A		MTW,1	MYTSTPTA	
7770	02	016EB	655016E7	A		BIR,5	MYTSTPTA	
7771	02	016EC	659016E4	A		BIR,9	MYTSTPTA-3	60 WORDS
7772	02	016ED	351020C5	A		STW,1	BUFF1	
7773	02	016EE	356018F7	A		STW,6	SAVE6	SAVE REGISTER
7774	02	016EF	22700000	A		LI,7	0	
7775	02	016F0	229FFFF1	A		LI,9	-15	
7776	02	016F1	225FFFFD	A		LI,5	-3	
7777	02	016F2	22D01910	A		LI,13	NZPK3	3 WORDS 15 TIMES EACH PATTERN(5 PAT)
7778	02	016F3	55D216F4	A		STH,13	MYTSTPTB,1	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70
7779	02	016F4	32EE1910		MYTSTPTB	LW,14	NZPK3,7	
7780	02	016F5	35EC20C5			STW,14	BUFF1,6	
7781	02	016F6	33100006 A			MTW,1	6	
7782	02	016F7	331016F4			MTW,1	MYTSTPTB	
7783	02	016F8	655016F4			BIR,5	MYTSTPTB	
7784	02	016F9	659016F1			BIR,9	MYTSTPTB-3	
7785	02	016FA	33300007 A			MTW,3	7	
7786	02	016FB	2170000F A			CI,7	15	ALL PATTERNS DONE
7787	02	016FC	691016F0			BL	MYTSTPTB-4	5 PATTERNS
7788	02	016FD	229FFFFB A			LI,9	-5	
7789	02	016FE	326018F7			LW,5	SAVE6	
7790	02	016FF	206020C5			AI,6	BUFF1	FIRST ADDRESS
7791	02	01700	55621706			STH,6	MYTSTPTC,1	SET UP FIRST ADDRESS
7792	02	01701	22600000 A			LI,6	0	
7793	02	01702	22700000 A			LI,7	0	SET UP BYTE
7794	02	01703	32EC191F			LW,14	NZPK4,6	
7795	02	01704	55321707			STH,3	MYTSTPTD,1	
7796	02	01705	22AFFFFA A			LI,10	-6	STORE HALF WORD
7797	02	01706	55EE20C5		MYTSTPTC	STH,14	BUFF1,7	
7798	02	01707	20700003 A		MYTSTPTD	AI,7	3	
7799	02	01708	33301707			MTW,3	MYTSTPTD	
7800	02	01709	65A01706			BIR,10	MYTSTPTC	
7801	02	0170A	33100006 A			MTW,1	6	NEXT BYTE
7802	02	0170B	52E21706			LH,14	MYTSTPTC,1	
7803	02	0170C	20E0002D A			AI,14	45	
7804	02	0170D	55E21706			STH,14	MYTSTPTC,1	NEXT PATTERN
7805	02	0170E	65901702			BIR,9	MYTSTPTC-4	
7806	02	0170F	326018CB			LW,6	MAXREAD	MAXIMUM SIZE FOR READ
7807	02	01710	206FFE47 A			AI,6	-345	
7808	02	01711	22500000 A			LI,5	0	R5 = 0
7809	02	01712	32CA20C5			LW,12	BUFF1,5	
7810	02	01713	35CA221E			STW,12	BUFF1+345,5	STORE WORD
7811	02	01714	33100005 A			MTW,1	5	
7812	02	01715	64601712			BDR,6	\$-3	
7813	02	01716	E800000F A			B	*15	RETURN TO PROGRAM
7814					*			
7815					*			
7816					*			
7817					*			
7818					*			
7819					*			
7820					*			
7821					*			
7822					*			
7823	02	01717	35F0174A		UNPACK	STW,15	SVE15	SAVE RETURN ADDRESS
7824	02	01718	1560174C			STD,6	SAVEON	SAVE REGISTERS
7825	02	01719	1580174E			STD,8	SAVEON1	
7826	02	0171A	15A01750			STD,10	SAVEON2	
7827	02	0171B	22F0218D			LI,15	BUFF1+200	UNPACKED AREA
7828	02	0171C	35F01CF3			STW,15	:CLRADDR	
7829	02	0171D	6AF01CE8			BAL,15	:CLEAR	CLEAR AREA
7830	02	0171E	22700000 A			LI,7	0	
7831	02	0171F	22600000 A			LI,6	0	
7832	02	01720	B2BC207D		UNPACK 1	LW,11	*BUFF2,6	GET PACKED WORD
7833	02	01721	229FFFFB A			LI,9	-5	DO 5 TIMES
7834	02	01722	22A00000 A			LI,10	0	
7835	02	01723	25A00106 A			SLD,10	6	GET 6 BITS
7836	02	01724	75AE218D			STB,10	BUFF1+200,7	
7837	02	01725	33100007 A			MTW,1	7	MODIFY BYTE COUNT
7838	02	01726	65901722			BIR,9	\$-4	
7839	02	01727	22A00000 A			LI,10	0	
7840	02	01728	25A00102 A			SLD,10	2	2 EXTRA BYTES
7841	02	01729	33100006 A			MTW,1	6	MODIFY WORD COUNT
7842	02	0172A	B2BC207D			LW,11	*BUFF2,6	GET PACKED WORD
7843	02	0172B	25A00104 A			SLD,10	4	
7844	02	0172C	75AE218D			STB,10	BUFF1+200,7	
7845	02	0172D	33100007 A			MTW,1	7	MODIFY BYTE COUNT
7846	02	0172E	229FFFFC A			LI,9	-4	DO 4 TIMES
7847	02	0172F	22A00000 A			LI,10	0	
7848	02	01730	25A00106 A			SLD,10	6	GET 6 BITS

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0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 115
7849	02	01731	75AE218D			STB,10	BUFF1+200,7	STORE BYTE
7850	02	01732	33100007 A			MTW,1	7	
7851	02	01733	6590172F			BIR,9	\$-4	
7852	02	01734	33100006 A			MTW,1	6	GET NEXT PACKED WORD
7853	02	01735	22A00004 A			LI,10	4	4 BYTES LEFT OVER
7854	02	01736	25A00104 A			SLD,10	4	
7855	02	01737	82BC207D			LW,11	*BUFF2,6	GET PACKED WORD
7856	02	01738	25A00102 A			SLD,10	2	
7857	02	01739	75AE218D			STB,10	BUFF1+200,7	STORE BYTE
7858	02	0173A	33100007 A			MTW,1	7	MODIFY BYTE COUNT
7859	02	0173B	229FFFFB A			LI,9	-5	DO 5 TIMES
7860	02	0173C	22A00000 A			LI,10	0	
7861	02	0173D	25A00106 A			SLD,10	6	
7862	02	0173E	75AE218D			STB,10	BUFF1+200,7	
7863	02	0173F	33100007 A			MTW,1	7	MODIFY BYTE COUNT
7864	02	01740	6590173C			BIR,9	\$-4	
7865	02	01741	33100006 A			MTW,1	6	MODIFY WORD COUNT
7866	02	01742	21600022 A			CI,6	34	
7867	02	01743	68201720			BLE	UNPACK1	
7868	02	01744	32C0207D			LW,12	BUFF2	
7869	02	01745	35C01CF3			STW,12	:CLRADDR	
7870	02	01746	1260174C			LD,6	SAVEON	RESTORE REGISTERS
7871	02	01747	1280174E			LD,8	SAVEON1	
7872	02	01748	12A01750			LD,10	SAVEON2	
7873	02	01749	E800174A			B	*SVE15	RETURN TO PROGRAM
7874					*			
7875					*			
7876					*			
7877					*			
7878					*			
7879					*			
7880					*			
7881					*			
7882					*			
7883	02	0174A	00000000 A		SVE15	BOUND	8	
7884	02	0174B	00000000 A		WDCNT	DATA	0	
7885	02	0174C	00000000 A		SAVEON	DATA	0,0	
	02	0174D	00000000 A					
7886	02	0174E	00000000 A		SAVEON1	DATA	0,0	
	02	0174F	00000000 A					
7887	02	01750	00000000 A		SAVEON2	DATA	0,0	
	02	01751	00000000 A					
7888					*			
7889					*			
7890					*			
7891					*			
7892					*			
7893					*			
7894					*			
7895					*			
7896					*			
7897					*			
7898	02	01752	7C101C00 A		TSEQ001	:TSEQ	ISBT4,TIOF0,TIO4	IP RESET AND UE
7899	02	01753	30100000 A		TSEQ002	:TSEQ	HIOF0,TIOF0	INT PENDING RESET HIO, TIO
7900	02	01754	7A100000 A		TSEQ003	:TSEQ	ISBT2,TIOF0	ZBC, INT PEND RESET
7901	02	01755	101C0000 A		TSEQ004	:TSEQ	TIOF0,TIO4	INT PENDING RESET, UE
7902	02	01756	4B400000 A		TSEQ005	:TSEQ	TDVT3,TDVT5	LOAD POINT AND EOF
7903	02	01757	1C4D21E3 A		TSEQ006	:TSEQ	TIO4,TDVT5,OSBF1,BYT02	LP,UE,BC=2
	02	01758	00000000 A					
7904	02	01759	1C4D2100 A		TSEQ007	:TSEQ	TIO4,TDVT5,OSBF1	UE AND LP
7905	02	0175A	144B21E3 A		TSEQ008	:TSEQ	TIOF4,TDVT3,OSBF1,BYT02	NO UE,BC=2, EOF
	02	0175B	00000000 A					
7906	02	0175C	11121C15 A		TSEQ009	:TSEQ	TIOF1,TIOF2,TIO4,TIOF5,TIOF6,BYT02	SAME + UE
	02	0175D	16E30000 A					
7907	02	0175E	11121415 A		TSEQ010	:TSEQ	TIOF1,TIOF2,TIOF4,TIOF5,TIOF6,OSBF0,BYT00,TDVT1	READ
	02	0175F	1620E149 A					
	02	01760	00000000 A					
7908	02	01761	144921E1 A		TSEQ011	:TSEQ	TIOF4,TDVT1,OSBF1,BYT00	WRITE NO UE
	02	01762	00000000 A					
7909	02	01763	1C787B7C A		TSEQ012	:TSEQ	TIO4,ISBT0,ISBT3,ISBT4,TDVF0,BYT00	INC LENG, UE

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL		MAG TAPE TEST 705735-11/51A00	7/30/70 116
7910	02	01764	40E10000	A	TSE0013	:TSEQ	T10F4,TDVF4,OSBT1,BYT00	NO UE, BC=0
7911	02	01765	144429E1	A	TSE0014	:TSEQ	T10T4,TDVT3,TDVT5	UE, LP, EOF
7912	02	01766	00000000	A	TSE0015	:TSEQ	T10F4,TDVT3,OSBF1	NONE, TM
7913	02	01767	1C4B2100	A	TSE0016	:TSEQ	T10T4,TDVT3,OSBF1	UE, TM
7914	02	01768	142B40E2	A	TSE0017	:TSEQ	T10F4,OSBT0,TDVF0,BYT01	NO UE, INC LENGTH, BC=1
7915	02	01768	00000000	A	TSE0018	:TSEQ	T10F4,TDVF0,BYT01	NO UE, BC=1
7916	02	0176C	1440E200	A	TSE0019	:TSEQ	T10F4,OSBT0,TDVF0,BYT00	SAME BC=0
7917	02	0176E	00000000	A	TSE0020	:TSEQ	TDVT6	END OF TAPE
7918	02	01770	4E000000	A	TSE0021	:TSEQ	TDVF6	NO END OF TAPE
7919	02	01771	29797C1C	A	TSE0022	:TSEQ	OSBT1,ISBT1,ISBT4,T10T4,TDVF0	TRNS ERROR UE
7920	02	01772	40000000	A	TSE0023	:TSEQ	OSBT1,ISBT1,ISBT3,TDVF4,T10F4	CORRECTABLE TE
7921	02	01774	14000000	A	TSE0024	:TSEQ	OSBT1,ISBT1,ISBT3,TDVT4,T10F4	TE UNCORRECTABLE
7922	02	01775	29797B4C	A	TSE0025	:TSEQ	T10F4,TDVF0	NO UE
7923	02	01776	14000000	A	TSE0026	:TSEQ	T10T4,TDVT2,A10T2,OSBF1	WRITE PROTECT
7924	02	01777	1C4A6A21	A	TSE0027	:TSEQ	T10F1,T10T2,T10F3,T10F5,T10F6	DEVICE MANUAL
7925	02	01778	00000000	A	TSE0028	:TSEQ	TDVT4	INCORRECTABLE READ ERROR
7926	02	0177C	4C000000	A	TSE0029	:TSEQ	T10T4,TDVT5	UE AND LP
7927	02	0177E	1C4D0000	A	TSE0030	:TSEQ	T10F4,TDVF3,OSBF1,BYT02	NO UE, READY, BC=2
7928	02	0177F	00000000	A	TSE0031	:TSEQ	TDVT1,TDVT3,TDVT6 EOT OR EOF	
7929	02	01780	494B4E00	A	TSE0032	:TSEQ	OSBF1,OSBF2,OSBF3	NO TRANSMISSION ERROR
7930	02	01781	21222300	A	TSE0033	:TSEQ	T10F0,T10T3,T10F4,T10F5,T10F6	READY,NOUE,NO IN P
7931	02	01782	101B1415	A	TSE0034	:TSEQ	T10F0,T10T3,T10T4,OSBF1,TDVF0	UE, INT PENDING
7932	02	01783	16000000	A	TSE0035	:TSEQ	T10F4,TDVT3,TDVT5,OSBF1	EOF,LP, NO UE
7933	02	01784	00000000	A	TSE0036	:TSEQ	T10F4,TDVT1,OSBF0,BYT00	READY, NO UE, BC=00
7934	02	01785	144920E1	A	TSE0037	:TSEQ	T10T4,TDVT3,OSBT0,OSBF1	TAPE MARK, UE, NO TE
7935	02	01788	00000000	A	TSE0038	:TSEQ	T10T4,TDVT3,OSBF0,OSBF1	TAPE MARK, UE, NO TE
7936	02	0178C	1C4B2021	A				
7937	02	0178D	00000000	A				
7938								
7939								
7940								
7941								
7942	02	0178E	0C0087C4	A	TWR1	BOUND 8	GEN,8,24 X'0C',BA(BUFF1+300)	INVALID READ BKW
7943	02	0178F	00000002	A	TWR2	GEN,8,24 X'0',2	GEN,8,24 X'03',BA(BUFF1)	INVALID SET CORRECTION
7944	02	01790	03008314	A	TWR3	GEN,8,24 X'0',2	GEN,8,24 X'0C',BA(BUFF1+300)	INVALID READ BKW
7945	02	01791	00000002	A	TSE1	GEN,8,24 4,1	GEN,8,24 X'63',BA(BUFF1)	UE SET
7946	02	01792	0C0087C4	A	TSE3	GEN,8,24 X'14',2	GEN,8,24 X'63',BA(BUFF1)	SET ERASE BC=2
7947	02	01793	04000001	A	TSE	GEN,8,24 X'63',BA(BUFF1)	GEN,8,24 X'63',BA(BUFF1)	UE AND CE
7948	02	01794	63008314	A	TSECC	GEN,8,24 0,2	GEN,8,24 X'10',1	SET ERASE BC =2 NO INTERRUPT
7949	02	01795	14000002	A	TSE	GEN,8,24 X'63',BA(BUFF1)	GEN,8,24 X'63',BA(BUFF1)	SET ERASE CE SET
7950	02	01796	63008314	A	TSECC	GEN,8,24 X'10',1	GEN,8,24 X'63',BA(BUFF1)	COMMAND CHAIN ERASE
7951	02	01797	00000002	A	TWBK	GEN,8,24 X'20',1	GEN,8,24 X'0C',BA(BUFF1+300)	INVALID READ BKW
7952	02	01798	63008314	A	TSNS4	GEN,8,24 X'0C',BA(BUFF1+300)	GEN,8,24 X'04',2	END OF CHAIN
7953	02	01799	10000001	A	TWRCC	GEN,8,24 X'63',BA(BUFF1)	GEN,8,24 X'63',BA(BUFF1)	SET ERASE
7954	02	0179A	63008314	A		GEN,8,24 X'40',1	GEN,8,24 X'40',1	I2C SET
7955	02	0179B	20000001	A		GEN,8,24 X'0C',BA(BUFF1+300)	GEN,8,24 X'63',BA(BUFF1+300)	READ BKW COMMAND CHAIN
7956	02	0179C	0C0087C4	A		GEN,8,24 X'24',1	GEN,8,24 X'63',BA(BUFF1)	CC AND UE SET
7957	02	0179D	04000002	A		GEN,8,24 0,2		SET ERASE
7958	02	0179E	63008314	A				
7959	02	0179F	40000001	A				
7960	02	017A0	0C0087C4	A				
7961	02	017A1	24000001	A				
7962	02	017A2	63008314	A				
7963	02	017A3	00000002	A				

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00 7/30/70	117
7964	02	017A4	33008314		TRWOL	GEN,8,24 X'33',BA(BUFF1)		REWIND ON LINE
7965	02	017A5	00000000	A		GEN,8,24 X'0',0		
7966	02	017A6	13008314		TRWA1	GEN,8,24 X'13',BA(BUFF1)		REWIND AND INTERRUPT
7967	02	017A7	00000000	A		GEN,8,24 0,0		NO INTERRUPT
7968	02	017A8	73008314		TWTM	GEN,8,24 X'73',BA(BUFF1)		WRITE TAPE MARK CE SET, BC=2
7969	02	017A9	10000002	A		GEN,8,24 X'10',2		
7970	02	017AA	73008314		TWTM3	GEN,8,24 X'73',BA(BUFF1)		WRITE TAPE MARK CE, UE
7971	02	017AB	14000002	A		GEN,8,24 X'14',2		
7972	02	017AC	01008314		TWBC	GEN,8,24 X'01',BA(BUFF1)		WRITE RECORD 1-64 BYTES,UE SET
7973	02	017AD	14000001	A		GEN,8,24 X'14',1		
7974	02	017AE	01008314		TW64	GEN,8,24 X'01',BA(BUFF1)		WRITE 64 BYTES INTERRUPT ON ZBC
7975	02	017AF	40000040	A		GEN,8,24 X'40',64		
7976	02	017B0	01008314		TW100B	GEN,8,24 X'01',BA(BUFF1)		WRITE 100 BYTES, UE SET, CE
7977	02	017B1	14000064	A		GEN,8,24 X'14',100		
7978	02	017B2	01008314		TW1B	GEN,8,24 X'01',BA(BUFF1)		WRITE 1 BYTE,BCZ SET
7979	02	017B3	40000001	A		GEN,8,24 X'40',1		
7980	02	017B4	01008314		TWDC02	GEN,8,24 X'01',BA(BUFF1)		WRITE 2 DC 94 BYTES
7981	02	017B5	84000002	A		GEN,8,24 X'84',2		
7982	02	017B6	01008316			GEN,8,24 X'01',BA(BUFF1)+2		
7983	02	017B7	14000005E	A		GEN,8,24 X'14',94		
7984	02	017B8	01008314		WFBAD	GEN,8,24 X'01',BA(BUFF1)		WRITE FROM WA, WA+1, WA+2, WA+3 BC=4
7985	02	017B9	14000004	A		GEN,8,24 X'14',4		
7986	02	017BA	01008314		WBCC	GEN,8,24 X'01',BA(BUFF1)		WRITE RECORD BYTE COUNT 01-8000
7987	02	017BB	14000001	A		GEN,8,24 X'14',1		UE SET, CE SET
7988	02	017BC	01008314		TWNP	GEN,8,24 X'01',BA(BUFF1)		WRITE RECORD 20-MAX BYTES NOISE PTN
7989	02	017BD	14000014	A		GEN,8,24 X'14',20		UE,CE
7990	02	017BE	01008314		TW16B	GEN,8,24 X'01',BA(BUFF1)		WRITE 16 BYTES IRG TEST
7991	02	017BF	14000010	A		GEN,8,24 X'14',16		
7992	02	017C0	01008314		TW1000	GEN,8,24 X'01',BA(BUFF1)		WRITE 1000 BYTES
7993	02	017C1	140003E8	A		GEN,8,24 X'14',1000		
7994	02	017C2	010084A4		TWCREP	GEN,8,24 X'01',BA(BUFF1+100)		WRT RECORD B CREEP TEST
7995	02	017C3	1400000C	A		GEN,8,24 X'14',12		
7996	02	017C4	01008314		WRRAND	GEN,8,24 X'01',BA(BUFF1)		WRITE RANDOM RECORD
7997	02	017C5	14000014	A		GEN,8,24 X'14',20		
7998	02	017C6	01008314		TST3WRT	GEN,8,24 X'01',BA(BUFF1)		WRITE RECORD IN UNIT TEST
7999	02	017C7	140003E8	A		GEN,8,24 X'14',1000		UE,CE
8000	02	017C8	01008314		WR96B	GEN,8,24 X'01',BA(BUFF1)		WRITE 96 BYTES
8001	02	017C9	14000060	A		GEN,8,24 X'14',96		
8002	02	017CA	01008314		WSPKEC	GEN,8,24 X'01',BA(BUFF1)		WRITE 6,7,8 BYTES FOR END CONDIT
8003	02	017CB	14000006	A		GEN,8,24 X'14',6		
8004	02	017CC	0C0087C4		THRUE	GEN,8,24 X'0C',BA(BUFF1+300)		READ BKW UE SET
8005	02	017CD	04000002	A		GEN,8,24 X'04',2		
8006	02	017CE	01008314		WPBT	GEN,8,24 X'01',BA(BUFF1)		WRITE 00-FF RECORD PACKED BINARY
8007	02	017CF	14000100	A		GEN,8,24 X'14',256		CE AND UE
8008	02	017D0	01006490		WLRCPK	GEN,8,24 X'01',BA(LRCPK)		WRITE PACKED BINARY LRC, 3 WORDS
8009	02	017D1	1400000C	A		GEN,8,24 X'14',12		
8010	02	017D2	050064E4		WLR COP	GEN,8,24 X'05',BA(LR COP)		WRITE ODD PARITY LRC, 1 WORD
8011	02	017D3	14000004	A		GEN,8,24 X'14',4		
8012	02	017D4	0D006500		WLRCEP	GEN,8,24 X'0D',BA(LRCEP)		WRITE EVEN PARITY LRC, 1 WORD
8013	02	017D5	14000004	A		GEN,8,24 X'14',4		
8014	02	017D6	05008314		WBINT	GEN,8,24 X'05',BA(BUFF1)		WRITE BINARY 00-3F DATA ODD P
8015	02	017D7	14000040	A		GEN,8,24 X'14',64		
8016	02	017D8	0D00651C		TWBCD	GEN,8,24 X'0D',BA(BCDVALID)		WRITE BCD CHAR SET E PARITY
8017	02	017D9	14000040	A		GEN,8,24 X'14',64		
8018	02	017DA	0D00655C		TWBCDZ	GEN,8,24 X'0D',BA(BCDZERO)		WRITE FOR BCD ZERO TRANSLATION
8019	02	017DB	14000004	A		GEN,8,24 X'14',4		
8020	02	017DC	020081F4		TRFBC	GEN,8,24 X'02',BA(BUFF2)		READ FWD 100 BYTES, BC= 1-64, UE SET
8021	02	017DD	1C000001	A		GEN,8,24 X'1C',1		HTE SET
8022	02	017DE	020081F4		TRF100B	GEN,8,24 X'02',BA(BUFF2)		READ FWD 100 BYTES ,UE SET, CE
8023	02	017DF	14000064	A		GEN,8,24 X'14',100		
8024	02	017E0	020081F4		RF95B	GEN,8,24 X'02',BA(BUFF2)		READ FWD 95 BYTES, UE, CE SET
8025	02	017E1	1C00005F	A		GEN,8,24 X'1C',95		HTE
8026	02	017E2	020081F4		RF97B	GEN,8,24 X'02',BA(BUFF2)		READ FWD 97 BYTES, UE, CE SET
8027	02	017E3	16000061	A		GEN,8,24 X'16',97		
8028	02	017E4	020081F4		RF95BS	GEN,8,24 X'02',BA(BUFF2)		READ FWD 95 BYTES INC LENGTH SUP
8029	02	017E5	1600005F	A		GEN,8,24 X'16',95		
8030	02	017E6	020081F4		RFBAD	GEN,8,24 X'02',BA(BUFF2)		READ FWD INTO WA, WA+1, WA+2, WA+3
8031	02	017E7	14000004	A		GEN,8,24 X'14',4		
8032	02	017E8	020081F4		RFCC	GEN,8,24 X'02',BA(BUFF2)		READ FWD BYTE COUNT 01-8000 CHANGE
8033	02	017E9	14000001	A		GEN,8,24 X'14',1		UE,CE

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0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 118
8034	02	017EA	020081F4		RFNP	GEN,8,24 X'02'	BA(BUFF2)	READ FWD 20-MAX BYTES NOISE PATTERN
8035	02	017EB	14000014	A		GEN,8,24 X'14'	20	UE,CE
8036	02	017EC	020081F4		RF100B	GEN,8,24 X'02'	BA(BUFF2)	READ FWD RECORD A CREEP TEST
8037	02	017ED	14000064	A		GEN,8,24 X'14'	100	
8038	02	017EE	020081F4		RF16B	GEN,8,24 X'02'	BA(BUFF2)	READ FWD RECORD B CREEP TEST
8039	02	017EF	1400000C	A		GEN,8,24 X'14'	12	
8040	02	017F0	020081F4		RFRAND	GEN,8,24 X'02'	BA(BUFF2)	READ FWD RANDOM RECORD
8041	02	017F1	14000014	A		GEN,8,24 X'14'	20	
8042	02	017F2	020081F4		TST3RF	GEN,8,24 X'02'	BA(BUFF2)	READ FORWARD RECORD UNIT TEST
8043	02	017F3	140003E8	A		GEN,8,24 X'14'	1000	UE,CE
8044	02	017F4	02008314		RF96B	GEN,8,24 X'02'	BA(BUFF1)	READ FWD 96 BYTES
8045	02	017F5	14000060	A		GEN,8,24 X'14'	96	
8046	02	017F6	020081F4		TRFDC48	GEN,8,24 X'02'	BA(BUFF2)	READ FWD 48 BYTES DC 48
8047	02	017F7	84000030	A		GEN,8,24 X'02'	BA(BUFF2+48)	
8048	02	017F8	020082B4			GEN,8,24 X'14'	48	
8049	02	017F9	14000030	A		GEN,8,24 X'14'	48	
8050	02	017FA	020081F4		RPBT	GEN,8,24 X'02'	BA(BUFF2)	READ 00-FF RECORD PACKED BINARY
8051	02	017FB	14000101	A		GEN,8,24 X'14'	257	CE AND UE BC+1
8052	02	017FC	020081F4		RLRCPK	GEN,8,24 X'02'	BA(BUFF2)	READ PACKED BINARY LRC RECORD
8053	02	017FD	1400000C	A		GEN,8,24 X'14'	12	
8054	02	017FE	060081F4		RLRCOP	GEN,8,24 X'06'	BA(BUFF2)	READ ODD PARITY LRC RECORD
8055	02	017FF	14000004	A		GEN,8,24 X'14'	4	
8056	02	01800	0E0081F4		RLRCEP	GEN,8,24 X'0E'	BA(BUFF2)	READ EVEN PARITY LRC RECORD
8057	02	01801	14000004	A		GEN,8,24 X'14'	4	
8058	02	01802	060081F4		RBINT	GEN,8,24 X'06'	BA(BUFF2)	READ TAPE BINARY 00-3F DATA ODD P
8059	02	01803	14000040	A		GEN,8,24 X'14'	64	
8060	02	01804	0E0081F4		REPOPR	GEN,8,24 X'0E'	BA(BUFF2)	READ TAPE WITH TRANSLATION 00-3F
8061	02	01805	14000040	A		GEN,8,24 X'14'	64	
8062	02	01806	0E0081F4		TRBCD	GEN,8,24 X'0E'	BA(BUFF2)	READ WITH TRANSLATION(BCD) EVEN P
8063	02	01807	14000040	A		GEN,8,24 X'14'	64	
8064	02	01808	060081F4		TRBCDWT	GEN,8,24 X'06'	BA(BUFF2)	READ BCD RECORD WITHOUT TRANSLATION
8065	02	01809	14000040	A		GEN,8,24 X'14'	64	
8066	02	0180A	0E0081F4		TRBCDZ	GEN,8,24 X'0E'	BA(BUFF2)	READ ZERO RECORD BCD TRANSLATION
8067	02	0180B	14000004	A		GEN,8,24 X'14'	4	
8068	02	0180C	020081F4		RSPKEC	GEN,8,24 X'02'	BA(BUFF2)	READ 6,8,9 BYTES FOR END CONDIT
8069	02	0180D	14000006	A		GEN,8,24 X'14'	6	
8070	02	0180E	48000000	A	SB100B	GEN,8,24 X'48'	0	SPACE BKW OVER RECORD A CREEP TEST
8071	02	0180F	14000000	A		GEN,8,24 X'14'	0	
8072	02	01810	48000000	A	SB16B	GEN,8,24 X'48'	0	SPACE BKW OVER RECORD B CREEP TEST
8073	02	01811	14000000	A		GEN,8,24 X'14'	0	
8074	02	01812	48000000	A	SBR1	GEN,8,24 X'48'	0	SPACE BKW, UE SET, BC=2
8075	02	01813	14000002	A		GEN,8,24 X'14'	2	
8076	02	01814	58000000	A	SBF1	GEN,8,24 X'58'	0	SPACE FILE BKW
8077	02	01815	14000000	A		GEN,8,24 X'14'	0	
8078	02	01816	33000000	A	SFR1	GEN,8,24 X'33'	0	SPACE RECORD FWD CE SET, BC=2
8079	02	01817	10000002	A		GEN,8,24 X'10'	2	
8080	02	01818	43000000	A	SF100	GEN,8,24 X'43'	0	SPACE RECORD FWD, UE SET, CE
8081	02	01819	14000000	A		GEN,8,24 X'14'	0	
8082	02	0181A	48000000	A	SB100	GEN,8,24 X'48'	0	SPACE RECORD BKW, UE SET, CE
8083	02	0181B	14000000	A		GEN,8,24 X'14'	0	
8084	02	0181C	53000000	A	TSFF	GEN,8,24 X'53'	0	SPACE FILE FWD, UE SET, CE
8085	02	0181D	14000000	A		GEN,8,24 X'14'	0	
8086	02	0181E	58000000	A	TSFB	GEN,8,24 X'58'	0	SPACE FILE BKW, UE SET, CE
8087	02	0181F	14000000	A		GEN,8,24 X'14'	0	
8088	02	01820	43000000	A	SF16CC	GEN,8,24 X'43'	0	SPACE FWD 9 RECORDS USING CC
8089	02	01821	24000000	A		GEN,8,24 X'24'	0	
8090	02	01822	43000000	A		GEN,8,24 X'43'	0	CC
8091	02	01823	24000000	A		GEN,8,24 X'24'	0	
8092	02	01824	43000000	A		GEN,8,24 X'43'	0	CC
8093	02	01825	24000000	A		GEN,8,24 X'24'	0	
8094	02	01826	43000000	A		GEN,8,24 X'43'	0	CC
8095	02	01827	24000000	A		GEN,8,24 X'24'	0	
8096	02	01828	43000000	A		GEN,8,24 X'43'	0	CC
8097	02	01829	24000000	A		GEN,8,24 X'24'	0	
8098	02	0182A	43000000	A		GEN,8,24 X'43'	0	CC
8099	02	0182B	24000000	A		GEN,8,24 X'24'	0	
8100	02	0182C	43000000	A		GEN,8,24 X'43'	0	CC
8101	02	0182D	24000000	A		GEN,8,24 X'24'	0	
8102	02	0182E	43000000	A		GEN,8,24 X'43'	0	CC
8103	02	0182F	24000000	A		GEN,8,24 X'24'	0	

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0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 119
8104	02	01830	43000000	A		GEN,8,24	X'43',0	NO CC
8105	02	01831	14000000	A		GEN,8,24	X'14',0	
8106	02	01832	48000000	A	SPBRAND	GEN,8,24	X'4B',0	SPACE B*W RANDOM RECORD
8107	02	01833	14000000	A		GEN,8,24	X'14',0	
8108	02	01834	43000000	A	SPFRAND	GEN,8,24	X'43',0	SPACE FWD RANDOM RECORD
8109	02	01835	14000000	A		GEN,8,24	X'14',0	
8110	02	01836	23000000	A	TRWOF	GEN,8,24	X'23',0	REWIND AND PUT OFF LINE
8111	02	01837	14000000	A		GEN,8,24	X'14',0	
8112	02	01838	01008314	A	TST32W	GEN,8,24	X'01',BA(BUFF1)	WRITE 1 RECORD DATA CHAIN
8113	02	01839	C0000190	A		GEN,8,24	X'CO',400	DC AND ZBC
8114	02	0183A	08000C1C	A		GEN,8,8,16	X'08',0,DA(TST32W)	TRANSFER IN CHANNEL
8115	02	0183B	00000000	A		DATA	0	
8116	02	0183C	02008444	A	TST32RF	GEN,8,24	X'02',BA(BUFF1+100)	READ FWD 1 RECORD DATA CHAIN
8117	02	0183D	C0000190	A		GEN,8,24	X'CO',400	DC AND ZBC
8118	02	0183E	08000C1E	A		GEN,8,8,16	X'08',0,DA(TST32RF)	TRANSFER IN CHANNEL
8119	02	0183F	00000000	A		DATA	0	
8120	02	01840	48008314	A	TST33S	GEN,8,24	X'4B',BA(BUFF1)	SPACE B*W
8121	02	01841	10000000	A		GEN,8,24	X'10',0	
8122	02	01842	00008314	A	TST33R	GEN,8,24	0,BA(BUFF1)	READ FWD OR B*W AND DATA CHAIN
8123	02	01843	40000000	A		GEN,8,24	X'40',0	
8124	02	01844	00008314	A		GEN,8,24	0,BA(BUFF1)	
8125	02	01845	40000000	A		GEN,8,24	X'40',0	
8126	02	01846	00008314	A		GEN,8,24	0,BA(BUFF1)	
8127	02	01847	40000000	A		GEN,8,24	X'40',0	
8128	02	01848	00008314	A		GEN,8,24	0,BA(BUFF1)	
8129	02	01849	40000000	A		GEN,8,24	X'40',0	
8130	02	0184A	00008314	A		GEN,8,24	0,BA(BUFF1)	
8131	02	0184B	40000000	A		GEN,8,24	X'40',0	
8132	02	0184C	00008314	A		GEN,8,24	0,BA(BUFF1)	
8133	02	0184D	40000000	A		GEN,8,24	X'40',0	
8134	02	0184E	00008314	A		GEN,8,24	0,BA(BUFF1)	
8135	02	0184F	40000000	A		GEN,8,24	X'40',0	
8136	02	01850	00008314	A		GEN,8,24	0,BA(BUFF1)	
8137	02	01851	40000000	A		GEN,8,24	X'40',0	
8138	02	01852	00008314	A		GEN,8,24	0,BA(BUFF1)	
8139	02	01853	40000000	A		GEN,8,24	X'40',0	
8140	02	01854	00008314	A		GEN,8,24	0,BA(BUFF1)	
8141	02	01855	40000000	A		GEN,8,24	X'40',0	
8142	02	01856	00008314	A		GEN,8,24	0,BA(BUFF1)	
8143	02	01857	40000000	A		GEN,8,24	X'40',0	
8144	02	01858	02008314	A	RFSPEC	GEN,8,24	X'02',BA(BUFF1)	READ INTO MAX BUFFER INT ON CE, ZBC
8145	02	01859	50001388	A		GEN,8,24	X'50',5000	
8146	02	0185A	02008314	A	RFSPEC1	GEN,8,24	X'02',BA(BUFF1)	READ WITH HTE
8147	02	0185B	5A001388	A		GEN,8,24	X'5A',5000	
8148	02	0185C	33000000	A	TPDMP	GEN,8,24	X'33',0	REWIND AND COMMAND CHAIN
8149	02	0185D	20000000	A		GEN,8,24	X'20',0	
8150	02	0185E	01000064	A	TPDMP1	GEN,8,24	X'01',100	WRITE WITH DATA CHAIN
8151	02	0185F	80009000	A		GEN,8,24	X'80',X'9000'	
8152	02	01860	01000064	A		GEN,8,24	X'01',100	
8153	02	01861	80009000	A		GEN,8,24	X'80',X'9000'	
8154	02	01862	01000064	A		GEN,8,24	X'01',100	WRITE NO DATA CHAIN
8155	02	01863	00009000	A		GEN,8,24	X'00',X'9000'	
8156						BOUND	8	
8157	02	01864	00000000	A	TWTALLY	DATA	0,0,0,0,0,0,0,0	TEMP WRITE ERROR TALLY
	02	01865	00000000	A				
	02	01866	00000000	A				
	02	01867	00000000	A				
	02	01868	00000000	A				
	02	01869	00000000	A				
	02	0186A	00000000	A				
	02	0186B	00000000	A				
8158	02	0186C	00000000	A	PWTALLY	DATA	0,0,0,0,0,0,0,0	PERM WRITE ERROR TALLY
	02	0186D	00000000	A				
	02	0186E	00000000	A				
	02	0186F	00000000	A				
	02	01870	00000000	A				
	02	01871	00000000	A				
	02	01872	00000000	A				
	02	01873	00000000	A				
8159	02	01874	00000000	A	PRTALLY	DATA	0,0,0,0,0,0,0,0	PERM READ FWD ERROR TALLY

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			120
	02	01875	00000000	A				
	02	01876	00000000	A				
	02	01877	00000000	A				
	02	01878	00000000	A				
	02	01879	00000000	A				
	02	0187A	00000000	A				
	02	0187B	00000000	A				
8160	02	0187C	00000000	A	TRFTALLY DATA		0.0,0.0,0.0,0.0	TEMP READ FWD ERROR TALLY
	02	0187D	00000000	A				
	02	0187E	00000000	A				
	02	0187F	00000000	A				
	02	01880	00000000	A				
	02	01881	00000000	A				
	02	01882	00000000	A				
	02	01883	00000000	A				
8161	02	01884	00000000	A		DATA	0	
8162	02	01885	00000000	A	LOOPTLY	DATA	0	
8163	02	01886	00000000	A	SVESEED	DATA	0	SAVE SEED EACH PASS
8164	02	01887	00000000	A	CRTRY	DATA	0	NUMBER OF RETRIES ALLOWED
8165	02	01888	00000000	A	NMLOOP	DATA	0	LOOP LIMIT FROM USER
8166	02	01889	00000000	A	OPFLAG	DATA	0	RANDOM SET OF EXERCISES
8167	02	0188A	00000000	A	REWRDS	DATA	0	RANDOM NUMBER OF WORDS
8168	02	0188B	00000000	A	RETIME	DATA	0	RANDOM TIME DELAY
8169	02	0188C	00000000	A	STOBCD	DATA	0	
8170	02	0188D	00000000	A	STDPB	DATA	0	
8171	02	0188E	00000000	A	OPTPB	DATA	0	
8172	02	0188F	00000000	A	OPTBCD	DATA	0	
8173	02	01890	00000000	A	FL37IPS	DATA	0	
8174	02	01891	00000000	A	FL75IPS	DATA	0	
8175						BOUND	8	
8176	02	01892	00000000	A	RTRYSE	DATA	0.0	
	02	01893	00000000	A				
8177	02	01894	00000000	A	SAVIT	DATA	0.0	
	02	01895	00000000	A				
8178	02	01896	00000000	A	RTRYRT	DATA	0	
8179						BOUND	8	
8180	02	01898	00000000	A	STDELAY	DATA	0.0	
	02	01899	00000000	A				
8181	02	0189A	00000000	A	SAVE45	DATA	0.0	
	02	0189B	00000000	A				
8182	02	0189C	00000001	A	FLGRG	DATA	1	
8183	02	0189D	00000000	A	FLAGINC	DATA	0	
8184	02	0189E	00000000	A	REWONLY	DATA	0	
8185	02	0189F	00000000	A	ST15I2	DATA	0	
8186	02	018A0	00000000	A	ST15	DATA	0	
8187	02	018A1	33100007	A	CLOCK	MTW,1	7	CLOCK COUNTER
8188	02	018A2	00000000	A	TSNS10	DATA	0	
8189	02	018A3	00000000	A	TSCID	DATA	0	
8190	02	018A4	00000000	A	FLGINT	DATA	0	
8191	02	018A5	00000000	A	FLGI	DATA	0	
8192	02	018A6	00000000	A	CSENSE	DATA	0	
8193	02	018A7	00000000	A	STRIME	DATA	0	
8194	02	018A8	00000000	A	SAVESEED	DATA	0	
8195	02	018A9	00000000	A	REWORDS	DATA	0	
8196	02	018AA	00000000	A	UNITSAV	DATA	0	
8197	02	018AB	01020408	A	CORBYT	DATA	X'01020408',X'10204080'	
	02	018AC	10204080	A				SAVE R15
8198	02	018AD	00000000	A	ST15I	DATA	0	
8199	02	018AE	00000000	A	IRGTM	DATA	0	
8200	02	018AF	00000000	A	ERTMAX	DATA	0	
8201	02	018B0	00000000	A	ERTMIN	DATA	0	
8202	02	018B1	00000000	A	IRGMAX	DATA	0	
8203	02	018B2	00000000	A	IRGMIN	DATA	0	
8204	02	018B3	00000000	A	CRPMAX	DATA	0	
8205	02	018B4	00000000	A	WTRT	DATA	0	
8206	02	018B5	00000000	A	:DEVADDR	DATA	0	
8207	02	018B6			SAVDEV	RES	8	DEVICE NUMBERS BEING TESTED
8208	02	018B8	00000000	A	SAVNUMB	DATA	0	NUMBER OF DEVICE NUMBERS LISTED
8209	02	018BF			SAVDEVR	RES	8	DEVICE NUMBERS THAT ARE READY
8210	02	018C7	00000000	A	PROGLAST	DATA	0	LAST ADDRESS OF PROGRAM

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 121
8211	02	018C8	00000000	A	MAXBYT	DATA	0	MAXIMUM BYTE COUNT OF BUFFER
8212	02	018C9	00000000	A	MAXREC	DATA	0	MEMORY MAXIMUM-BUFF1
8213	02	018CA	00000000	A	MAXREADB	DATA	0	MAX BYTES IN EACH BUFFER
8214	02	018CB	00000000	A	MAXREAD	DATA	0	BUFF1 TO BUFF2
8215	02	018CC	00000000	A	NOREAD	DATA	0	TOO LARGE TO READ FLAG
8216	02	018CD	00000000	A	TNS1D	DATA	0	
8217	02	018CE	00000000	A	TNS20	DATA	0	
8218	02	018CF	00000000	A	TNS10	DATA	0	
8219	02	018D0	FF000000	A	TSC2D	DATA	X'FF000000'	
8220	02	018D1	FF000000	A	TSNS20	DATA	X'FF000000'	
8221	02	018D2	00000000	A	ST1155	DATA	0	
8222	02	018D3	00000000	A	TIME1	DATA	0	
8223	02	018D4	00000000	A	TIME2	DATA	0	
8224	02	018D5	00000000	A	TIME3	DATA	0	
8225	02	018D6	000000DC	A	CHARTR	DATA	220	
8226	02	018D7	00000000	A	LASTWDW	DATA	0	
8227	02	018D8	00000AF0	A	STOPDIF	DATA	2800	
8228	02	018D9	00000000	A	LASTWDR	DATA	0	
8229	02	018DA	00000000	A	BYTECN	DATA	0	
8230					BOUND	DATA	8	
8231	02	018DC	00000000	A	PT00T	DATA	0,0,0,0	
	02	018DD	00000000	A				
	02	018DE	00000000	A				
	02	018DF	00000000	A				
8232	02	018E0	00000000	A	PT00	DATA	0	PATTERNS 00 -80
8233	02	018E1	01010101	A		DATA	X'01010101'	
8234	02	018E2	02020202	A		DATA	X'02020202'	
8235	02	018E3	04040404	A		DATA	X'04040404'	
8236	02	018E4	08080808	A		DATA	X'08080808'	
8237	02	018E5	10101010	A		DATA	X'10101010'	
8238	02	018E6	20202020	A		DATA	X'20202020'	
8239	02	018E7	40404040	A		DATA	X'40404040'	
8240	02	018E8	80808080	A	PT80	DATA	X'80808080'	
8241	02	018E9	00000000	A		DATA	X'00000000'	
8242	02	018EA	5C00AE80	A	CRCDAT	DATA	X'5C00AE80'	
8243	02	018EB	AE002E00	A		DATA	X'AE002E00'	
8244	02	018EC	EE008E00	A		DATA	X'EE008E00'	
8245	02	018ED	BE00A600	A		DATA	X'BE00A600'	
8246	02	018EE	AA000000	A		DATA	X'AA000000'	
8247	02	018EF	D7000000	A	CRCBL	DATA	X'D7000000'	
8248	02	018F0	00000000	A	PTCKIT	DATA	0,0,0	
	02	018F1	00000000	A				
	02	018F2	00000000	A				
8249	02	018F3	00000000	A	NZFLAG	DATA	0	
8250	02	018F4	00000000	A	P2FLAG	DATA	0	
8251	02	018F5	00000000	A	SPFLAG	DATA	0	
8252	02	018F6	00000000	A	LOOPMAX	DATA	0	
8253	02	018F7	00000000	A	SAVE6	DATA	0	
8254	02	018F8	00000000	A	NZSEQNO	DATA	0	
8255	02	018F9	07070707	A	NZDATA1	DATA	X'07070707'	
8256	02	018FA	17000000	A		DATA	X'17000000'	
8257	02	018FB	00170707	A		DATA	X'00170707'	
8258	02	018FC	07071700	A		DATA	X'07071700'	
8259	02	018FD	00000017	A		DATA	X'00000017'	
8260	02	018FE	3E3E3E3E	A	NZDATA2	DATA	X'3E3E3E3E'	
8261	02	018FF	3E1D1D1D	A		DATA	X'3E1D1D1D'	
8262	02	01900	1D1D3737	A		DATA	X'1D1D3737'	
8263	02	01901	3737371B	A		DATA	X'3737371B'	
8264	02	01902	1B1B1B1B	A		DATA	X'1B1B1B1B'	
8265	02	01903	36363636	A		DATA	X'36363636'	
8266	02	01904	2E2E2E2E	A	NZDATA3	DATA	X'2E2E2E2E'	
8267	02	01905	3B3B3B3B	A		DATA	X'3B3B3B3B'	
8268	02	01906	1D1D1D1D	A		DATA	X'1D1D1D1D'	
8269	02	01907	37373737	A		DATA	X'37373737'	
8270	02	01908	3E3E3E3E	A		DATA	X'3E3E3E3E'	
8271	02	01909	1C71C71C	A	NZPK1	DATA	X'1C71C71C'	
8272	02	0190A	75C00000	A		DATA	X'75C00000'	
8273	02	0190B	000171C7	A		DATA	X'000171C7'	
8274	02	0190C	FBFBFBF9	A	NZPK2	DATA	X'FBFBFBF9'	
8275	02	0190D	D75DDF7D	A		DATA	X'D75DDF7D'	

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70
8276	02	0190E	F70D6DB6	A		DATA	X'F70D6DB6'	
8277	02	0190F	DBFBEFBE	A		DATA	X'DBFBEFBE'	
8278	02	01910	BAEBAEBA	A	NZPk3	DATA	X'BAEBAEBA'	
8279	02	01911	EBAEBAEB	A		DATA	X'EBAEBAEB'	
8280	02	01912	AEBAEBAE	A		DATA	X'AEBAEBAE'	
8281	02	01913	EFBEFBEB	A		DATA	X'EFBEFBEB'	
8282	02	01914	BEFBEBFE	A		DATA	X'BEFBEBFE'	
8283	02	01915	FBFBEBFB	A		DATA	X'FBFBEBFB'	
8284	02	01916	75D75D75	A		DATA	X'75D75D75'	
8285	02	01917	D75D75D7	A		DATA	X'D75D75D7'	
8286	02	01918	5D75D75D	A		DATA	X'5D75D75D'	
8287	02	01919	DF7DF7DF	A		DATA	X'DF7DF7DF'	
8288	02	0191A	7DF7DF7D	A		DATA	X'7DF7DF7D'	
8289	02	0191B	F7DF7DF7	A		DATA	X'F7DF7DF7'	
8290	02	0191C	FBEFBEBF	A		DATA	X'FBEFBEBF'	
8291	02	0191D	EFBEFBEB	A		DATA	X'EFBEFBEB'	
8292	02	0191E	BEFBEBFE	A		DATA	X'BEFBEBFE'	
8293	02	0191F	FEFBFEFB	A	NZPK4	DATA	X'FEFBFEFB'	
8294	02	01920	FFBEFFBE	A		DATA	X'FFBEFFBE'	
8295	02	01921	FDD7FDD7	A		DATA	X'FDD7FDD7'	
8296	02	01922	FF7DFF7D	A		DATA	X'FF7DFF7D'	
8297	02	01923	FFFFFFEF	A		DATA	X'FFFFFFEF'	
8298	02	01924	FFFFFFFA	A	LRCPK	DATA	X'FFFFFFFA'	3WORDS EACH RECORD
8299	02	01925	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8300	02	01926	FFFFFF00	A		DATA	X'FFFFFF00'	
8301	02	01927	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8302	02	01928	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8303	02	01929	FFFFFF80	A		DATA	X'FFFFFF80'	
8304	02	0192A	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8305	02	0192B	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8306	02	0192C	FFFFFF40	A		DATA	X'FFFFFF40'	
8307	02	0192D	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8308	02	0192E	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8309	02	0192F	FFFFFF20	A		DATA	X'FFFFFF20'	
8310	02	01930	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8311	02	01931	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8312	02	01932	FFFFFF10	A		DATA	X'FFFFFF10'	
8313	02	01933	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8314	02	01934	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8315	02	01935	FFFFFF00	A		DATA	X'FFFFFF00'	
8316	02	01936	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8317	02	01937	FFFFFFFA	A		DATA	X'FFFFFFFA'	
8318	02	01938	FFFFFF04	A		DATA	X'FFFFFF04'	
8319	02	01939	3F3F3F00	A	LRCOP	DATA	X'3F3F3F00'	1 WORD EACH RECORD
8320	02	0193A	3F3F3F20	A		DATA	X'3F3F3F20'	
8321	02	0193B	3F3F3F10	A		DATA	X'3F3F3F10'	
8322	02	0193C	3F3F3F08	A		DATA	X'3F3F3F08'	
8323	02	0193D	3F3F3F04	A		DATA	X'3F3F3F04'	
8324	02	0193E	3F3F3F02	A		DATA	X'3F3F3F02'	
8325	02	0193F	3F3F3F01	A		DATA	X'3F3F3F01'	
8326	02	01940	4F4F4F4F	A	LRCPEP	DATA	X'4F4F4F4F'	1 WORD EACH RECORD
8327	02	01941	4F4F4F6F	A		DATA	X'4F4F4F6F'	
8328	02	01942	4F4F4F5F	A		DATA	X'4F4F4F5F'	
8329	02	01943	4F4F4FC7	A		DATA	X'4F4F4FC7'	
8330	02	01944	4F4F4F4B	A		DATA	X'4F4F4F4B'	
8331	02	01945	4F4F4F4D	A		DATA	X'4F4F4F4D'	
8332	02	01946	4F4F4F4E	A		DATA	X'4F4F4F4E'	
8333	02	01947	F0F1F2F3	A	BCDVALID	DATA	X'F0F1F2F3'	DATA FOR TRANSLATION
8334	02	01948	F4F5F6F7	A		DATA	X'F4F5F6F7'	
8335	02	01949	F8F9E2E3	A		DATA	X'F8F9E2E3'	
8336	02	0194A	E4E5E6E7	A		DATA	X'E4E5E6E7'	
8337	02	0194B	E8E9D1D2	A		DATA	X'E8E9D1D2'	
8338	02	0194C	D3D4D5D6	A		DATA	X'D3D4D5D6'	
8339	02	0194D	D7D8D9C1	A		DATA	X'D7D8D9C1'	
8340	02	0194E	C2C3C4C5	A		DATA	X'C2C3C4C5'	
8341	02	0194F	C6C7C8C9	A		DATA	X'C6C7C8C9'	
8342	02	01950	F07B7C7D	A		DATA	X'F07B7C7D'	
8343	02	01951	7E7F6061	A		DATA	X'7E7F6061'	
8344	02	01952	6B6C6D6E	A		DATA	X'6B6C6D6E'	
8345	02	01953	6F505A5B	A		DATA	X'6F505A5B'	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 123
8346	02	01954	5C5D5E5F	A		DATA	X'5C5D5E5F'	
8347	02	01955	404A4B4C	A		DATA	X'404A4B4C'	
8348	02	01956	4D4E4F40	A		DATA	X'4D4E4F40'	
8349	02	01957	3A7ABAF A	A	BCDZERO	DATA	X'3A7ABAF A'	ZERO TRANSLATION
8350	02	01958	F0F0F0F0	A	CPBCDZ	DATA	X'F0F0F0F0'	
8351	02	01959	0A010203	A	DCDNOTRN	DATA	X'0A010203'	NO TRANSLATION CHARACTER SET
8352	02	0195A	04050607	A		DATA	X'04050607'	
8353	02	0195B	08091213	A		DATA	X'08091213'	
8354	02	0195C	14151617	A		DATA	X'14151617'	
8355	02	0195D	18192122	A		DATA	X'18192122'	
8356	02	0195E	23242526	A		DATA	X'23242526'	
8357	02	0195F	27282931	A		DATA	X'27282931'	
8358	02	01960	32333435	A		DATA	X'32333435'	
8359	02	01961	36373839	A		DATA	X'36373839'	
8360	02	01962	0A0B0C0D	A		DATA	X'0A0B0C0D'	
8361	02	01963	0E0F2011	A		DATA	X'0E0F2011'	
8362	02	01964	1B1C1D1E	A		DATA	X'1B1C1D1E'	
8363	02	01965	1F302A2B	A		DATA	X'1F302A2B'	
8364	02	01966	2C2D2E2F	A		DATA	X'2C2D2E2F'	
8365	02	01967	103A3B3C	A		DATA	X'103A3B3C'	
8366	02	01968	3D3E3F10	A		DATA	X'3D3E3F10'	
8367	02	01969	F0F1F2F3	A	BINTRLS	DATA	X'F0F1F2F3'	
8368	02	0196A	F4F5F6F7	A		DATA	X'F4F5F6F7'	
8369	02	0196B	F8F9F07B	A		DATA	X'F8F9F07B'	
8370	02	0196C	7C7D7E7F	A		DATA	X'7C7D7E7F'	
8371	02	0196D	4061E2E3	A		DATA	X'4061E2E3'	
8372	02	0196E	E4E5E6E7	A		DATA	X'E4E5E6E7'	
8373	02	0196F	E8E9EA6B	A		DATA	X'E8E9EA6B'	
8374	02	01970	6C6D6E6F	A		DATA	X'6C6D6E6F'	
8375	02	01971	60D1D2D3	A		DATA	X'60D1D2D3'	
8376	02	01972	D4D5D6D7	A		DATA	X'D4D5D6D7'	
8377	02	01973	D8D9EA5B	A		DATA	X'D8D9EA5B'	
8378	02	01974	5C5D5E5F	A		DATA	X'5C5D5E5F'	
8379	02	01975	50C1C2C3	A		DATA	X'50C1C2C3'	
8380	02	01976	C4C5C6C7	A		DATA	X'C4C5C6C7'	
8381	02	01977	C8C9CA4B	A		DATA	X'C8C9CA4B'	
8382	02	01978	4C4D4E4F	A		DATA	X'4C4D4E4F'	
8383	02	01979	00000000	A	PBTSAT	DATA	0	
8384	02	0197A	00000000	A		DATA	0	
8385	02	0197B	00000000	A		DATA	0	
8386	02	0197C	04104104	A		DATA	X'04104104'	
8387	02	0197D	10410410	A		DATA	X'10410410'	
8388	02	0197E	41041041	A		DATA	X'41041041'	
8389	02	0197F	08208208	A		DATA	X'08208208'	
8390	02	01980	20820820	A		DATA	X'20820820'	
8391	02	01981	82082082	A		DATA	X'82082082'	
8392	02	01982	10410410	A		DATA	X'10410410'	
8393	02	01983	41041041	A		DATA	X'41041041'	
8394	02	01984	04104104	A		DATA	X'04104104'	
8395	02	01985	20820820	A		DATA	X'20820820'	
8396	02	01986	82082082	A		DATA	X'82082082'	
8397	02	01987	08208208	A		DATA	X'08208208'	
8398	02	01988	41041041	A		DATA	X'41041041'	
8399	02	01989	04104104	A		DATA	X'04104104'	
8400	02	0198A	10410410	A		DATA	X'10410410'	
8401	02	0198B	82082082	A		DATA	X'82082082'	
8402	02	0198C	08208208	A		DATA	X'08208208'	
8403	02	0198D	20820820	A		DATA	X'20820820'	
8404	02	0198E	12131415	A	COMPSPD	DATA	X'12131415'	
8405	02	0198F	00333435	A		DATA	X'00333435'	
8406	02	01990	12131415	A		DATA	X'12131415'	
8407	02	01991	32003435	A		DATA	X'32003435'	
8408	02	01992	12131415	A		DATA	X'12131415'	
8409	02	01993	32330035	A		DATA	X'32330035'	
8410	02	01994	12131415	A		DATA	X'12131415'	
8411	02	01995	32333400	A		DATA	X'32333400'	
8412	02	01996	AAAAAAAA	A	COPEC	DATA	X'AAAAAAAA'	
8413	02	01997	AAAAFFFF	A		DATA	X'AAAAFFFF'	
8414	02	01998	FFFFFFFF	A		DATA	X'FFFFFFFF'	
8415	02	01999	AAAAAAAA	A		DATA	X'AAAAAAAA'	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 124
8416	02	0199A	AAAAAA00	A		DATA	X'AAAAAA00'	
8417	02	0199B	FFFFFFF	A		DATA	X'FFFFFFF'	
8418	02	0199C	AAAAAAA	A		DATA	X'AAAAAAA'	
8419	02	0199D	AAAAAAA	A		DATA	X'AAAAAAA'	
8420	02	0199E	00FFFFFF	A		DATA	X'00FFFFFF'	
8421	02	0199F	00000000	A	PATTSED	DATA	0	SEED FOR PATTERN
8422	02	019A0	00000000	A	PATTYPE	DATA	0	PATTERN TYPE 0=FIXED,1=RANDOM,5=BIT
8423	02	019A1	00000000	A	PATTK	DATA	0	TRACKS IF BIT CROWDING PATTERN
8424	02	019A2	00000000	A	PATTS1	DATA	0	PATTERN FOR 1ST TRACK
8425	02	019A3	00000000	A	PATTS2	DATA	0	
8426	02	019A4	00000000	A	PATTFIX	DATA	0	FIXED PATTERN
8427	02	019A5	00000000	A	LENGTHB	DATA	0	LENGTH REVISED
8428	02	019A6	00000000	A	LENGTH	DATA	0	BYTE LENGTH FROM DIRECTIVE
8429	02	019A7	00000001	A	NOPKPR	DATA	1	
8430	02	019A8	00000001	A	TLOOP	DATA	1	
8431	02	019A9	00000000	A	CMA	DATA	0	
8432	02	019AA	00000000	A	RRTT	DATA	0	
8433	02	019AB	00000000	A	MASKBYT	DATA	0	
8434	02	019AC	00001A32	A	OPPI	DATA	OPMESGA	
8435	02	019AD	00001A38	A		DATA	OPMESGB	
8436	02	019AE	00001A3E	A		DATA	OPMESG9	
8437	02	019AF	00000055	A	TOL800	DATA	85	
8438	02	019B0	0000001E	A		DATA	30	
8439	02	019B1	00000014	A		DATA	20	
8440	02	019B2	00000006	A		DATA	06	
8441	02	019B3	00000046	A	TOL8001	DATA	70	
8442	02	019B4	0000001D	A		DATA	29	
8443	02	019B5	00000010	A		DATA	16	
8444	02	019B6	00000005	A		DATA	05	
8445						BOUND	8	
8446	02	019B8	0FE3E2E3	A	DEVPRTO	TEXTC	'TST1-DEV.	
	02	019B9	F160C4C5	A				
	02	019BA	E54B4040	A				
	02	019BB	40404040	A				
8447	02	019BC	0000218D	A	RESLOC	DATA	BUFF1+200	
8448	02	019BD	00000000	A	CSMEAR	DATA	0,0,0,0,0,0,0,0,0,0,0,0,	
	02	019BE	00000000	A				
	02	019BF	00000000	A				
	02	019C0	00000000	A				
	02	019C1	00000000	A				
	02	019C2	00000000	A				
	02	019C3	00000000	A				
	02	019C4	00000000	A				
	02	019C5	00000000	A				
	02	019C6	00000000	A				
	02	019C7	00000000	A				
	02	019C8	00000000	A				
	02	019C9	00000000	A				
8449	02	019CA	00000000	A	LENBUF1	DATA	0	LENGTH IN BYTES OF REC BUFFER 1
8450	02	019CB	00000000	A	LENBUF2	DATA	0	LENGTH IN BYTES OF REC BUFFER 2
8451						BOUND	8	
8452	02	019CC	08FF0000	A	CHKBIT	DATA	X'08FF0000'	
8453	02	019CD	08BF0000	A	CHKBIT	DATA	X'08BF0000'	
8454	02	019CE	00000000	A	MODEFLAG	DATA	0	
8455	02	019CF	0F0019D0	A	XPSD1	XPSD,0	INTSVV	INTERRUPT ADDRESS
8456						BOUND	8	
8457	02	019D0	00000000	A	INTSVV	DATA	0,0,INTSV,0	
	02	019D1	00000000	A				
	02	019D2	00001E7C	A				
	02	019D3	00000000	A				
8458	02	019D4	0F0019D6	A	XPSD4	XPSD,0	INTMY	INTERRUPT FOR UTILITY TEST 2
8459						BOUND	8	
8460	02	019D6	00000000	A	INTMY	DATA	0,0,TST3207,0	
	02	019D7	00000000	A				
	02	019D8	000013FC	A				
	02	019D9	00000000	A				
8461						BOUND	8	
8462	02	019DA	E66BE66B	A	REDAPT	TEXT	'W,W,W,W	
	02	019DB	E66BE640	A				
	02	019DC	40404040	A				

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 125
8463	02	019DD	E66BE66B A			TEXT	'W,W,W,SB	
	02	019DE	E66BE2C2 A					
	02	019DF	40404040 A					
8464	02	019E0	E66BE66B A			TEXT	'W,W,SB,SB	
	02	019E1	E2C26BE2 A					
	02	019E2	C2404040 A					
8465	02	019E3	E66BE66B A			TEXT	'W,W,SB,RF	
	02	019E4	E2C26BD9 A					
	02	019E5	C6404040 A					
8466	02	019E6	E66BE2C2 A			TEXT	'W,SB,RF,SB	
	02	019E7	6BD9C66B A					
	02	019E8	E2C24040 A					
8467	02	019E9	E66BE2C2 A			TEXT	'W,SB,SB,RF	
	02	019EA	6BE2C26B A					
	02	019EB	D9C64040 A					
8468	02	019EC	E66BE2C2 A			TEXT	'W,SB,SB,SF	
	02	019ED	6BE2C26B A					
	02	019EE	E2C64040 A					
8469	02	019EF	E2C26BD9 A			TEXT	'SB,RF,W,W	
	02	019F0	C66BE66B A					
	02	019F1	E6404040 A					
8470	02	019F2	E2C26BD9 A			TEXT	'SB,RF,W,SB	
	02	019F3	C66BE66B A					
	02	019F4	E2C24040 A					
8471	02	019F5	E2C26BE6 A			TEXT	'SB,W,SB,RF	
	02	019F6	6BE2C26B A					
	02	019F7	D9C64040 A					
8472	02	019F8	E2C26BD9 A			TEXT	'SB,RF,SB,W	
	02	019F9	C66BE2C2 A					
	02	019FA	6BE64040 A					
8473	02	019FB	E2C26BD9 A			TEXT	'SB,RF,SB,RF	
	02	019FC	C66BE2C2 A					
	02	019FD	6BD9C640 A					
8474	02	019FE	E2C26BE2 A			TEXT	'SB,SF,W,W	
	02	019FF	C66BE66B A					
	02	01A00	E6404040 A					
8475	02	01A01	E2C26BE6 A			TEXT	'SB,W,SB,SF	
	02	01A02	6BE2C26B A					
	02	01A03	E2C64040 A					
8476	02	01A04	E2C26BD9 A			TEXT	'SB,RF,SB,RF	
	02	01A05	C66BE2C2 A					
	02	01A06	6BD9C640 A					
8477	02	01A07	E2C26BE2 A			TEXT	'SB,SF,SB,RF	
	02	01A08	C66BE2C2 A					
	02	01A09	6BD9C640 A					
8478						BOUND	8	
8479	02	01A0A	0DE3C9D4 A		TIMEOUT	TEXTC	'TIMEOUT ERROR'	
	02	01A0B	C5D6E4E3 A					
	02	01A0C	40C5D9D9 A					
	02	01A0D	D6D94040 A					
8480						BOUND	8	
8481	02	01A0E	0DD5D640 A		NLOAD	TEXTC	'NO LOAD POINT'	
	02	01A0F	D3D6C1C4 A					
	02	01A10	40D7D6C9 A					
	02	01A11	D5E34040 A					
8482						BOUND	8	
8483	02	01A12	10C4C5D3 A		DELSUB	TEXTC	'DELAY SUBROUTINE'	
	02	01A13	C1E840E2 A					
	02	01A14	E4C2D9D6 A					
	02	01A15	E4E3C9D5 A					
	02	01A16	C5404040 A					
8484						BOUND	8	
8485	02	01A18	0FD9C5D4 A		OPMMSG2	TEXTC	'REMOVE JUMPER'	
	02	01A19	D6E5C540 A					
	02	01A1A	D1E4D4D7 A					
	02	01A1B	C5D94040 A					
8486						BOUND	8	
8487	02	01A1C	1BD9C5D7 A		OPMMSG3	TEXTC	'REPLACE WRITE RING, READY'	
	02	01A1D	D3C1C3C5 A					
	02	01A1E	40E6D9C9 A					

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			126
		02 01A1F	E3C540D9 A					
		02 01A20	C9D5C76B A					
		02 01A21	40D9C5C1 A					
		02 01A22	C4E84040 A					
8488						BOUND	8	
8489		02 01A24	17D9C5E2 A		OPMSG4	TEXTC		'RESTORE UNIT TO READY'
		02 01A25	E3D6D9C5 A					
		02 01A26	40E4D5C9 A					
		02 01A27	E340E3D6 A					
		02 01A28	40D9C5C1 A					
		02 01A29	C4E84040 A					
8490						BOUND	8	
8491		02 01A2A	1FD9C5E2 A		OPMSG5	TEXTC		'RESET, ATTENTION, FOR INTERRUPT'
		02 01A2B	C5E36B40 A					
		02 01A2C	C1E3E3C5 A					
		02 01A2D	D5E3C9D6 A					
		02 01A2E	D56B40C6 A					
		02 01A2F	D6D940C9 A					
		02 01A30	D5E3C5D9 A					
		02 01A31	D9E4D7E3 A					
8492						BOUND	8	
8493		02 01A32	13E2C5E3 A		OPMSG6	TEXTC		'SET DIAL TO 200 BPI'
		02 01A33	40C4C9C1 A					
		02 01A34	D340E3D6 A					
		02 01A35	40F2F0F0 A					
		02 01A36	40C2D7C9 A					
8494						BOUND	8	
8495		02 01A38	13E2C5E3 A		OPMSG8	TEXTC		'SET DIAL TO 556 BPI'
		02 01A39	40C4C9C1 A					
		02 01A3A	D340E3D6 A					
		02 01A3B	40F5F5F6 A					
		02 01A3C	40C2D7C9 A					
8496						BOUND	8	
8497		02 01A3E	13E2C5E3 A		OPMSG9	TEXTC		'SET DIAL TO 800 BPI'
		02 01A3F	40C4C9C1 A					
		02 01A40	D340E3D6 A					
		02 01A41	40F8F0F0 A					
		02 01A42	40C2D7C9 A					
8498						BOUND	8	
8499		02 01A44	08D5D6E3 A		ERMSG1	TEXTC		'NOT 200 BPI'
		02 01A45	40F2F0F0 A					
		02 01A46	40C2D7C9 A					
8500						BOUND	8	
8501		02 01A48	08D5D6E3 A		ERMSG2	TEXTC		'NOT 556 BPI'
		02 01A49	40F5F5F6 A					
		02 01A4A	40C2D7C9 A					
8502						BOUND	8	
8503		02 01A4C	08D5D6E3 A		ERMSG3	TEXTC		'NOT 800 BPI'
		02 01A4D	40F8F0F0 A					
		02 01A4E	40C2D7C9 A					
8504						BOUND	8	
8505		02 01A50	26D9C5D4 A		OPMSG6	TEXTC		'REMOVE WRITE RING, READY, CORRECT UNIT'
		02 01A51	D6E5C540 A					
		02 01A52	E6D9C9E3 A					
		02 01A53	C540D9C9 A					
		02 01A54	D5C76B40 A					
		02 01A55	D9C5C1C4 A					
		02 01A56	E86B40C3 A					
		02 01A57	D6D9D9C5 A					
		02 01A58	C3E340E4 A					
		02 01A59	D5C9E340 A					
8506						BOUND	8	
8507					MESIRG	TEXTC		'I R G TIME US TOLERANCE
8508		02 01A5A	37C940D9 A					TO
		02 01A5B	40C740E3 A					
		02 01A5C	C9D4C540 A					
		02 01A5D	40404040 A					
		02 01A5E	40404040 A					
		02 01A5F	40E4E240 A					
		02 01A60	40E3D6D3 A					

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00	7/30/70 127
		02 01A61	C5D9C1D5 A					
		02 01A62	C3C54040 A					
		02 01A63	40404040 A					
		02 01A64	40404040 A					
		02 01A65	40E3D640 A					
		02 01A66	40404040 A					
		02 01A67	40404040 A					
8509						BOUND	8	
8510		02 01A68	1BE2E3C1 A	MESSTRT	TEXTC	'START TIME IS		US'
		02 01A69	D9E340E3 A					
		02 01A6A	C9D4C540 A					
		02 01A6B	C9E24040 A					
		02 01A6C	40404040 A					
		02 01A6D	40404040 A					
		02 01A6E	4040E4E2 A					
8511						BOUND	8	
8512		02 01A70	26E3C1D7 A	MESTPC	TEXTC	'TAPE CREEP	US TOLERANCE	US'
		02 01A71	C540C3D9 A					
		02 01A72	C5C5D740 A					
		02 01A73	40404040 A					
		02 01A74	40E4E240 A					
		02 01A75	4040E3D6 A					
		02 01A76	D3C5D9C1 A					
		02 01A77	D5C3C540 A					
		02 01A78	40404040 A					
		02 01A79	40E4E240 A					
8513						BOUND	8	
8514		02 01A7A	22D5C5C7 A	MESNCR	TEXTC	'NEG. CREEP	IN TAPE CREEP TEST'	
		02 01A7B	4B40C3D9 A					
		02 01A7C	C5C5D740 A					
		02 01A7D	40404040 A					
		02 01A7E	40C9D540 A					
		02 01A7F	E3C1D7C5 A					
		02 01A80	40C3D9C5 A					
		02 01A81	C5D740E3 A					
		02 01A82	C5E2E340 A					
8515						BOUND	8	
8516		02 01A84	23E3D9C1 A	MRTE	TEXTC	'TRANS ERROR REC	XXXXXX BYT XXXXXX'	
		02 01A85	D5E240C5 A					
		02 01A86	D9D9D6D9 A					
		02 01A87	4040D9C5 A					
		02 01A88	C340E7E7 A					
		02 01A89	E7E7E7E7 A					
		02 01A8A	4040C2E8 A					
		02 01A8B	E340E7E7 A					
		02 01A8C	E7E7E7E7 A					
8517						BOUND	8	
8518		02 01A8E	1BD9C5C3 A	RECOU	TEXTC	'REC XXXXXX BYT CNT XXXXXX'		
		02 01A8F	4040E7E7 A					
		02 01A90	E7E7E7E7 A					
		02 01A91	4040C2E8 A					
		02 01A92	E340C3D5 A					
		02 01A93	E340E7E7 A					
		02 01A94	E7E7E7E7 A					
8519						BOUND	8	
8520		02 01A96	2EC5D9C1 A	MESEGT	TEXTC	'ERASE TIME	MS, TOLERANCE	- MS'
		02 01A97	E2C540E3 A					
		02 01A98	C9D4C540 A					
		02 01A99	40404040 A					
		02 01A9A	40D4E26B A					
		02 01A9B	40E3D6D3 A					
		02 01A9C	C5D9C1D5 A					
		02 01A9D	C3C54040 A					
		02 01A9E	40404040 A					
		02 01A9F	40604040 A					
		02 01AA0	40404040 A					
		02 01AA1	40D4E240 A					
8521						BOUND	8	
8522		02 01AA2	13C4C5E2 A	OPMESG7	TEXTC	'DESIGNATE UNIT XXXX'		
		02 01AA3	C9C7D5C1 A					

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00			7/30/70 128
	02	01AA4	E3C540E4	A				
	02	01AA5	D5C9E3-0	A				
	02	01AA6	E7E7E7E7	A				
8523						BOUND	8	
8524	02	01AAB	345C5C5C	A	MSERI	TEXTC	
	02	01AA9	5C5C5C5C	A				
	02	01AAA	5C5C5C5C	A				
	02	01AAB	5C5C5C5C	A				
	02	01AAC	5C5C5C5C	A				
	02	01AAD	5C5C5C5C	A				
	02	01AAE	5C5C5C5C	A				
	02	01AAF	5C5C5C5C	A				
	02	01AB0	5C5C5C5C	A				
	02	01AB1	5C5C5C5C	A				
	02	01AB2	5C5C5C5C	A				
	02	01AB3	5C5C5C5C	A				
	02	01AB4	5C5C5C5C	A				
	02	01AB5	5C404040	A				
8525						BOUND	8	
8526	02	01AB6	33D9C5C3	A	MESER	TEXTC		'REC 100 PT XXXX WRT ER XXXX RF ER XXXX INF ER XXXX'
	02	01AB7	40F1F0F0	A				
	02	01AB8	40D7E340	A				
	02	01AB9	E7E7E7E7	A				
	02	01ABA	40E6D9E3	A				
	02	01ABB	40C5D940	A				
	02	01ABC	E7E7E7E7	A				
	02	01ABD	4040D9C6	A				
	02	01ABE	40C5D940	A				
	02	01ABF	E7E7E7E7	A				
	02	01AC0	40C9D5C6	A				
	02	01AC1	40C5D940	A				
	02	01AC2	E7E7E7E7	A				
8527						BOUND	8	
8528	02	01AC4	33D9C1D5	A	REMESG1	TEXTC		'RAND. WORD DEV. PASS HEX'
	02	01AC5	C44B40E6	A				
	02	01AC6	D6D9C440	A				
	02	01AC7	40404040	A				
	02	01AC8	40404040	A				
	02	01AC9	404040C4	A				
	02	01ACA	C5E54840	A				
	02	01ACB	40404040	A				
	02	01ACC	404040D7	A				
	02	01ACD	C1E2E240	A				
	02	01ACE	C8C5E740	A				
	02	01ACF	40404040	A				
	02	01AD0	40404040	A				
8529						BOUND	8	
8530	02	01AD2	1BC6C1C9	A	REMESG2	TEXTC		'FAILING SEQ: W.'
	02	01AD3	D3C9D5C7	A				
	02	01AD4	40E2C5D8	A				
	02	01AD5	7A40E668	A				
	02	01AD6	40404040	A				
	02	01AD7	40404040	A				
	02	01AD8	40404040	A				
8531						BOUND	8	
8532						TEXTC		
8533	02	01ADA	3BC4C5E5	A	REMESG3	TEXTC		'DEVICE TRFT PWT TWT PRFT ,:'
	02	01ADB	C9C3C540	A				
	02	01ADC	40404040	A				
	02	01ADD	404040D7	A				
	02	01ADE	E6E34040	A				
	02	01ADF	40404040	A				
	02	01AE0	404040E3	A				
	02	01AE1	E6E34040	A				
	02	01AE2	40404040	A				
	02	01AE3	404040D7	A				
	02	01AE4	D9C6E340	A				
	02	01AE5	40404040	A				
	02	01AE6	404040E3	A				
	02	01AE7	D9C6E340	A				

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	DR I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00 7/30/70			129
8534	02	01AE8	40404040	A		BOUND	8	
8535					OUTMSG	TEXTC	:	..
8536	02	01AEA	44404040	A				
	02	01AEB	40404040	A				
	02	01AEC	40404040	A				
	02	01AED	40404040	A				
	02	01AEE	40404040	A				
	02	01AEF	40404040	A				
	02	01AF0	40404040	A				
	02	01AF1	40404040	A				
	02	01AF2	40404040	A				
	02	01AF3	40404040	A				
	02	01AF4	40404040	A				
	02	01AF5	40404040	A				
	02	01AF6	40404040	A				
	02	01AF7	40404040	A				
	02	01AF8	40404040	A				
	02	01AF9	40404040	A				
	02	01AFA	40404040	A				
	02	01AFB	40404040	A				
	02	01AFC	40404040	A				
8537						BOUND	8	
8538	02	01AFE	274040C4	A	REMMSG32	TEXTC	DEV.	FAILING REC HEX
	02	01AFF	C5E54840	A				
	02	01B00	40404040	A				
	02	01B01	40404040	A				
	02	01B02	C6C1C9D3	A				
	02	01B03	C9D5C740	A				
	02	01B04	D9C5C340	A				
	02	01B05	C8C5E740	A				
	02	01B06	40404040	A				
	02	01B07	40404040	A				
8539	02	01B08	00000000	A	SAVMODEL	DATA	0	MODEL NUMBER BEING TESTED
8540					*			
8541					*			
8542	02	01B09	35F01852	A	ERRPNT1	STW,15	ERREXIT	STORE RETURN ADDR
8543	02	01B0A	22B00000	A		LI,11	0	FETCH ZERO
8544	02	01B0B	226FFFFA	A		LI,6	-6	FETCH -6
8545	02	01B0C	328C1861	A		LW,8	:TALLYO+6,6	FETCH OBS. COUNT
8546	02	01B0D	69301810	A		BNEZ	\$+3	BRANCH NOT EQUAL ZERO
8547	02	01B0E	6560180C	A		BIR,6	\$-2	BRANCH INCREMENT REG. 6
8548	02	01B0F	E8001852	A		B	*ERREXIT	EXIT - NO ERRORS
8549	02	01B10	226FFFFA	A		LI,6	-6	FETCH -6
8550	02	01B11	32CC185B	A	ERRPNT2	LW,12	:TALLYE+6,6	FETCH EXP. COUNT
8551	02	01B12	6830182D	A		BEZ	ERRPNT5	BRANCH IF EQUAL ZERO
8552	02	01B13	38CC1861	A		SW,12	:TALLYO+6,6	IF NOT EQUAL SUBTRACT OBS. COUNT
8553	02	01B14	21C02710	A		CI,12	10000	COMPARE IMMEDIATE
8554	02	01B15	6830181D	A		BE	ERRPNT3A	BRANCH IF EQUAL
8555	02	01B16	21C026AC	A		CI,12	9900	COMPARE IMMEDIATE
8556	02	01B17	68101820	A		BGE	ERRPNT3	BRANCH IF GREATER OR EQUAL
8557	02	01B18	21C01388	A		CI,12	5000	COMPARE IMMEDIATE
8558	02	01B19	68101823	A		BGE	ERRPNT4	BRANCH IF GREATER OR EQUAL
8559	02	01B1A	02200030	A	ERRPNT2A	LC1	3	LOAD CONDITION CONTROL IMMEDIATE
8560	02	01B1B	2A801882	A		LM,8	ERRN06	LOAD MULTIPLE
8561	02	01B1C	68001825	A		B	\$+9	BRANCH
8562	02	01B1D	02200030	A	ERRPNT3A	LC1	3	LOAD CONDITION CONTROL IMMEDIATE
8563	02	01B1E	2A801885	A		LM,8	ERRN07	FETCH MULTIPLE
8564	02	01B1F	68001825	A		B	\$+6	BRANCH
8565	02	01B20	02200030	A	ERRPNT3	LC1	3	LOAD CONDITION CONTROL IMMEDIATE
8566	02	01B21	2A80187F	A		LM,8	ERRN05	LOAD MULTIPLE
8567	02	01B22	68001825	A		B	\$+3	BRANCH
8568	02	01B23	02200030	A	ERRPNT4	LC1	3	LOAD CONDITION CONTROL IMMEDIATE
8569	02	01B24	2A80187C	A		LM,8	ERRN04	LOAD MULTIPLE
8570	02	01B25	55821879	A		STW,8	ERRN03+11,1	STORE HALF WORD INTO ERRN03
8571	02	01B26	02200020	A		LC1	2	LOAD CONDITION CONTROL IMMEDIATE
8572	02	01B27	2B90187A	A		STM,9	ERRN03+12	STORE MULTIPLE
8573	02	01B28	EAF00217	A		BAL,15	*:DECC	CONVERSION SUBR.
8574	02	01B29	35F01878	A		STW,15	ERRN03+10	STORE THE RESULT INTO ERRN03
8575	02	01B2A	EAF00217	A		BAL,15	*:DECC	CONVERSION SUBR.

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	130
8576	02	01B2B	75F61B77			STB,15	ERRN03+9,3	STORE THE RESULT INTO ERRN03
8577	02	01B2C	68001B35			B	ERRPNT6	BRANCH TO ERRPNT6
8578	02	01B2D	32CC1B61		ERRPNT5	LW,12	:TALLY0+6,6	FETCH OBS. COUNT
8579	02	01B2E	21C00000 A			CI,12	0	COMPARE IMMEDIATE
8580	02	01B2F	68301B1D			BE	ERRPNT3A	BRANCH IF EQUAL
8581	02	01B30	21C00064 A			CI,12	100	COMPARE IMMEDIATE
8582	02	01B31	68201B20			BLE	ERRPNT3	BRANCH IF LESS OR EQUAL
8583	02	01B32	21C01388 A			CI,12	5000	COMPARE IMMEDIATE
8584	02	01B33	68201B23			BLE	ERRPNT4	BRANCH IF LESS OR EQUAL
8585	02	01B34	68001B1A			B	ERRPNT2A	BRANCH
8586	02	01B35	72C6000B A		ERRPNT6	LB,12	11,3	FETCH BYTE
8587	02	01B36	EAF00217 A			BAL,15	*:DECC	CONVERSION SUBR.
8588	02	01B37	75F41B70			STB,15	ERRN03+2,2	STORE THE RESULT INTO ERRN03
8589	02	01B38	32C01B54			LW,12	TESTNO	FETCH TEST NO.
8590	02	01B39	EAF00217 A			BAL,15	*:DECC	CONVERSION SUBR.
8591	02	01B3A	55F21B62			STW,15	ERRN01+1,1	STORE THE RESULT INTO ERRN01
8592	02	01B3B	32CC1B5B			LW,12	:TALLYE+6,6	FETCH EXP. COUNT
8593	02	01B3C	EAF00217 A			BAL,15	*:DECC	CONVERSION SUBR.
8594	02	01B3D	35F01B75			STW,15	ERRN03+7	STORE THE RESULT INTO ERRN03
8595	02	01B3E	EAF00217 A			BAL,15	*:DECC	CONVERSION SUBR.
8596	02	01B3F	75F61B74			STB,15	ERRN03+6,3	STORE THE RESULT INTO ERRN03
8597	02	01B40	216FFFFA A			CI,6	-6	
8598	02	01B41	69301B4D				LINE3	
8599	02	01B42	EAF0021C A			BAL,15	*:PRINT	GO TO PRINT SUBR.
8600	02	01B43	00001B61			DATA	ERRN01	
8601	02	01B44	EAF0021C A			BAL,15	*:PRINT	GO TO PRINT SUBR.
8602	02	01B45	00000000 A		:TALLYMA	DATA	0	
8603	02	01B46	32C01B53			LW,12	:TALLYP	FETCH TALLYP
8604	02	01B47	EAF00218 A			BAL,15	*:HEXC	CONVERSION SUBR.
8605	02	01B48	35F01B6D			STW,15	ERRN02+6	STORE THE RESULT
8606	02	01B49	EAF00218 A			BAL,15	*:HEXC	CONVERSION SUBR.
8607	02	01B4A	35F01B6C			STW,15	ERRN02+5	STORE THE RESULT
8608	02	01B4B	EAF0021C A			BAL,15	*:PRINT	GO TO PRINT SUBR.
8609	02	01B4C	00001B67			DATA	ERRN02	
8610	02	01B4D	EAF0021C A		LINE3	BAL,15	*:PRINT	GO TO PRINT SUBR.
8611	02	01B4E	00001B6E			DATA	ERRN03	
8612	02	01B4F	3310000B A		ERRPNT7	MTW,1	11	ADD 1 TO REG. 11
8613	02	01B50	65601B11			BIR,6	ERRPNT2	
8614	02	01B51	E8021B52			B	*ERREXIT,1	ERROR EXIT
8615	02	01B52	00000000 A		ERREXIT	DATA	0	
8616	02	01B53	00000000 A		:TALLYP	DATA	0	
8617	02	01B54	00000000 A		TESTNO	DATA	0	
8618	02	01B55			:TALLYE	RES	6	
8619	02	01B5B			:TALLYO	RES	6	
8620	02	01B61	15E3E2E3 A		ERRN01	TEXTC	'TST1,XX FAULT SUMMARY'	
		02	01B62	F16BE7E7 A				
		02	01B63	40C6C1E4 A				
		02	01B64	D3E340E2 A				
		02	01B65	E4D4D4C1 A				
		02	01B66	D9E84040 A				
8621	02	01B67	18C3E4D9 A		ERRN02	TEXTC	'CURRENT PATTERN: xxxxxxxx'	
		02	01B68	D9C5D5E3 A				
		02	01B69	40D7C1E3 A				
		02	01B6A	E3C5D9D5 A				
		02	01B6B	7A404040 A				
		02	01B6C	E7E7E7E7 A				
		02	01B6D	E7E7E7E7 A				
8622					ERRN03	TEXTC	:	
8623	02	01B6E	37C4C1E3 A				'DATA BIT N TOTAL BITS EXP xxxxx OBS xxxxx'	
	02	01B6F	C140C2C9 A					
	02	01B70	E340D540 A					
	02	01B71	E306E3C1 A					
	02	01B72	D340C2C9 A					
	02	01B73	E3E240C5 A					
	02	01B74	E7D740E7 A					
	02	01B75	E7E7E7E7 A					
	02	01B76	404040D6 A					
	02	01B77	C2E240E7 A					
	02	01B78	E7E7E7E7 A					
	02	01B79	40404040 A					

LINE NO.	MEM PRGT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00 7/30/70	132
8674	02	01B9A	E830000F	A		BCR,3	*R15	NO 1-BITS COMPARE-EXIT NORMAL
8675	02	01B9B	22400000	A		LI,R4	0	
8676	02	01B9C	35401C18			STW,R4	:TYPE	ISSUE TYPE=0
8677	02	01B9D	68001BCA			B	:STATEST	REPORT S10 STATUS ERROR
8678								
8679								
8680								ISSUE T10
8681	02	01B9E	CDC018B5	A	:T10	T10,R12	*:DEVADDR	ISSUE T10
8682	02	01B9F	3280000D	A		LW,R11	R13	DEVICE STATUS, BYTE COUNT
8683	02	01BA0	22400002	A		LI,R4	2	INDEX=2
8684	02	01BA1	7408000B	A		STCF	R11,R4	ENTER COND CODES 1-4 AND FLOAT CTR
8685	02	01BA2	22400001	A		LI,R4	1	INDEX=1
8686	02	01BA3	48B0000E	A		AND,R11	R14	(DEV STATUS).(STATUS MASK)
8687	02	01BA4	48B020BD	A		AND,R11	=X'FFFC000'	REMOVE BYTE CNT, CC3,4 AND FLT CTR
8688	02	01BA5	E830000F	A		BCR,3	*R15	NO 1-BITS COMPARE-EXIT NORMAL
8689	02	01BA6	22400001	A		LI,R4	1	
8690	02	01BA7	35401C18			STW,R4	:TYPE	ISSUE TYPE=1
8691	02	01BA8	68001BCA			B	:STATEST	REPORT T10 STATUS ERROR
8692								
8693								ISSUE H10
8694								
8695	02	01BA9	CFC018B5	A	:H10	H10,R12	*:DEVADDR	ISSUE H10
8696	02	01BAA	3280000D	A		LW,R11	R13	DEVICE STATUS, BYTE COUNT
8697	02	01BAB	22400002	A		LI,R4	2	INDEX=2
8698	02	01BAC	7408000B	A		STCF	R11,R4	ENTER COND CODES 1-4 AND FLOAT CTR
8699	02	01BAD	22400001	A		LI,R4	1	INDEX=1
8700	02	01BAE	48B0000E	A		AND,R11	R14	(DEV STATUS).(STATUS MASK)
8701	02	01BAF	48B020BD	A		AND,R11	=X'FFFC000'	REMOVE BYTE CNT, CC3,4 AND FLT CTR
8702	02	01BB0	E830000F	A		BCR,3	*R15	NO 1-BITS COMPARE-EXIT NORMAL
8703	02	01BB1	22400002	A		LI,R4	2	
8704	02	01BB2	35401C18			STW,R4	:TYPE	ISSUE TYPE=2
8705	02	01BB3	68001BCA			B	:STATEST	REPORT H10 STATUS ERROR
8706								
8707								ISSUE TDV
8708								
8709	02	01BB4	CEC018B5	A	:TDV	TDV,R12	*:DEVADDR	ISSUE TDV
8710	02	01BB5	3280000D	A		LW,R11	R13	DEVICE STATUS, BYTE COUNT
8711	02	01BB6	22400002	A		LI,R4	2	INDEX=2
8712	02	01BB7	7408000B	A		STCF	R11,R4	ENTER COND CODES 1-4 AND FLOAT CTR
8713	02	01BB8	22400001	A		LI,R4	1	INDEX=1
8714	02	01BB9	48B0000E	A		AND,R11	R14	(DEV STATUS).(STATUS MASK)
8715	02	01BBA	48B020BD	A		AND,R11	=X'FFFC000'	REMOVE BYTE CNT, CC3,4 AND FLT CTR
8716	02	01BBB	E830000F	A		BCR,3	*R15	NO 1-BITS COMPARE-EXIT NORMAL
8717	02	01BBC	22400003	A		LI,R4	3	
8718	02	01BBD	35401C18			STW,R4	:TYPE	ISSUE TYPE=3
8719	02	01BBE	68001BCA			B	:STATEST	REPORT TDV STATUS ERROR
8720								
8721								ISSUE A10
8722								
8723	02	01BBF	6ED00000	A	:A10	A10,R13	0	ISSUE A10
8724	02	01BC0	3280000D	A		LW,R11	R13	DEVICE STATUS, BYTE COUNT
8725	02	01BC1	22400002	A		LI,R4	2	INDEX=2
8726	02	01BC2	7408000B	A		STCF	R11,R4	ENTER COND CODES 1-4 AND FLOAT CTR
8727	02	01BC3	22400001	A		LI,R4	1	INDEX=1
8728	02	01BC4	48B0000E	A		AND,R11	R14	(DEV STATUS).(STATUS MASK)
8729	02	01BC5	48B020BD	A		AND,R11	=X'FFFC000'	REMOVE BYTE CNT, CC3,4 AND FLT CTR
8730	02	01BC6	E830000F	A		BCR,3	*R15	NO 1-BITS COMPARE-EXIT NORMAL
8731	02	01BC7	22400004	A		LI,R4	4	
8732	02	01BC8	35401C18			STW,R4	:TYPE	ISSUE TYPE=4
8733	02	01BC9	66001BCA			B	:STATEST	REPORT A10 STATUS ERROR
8734								
8735								PROCESS CC, STATUS ERRORS
8736	02	01BCA	74000004	A	:STATEST	STCF	R4	COND CODES 1-4, FLOAT CTRL
8737	02	01BCB	72400004	A		LB,R4	R4	Merge CCI,2 TO BIT POSITIONS 30,31
8738	02	01BCC	2540007A	A		SLS,R4	-6	
8739	02	01BCD	35401C17			STW,R4	:CC12	SAVE CCI,2
8740	02	01BCE	3310000F	A		MTW,1	R15	RETURN ADDRESS +1
8741	02	01BCF	22400003	A		LI,R4	3	INDEX=3
8742	02	01BD0	7248000E	A		LB,R4	R14,R4	STATUS MASK PRINT INHIBIT
8743	02	01BD1	E920000F	A		BCS,2	*R15	PRINT INHIBIT <>0 -ERROR EXIT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 133
8744	02	01BD2	02200000	A		LCI	0	
8745	02	01BD3	2B001C19	A		STM,R0	:REGSAVE	SAVE ALL REGISTERS
8746	02	01BD4	22400002	A		LI,R4	2	INDEX=2
8747	02	01BD5	7248000B	A		LB,R4	R11,R4	MASKED CCI,2
8748	02	01BD6	68301BFB	A		BCR,3	:STATERR	NO CC ERROR-GO TO STATUS ERROR TEST
8749	02	01BD7	32401C17	A		LW,R4	:CCI2	CCI,2
8750	02	01BD8	21400003	A		CI,R4	3	
8751	02	01BD9	68301BED	A		BCR,3	:CCERR3	CCI,2=11
8752	02	01BDA	21400002	A		CI,R4	2	
8753	02	01BD8	68301BE7	A		BCR,3	:CCERR2	CCI,2=10
8754								CCI,2=01
8755	02	01BDC	32401C18	A	:CCERR1	LW,R4	:TYPE	ISSUE TYPE
8756	02	01BDD	21400003	A		CI,R4	3	
8757	02	01BDE	69301BE2	A		BCS,3	\$+4	TYPE NOT 3
8758	02	01BDF	32C01C17	A		LW,R12	:CCI2	COND CODES 1,2
8759	02	01BE0	EAF00216	A		BAL,R15	*:BINC	CONVERT TO BINARY IN EBCDIC
8760	02	01BE1	55F01C52	A		STH,R15	:CCERM4+9	ENTER INTO TDV MSG
8761	02	01BE2	32481C29	A		LW,R4	:ERRADR1,R4	ERROR MSG ADDRESS
8762	02	01BE3	35401BE5	A		STW,R4	\$+2	
8763	02	01BE4	EAF0021C	A		BAL,R15	*:PRINT	PRINT ERROR MSG
8764	02	01BE5	00000000	A		DATA	0	
8765	02	01BE6	68001BFB	A		B	:STATERR	GO TO STATUS ERROR TEST
8766								CCI,2=10
8767	02	01BE7	32401C18	A	:CCERR2	LW,R4	:TYPE	ISSUE TYPE
8768	02	01BE8	32481C2E	A		LW,R4	:ERRADR2,R4	ERROR MSG ADDRESS
8769	02	01BE9	35401BEB	A		STW,R4	\$+2	
8770	02	01BEA	EAF0021C	A		BAL,R15	*:PRINT	PRINT ERROR MSG
8771	02	01BEB	00000000	A		DATA	0	
8772	02	01BEC	68001BFB	A		B	:STATERR	GO TO STATUS ERROR TEST
8773								CCI,2=11
8774	02	01BED	32501C18	A	:CCERR3	LW,R5	:TYPE	ISSUE TYPE
8775	02	01BEE	324A1C33	A		LW,R4	:ERRADR3,R5	ERROR MSG ADDRESS
8776	02	01BEF	21500004	A		CI,R5	4	
8777	02	01BF0	68301BF5	A		BCR,3	\$+5	ISSUE TYPE 4-NO DEV ADDR REQ'D
8778	02	01BF1	32C01B85	A		LW,R12	:DEVADDR	DEVICE ADDRESS
8779	02	01BF2	EAF00218	A		BAL,R15	*:HEXC	CONVERT TO HEXADECIMAL IN EBCDIC
8780	02	01BF3	22500004	A		LI,R5	4	INDEX=4
8781	02	01BF4	B5FA0004	A		STW,R15	*R4,R5	DEV ADDR TO ERROR MSG
8782	02	01BF5	35401BF7	A		STW,R4	\$+2	
8783	02	01BF6	EAF0021C	A		BAL,R15	*:PRINT	PRINT ERROR MSG
8784	02	01BF7	00000000	A		DATA	0	
8785	02	01BF8	02200000	A		LCI	0	
8786	02	01BF9	2A001C19	A		LM,R0	:REGSAVE	RESTORE ALL REGISTERS
8787	02	01BFA	E800000F	A		B	*R15	ERROR EXIT
8788								TEST MASKED STATUS
8789	02	01BFB	5240000B	A	:STATERR	LH,R4	R11	MASKED STATUS
8790	02	01BFC	68301BF8	A		BCR,3	\$-4	NO STATUS ERROR-ERROR EXIT
8791	02	01BFD	EAF0021C	A		BAL,R15	*:PRINT	PRINT STATUS ERROR HEADER MSG
8792	02	01BFE	00001C86	A		DATA	:STATEM1	
8793	02	01BFF	32401C18	A		LW,R4	:TYPE	ISSUE TYPE
8794	02	01C00	32481C9D	A		LW,R4	:STAT1YP,R4	ENTER TYPE INTO STATUS ERROR MSG
8795	02	01C01	72501C92	A		LB,R5	:STATEM2	SAVE ERROR MSG BYTE COUNT
8796	02	01C02	35401C92	A		STW,R4	:STATEM2	
8797	02	01C03	75501C92	A		STB,R5	:STATEM2	RESTORE BYTE COUNT
8798	02	01C04	22500012	A		LI,R5	18	MSG BYTE INDEX=18
8799	02	01C05	52C0000D	A		LH,R12	R13	DEV STATUS
8800	02	01C06	22400004	A		LI,R4	4	MINOR INDEX=4
8801	02	01C07	EAF00216	A		BAL,R15	*:BINC	CONVERT TO BINARY IN EBCDIC
8802	02	01C08	75FA1C95	A		STB,R15	:STATEM2+3,R5	STATUS BIT TO ERROR MSG
8803	02	01C09	33F00005	A		MTW,-1	R5	BYTE INDEX-1
8804	02	01C0A	25F00078	A		SLS,R15	-8	ADJUST CONVERTED STATUS BITS
8805	02	01C0B	64401C08	A		BDR,R4	\$-3	MINOR INDEX-1 NOT ZERO
8806	02	01C0C	64501C06	A		BDR,R5	\$-6	BYTE INDEX-1 NOT ZERO
8807	02	01C0D	32C01C17	A		LW,R12	:CCI2	COND CODES 1,2
8808	02	01C0E	EAF00216	A		BAL,R15	*:BINC	CONVERT TO BINARY IN EBCDIC
8809	02	01C0F	22400001	A		LI,R4	1	INDEX=1
8810	02	01C10	55F81C9A	A		STH,R15	:STATEM2+8,R4	COND CODES 1,2 TO ERROR MSG
8811	02	01C11	32C01B85	A		LW,R12	:DEVADDR	DEVICE ADDRESS
8812	02	01C12	EAF00218	A		BAL,R15	*:HEXC	CONVERT TO HEXADECIMAL IN EBCDIC
8813	02	01C13	35F01C9C	A		STW,R15	:STATEM2+10	DEV ADDR TO ERROR MSG

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 134
8814	02	01C14	EAF0021C	A		BAL,R15	*:PRINT	PRINT STATUS MSG
8815	02	01C15	00001C92			DATA	:STATEM2	
8816	02	01C16	68001BF8			B	:STATERR-3	GO TO ERROR EXIT
8817								
8818	02	01C17	00000000	A	:CC12	DATA	0	CC1,2
8819	02	01C18	00000000	A	:TYPE	DATA	0	ISSUE TYPE
8820	02	01C19			:REGSAVE	RES	16	REGISTERS 0-15
8821	02	01C29	00001C38		:ERRADR1	DATA	:CCERM1	ERROR ADDRESS 1-F
8822	02	01C2A	00001C3D			DATA	:CCERM2	
8823	02	01C2B	00001C43			DATA	:CCERM3	
8824	02	01C2C	00001C49			DATA	:CCERM4	
8825	02	01C2D	00001C53			DATA	:CCERM5	
8826	02	01C2E	00001C58		:ERRADR2	DATA	:CCERM6	
8827	02	01C2F	00001C5C			DATA	:CCERM7	
8828	02	01C30	00001C60			DATA	:CCERM8	
8829	02	01C31	00001C64			DATA	:CCERM9	
8830	02	01C32	00001C68			DATA	:CCERMA	
8831	02	01C33	00001C6C		:ERRADR3	DATA	:CCERMB	
8832	02	01C34	00001C71			DATA	:CCERMC	
8833	02	01C35	00001C76			DATA	:CCERMD	
8834	02	01C36	00001C7B			DATA	:CCERME	
8835	02	01C37	00001C80			DATA	:CCERMF	
8836	02	01C38	10E2C9D6	A	:CCERM1	TEXTC	'S10-NOT ACCEPTED'	
	02	01C39	60D5D6E3	A				
	02	01C3A	40C1C3C3	A				
	02	01C3B	C5D7E3C5	A				
	02	01C3C	C4404040	A				
8837	02	01C3D	14E3C9D6	A	:CCERM2	TEXTC	'T10-S10 NOT POSSIBLE'	
	02	01C3E	60E2C9D6	A				
	02	01C3F	40D5D6E3	A				
	02	01C40	40D7D6E2	A				
	02	01C41	E2C9C2D3	A				
	02	01C42	C5404040	A				
8838	02	01C43	14C8C9D6	A	:CCERM3	TEXTC	'H10-DEV BUSY AT HALT'	
	02	01C44	60C4C5E5	A				
	02	01C45	40C2E4E2	A				
	02	01C46	E840C1E3	A				
	02	01C47	40C8C1D3	A				
	02	01C48	E3404040	A				
8839	02	01C49	25E3C4E5	A	:CCERM4	TEXTC	'TDV-DEV DEPENDENT CONDITION CC1,2='	
	02	01C4A	60C4C5E5	A				
	02	01C4B	40C4C5D7	A				
	02	01C4C	C5D5C4C5	A				
	02	01C4D	D5E340C3	A				
	02	01C4E	D6D5C4C9	A				
	02	01C4F	E3C9D6D5	A				
	02	01C50	40C3C3F1	A				
	02	01C51	E8F27E40	A				
	02	01C52	40404040	A				
8840	02	01C53	10C1C9D6	A	:CCERM5	TEXTC	'A10-UE INTERRUPT'	
	02	01C54	60E4C540	A				
	02	01C55	C9D5E3C5	A				
	02	01C56	D9D9E4D7	A				
	02	01C57	E3404040	A				
8841	02	01C58	0DE2C9D6	A	:CCERM6	TEXTC	'S10-BUSY S10P'	
	02	01C59	60C2E4E2	A				
	02	01C5A	E840E2C9	A				
	02	01C5B	D6D74040	A				
8842	02	01C5C	0DE3C9D6	A	:CCERM7	TEXTC	'T10-BUSY S10P'	
	02	01C5D	60C2E4E2	A				
	02	01C5E	E840E2C9	A				
	02	01C5F	D6D74040	A				
8843	02	01C60	0CC8C9D6	A	:CCERM8	TEXTC	'H10-CC1,2=10'	
	02	01C61	60C3C3F1	A				
	02	01C62	68F27EF1	A				
	02	01C63	F0404040	A				
8844	02	01C64	0DE3C4E5	A	:CCERM9	TEXTC	'TDV-BUSY S10P'	
	02	01C65	60C2E4E2	A				
	02	01C66	E840E2C9	A				
	02	01C67	D6D74040	A				

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03.	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70
8845	02	01C68	0CC1C9D6	A	:CCERMA	TEXTC	'A10-CC1,2=10'	135
	02	01C69	60C3C3F1	A				
	02	01C6A	68F27EF1	A				
	02	01C6B	F0404040	A				
8846	02	01C6C	13E2C9D6	A	:CCERMB	TEXTC	'S10-NO AR-DEV XXXX'	
	02	01C6D	60D5D640	A				
	02	01C6E	C1D960C4	A				
	02	01C6F	C5E54040	A				
	02	01C70	E7E7E7E7	A				
8847	02	01C71	13E3C9D6	A	:CCERMC	TEXTC	'T10-NO AR-DEV XXXX'	
	02	01C72	60D5D640	A				
	02	01C73	C1D960C4	A				
	02	01C74	C5E54040	A				
	02	01C75	E7E7E7E7	A				
8848	02	01C76	13C8C9D6	A	:CCERMD	TEXTC	'H10-NO AR-DEV XXXX'	
	02	01C77	60D5D640	A				
	02	01C78	C1D960C4	A				
	02	01C79	C5E54040	A				
	02	01C7A	E7E7E7E7	A				
8849	02	01C7B	13E3C4E5	A	:CCERME	TEXTC	'TDV-NO AR-DEV XXXX'	
	02	01C7C	60D5D640	A				
	02	01C7D	C1D960C4	A				
	02	01C7E	C5E54040	A				
	02	01C7F	E7E7E7E7	A				
8850	02	01C80	16C1C9D6	A	:CCERMF	TEXTC	'A10-NO INTERRUPT RECOG'	
	02	01C81	60D5D640	A				
	02	01C82	C9D5E3C5	A				
	02	01C83	D9D9E4D7	A				
	02	01C84	E340D9C5	A				
	02	01C85	C3D6C740	A				
8851	02	01C86	2D404040	A	:STATEM1	TEXTC	'0123 4567 8901 2345 CC1,2 DEV ADDR'	
	02	01C87	40404040	A				
	02	01C88	40404040	A				
	02	01C89	F0F1F2F3	A				
	02	01C8A	40F4F5F6	A				
	02	01C8B	F740F8F9	A				
	02	01C8C	F0F140F2	A				
	02	01C8D	F3F4F540	A				
	02	01C8E	C3C3F16B	A				
	02	01C8F	F240C4C5	A				
	02	01C90	E540C1C4	A				
	02	01C91	C4D94040	A				
8852	02	01C92	2B404040	A	:STATEM2	TEXTC	'STATUS XXXX XXXX XXXX XXXX XX XXXX'	
	02	01C93	40E2E3C1	A				
	02	01C94	E3E4E240	A				
	02	01C95	E7E7E7E7	A				
	02	01C96	40E7E7E7	A				
	02	01C97	E740E7E7	A				
	02	01C98	E7E740E7	A				
	02	01C99	E7E7E740	A				
	02	01C9A	4040E7E7	A				
	02	01C9B	40404040	A				
	02	01C9C	E7E7E7E7	A				
8853	02	01C9D	40E2C9D6	A	:STAT1YP	TEXT	'S10','T10','H10','TDV','A10'	
	02	01C9E	40E3C9D6	A				
	02	01C9F	40C8C9D6	A				
	02	01CA0	40E3C4E5	A				
	02	01CA1	40C1C9D6	A				
8854								
8855								
8856								
8857								
8858								
8859								
8860								
8861								
8862								
8863								
8864								
8865								

PAGE

*** IO EXECUTE ***

* THE IO EXECUTE SUBROUTINE ISSUES A T10, S10 TO SPECIFIED DEVICE.
 * THE SUBROUTINE LOOPS UPON DETECTION OF STATUS OR CC ERROR.

INPUT PARAMETERS:

* REG 0 -DA(10CD)
 * REG 15 -RETURN ADDRESS
 * :DEVADDR-DEVICE ADDRESS

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 137
8927				*				MODIFIED PSEUDORANDOM NUMBER GENERATOR
8928				*				
8929				*				THE ALGORITHM
8930				*				
8931				*				THE CALCULATION OF THE NEXT NUMBER X(N+1) DEPENDS ON THE
8932				*				PREVIOUS NUMBER X(N) AND THE VALUE OF TWO INTERNAL
8933				*				COUNTERS M1 AND M2. THE TWO COUNTERS ARE CHANGED
8934				*				BY UNITY EACH TIME A RANDOM NUMBER IS GENERATED, THE
8935				*				ONE COUNTER INCREASING AND THE OTHER DECREASING.
8936				*				
8937				*				THE PROCEDURE
8938				*				
8939				*				X(N+1) = M1 (+) M2 (+) M(X(N)), WHERE (+)-EXCLUSIVE OR
8940				*				
8941				*				OPTION-1, USES INTERNAL VALUES OF M1, M2 AND X. RESULTS
8942				*				FOUND IN REGISTER-14.
8943				*				
8944				*				OPTION-1 CALLING SEQUENCE
8945				*				
8946				*				BAL,15 :RANDOMX
8947				*				
8948				*				OPTION-2, USES INTERNAL VALUES OF M1 AND M2. USER PROVIDES
8949				*				SEED IN REGISTER-14. RESULT IN REGISTER-14.
8950				*				
8951				*				OPTION-2 CALLING SEQUENCE
8952				*				
8953				*				LW,14 :SEED SEED IN REGISTER-14.
8954				*				BAL,15 :RANDOM
8955				*				
8956				*				OPTION-3, USER PROVIDES M1,M2 AND X. RESULT IN REGISTER-14.
8957				*				
8958				*				OPTION-3 CALLING SEQUENCE
8959				*				
8960				*				LW,12 :M1 M1 = VALUE OF COUNTER 1
8961				*				LW,13 :M2 M2 = VALUE OF COUNTER 2
8962				*				LW,14 :SEED SEED = RANDOM NUMBER SEED
8963				*				BAL,15 :RANDOMY
8964				*				
8965				*				
8966	02	01CD7	35C01CE4	*				OPTION-3 ENTRY
8967	02	01CD8	35D01CE5	*				SAVE PARAMETERS
8968				*				
8969	02	01CD9	35E01CE6	*				OPTION-2 ENTRY
8970				*				
8971	02	01CDA	33101CE4	*				OPTION-1 ENTRY
8972	02	01CDB	68301CDD	*				TEST, M1 + 1 = 0
8973	02	01CDC	33F01CE5	*				NO, M2 = M2 - 1
8974	02	01CDD	32E01CE6	*				
8975	02	01CDE	25E0020D A	*				GENERATE M(SEED) BY ARITHMETIC MEANS
8976	02	01CDF	30E01CE7	*				ADD CONSTANT :K
8977	02	01CE0	48E01CE4	*				M(SEED) (+) M1, WHERE (+) = EOR
8978	02	01CE1	48E01CE5	*				M(SEED) (+) M1 (+) M2
8979	02	01CE2	35E01CE6	*				SEED = M(SEED) (+) M1 (+) M2
8980	02	01CE3	E800000F A	*				B *15
8981				*				
8982	02	01CE4	12B9B0A1 A	*				P1 - PRE-SET M1 VALUE
8983	02	01CE5	1033C4D7 A	*				E - PRE-SET M2 VALUE
8984	02	01CE6	544B2FBA A	*				SQRT(2) - PRE-SET SEED VALUE
8985	02	01CE7	22679CB1 A	*				GAMMA - CONSTANT
8986				*				
8987				*				
8988				*				*** CLEAR BUFFER ***
8989				*				
8990				*				THE CLEAR BUFFER SUBROUTINE CLEARS A SPECIFIED BUFFER AREA.
8991				*				BUFFER SIZE SPECIFIED IN NUMBER OF WORDS.
8992				*				
8993				*				INPUT PARAMETERS:
8994				*				
8995				*				REG 15 -RETURN ADDRESS
8996				*				:CLRADDR-WA(BUFFER)

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42	AUG 03, '70		SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 138
8997							:CLRSIZE-BUFFER WORD SIZE	
8998								
8999						REGISTERS DISTURBED:		
9000						(NONE)		
9001								
9002						OUTPUT PARAMETERS:		
9003						(NONE)		
9004								
9005								
9006								
9007	02	01CE8	15401CF6		:CLEAR	STD,R4	:CLRSAVE	SAVE REGISTERS 4-6
9008	02	01CE9	35601CF8			STW,R6	:CLRSAVE+2	
9009	02	01CEA	32501CF3			LW,R5	:CLRADDR	BUFFER ADDRESS
9010	02	01CEB	30501CF4			AW,R5	:CLRSIZE	BUFFER ADDR + BUFFER SIZE
9011	02	01CEC	3A401CF4			LCW,R4	:CLRSIZE	-(BUFFER SIZE)
9012	02	01CED	22600000	A		L1,R6	0	0 TO BUFFER
9013	02	01CEE	85680005	A		STW,R6	*R5,R4	COUNT NOT 0
9014	02	01CEF	65401CEE			BIR,R4	\$-1	RESTORE REGISTERS 4-6
9015	02	01CF0	12401CF6			LD,R4	:CLRSAVE	
9016	02	01CF1	32601CF8			LW,R6	:CLRSAVE+2	
9017	02	01CF2	E800000F	A		B	*R15	EXIT
9018								
9019	02	01CF3	00000000	A	:CLRADDR	DATA	0	BUFFER ADDRESS
9020	02	01CF4	00000000	A	:CLRSIZE	DATA	0	BUFFER SIZE
9021						BOUND	8	
9022	02	01CF6			:CLRSAVE	RES	3	REGISTERS 4-6
9023						PAGE		
9024								
9025								
9026								
9027								
9028								
9029								
9030								
9031								
9032								
9033								
9034								
9035								
9036								
9037								
9038								
9039								
9040								
9041								
9042								
9043								
9044								
9045								
9046								
9047								
9048								
9049								
9050								
9051								
9052								
9053								
9054								
9055								
9056								
9057	02	01CF9	02200050	A	:PATTERN	LCI	5	SAVE REGISTERS 6-10
9058	02	01CFA	28601D3D			STM,R6	:PATSAVE	PATTERN ID-TYPE
9059	02	01CFB	32701D38			LW,R7	:PATID	GO TO SPECIFIED SPREAD TYPE
9060	02	01CFC	680E1CFD			B	\$+1,R7	
9061	02	01CFD	68001D02			B	:PAT0	
9062	02	01CFE	68001D08			B	:PAT1	
9063	02	01CFF	68001D13			B	:PAT2	
9064	02	01D00	68001D24			B	:PAT3	
9065	02	01D01	68001D28			B	:PAT4	
9066								SPREAD FIXED PATTERN

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 139
9067	02	01D02	32801D3B		:PAT0	LW,R8	:PATWC	WORD COUNT
9068	02	01D03	30801D3C			AW,R8	:PATBFR	WRD CNT + BFR ADDR
9069	02	01D04	3A701D3B			LCW,R7	:PATWC	-(WORD COUNT)
9070	02	01D05	32901D39			LW,R9	:PATID+1	PATTERN
9071	02	01D06	B59E0008	A		STW,R9	*R8,R7	ENTER PATTERN
9072	02	01D07	65701D06			BIR,R7	\$-1	WORD COUNT NOT 0
9073	02	01D08	02200050	A	:PATEXIT	LCI	5	
9074	02	01D09	2A601D3D			LM,R6	:PATSAVE	RESTORE REGISTERS 6-10
9075	02	01D0A	E800000F	A		B	*R15	EXIT
9076					*			SPREAD AND INCREMENT FIXED PATTERN
9077	02	01D08	32901D3B		:PAT1	LW,R8	:PATWC	WORD COUNT
9078	02	01D0C	30801D3C			AW,R8	:PATBFR	WRD CNT + BFR ADDR
9079	02	01D0D	3A701D3B			LCW,R7	:PATWC	-(WORD COUNT)
9080	02	01D0E	32901D39			LW,R9	:PATID+1	PATTERN
9081	02	01D0F	B59E0008	A		STW,R9	*R8,R7	ENTER PATTERN
9082	02	01D10	30901D3A			AW,R9	:PATID+2	INCR PATTERN
9083	02	01D11	65701D0F			BIR,R7	\$-2	WORD COUNT NOT 0
9084	02	01D12	68001D08			B	:PATEXIT	GO TO EXIT
9085					*			SPREAD RANDOM PATTERN
9086	02	01D13	02200050	A	:PAT2	LCI	5	
9087	02	01D14	28801D42			STM,R11	:PATSAVE+5	SAVE REGISTERS 11-15
9088	02	01D15	32801D3B			LW,R8	:PATWC	WORD COUNT
9089	02	01D16	30801D3C			AW,R8	:PATBFR	WRD CNT + BFR ADDR
9090	02	01D17	3A701D3B			LCW,R7	:PATWC	-(WORD COUNT)
9091	02	01D18	32E01D39			LW,R14	:PATID+1	RANDOM NUM GEN SEED
9092	02	01D19	B5EE0008	A		STW,R14	*R8,R7	SEED TO PATTERN FIRST WORD
9093	02	01D1A	65701D1C			BIR,R7	\$+2	WORD COUNT NOT 0
9094	02	01D1B	68001D21			B	:PAT2A	GO TO EXIT
9095	02	01D1C	32C020AD			LW,R12	=314159265	ESTABLISH :M1
9096	02	01D1D	32D020AE			LW,R13	=271828183	ESTABLISH :M2
9097	02	01D1E	6AF01CD7			BAL,R15	:RANDOMY	RANDOM NUMBER GENERATOR
9098	02	01D1F	B5EE0008	A		STW,R14	*R8,R7	ENTER NUMBER
9099	02	01D20	65701D1E			BIR,R7	\$-2	WORD COUNT NOT 0
9100	02	01D21	02200050	A	:PAT2A	LCI	5	
9101	02	01D22	2A801D42			LM,R11	:PATSAVE+5	RESTORE REGISTERS 11-15
9102	02	01D23	68001D08			B	:PATEXIT	GO TO EXIT
9103					*			SPREAD ADDRESS-SPECIFIED PATTERN
9104	02	01D24	32801D3B		:PAT3	LW,R8	:PATWC	WORD COUNT
9105	02	01D25	30801D3C			AW,R8	:PATBFR	WRD CNT + BFR ADDR
9106	02	01D26	3A701D3B			LCW,R7	:PATWC	-(WORD COUNT)
9107	02	01D27	B2901D39			LW,R9	*:PATID+1	PATTERN
9108	02	01D28	B59E0008	A		STW,R9	*R8,R7	ENTER PATTERN
9109	02	01D29	65701D28			BIR,R7	\$-1	WRD CNT NOT 0
9110	02	01D2A	68001D08			B	:PATEXIT	GO TO EXIT
9111					*			SPREAD 3-WORD, ADDR-SPECIFIED PATTERN
9112	02	01D2B	32801D3B		:PAT4	LW,R8	:PATWC	WORD COUNT
9113	02	01D2C	30801D3C			AW,R8	:PATBFR	WRD CNT + BFR ADDR
9114	02	01D2D	3A701D3B			LCW,R7	:PATWC	-(WORD COUNT)
9115	02	01D2E	32A01D39			LW,R10	:PATID+1	PATTERN ADDR
9116	02	01D2F	20A00003	A		AI,R10	3	PATTERN ADDRESS +3
9117	02	01D30	226FFFFD	A		LI,R6	-3	
9118	02	01D31	B29C000A	A		LW,R9	*R10,R6	PATTERN
9119	02	01D32	B59E0008	A		STW,R9	*R8,R7	ENTER PATTERN
9120	02	01D33	33100007	A		MTW,I	R7	-(WORD COUNT) +1
9121	02	01D34	68101D08			BCR,I	:PATEXIT	WORD COUNT = 0, EXIT
9122	02	01D35	65601D31			BIR,R6	\$-4	3 WORDS NOT ENTERED
9123	02	01D36	68001D30			B	\$-6	
9124					*			
9125						BOUND	B	
9126	02	01D38	00000000	A	:PATID	DATA	0,0,0	PATTERN IDENTIFICATION
	02	01D39	00000000	A				
	02	01D3A	00000000	A				
9127	02	01D3B	00000000	A	:PATWC	DATA	0	WORD COUNT
9128	02	01D3C	00000000	A	:PATBFR	DATA	0	BUFFER ADDRESS
9129	02	01D3D			:PATSAVE	RES	10	REGISTERS 6-15
9130						PAGE		
9131					*			
9132					*			
9133					*			
9134					*			

*** C O M P A R E ***

* THE COMPARE SUBROUTINE COMPARES TWO BUFFER AREAS A WORD AT A

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00		7/30/70	140
9135								TIME. AN ERROR COUNT IS GENERATED WHEN UNEQUAL COMPARES ARE
9136								SENSED. UNEQUAL WORDS ARE PRINTED. ERROR EXIT IF ONE OR MORE
9137								UNEQUAL COMPARES SENSED.
9138								
9139								INPUT PARAMETERS:
9140								
9141								REG 15 -RETURN ADDRESS
9142								:COMWCNT-NUMBER OF WORDS TO BE COMPARED
9143								:COMBFRA-EXPECTED BUFFER ADDRESS
9144								:COMBFRB-OBSERVED BUFFER ADDRESS
9145								:COMFLAG-ERROR PRINTOUT INHIBIT FLAG (INHIBIT IF <>0)
9146								(REGISTERS 8 THRU 11 CAN BE USED AS BUFFERS)
9147								
9148								REGISTERS DISTURBED:
9149								
9150								(NONE)
9151								
9152								OUTPUT PARAMETERS:
9153								
9154								NORMAL EXIT-RETURN ADDRESS
9155								ERROR EXIT -RETURN ADDRESS +1
9156								:COMERRT -COUNT OF COMPARE ERRORS
9157								
9158	02	01D47	02200000	A	:COMPARE	LCI	0	
9159	02	01D48	28001DA5			STM,R0	:COMTEM1	SAVE REGISTERS 0-15
9160	02	01D49	22500000	A		LI,R5	0	
9161	02	01D4A	15501DB8			STD,R5	:COMERRT	CLEAR ERROR TOTAL, HDR FLAG
9162	02	01D4B	32401DBB			LW,R4	:COMBFRA	EXPECTED BUFFER ADDRESS A
9163	02	01D4C	32501DBC			LW,R5	:COMBFRB	OBSERVED BUFFER ADDRESS B
9164	02	01D4D	30401DBA			AW,R4	:COMWCNT	BUFFER A + WORD COUNT
9165	02	01D4E	30501DBA			AW,R5	:COMWCNT	BUFFER B + WORD COUNT
9166	02	01D4F	15401DB6			STD,R4	:COMTEM2	SAVE FINAL BFR ADDRESSES
9167	02	01D50	3A401DBA			LCW,R4	:COMWCNT	-(WORD COUNT)
9168	02	01D51	B2581DB6	:COM1		LW,R5	*:COMTEM2,R4	BUFFER A WORD
9169	02	01D52	B1581DB7			CW,R5	*:COMTEM2+1,R4	BUFFER A WORD:BUFFER B WORD
9170	02	01D53	69301D58			BCS,3	:COM2	UNEQUAL COMPARISON
9171	02	01D54	65401D51			BIR,R4	:COM1	WORD COUNT NOT 0
9172	02	01D55	32401DB8			LW,R4	:COMERRT	ERROR TOTAL
9173	02	01D56	68301D58			BCR,3	\$+2	NO ERROR
9174	02	01D57	33101DB4			MTW,1	:COMTEM1+15	ERROR-RETURN ADDRESS +1
9175	02	01D58	02200000	A		LCI	0	
9176	02	01D59	2A001DA5			LM,R0	:COMTEM1	RESTORE REGISTERS 0-15
9177	02	01D5A	E800000F	A		B	*R15	EXIT
9178								COMPARE ERROR
9179	02	01D5B	33101DB8	:COM2		MTW,1	:COMERRT	ERROR TOTAL +1
9180	02	01D5C	32601DBD			LW,R6	:COMFLAG	PRINT INHIBIT FLAG
9181	02	01D5D	69301D54			BCS,3	:COM1+3	PRINT INHIBIT <>0 -RETURN TO COMPARE
9182	02	01D5E	32601DB8			LW,6	:COMERRT	FETCH ERROR COUNT
9183	02	01D5F	31601DBE			CW,6	:COMPLIN	TEST LIMIT
9184	02	01D60	69201D57			BG	:COM1+6	EXIT
9185	02	01D61	32601DB9			LW,R6	:COMTEM3	HEADER FLAG
9186	02	01D62	69301D77			BCS,3	:COM3	FLAG NOT 0 -NO ERR MSG HDR REQ'D
9187								PRINT ERROR MSG HEADER
9188	02	01D63	33101DB9			MTW,1	:COMTEM3	SET HDR FLAG
9189	02	01D64	EAF0021C	A		BAL,R15	*:PRINT	PRINT ERROR MSG HEADER
9190	02	01D65	00001DBF			DATA	:COMERM1	
9191	02	01D66	32C01DBB			LW,R12	:COMBFRA	EXPECTED BUFFER ADDRESS
9192	02	01D67	EAF00218	A		BAL,R15	*:HEXC	CONVERT TO HEXADECIMAL IN EBCDIC
9193	02	01D68	22600001	A		LI,R6	1	INDEX=1
9194	02	01D69	55F01DC8			STH,R15	:COMERM2+4	BFR ADDR TO MSG
9195	02	01D6A	52F0000F	A		LH,R15	R15	
9196	02	01D6B	55FC1DC7			STH,R15	:COMERM2+3,R6	
9197	02	01D6C	32C01DBC			LW,R12	:COMBFRB	OBSERVED BUFFER ADDRESS
9198	02	01D6D	EAF00218	A		BAL,R15	*:HEXC	CONVERT TO HEXADECIMAL IN EBCDIC
9199	02	01D6E	35F01DCC			STW,R15	:COMERM2+8	BFR ADDR TO MSG
9200	02	01D6F	EAF0021C	A		BAL,R15	*:PRINT	PRINT ERROR MSG HEADER
9201	02	01D70	00001DC4			DATA	:COMERM2	
9202	02	01D71	312019A7			CW,2	NOPKPRT	SUPPRESS PACKED PRINTOUT FLAG
9203	02	01D72	68301D75			BE	\$+3	
9204	02	01D73	311019CE			CW,1	MODEFLAG	PACKED INFORMATION

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 141
9205	02	01D74	68301D77			BE	:COM3	GET SPECIAL HEADING FOR PACKED
9206	02	01D75	EAF0021C A			BAL,R15	*:PRINT	PRINT ERROR MSG HEADER
9207	02	01D76	00001DCD			DATA	:COMERM3	
9208								PRINT EXPECTED, OBSERVED WORDS
9209	02	01D77	311019CE		:COM3	CW,1	MODEFLAG	PACKED OPTION SET
9210	02	01D78	69301D88			BNE	:COM6	
9211	02	01D79	312019A7			CW,2	NOPKPRT	SUPPRESS PACKED PRINTOUT FLAG
9212	02	01D7A	68301D88			BE	:COM6	
9213	02	01D7B	22C00000 A			LI,12	0	
9214	02	01D7C	32D01DBA			LW,13	:COMWCNT	GET LINE NO
9215	02	01D7D	30D00004 A			AW,13	4	R13 HAS WORD THAT FAILED
9216	02	01D7E	36C00003 A			DW,12	3	R12 HAS REMAINDER
9217	02	01D7F	21C00001 A			CI,12	1	
9218	02	01D80	69401D85			BCS,4	\$+5	
9219	02	01D81	21C00002 A			CI,12	2	
9220	02	01D82	68401D87			BCR,4	\$+5	
9221	02	01D83	22D01DFA			LI,13	:COMPK3	REMAINDER =2
9222	02	01D84	68001D88			B	:COM5	
9223	02	01D85	22D01DEB			LI,13	:COMPK2	REMAINDER =1
9224	02	01D86	68001D88			B	:COM5	
9225	02	01D87	22D01DDC			LI,13	:COMPK1	REMAINDER =0
9226	02	01D88	35D01DBA		:COM5	STW,13	\$+2	
9227	02	01D89	EAF0021C A			BAL,15	*:PRINT	PRINT PACKED HEADING
9228	02	01D8A	00001DDC			DATA	:COMPK1	
9229	02	01D8B	32C01DBA		:COM6	LW,R12	:COMWCNT	GET LINE NO FOR PRINTOUT
9230	02	01D8C	30C00004 A			AW,R12	R4	WRD CNT=NUM WORDS + WRD CNT INDEX
9231	02	01D8D	EAF00218 A			BAL,R15	*:HEXC	CONVERT TO HEXADECIMAL IN EBCDIC
9232	02	01D8E	35FC1E17			STW,R15	:COMERM4+13	WRD CNT TO MSG
9233	02	01D8F	B2C81DB6			LW,R12	*:COMTEM2,R4	EXPECTED WORD
9234	02	01D90	22D01E0A			LI,R13	:COMERM4	ERROR MSG ADDR
9235	02	01D91	6AE01D9A			BAL,R14	:COM4	ENTER EXP WRD INTO MSG
9236	02	01D92	EAF0021C A			BAL,R15	*:PRINT	PRINT EXPECTED WORD MSG
9237	02	01D93	00001E0A			DATA	:COMERM4	
9238	02	01D94	B2C81DB7			LW,R12	*:COMTEM2+1,R4	OBSERVED WORD
9239	02	01D95	22D01E18			LI,R13	:COMERM5	ERROR MSG ADDR
9240	02	01D96	6AE01D9A			BAL,R14	:COM4	ENTER OBS WRD INTO MSG
9241	02	01D97	EAF0021C A			BAL,R15	*:PRINT	PRINT OBSERVED WORD MSG
9242	02	01D98	00001E18			DATA	:COMERM5	
9243	02	01D99	68001D54			B	:COM1+3	RETURN TO COMPARISON
9244								ENTER STATUS BITS INTO MESSAGE
9245	02	01D9A	22600030 A		:COM4	LI,R6	48	BYTE INDEX=48
9246	02	01D9B	22700004 A			LI,R7	4	MINOR INDEX=4
9247	02	01D9C	EAF00216 A			BAL,R15	*:BINC	CONVERT TO BINARY IN EBCDIC
9248	02	01D9D	F5FC000D A			STB,R15	*R13,R6	BIT TO MSG
9249	02	01D9E	33F00006 A			MTW,-1	R6	BYTE INDEX -1
9250	02	01D9F	25F00078 A			SLS,R15	-8	ADJUST EBCDIC BITS
9251	02	01DA0	64701D9D			BDR,R7	\$-3	MINOR LOOP INDEX NOT 0
9252	02	01DA1	33F00006 A			MTW,-1	R6	BYTE INDEX -1
9253	02	01DA2	21600009 A			CI,R6	9	BYTE INDEX:9
9254	02	01DA3	69201D9B			BCS,2	:COM4+1	BYTE INDEX NOT MINIMUM
9255	02	01DA4	E800000E A			B	*R14	ENTER COMPLETE-EXIT
9256								
9257	02	01DA5			:COMTEM1	RES	16	REGISTERS 0-15
9258						BOUND	8	
9259	02	01DB6	00000000 A		:COMTEM2	DATA	0,0	BUFFER A ADDR, BUFFER B ADDR
			00000000 A					
9260	02	01DB8	00000000 A		:COMERTT	DATA	0	COMPARE ERROR TOTAL
9261	02	01DB9	00000000 A		:COMTEM3	DATA	0	MESSAGE HEADER FLAG
9262	02	01DBA	00000000 A		:COMWCNT	DATA	0	BUFFER WORD COUNT
9263	02	01DBB	00000000 A		:COMBFRA	DATA	0	EXPECTED BUFFER A
9264	02	01DBC	00000000 A		:COMBFRB	DATA	0	OBSERVED BUFFER B
9265	02	01DBD	00000000 A		:COMFLAG	DATA	0	PRINT INHIBIT FLAG
9266	02	01DBE	00000001 A		:COMPLIN	DATA	1	COMPARE LIMIT COUNT
9267	02	01DBF	12D9C5C1 A		:COMERM1	TEXTC		'READ COMPARE ERROR'
			02 01DC0					C440C3D6 A
			02 01DC1					D4D7C1D9 A
			02 01DC2					C540C5D9 A
			02 01DC3					D9D6D940 A
9268	02	01DC4	23C5E7D7 A		:COMERM2	TEXTC		'EXP BFR ADDR XXXX OBS BFR ADDR XXXX'
			02 01DC5					40C2C6D9 A

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42 AUG 03, '70					SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00	7/30/70 142
		02 01DC6	40C1C4C4	A				
		02 01DC7	D940E7E7	A				
		02 01DC8	E7E740D6	A				
		02 01DC9	C2E240C2	A				
		02 01DCA	C6D940C1	A				
		02 01DCB	C4C4D940	A				
		02 01DCC	E7E7E7E7	A				
9269					:COMERM3	TEXTC		
9270		02 01DCD	38404040	A			0123 4567 0123 4567 0123 4567	WD CNT'
		02 01DCE	40404040	A				
		02 01DCF	4040F0F1	A				
		02 01DD0	F2F340F4	A				
		02 01DD1	F5F6F740	A				
		02 01DD2	F0F1F2F3	A				
		02 01DD3	40F4F5F6	A				
		02 01DD4	F740F0F1	A				
		02 01DD5	F2F340F4	A				
		02 01DD6	F5F6F740	A				
		02 01DD7	F0F1F2F3	A				
		02 01DD8	40F4F5F6	A				
		02 01DD9	F74040E6	A				
		02 01DDA	C440C3D5	A				
		02 01DDB	E3404040	A				
9271					:COMP1	TEXTC		
9272		02 01DDC	38404040	A			0123 4501 2345 0123 4501 2345 0123 4501	WD CNT'
		02 01DD0	40404040	A				
		02 01DDE	4040F0F1	A				
		02 01DDF	F2F340F4	A				
		02 01DE0	F5F0F140	A				
		02 01DE1	F2F3F4F5	A				
		02 01DE2	40F0F1F2	A				
		02 01DE3	F340F4F5	A				
		02 01DE4	F0F140F2	A				
		02 01DE5	F3F4F540	A				
		02 01DE6	F0F1F2F3	A				
		02 01DE7	40F4F5F0	A				
		02 01DE8	F14040E6	A				
		02 01DE9	C440C3D5	A				
		02 01DEA	E3404040	A				
9273					:COMP2	TEXTC		
9274		02 01DEB	38404040	A			2345 0123 4501 2345 0123 4501 2345 0123	WD CNT'
		02 01DEC	40404040	A				
		02 01DED	4040F2F3	A				
		02 01DEE	F4F540F0	A				
		02 01DEF	F1F2F340	A				
		02 01DF0	F4F5F0F1	A				
		02 01DF1	40F2F3F4	A				
		02 01DF2	F540F0F1	A				
		02 01DF3	F2F340F4	A				
		02 01DF4	F5F0F140	A				
		02 01DF5	F2F3F4F5	A				
		02 01DF6	40F0F1F2	A				
		02 01DF7	F34040E6	A				
		02 01DF8	C440C3D5	A				
		02 01DF9	E3404040	A				
9275					:COMP3	TEXTC		
9276		02 01DFA	38404040	A			4501 2345 0123 4501 2345 0123 4501 2345	WD CNT'
		02 01DFB	40404040	A				
		02 01DFC	4040F4F5	A				
		02 01DFD	F0F140F2	A				
		02 01DFE	F3F4F540	A				
		02 01DFE	F0F1F2F3	A				
		02 01E00	40F4F5F0	A				
		02 01E01	F140F2F3	A				
		02 01E02	F4F540F0	A				
		02 01E03	F1F2F340	A				
		02 01E04	F4F5F0F1	A				
		02 01E05	40F2F3F4	A				
		02 01E06	F54040E6	A				
		02 01E07	C440C3D5	A				

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00			7/30/70 143
	02	01E08	E3404040 A					
9277						BOUND	8	
9278	02	01E0A	37C5E7D7 A		:COMERM4	TEXT	' EXPECTED	
	02	01E0B	C5C3E3C5 A					
	02	01E0C	C4404040 A					
9279			0000000B			DO	11	
9280	02	01E0D	40404040 A			DATA	X'40404040'	SPACES
9281						FIN		
	02	01E0E	40404040 A					
	02	01E0F	40404040 A					
	02	01E10	40404040 A					
	02	01E11	40404040 A					
	02	01E12	40404040 A					
	02	01E13	40404040 A					
	02	01E14	40404040 A					
	02	01E15	40404040 A					
	02	01E16	40404040 A					
	02	01E17	40404040 A					
9282	02	01E18	34D6C2E2 A		:COMERM5	TEXT	' OBSERVED	
	02	01E19	C5D9E5C5 A					
	02	01E1A	C4404040 A					
9283			0000000B			DO	11	
9284	02	01E1B	40404040 A			DATA	X'40404040'	SPACES
9285						FIN		
	02	01E1C	40404040 A					
	02	01E1D	40404040 A					
	02	01E1E	40404040 A					
	02	01E1F	40404040 A					
	02	01E20	40404040 A					
	02	01E21	40404040 A					
	02	01E22	40404040 A					
	02	01E23	40404040 A					
	02	01E24	40404040 A					
	02	01E25	40404040 A					
9286						PAGE		
9287					*			
9288					*	*** DELAY FOR I/O INTERRUPT ***		
9289					*			
9290					*	THE DELAY SUBROUTINE DELAYS TO AWAIT THE I/O INTERRUPT. TIMEOUT OCCURS		
9291					*	WHEN SPECIFIED MAXIMUM DELAY TIME IS REACHED.		
9292					*			
9293					*	INPUT PARAMETERS:		
9294					*			
9295					*	REG 14- MAX DELAY TIME (DELAY = (R14) MILLISECONDS)		
9296					*	REG 15- RETURN ADDRESS		
9297					*			
9298					*	REGISTERS DISTURBED:		
9299					*			
9300					*	(NONE)		
9301					*			
9302					*	OUTPUT PARAMETERS:		
9303					*			
9304					*	INTERRUPT REC'D EXIT-RETURN ADDRESS		
9305					*	DELAY TIMEOUT EXIT -RETURN ADDRESS +1		
9306					*	(INTERRUPTS ARMED, ENABLED IF FLAG <>0)		
9307					*			
9308	02	01E26	35F01E3C		:DELAY	STW,R15	:DELSAVE	SAVE REGISTER 15
9309	02	01E27	25E0007F A			SLS,R14	-1	DELAY TIME /2
9310	02	01E28	3310000E A			MTW,1	R14	COMPENSATE FOR IMMEDIATE CTR4 INTER
9311	02	01E29	35E01E3B			STW,R14	:DELTIME	TIME TO CTR 4 DECR POSITION
9312	02	01E2A	6AF01E33			BAL,R15	:DELAYAE	ARM AND ENABLE COUNTER 4 INTERRUPTS
9313	02	01E2B	32F01EA6			LW,R15	:INTRECF	I/O INTERRUPT RECEIVED FLAG
9314	02	01E2C	68301E2B			BCR,3	\$-1	FLAG=0,I/O INTERRUPT NOT RECEIVED
9315	02	01E2D	6AF01E37			BAL,R15	:DELAYD	DISARM COUNTER 4 INTERRUPTS
9316	02	01E2E	32F01E3C		:DELEXIT	LW,R15	:DELSAVE	RESTORE REGISTER 15
9317	02	01E2F	E800000F A			B	*R15	EXIT
9318					*			DELAY TIMEOUT
9319	02	01E30	6AF01E37		:DELTO	BAL,R15	:DELAYD	DISARM COUNTER 4 INTERRUPTS
9320	02	01E31	33101E3C			MTW,1	:DELSAVE	RETURN ADDRESS +1
9321	02	01E32	68001E2E			B	:DELEXIT	GO TO DELAY TIMEOUT EXIT

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42	AUG 03, '70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 144
9322								ARM/ENABLE COUNTER 4 INTERRUPTS
9323	02	01E33	35F01E3D		:DELAYAE	STW,R15	:DELSAVE+1	SAVE REGISTER 15
9324	02	01E34	22F01040 A			LI,R15	X'1040'	BITS 19,25
9325	02	01E35	6DF01200 A			WD,R15	X'1200'	ARM AND ENABLE CTR 4 INTERRUPTS
9326	02	01E36	E8001E3D			B	*:DELSAVE+1	EXIT
9327								DISARM COUNTER 4 INTERRUPTS
9328	02	01E37	35F01E3D		:DELAYD	STW,R15	:DELSAVE+1	SAVE REGISTER 15
9329	02	01E38	22F01040 A			LI,R15	X'1040'	BITS 19,25
9330	02	01E39	6DF01100 A			WD,R15	X'1100'	DISARM COUNTER 4 INTERRUPTS
9331	02	01E3A	E8001E3D			B	*:DELSAVE+1	EXIT
9332								DELAY TIME CTR 4 DECREMENT POSITION
9333	02	01E3B	00000000 A		:DELTIME	DATA	0	REGISTER 15
9334	02	01E3C	00000000 A		:DELSAVE	DATA	0,0	
9335						BOUND	8	
9336	02	01E3E	00000000 A		:DELAYTO	DATA	0,0	
9337	02	01E40	00001E30			DATA	:DELTO,0	
9338	02	01E42	0F001E3E		:DELXPSD	XPSD,0	:DELAYTO	
9339	02	01E43	33F01E3B		:DELMTH	MTH,-1	:DELTIME	
9340								
9341								*** ARM AND ENABLE IO INTERRUPT ***
9342								
9343								
9344	02	01E44	35F01E4E		:INTAE	STW,15	:INTSAV1	SAVE EXIT ADR
9345	02	01E45	22F00000 A			LI,15	0	CLEAR IO INTER REC'D FLAG
9346	02	01E46	35F01EA6			STW,15	:INTRECF	ARM AND ENABLE
9347	02	01E47	22F00020 A			LI,15	X'20'	IO INTERRUPT
9348	02	01E48	6DF01200 A			WD,15	X'1200'	EXIT
9349	02	01E49	E8001E4E			B	*:INTSAV1	
9350								
9351								*** DISARM IO INTERRUPT ***
9352								
9353								
9354	02	01E4A	35F01E4F		:INTD	STW,15	:INTSAV2	SAVE EXIT ADR
9355	02	01E4B	22F00020 A			LI,15	X'20'	
9356	02	01E4C	6DF01100 A			WD,15	X'1100'	DISARM IO INTERRUPT
9357	02	01E4D	E8001E4F			B	*:INTSAV2	EXIT
9358								EXIT ADR
9359	02	01E4E	00000000 A		:INTSAV1	DATA	0	
9360	02	01E4F	00000000 A		:INTSAV2	DATA	0	
9361						PAGE		
9362								*** INTERRUPT ADDRESS TABLE ***
9363								
9364								THIS ROUTINE UPDATES THE INTERRUPT ADDRESS TABLE ACCORDIND TO THE
9365								ENTRY POINT:
9366								
9367								:INTADRC - CLEAR INTERRUPT ADR TABLE
9368								:INTADRM - ENTER CURRENT DEVICE ADR - MULTI UNIT OPERATION
9369								:INTADRD - DELETE DEVICE ADR - INDEX VALUE = INTSVX
9370								:INTADRS - ENTER CURRENT DEVICE ADR - SINGLE UNIT OPERATION
9371								
9372								INPUT PARAMETERS:
9373								
9374								REG 15
9375								:DEVADDR - CURRENT DEVICE ADR
9376								:INTSVX - TABLE INDEX OF LAST INTERRUPT
9377								
9378								REGISTERS DISTURBED:
9379								
9380								(NONE)
9381								
9382								OUTPUT PARAMETERS:
9383								
9384								(NONE)
9385								
9386								SAVE EXIT ADR
9387	02	01E50	35F01E7A		:INTADRC	STW,15	:INTADRE	CLEAR
9388	02	01E51	22F00000 A			LI,15	0	

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0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 145
9389	02	01E52	35F01E79			STW,15	:INTADRX	TABLE INDEX
9390	02	01E53	22FFFFFF A			LI,15	-1	STORE LAST ENTRY FLAG (-1)
9391	02	01E54	35F01E70			STW,15	:INTTAB	INTO WORD 1 OF TABLE
9392	02	01E55	E8001E7A			B	*:INTADRE	EXIT
9393					*			
9394					*			
9395	02	01E56	35F01E7A		:INTADRD	STW,15	:INTADRE	SAVE EXIT ADR
9396	02	01E57	35401E7B			STW,4	:INTADRE+1	SAVE R4
9397	02	01E58	32401EA7			LW,4	:INTSVX	FETCH ADR TABLE INDEX
9398	02	01E59	22F00000 A			LI,15	0	CLEAR ONE WORD
9399	02	01E5A	35F01E78			STW,15	:INTTAB8,4	IN ADR TABLE (LAST INTER DEV)
9400	02	01E5B	68001E6D			B	:INTADRZ	
9401					*			
9402					*			
9403					*			
9404	02	01E5C	35401E7B		:INTADRM	STW,4	:INTADRE+1	SAVE R4
9405	02	01E5D	32401E79			LW,4	:INTADRX	FETCH CURRENT TABLE INDEX
9406	02	01E5E	21400007 A			CI,4	7	COMPARE INDEX TO 7
9407	02	01E5F	69201E62			BCS,2	:INTADRS+1	BRANCH: INDEX > 7
9408	02	01E60	68001E63			B	:INTADRS+2	
9409	02	01E61	35401E78		:INTADRS	STW,4	:INTADRE+1	SAVE R4
9410	02	01E62	22400000 A			LI,4	0	CURRENT TABLE INDEX = 0
9411	02	01E63	35F01E7A			STW,15	:INTADRE	SAVE EXIT ADR
9412	02	01E64	32F018B5			LW,15	:DEVADDR	FETCH CURRENT DEVICE ADR
9413	02	01E65	35F81E70			STW,15	:INTTAB,4	STORE DEV ADR IN TABLE
9414	02	01E66	33100004 A			MTW,1	4	INCREMENT CURRENT TABLE INDEX
9415	02	01E67	22FFFFFF A			LI,15	-1	STORE LAST ENTRY FLAG (-1)
9416	02	01E68	35F81E70			STW,15	:INTTAB,4	IN TABLE
9417	02	01E69	35401E79			STW,4	:INTADRX	SAVE CURRENT TABLE INDEX
9418	02	01E6A	22F00000 A			LI,15	0	CLEAR
9419	02	01E6B	35F01EA4			STW,15	:INTSTAT	INTER STATUS AND
9420	02	01E6C	35F01EA5			STW,15	:INTCC	AIO COND CODE
9421	02	01E6D	32401E7B		:INTADRZ	LW,4	:INTADRE+1	RESTORE 4
9422	02	01E6E	E8001E7A			B	*:INTADRE	
9423					*			
9424					*			
9425						BOUND	8	
9426		02 01E70			:INTTAB	EQU	8	INTERRUPT
9427		00000008				DO	8	
9428	02	01E70	FFFFFFFF A			DATA	-1	ADDRESS TABLE
9429						FIN		
		02 01E71	FFFFFFFF A					
		02 01E72	FFFFFFFF A					
		02 01E73	FFFFFFFF A					
		02 01E74	FFFFFFFF A					
		02 01E75	FFFFFFFF A					
		02 01E76	FFFFFFFF A					
		02 01E77	FFFFFFFF A					
9430	02	01E78	FFFFFFFF A		:INTTAB8	DATA	-1	9 WORDS (INITIAL VALUE = -1)
9431	02	01E79	00000000 A		:INTADRX	DATA	0	CURRENT ADR TABLE INDEX
9432	02	01E7A	00000000 A		:INTADRE	DATA	0,0	TEMP STORAGE
		02 01E7B	00000000 A					
9433						PAGE		
9434					*			
9435					*			
9436					*			
9437					*			
9438					*			
9439					*			
9440					*			
9441					*			
9442					*			
9443					*			
9444					*			
9445					*			
9446					*			
9447					*			
9448					*			
9449					*			
9450					*			

*** INTERRUPT - SERVICE ***

* THIS ROUTINE ACKNOWLEDGES AN IO INTERRUPT AND VERIFIES THE INTERRUPT DEVICE ADDRESS. IO INTERRUPT WILL BE DISARMED AND DISABLED IF INTERRUPT IS RECOGNIZED AND DEVICE ADDRESS WAS STORED IN TABLE.

INPUT PARAMETERS

(NONE)

REGISTERS DISTURBED:

(NONE)

OUTPUT PARAMETERS:

:INTSTAT - INTERRUPT STATUS AND ADR

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0		16:42 AUG 03, '70			SIGMA 5/7	7-CHANNEL MAG TAPE TEST	705735-11/51A00	7/30/70 146
9451						:INTCC	- INTERRUPT CONDITION CODE	
9452						:INTRECF	- INTERRUPT RECEIVED FLAG; RESET = 0, SET > 0	
9453						:INTSVX	- NEG. INTERRUPT TABLE INDEX;	
9454							CURRENT TABLE WORD = WA(INTTABB)-INTSVX	
9455								
9456								
9457	02	01E7C	15401E9E		:INTSV	STD,4	:INTSVSR	SAVE
9458	02	01E7D	15C01EA0			STD,12	:INTSVSR+2	
9459	02	01E7E	15E01EA2			STD,14	:INTSVSR+4	REGISTERS
9460	02	01E7F	6ED00000	A		A10,13		A10
9461	02	01E80	69801E95			BCS,8	:INTSV4	BRANCH: NO INTER RECOG
9462	02	01E81	74001EA5			STCF	:INTCC	SAVE COND CODE
9463	02	01E82	22400001	A		LI,4	1	
9464	02	01E83	52C20000	A		LH,12	13,1	LOAD DEV ADR FROM A10 STATUS
9465	02	01E84	31C018B5		:INTSV1	CW,12	:DEVADDR	COMPARE DEVICE ADDRESS
9466	02	01E85	69301E8F			BCS,3	:INTSV3	BRANCH: ADR NOT EQUAL
9467	02	01E86	35D01EA4			STW,13	:INTSTAT	SAVE INTERRUPT STATUS
9468	02	01E87	6AF0204D			BAL,15	:SAVEA10	SAVE A10 INFO FOR TEST
9469	02	01E88	35401EA7			STW,4	:INTSVX	SAVE ADR TABLE INDEX
9470	02	01E89	33101EA6			MTW,1	:INTRECF	SET INTER RECEIVED FLAG
9471	02	01E8A	6AF01E4A			BAL,15	:INTD	DISARM IO INTERRUPT
9472	02	01E8B	12401E9E		:INTSV2	LD,4	:INTSVSR	RESTORE
9473	02	01E8C	12C01EA0			LD,12	:INTSVSR+2	
9474	02	01E8D	12E01EA2			LD,14	:INTSVSR+4	REGISTERS
9475	02	01E8E	0E2019D0			LPSD,2	INTSVV	GO BACK TO PROGRAM
9476								
9477	02	01E8F	22401EA8		:INTSV3	LI,4	:INTSVM	LOAD MSG ADDRESS -SPURIOUS INTERRUPT
9478	02	01E90	22401EA8			LI,4	:INTSVM	LOAD MSG ADR (SPURIOUS INTER)
9479	02	01E91	35401E98			STW,4	:INTSV6	SAVE MSG ADR
9480	02	01E92	EAF00218	A		BAL,R15	*:HEXC	CONVERT TO HEXADECIMAL IN EBCDIC
9481	02	01E93	35F01EAE			STW,15	:INTSVM+6	DEV ADR TO MSG
9482	02	01E94	68001E97			B	:INTSV5	
9483	02	01E95	22401C80		:INTSV4	LI,4	:CCRMF	LOAD MSG ADR (NO INTER RECOG)
9484	02	01E96	35401E98			STW,4	:INTSV6	SAVE MSG ADR
9485	02	01E97	EAF0021C	A	:INTSV5	BAL,15	*:PRINT	PRINT MSG
9486	02	01E98	00000000	A	:INTSV6	DATA	0	MSG ADR
9487	02	01E99	68001E8B			B	:INTSV2	
9488								
9489								
9490						BOUND	8	
9491	02	01E9A	00000000	A	:INTSVDM	DATA	0,0,:INTSV,X'04000000'	
		02	01E9B	A				
		02	01E9C	A				
		02	01E9D	A				
9492	02	01E9E			:INTSVSR	RES	6	REGISTERS 4,5,12,13,14,15
9493	02	01EA4	00000000	A	:INTSTAT	DATA	0	A10 STATUS AND DEV ADR
9494	02	01EA5	00000000	A	:INTCC	DATA	0	A10 COND CODE
9495	02	01EA6	00000000	A	:INTRECF	DATA	0	INTER RECEIVED FLAG
9496	02	01EA7	00000000	A	:INTSVX	DATA	0	ADR TABLE INDEX
9497	02	01EA8	1BE2D7E4	A	:INTSVM	TEXTC	'SPURIOUS INTERRUPT DEV XXXX'	
		02	01EA9	A				
		02	01EAA	A				
		02	01EAB	A				
		02	01EAC	A				
		02	01EAD	A				
		02	01EAE	A				
9498								
9499								
9500								
9501								
9502	02	01EAF	35F01EBC		10CDMSG	STW,15	10CDMSGX	SAVE RETURN
9503	02	01EB0	EAF00218	A		BAL,15	*:HEXC	CONVERT
9504	02	01EB1	35F01EC0			STW,15	10CDMSGM+3	
9505	02	01EB2	EAF00218	A		BAL,15	*:HEXC	
9506	02	01EB3	35F01EBF			STW,15	10CDMSGM+2	
9507	02	01EB4	32C0000D	A		LW,12	13	
9508	02	01EB5	EAF00218	A		BAL,15	*:HEXC	
9509	02	01EB6	35F01EC3			STW,15	10CDMSGM+6	
9510	02	01EB7	EAF00218	A		BAL,15	*:HEXC	
9511	02	01EB8	35F01EC2			STW,15	10CDMSGM+5	

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LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 147
9512	02	01EB9	EAF0021C	A		BAL,15	::PRINT	
9513	02	01EBA	00001EBD			DATA	10CDMSGM	
9514	02	01EBB	E8001EBC			B	::10CDMSGX	EXIT
9515	02	01EBC	00000000	A	10CDMSGX	DATA	0	
9516	02	01EBD	1BC9D6C3	A	10CDMSGM	TEXTC	'10CD = xxxxxxxx xxxxxxxx'	
			02 01EBE	A				
			02 01EBF	A				
			02 01EC0	A				
			02 01EC1	A				
			02 01EC2	A				
			02 01EC3	A				
9517								*** ERROR ROUTINE ***
9518								* THIS SUBROUTINE ACCEPTS A STRING OF BYTES, EACH OF WHICH IDENTIFIES
9519								* THE STATUS TYPE (BITS 0 - 3), THE BIT TEST (BIT 4) AND THE STATUS
9520								* MASK (BITS 5 - 7). THE TESTS WILL BE PERFORMED IN THE SEQUENCE OF THE
9521								* BYTE STRING, WITH EACH TEST CHECKING A SPECIFIC STATUS BIT FOR THE
9522								* TRUE OR FALSE CONDITION. A ZERO BYTE WILL INDICATE THE END OF THE
9523								* BYTE STRING. AFTER THE BIT TESTS, THE REMAINING BITS OF THE STATUS
9524								* PREVIOUSLY SELECTED WILL BE TESTED.
9525								*
9526								* THE BYTE HAS THE FOLLOWING FORMAT:
9527								*
9528								* BITS 0 - 3 BIT 4 BITS 5 - 7
9529								-----
9530								* 0 NOT ALLOWED 0 FALSE 0 MASK X'80', BYT -, COM2=COM1
9531								* 1 T10 STATUS 1 TRUE 1 MASK X'40', BYT = 0, COM2=COM1
9532								* 2 OPERATIONAL STATUS (T10) TEST 2 MASK X'20', BYT +1, COM2=COM1+1
9533								* 3 H10 STATUS 3 MASK X'10', BYT +2, COM2=COM1+2
9534								* 4 TDV STATUS 4 MASK X'08', BYT +3, COM2=COM1+3
9535								* 5 S10 STATUS 5 MASK X'04', BYT +4, COM2=COM1+4
9536								* 6 A10 STATUS 6 MASK X'02', BYT +5, COM2=COM1+5
9537								* 7 INTERRUPT STATUS (A10) 7 MASK X'01', BYT +6, COM2=COM1+6
9538								* 8 NOT ASSIGNED
9539								* 9 NOT ASSIGNED
9540								* A NOT ASSIGNED
9541								* B NOT ASSIGNED
9542								* C NOT ASSIGNED
9543								* D NOT ASSIGNED
9544								* E BYTE COUNT TEST (T10)
9545								* F COMMAND ADDR TEST (T10)
9546								*
9547								*
9548								* SUBROUTINES ARE PROVIDED TO STORE STATUS INFORMATION INTO A TABLE.
9549								* IF THE T10, H10, TDV, OSB, BYTE CNT, OR COMMAND ADR HAS NOT BEEN
9550								* STORED IN THE TABLE, THE ERROR ROUTINE SR WILL ISSUE THE APPROPRIATE
9551								* I/O INSTRUCTION AND STORE THE STATUS BEFORE TESTING COMMENCES.
9552								*
9553								* CALLING SEQUENCE: BAL,15 :ERRORT
9554								* DATA BA(TSEQNNN)
9555								* NORMAL EXIT: B (CONTINUE TEST)
9556								* ERROR EXIT: (IDENTIFY SUBTEST)
9557								*
9558								* REGISTERS DISTURBED: NONE (R1 = 1, R2 = 2, R3 = 3)
9559								*
9560								* VARIABLES REQUIRED: STATUS IN SAVE TABLE
9561								* STARTING COMMAND ADR
9562								*
9563								* OTHER SUBROUTINES: CLEAR STATUS SAVE TABLE (:SAVECLR)
9564								* STORE STATUS IN SAVE TABLE (:SAVET10,:SAVEH10,
9565								* :SAVETDV,:SAVES10,:SAVEA10,:SAVESSA,SAVESSB,:T10,
9566								* :TDV,:H10)
9567								*
9568								*
9569								* THE FOLLOWING EQUATE STATEMENTS ASSIGN LABELS TO BYTE VALUES
9570								*
9571								T10F0,T10F1,T10F2,T10F3,T10F4,T10F5,T10F6,T10F7 :TSEQEQU X'10'
9572								T10T0,T10T1,T10T2,T10T3,T10T4,T10T5,T10T6,T10T7 :TSEQEQU X'18'
9573								OSBF0,OSBF1,OSBF2,OSBF3,OSBF4,OSBF5,OSBF6,OSBF7 :TSEQEQU X'20'
9574								OSBT0,OSBT1,OSBT2,OSBT3,OSBT4,OSBT5,OSBT6,OSBT7 :TSEQEQU X'28'
9575								H10F0,H10F1,H10F2,H10F3,H10F4,H10F5,H10F6,H10F7 :TSEQEQU X'30'

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST 705735-11/51A00		7/30/70	148
9576					H10T0, H10T1, H10T2, H10T3, H10T4, H10T5, H10T6, H10T7		:TSEQEQU X'38'	
9577					TDVF0, TDVF1, TDVF2, TDVF3, TDVF4, TDVF5, TDVF6, TDVF7		:TSEQEQU X'40'	
9578					TDVT0, TDVT1, TDVT2, TDVT3, TDVT4, TDVT5, TDVT6, TDVT7		:TSEQEQU X'48'	
9579					S10F0, S10F1, S10F2, S10F3, S10F4, S10F5, S10F6, S10F7		:TSEQEQU X'50'	
9580					S10T0, S10T1, S10T2, S10T3, S10T4, S10T5, S10T6, S10T7		:TSEQEQU X'58'	
9581					A10F0, A10F1, A10F2, A10F3, A10F4, A10F5, A10F6, A10F7		:TSEQEQU X'60'	
9582					A10T0, A10T1, A10T2, A10T3, A10T4, A10T5, A10T6, A10T7		:TSEQEQU X'68'	
9583					ISBF0, ISBF1, ISBF2, ISBF3, ISBF4, ISBF5, ISBF6, ISBF7		:TSEQEQU X'70'	
9584					ISBT0, ISBT1, ISBT2, ISBT3, ISBT4, ISBT5, ISBT6, ISBT7		:TSEQEQU X'78'	
9585					BYT0, BYT00, BYT01, BYT02, BYT03, BYT04, BYT05, BYT06		:TSEQEQU X'E0'	
9586					COMNG, COM00, COM01, COM02, COM03, COM04, COM05, COM06		:TSEQEQU X'F0'	
9587								
9588	02 01EC4	02200000	A		:ERRORT	LCI	0	
9589	02 01EC5	2B001F7B				STM,0	:ERRTMP1	SAVE ALL REGISTERS
9590	02 01EC6	B250000F	A			LW,5	*15	FETCH BYTE ADDR
9591	02 01EC7	22000000	A			LI,0	0	
9592	02 01EC8	35001FBF				STW,0	:ERRTFLG	RESET ERROR FLAG
9593	02 01EC9	726A0000	A		:ERRT0	LB,6	0,5	FETCH BYTE
9594	02 01ECA	68301F50				BCR,3	:ERRT13	BRANCH: BYTE = 0
9595	02 01ECB	22700000	A			LI,7	0	
9596	02 01ECC	2560037C	A			SCD,6	-4	BITS 0 - 3 RIGHT JUSTIFIED
9597	02 01ECD	35601F8C				STW,6	:ERRTMP3	SAVE INDEX
9598	02 01ECE	21600008	A			CI,6	8	
9599	02 01ECF	69101ED4				BCS,1	:ERRT1	B: RANGE OF INDEX 1 - 7
9600	02 01ED0	2160000D	A			CI,6	13	
9601	02 01ED1	69201F1E				BCS,2	:ERRT11	BRANCH: RANGE OF INDEX 14 - 15
9602	02 01ED2	2E000000	A			WAIT		/// HALT ///
9603	02 01ED3	68001ED2				B	\$-1	PROGRAM ERRORS
9604								
9605	02 01ED4	328C2068			:ERRT1	LW,8	:SAVETAB,6	FETCH STATUS
9606	02 01ED5	69101EF4				BCS,1	:ERRT6	BRANCH: STATUS IN TABLE
9607	02 01ED6	21600005	A			CI,6	5	
9608	02 01ED7	69101EDA				BCS,1	:ERRT2	BRANCH: RANGE OF INDEX 1 - 4
9609	02 01ED8	2E000000	A			WAIT		/// HALT ///
9610	02 01ED9	68001ED8				B	\$-1	PROGRAM ERROR
9611	02 01EDA	21600003	A		:ERRT2	CI,6	3	
9612	02 01EDB	69301EE2				BCS,3	:ERRT3	BRANCH: NOT H10 TEST
9613	02 01EDC	32E020C1				LW,14	=X'00008000'	
9614	02 01EDD	6AF01BA9				BAL,15	:H10	ISSUE H10 AND TEST CCI
9615	02 01EDE	68001EE0				B	\$+2	
9616	02 01EDF	68001F1C				B	:ERRT10	BRANCH: NO ADDR RECOG OR BUSY S10P
9617	02 01EE0	6AF0203E				BAL,15	:SAVET10	STORE H10 STATUS IN TABLE
9618	02 01EE1	68001ED4				B	:ERRT1	FETCH STATUS
9619								
9620	02 01EE2	21600004	A		:ERRT3	CI,6	4	
9621	02 01EE3	69301EEA				BCS,3	:ERRT4	BRANCH: NOT TDV TEST
9622	02 01EE4	32E020C1				LW,14	=X'00008000'	
9623	02 01EE5	6AF01BB4				BAL,15	:TDV	ISSUE TDV AND TEST CCI
9624	02 01EE6	68001EE8				B	\$+2	
9625	02 01EE7	68001F1C				B	:ERRT10	BRANCH: NO ADDR RECOG OR BUSY S10P
9626	02 01EE8	6AF02043				BAL,15	:SAVETDV	STORE TDV STATUS
9627	02 01EE9	68001ED4				B	:ERRT1	FETCH STATUS
9628								
9629	02 01EEA	6AF01EEC			:ERRT4	BAL,15	:ERRT5	ISSUE T10 AND STORE STATUS
9630	02 01EEB	68001ED4				B	:ERRT1	
9631								
9632	02 01EEC	35F01EF3			:ERRT5	STW,15	:ERRT5X	SAVE EXIT ADDR
9633	02 01EED	32E020C1				LW,14	=X'00008000'	
9634	02 01EEE	6AF01B9E				BAL,15	:T10	ISSUE T10 AND TEST CCI
9635	02 01EEF	68001EF1				B	\$+2	
9636	02 01EF0	68001F1C				B	:ERRT10	BRANCH: NO ADDR RECOG OR BUSY S10P
9637	02 01EF1	6AF02030				BAL,15	:SAVET10	STORE T10 STATUS, OSB, BYT, COM
9638	02 01EF2	E8001EF3				B	*:ERRT5X	IN TABLE
9639	02 01EF3	00000000	A		:ERRT5X	DATA	0	EXIT ADDR
9640								
9641	02 01EF4	22600000	A		:ERRT6	LI,6	0	FETCH BIT 4
9642	02 01EF5	25600301	A			SCD,6	1	
9643	02 01EF6	35601F8B				STW,6	:ERRTMP2	SAVE TRUE/FALSE TEST FLAG
9644	02 01EF7	22600000	A			LI,6	0	
9645	02 01EF8	25600303	A			SCD,6	3	FETCH BITS 5 - 7

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0	16:42	AUG 03, '70			SIGMA 5/7	7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70 149
9646	02	01EF9	35602019			STW,6	:ERRBITS	
9647	02	01EFA	729C1F8D			LB,9	:ERRTMS*,6	FETCH MASK
9648	02	01EFB	49800009	A		OR,8	9	UPDATE CURRENT MASK
9649	02	01EFC	71920008	A		CB,9	8,1	COMPARE MASK TO STATUS
9650	02	01EFD	69401F01			BCS,4	:ERRT7	BRANCH: MATCH BETWEEN STATUS & MASK
9651	02	01EFE	33001F88			MTW,0	:ERRTMP2	TEST TRUE/FALSE FLAG
9652	02	01EFF	68301F04			BCR,3	:ERRT8	BRANCH: FALSE TEST SUCCESSFUL
9653	02	01F00	68001F08			B	:ERRT9	BRANCH: TRUE TEST UNSUCCESSFUL
9654					*			
9655	02	01F01	33001F88		:ERRT7	MTW,0	:ERRTMP2	TEST TRUE/FALSE FLAG
9656	02	01F02	68301F08			BCR,3	:ERRT9	BRANCH: FALSE TEST UNSUCCESSFUL
9657	02	01F03	68001F04			B	:ERRT8	BRANCH: TRUE TEST SUCCESSFUL
9658					*			
9659	02	01F04	32601F8C		:ERRT8	LW,6	:ERRTMP3	FETCH INDEX
9660	02	01F05	358C2068			STW,8	:SAVETAB,6	SAVE STATUS IN TABLE
9661	02	01F06	33100005	A	:ERRT8A	MTW,1	E	INCREMENT BYTE ADDR
9662	02	01F07	68001EC9			B	:ERRT0	TEST NEXT BYTE
9663					*			
9664	02	01F08	32601F8C		:ERRT9	LW,6	:ERRTMP3	FETCH INDEX
9665	02	01F09	358C2068			STW,8	:SAVETAB,6	SAVE STATUS IN TABLE
9666	02	01F0A	32601F8C		:ERRT9A	LW,6	:ERRTMP3	FETCH INDEX
9667	02	01F0B	327C1F90			LW,7	:ERRTYPE,6	FETCH WORD CORRESP. TO INDEX
9668	02	01F0C	35702007			STW,7	:ERRTMG1+1	STORE IN OUTPUT FORMAT
9669	02	01F0D	327C2010			LW,7	:ERRTIB,6	FETCH INDEX FROM INDEX TABLE
9670	02	01F0E	32602019			LW,6	:ERRBITS	FETCH BIT SELECTED
9671	02	01F0F	928C0007	A		LD,8	*7,6	FETCH DOUBLEWORD ERROR MESSAGE
9672	02	01F10	1580200A			STD,8	:ERRTMG1+4	STORE DOUBLEWORD TO OUTPUT FORMAT
9673	02	01F11	206000F0	A		A1,6	X'F0'	CHANGE HEX TO EBCDIC
9674	02	01F12	75622009			STB,6	:ERRTMG1+3,1	STORE BIT NUMBER IN OUTPUT FORMAT
9675	02	01F13	32601F88			LW,6	:ERRTMP2	FETCH TRUE OR FALSE BIT
9676	02	01F14	206000F0	A		A1,6	X'F0'	CHANGE TO EBCDIC
9677	02	01F15	7564200D			STB,6	:ERRTMG1+7,2	STORE T/F BIT IN OUTPUT FORMAT
9678	02	01F16	32601F88			LW,6	:ERRTMP2	
9679	02	01F17	48600001	A		EOR,6	I	COMPLEMENT T/F BIT
9680	02	01F18	206000F0	A		A1,6	X'F0'	CHANGE TO EBCDIC
9681	02	01F19	7560200F			STB,6	:ERRTMG1+9,0	STORE COMPLEMENTED T/F BIT
9682	02	01F1A	EAF0021C	A		BAL,15	*:PRINT	
9683	02	01F1B	00002006			DATA	:ERRTMG1	
9684					*			
9685	02	01F1C	33101F8F		:ERRT10	MTW,1	:ERRTFLG	INCR. ERROR TALLY
9686	02	01F1D	68001F06			B	:ERRT8A	
9687					*			
9688	02	01F1E	328C2068		:ERRT11	LW,8	:SAVETAB,6	FETCH STATUS
9689	02	01F1F	69101F21			BCS,1	\$+2	BRANCH: STATUS IN TABLE
9690	02	01F20	6AF01EEC			BAL,15	:ERRT5	ISSUE T10 AND STORE STATUS
9691	02	01F21	4B8020C2			AND,8	=X'FFFF'	BITS 16 - 31
9692	02	01F22	52820008	A		LH,8	8,1	
9693	02	01F23	2160000E	A		CI,6	14	
9694	02	01F24	69301F4D			BCS,3	:ERRT12	BRANCH: COMMAND ADDR TEST
9695	02	01F25	25600304	A	:ERRT11A	SCD,6	4	FETCH BITS 4 - 7
9696	02	01F26	4B6020C3			AND,6	=X'7'	
9697	02	01F27	69301F28			BCS,3	:ERRT11B	BRANCH: NOT EQUAL TO ZERO
9698	02	01F28	33000008	A		MTW,0	8	TEST BYTE COUNT OR COMMAND DIFF
9699	02	01F29	69101F06			BCS,1	:ERRT8A	BRANCH: NEGATIVE TEST SUCCESSFUL
9700	02	01F2A	68001F38			B	:ERRT91A	B: NEGATIVE TEST NOT SUCCESSFUL
9701	02	01F2B	33F00006	A	:ERRT11B	MTW,-1	6	SUBTRACT 1 FROM BITS 5 - 7
9702	02	01F2C	31600008	A		CW,6	8	COMPARE R8 TO TEST VALUE
9703	02	01F2D	68301F06			BCR,3	:ERRT8A	BRANCH: TEST SUCCESSFUL
9704					*			TEST NOT SUCCESSFUL
9705	02	01F2E	32701F8C		:ERRT92A	LW,7	:ERRTMP3	FETCH INDEX
9706	02	01F2F	2170000E	A		CI,7	14	BYTE COUNT OR COMMAND ADDRESS
9707	02	01F30	68301F35			BCR,3	:ERRT92C	BRANCH IF EQUAL TO
9708	02	01F31	3290207C			LW,9	:SAVCOM1	FETCH ORIG COMMAND ADDRESS
9709	02	01F32	30900006	A		AW,9	6	SAVCOM1 + 1
9710	02	01F33	3590000C	A		STW,9	12	STORE IN R12
9711	02	01F34	68001F3E			B	:ERRT92B	BRANCH
9712	02	01F35	306020C4		:ERRT92C	AW,6	=X'F0F0F0F0'	CONVERT INDEX TO EBCDIC
9713	02	01F36	3560000F	A		STW,6	15	STORE IN R15
9714	02	01F37	68001F42			B	:ERRT91C	BRANCH
9715	02	01F38	32701F8C		:ERRT91A	LW,7	:ERRTMP3	FETCH INDEX

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 151
9786	02	01F7B			:ERRTMP1	RES	16	REGISTER SAVE AREA
9787	02	01F8B	00000000	A	:ERRTMP2	DATA	0	TRUE/FALSE TEST FLAG
9788	02	01F8C	00000000	A	:ERRTMP3	DATA	0	INDEX
9789	02	01F8D	80402010	A	:ERRTMSK	GEN,8,8,8,8	X'80',X'40',X'20',X'10'	TEST
9790	02	01F8E	08040201	A		GEN,8,8,8,8	X'08',X'04',X'02',X'01'	MASKS
9791	02	01F8F	00000000	A	:ERRTFLG	DATA	0	
9792	02	01F90	00000000	A	:ERRTYPE	DATA	0,'T10 ','05B ','H10 ','TDV ','S10 ','A10 ','15B ','S88 '	
	02	01F91	E3C9D640	A				
	02	01F92	D6E2C240	A				
	02	01F93	C8C9D640	A				
	02	01F94	E3C4E540	A				
	02	01F95	E2C9D640	A				
	02	01F96	C1C9D640	A				
	02	01F97	C9E2C240	A				
	02	01F98	E2C2F840	A				
9793	02	01F99	0F404040	A	:ERRTM1	TEXTC	'XXX 01234567'	STATUS
	02	01F9A	E7E7E740	A				
	02	01F9B	F0F1F2F3	A				
	02	01F9C	F4F5F6F7	A				
9794	02	01F9D	0FE2E3C1	A	:ERRTM2	TEXTC	'STATUS BBBB BBBB'	
	02	01F9E	E3E4E240	A				
	02	01F9F	C2C2C2C2	A				
	02	01FA0	C2C2C2C2	A				
9795	02	01FA1	0F4040D4	A	:ERRTM3	TEXTC	'MASK MMMMMMMM'	MSG5
	02	01FA2	C1E2D240	A				
	02	01FA3	D4D4D4D4	A				
	02	01FA4	D4D4D4D4	A				
9796						BOUND	8	
9797	02	01FA6	C9D5E340	A	:ERRTTBA	TEXT	'INT PEND'	BIT 0
	02	01FA7	D7C5D5C4	A				
9798	02	01FA8	D5D6E340	A		TEXT	'NOT OP ?'	BIT 1 T10
	02	01FA9	D6D7406F	A				
9799	02	01FAA	E4D5C1E5	A		TEXT	'UNAVAIL?'	BIT 2
	02	01FAB	C1C9D36F	A				
9800	02	01FAC	4040C1E4	A		TEXT	'AUTO'	BIT 3 S10 (1)
	02	01FAD	E3D64040	A				
9801	02	01FAE	404040E4	A		TEXT	'UE'	BIT 4 (3)
	02	01FAF	C5404040	A				
9802	02	01FB0	D5D6E340	A		TEXT	'NOT OP ?'	BIT 5 H10 (5)
	02	01FB1	D6D7406F	A				
9803	02	01FB2	E4D5C1E5	A		TEXT	'UNAVAIL?'	BIT 6
	02	01FB3	C1C9D36F	A				
9804	02	01FB4	D5D6E340	A		TEXT	'NOT USED'	BIT 7 STATUS
	02	01FB5	E4E2C5C4	A				
9805	02	01FB6	C9D5C340	A	:ERRTTBB	TEXT	'INC LEN'	BIT 0
	02	01FB7	D3C5D540	A				
9806	02	01FB8	E3D9C1D5	A		TEXT	'TRANSM'	BIT 1
	02	01FB9	E2D44040	A				
9807	02	01FBA	E3D9C1D5	A		TEXT	'TRANSMEM'	BIT 2 OPERATIONAL
	02	01FBB	E2D4C5D4	A				
9808	02	01FBC	D4C5D440	A		TEXT	'MEM ADR'	BIT 3
	02	01FBD	C1C4D940	A				
9809	02	01FBE	C9D6D740	A		TEXT	'IOP MEM'	BIT 4 STATUS BYTE (05B)
	02	01FBF	D4C5D440	A				
9810	02	01FC0	C9D6D740	A		TEXT	'IOP CONT'	BIT 5 (2)
	02	01FC1	C3D6D5E3	A				
9811	02	01FC2	C9D6D740	A		TEXT	'IOP HALT'	BIT 6
	02	01FC3	C8C1D3E3	A				
9812	02	01FC4	E2C9D6D7	A		TEXT	'SIOPBUSY'	BIT 7
	02	01FC5	C2E4E2E8	A				
9813	02	01FC6	D9C1E3C5	A	:ERRTTBC	TEXT	'RATE ERR'	BIT 0
	02	01FC7	40C5D9D9	A				
9814	02	01FC8	E6D940D7	A		TEXT	'WR PERMT'	BIT 1
	02	01FC9	C5D9D4E3	A				
9815	02	01FCA	E6D940D7	A		TEXT	'WR PROT'	BIT 2 TDV
	02	01FCB	D9D6E340	A				
9816	02	01FCC	C548D648	A		TEXT	'E.O.F.'	BIT 3
	02	01FCD	C648D404	A				
9817	02	01FCE	D5D6E340	A		TEXT	'NOT USED'	BIT 4 STATUS (4)
	02	01FCF	E4E2C5C4	A				

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0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 152
9818	02	01FD0	D3D6C1C4 A			TEXT	'LOAD PT ' BIT 5	
	02	01FD1	40D7E340 A					
9819	02	01FD2	C548D64B A			TEXT	'E.O.T. ' BIT 6	
	02	01FD3	E3484040 A					
9820	02	01FD4	D9E660D6 A			TEXT	'RW-ONLINE' BIT 7	
	02	01FD5	D5D3D5C5 A					
9821	02	01FD6	D9C1E3C5 A		:ERRTTBD	TEXT	'RATE ERR' BIT 0	
	02	01FD7	40C5D9D9 A					
9822	02	01FD8	C4C5E540 A			TEXT	'DEV END ' BIT 1	
	02	01FD9	C5D5C440 A					
9823	02	01FDA	E6D940D7 A			TEXT	'WR PROT ' BIT 2 A10	
	02	01FDB	D9D6E340 A					
9824	02	01FDC	C548D64B A			TEXT	'E.O.F. ' BIT 3 STATUS (6)	
	02	01FDD	C6484040 A					
9825	02	01FDE	D5D6E340 A			TEXT	'NOT USED' BIT 4	
	02	01FDF	E4E2C5C4 A					
9826	02	01FE0	D5D6E340 A			TEXT	'NOT USED' BIT 5	
	02	01FE1	E4E2C5C4 A					
9827	02	01FE2	D5D6E340 A			TEXT	'NOT USED' BIT 6	
	02	01FE3	E4E2C5C4 A					
9828	02	01FE4	D5D6E340 A			TEXT	'NOT USED' BIT 7	
	02	01FE5	E4E2C5C4 A					
9829	02	01FE6	C9D5C340 A		:ERRTTBE	TEXT	'INC LEN ' BIT 0	
	02	01FE7	D3C5D540 A					
9830	02	01FE8	E3D9C1D5 A			TEXT	'TRANSM ' BIT 1	
	02	01FE9	E2D44040 A					
9831	02	01FEA	E9C2C340 A			TEXT	'ZBC INT ' BIT 2 INTERRUPT	
	02	01FEB	C9D5E340 A					
9832	02	01FEC	40C3C540 A			TEXT	' CE INT ' BIT 3	
	02	01FED	C9D5E340 A					
9833	02	01FEE	40E4C540 A			TEXT	' UE INT ' BIT 4 STATUS BYTE (15B) (7)	
	02	01FEF	C9D5E340 A					
9834	02	01FF0	D5D6E340 A			TEXT	'NOT USED' BIT 5	
	02	01FF1	E4E2C5C4 A					
9835	02	01FF2	D5D6E340 A			TEXT	'NOT USED' BIT 6	
	02	01FF3	E4E2C5C4 A					
9836	02	01FF4	D5D6E340 A			TEXT	'NOT USED' BIT 7	
	02	01FF5	E4E2C5C4 A					
9837	02	01FF6	C440D7C1 A		:ERRTTBF	TEXT	'D PAR E ' BIT 0	
	02	01FF7	D940C540 A					
9838	02	01FF8	C3C8D2E6 A			TEXT	'CHKWRT E' BIT 1	
	02	01FF9	D9E340C5 A					
9839	02	01FFA	E2C5C3E3 A			TEXT	'SECT COM' BIT 2 SENSE	
	02	01FFB	40C3D6D4 A					
9840	02	01FFC	C8C5C1C4 A			TEXT	'HEAD COM' BIT 3	
	02	01FFD	40C3D6D4 A					
9841	02	01FFE	C3E8D340 A			TEXT	'CYL COM ' BIT 4 BYTE 8 (8)	
	02	01FFF	C3D6D440 A					
9842	02	02000	C8C440C1 A			TEXT	'HD ADR E' BIT 5	
	02	02001	C4D940C5 A					
9843	02	02002	D5D6E340 A			TEXT	'NOT USED' BIT 6	
	02	02003	E4E2C5C4 A					
9844	02	02004	D5D6E340 A			TEXT	'NOT USED' BIT 7	
	02	02005	E4E2C5C4 A					
9845	02	02006	24404040 A		:ERRTMGI	TEXTC	' xxx BIT x (XXXXXXXX) EXP X OBS X'	
	02	02007	E7E7E740 A					
	02	02008	C2C9E340 A					
	02	02009	40E74040 A					
	02	0200A	E7E7E7E7 A					
	02	0200B	E7E7E7E7 A					
	02	0200C	5D40C5E7 A					
	02	0200D	D740E740 A					
	02	0200E	D6C2E240 A					
	02	0200F	E7404040 A					
9846	02	02010	00000000 A		:ERRTTB	DATA	0,:ERRTTBA,:ERRTTBB,:ERRTTBA,:ERRTTBC,:ERRTTBA	
	02	02011	00001FA6					
	02	02012	00001FB6					
	02	02013	00001FA6					
	02	02014	00001FC6					
	02	02015	00001FA6					

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03,	'70		SIGMA 5/7 7-CHANNEL	MAG TAPE TEST 705735-11/51A00	7/30/70	153
9847	02	02016	00001FD6			DATA	:ERRITBD,:ERRITBE,:ERRITBF	
	02	02017	00001FE6					
	02	02018	00001FF6					
9848	02	02019	00000000	A	:ERRBITS DATA	0		
9849	02	0201A	23404040	A	:ERRTMG2 TEXTC		'XXXXXXX - EXP. XXXX OBS. XXXX'	
	02	0201B	E7E7E7E7	A				
	02	0201C	E7E7E740	A				
	02	0201D	6040C5E7	A				
	02	0201E	D74B4040	A				
	02	0201F	E7E7E7E7	A				
	02	02020	4040D6C2	A				
	02	02021	E24B4040	A				
	02	02022	E7E7E7E7	A				
9850	02	02023	40D5C5C7	A	:ERRTNEG TEXT	'NEG'		
9851					BOUND	8		
9852	02	02024	C2E8E340	A	:ERRTBCM TEXT	'BYT CNT'	BYTE COUNT MESSAGE	
	02	02025	C3D5E340	A				
9853	02	02026	C3D6D440	A	:ERRTCAM TEXT	'COM ADR'	COMMAND ADDRESS MESSAGE	
	02	02027	C1C4D940	A				
9854					*			
9855					*	*** SAVECLR	***	
9856					*	*** SAVETIO, -HIO, -TDV, -SIO, -AIO, -SSA, -SSB	***	
9857					*	ROUTINES		
9858					*			
9859					*	THE SUBROUTINES CLEAR THE STATUS SAVE TABLE ('SAVETAB') AND STORE		
9860					*	THE SELECTED STATUS IN THE CELL.		
9861					*			
9862					*	CALLING SEQUENCE: BAL,15 :SAVE---		
9863					*	NORMAL EXIT: --- ---		
9864					*			
9865					*	REGISTERS DISTURBED: NONE (R1 = 1, R2 = 2, R3 = 3)		
9866					*			
9867					*	VARIABLES REQUIRED: R13 - IOSTATUS AND BYTE COUNT		
9868					*	R12 - CURRENT COMMAND ADDR		
9869					*			
9870					*	OTHER SUBROUTINES: NONE		
9871					*			
9872					*			
9873	02	02028	15402078		:SAVECLR STD,4	:SAVETMP	SAVE R4 AND R5	
9874	02	02029	224FFFE0	A	LI,4	-32	INDEX	
9875	02	0202A	22500000	A	LI,5	0	0	
9876	02	0202B	55582078		STH,5	:SAVETAB+16,4	CLEAR FLAG AND CURRENT STATUS	
9877	02	0202C	65402020		BIR,4	\$+1	INCR R4	
9878	02	0202D	65402028		BIR,4	\$-2	LOOP	
9879	02	0202E	12402078		LD,4	:SAVETMP	RESTORE R4 AND R5	
9880	02	0202F	E800000F	A	B	*15	EXIT	
9881					*			
9882	02	02030	15402078		:SAVETIO STD,4	:SAVETMP	SAVE R4 AND R5	
9883	02	02031	35D0207A		STW,13	:SAVETMP+2	SAVE STATUS	
9884	02	02032	22402069		LI,4	WA(:SAVETAB+1)	INDEX - TIO STATUS	
9885	02	02033	6A502060		BAL,5	:SAVEALL	STORE STATUS	
9886	02	02034	2240206A		LI,4	WA(:SAVETAB+2)	INDEX - OSB	
9887	02	02035	6A502060		BAL,5	:SAVEALL	STORE STATUS	
9888	02	02036	32D0207A		LW,13	:SAVETMP+2	FETCH STATUS	
9889	02	02037	55D22076		STH,13	:SAVETAB+14,1	STORE BYTE COUNT	
9890	02	02038	225FFFFF	A	LI,5	-1		
9891	02	02039	75502076		STB,5	:SAVETAB+14,0	SET FLAG	
9892	02	0203A	55C22077		STH,12	:SAVETAB+15,1	STORE CURRENT COMMAND ADDR	
9893	02	0203B	75502077		STB,5	:SAVETAB+15,0	SET FLAG	
9894	02	0203C	12402078		LD,4	:SAVETMP	RESTORE R4 AND R5	
9895	02	0203D	E800000F	A	B	*15	EXIT	
9896					*			
9897	02	0203E	15402078		:SAVEHIO STD,4	:SAVETMP	SAVE R4 AND R5	
9898	02	0203F	2240206B		LI,4	WA(:SAVETAB+3)	INDEX - HIO STATUS	
9899	02	02040	6A502060		BAL,5	:SAVEALL	STORE STATUS	
9900	02	02041	12402078		LD,4	:SAVETMP	RESTORE R4 AND R5	
9901	02	02042	E800000F	A	B	*15	EXIT	
9902	02	02043	15402078		:SAVETDV STD,4	:SAVETMP	SAVE R4 AND R5	
9903	02	02044	2240206C		LI,4	WA(:SAVETAB+4)	INDEX - TDV STATUS	
9904	02	02045	6A502060		BAL,5	:SAVEALL	STORE STATUS	

XDS 901682

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	ORIG	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL	MAG TAPE TEST	705735-11/51A00	7/30/70 154
9905	02	02046	12402078			LD,4	:SAVETMP	RESTORE R4 AND R5
9906	02	02047	E800000F	A		B	*15	EXIT
9907								
9908	02	02048	15402078		:SAVESIO	STD,4	:SAVETMP	SAVE R4 AND R5
9909	02	02049	2240206D			LI,4	WA(:SAVETAB+5)	INDEX - SIO
9910	02	0204A	6A502060			BAL,5	:SAVEALL	STORE STATUS
9911	02	02048	12402078			LD,4	:SAVETMP	RESTORE R4 AND R5
9912	02	0204C	E800000F	A		B	*15	EXIT
9913								
9914	02	0204D	15402078		:SAVEAIO	STD,4	:SAVETMP	SAVE R4 AND R5
9915	02	0204E	3500207A			STW,13	:SAVETMP+2	SAVE STATUS
9916	02	0204F	2240206E			LI,4	WA(:SAVETAB+6)	INDEX - AIO
9917	02	02050	6A502060			BAL,5	:SAVEALL	STORE STATUS
9918	02	02051	2240206F			LI,4	WA(:SAVETAB+7)	INDEX - ISB
9919	02	02052	6A502060			BAL,5	:SAVEALL	STORE STATUS
9920	02	02053	3200207A			LW,13	:SAVETMP+2	FETCH STATUS
9921	02	02054	12402078			LD,4	:SAVETMP	RESTORE REGISTERS R4 AND R5
9922	02	02055	E800000F	A		B	*15	EXIT
9923								
9924	02	02056	15402078		:SAVESSA	STD,4	:SAVETMP	SAVE R4 AND R5
9925	02	02057	22402070			LI,4	WA(:SAVETAB+8)	SAVE STATUS
9926	02	02058	6A502060			BAL,5	:SAVEALL	RESTORE R4 AND R5
9927	02	02059	12402078			LD,4	:SAVETMP	RESTORE R4 AND R5
9928	02	0205A	E800000F	A		B	*15	EXIT
9929								
9930	02	0205B	15402078		:SAVESSB	STD,4	:SAVETMP	SAVE R4 AND R5
9931	02	0205C	22402071			LI,4	WA(:SAVETAB+9)	SAVE STATUS
9932	02	0205D	6A502060			BAL,5	:SAVEALL	RESTORE R4 AND R5
9933	02	0205E	12402078			LD,4	:SAVETMP	RESTORE R4 AND R5
9934	02	0205F	E800000F	A		B	*15	EXIT
9935								
9936	02	02060	3550207B		:SAVEALL	STW,5	:SAVETMP+3	SAVE EXIT ADDR
9937	02	02061	22500000	A		LI,5	0	
9938	02	02062	F5560004	A		STB,5	*4,3	CLEAR CURRENT STATUS MASK
9939	02	02063	25000208	A		SCS,13	+8	
9940	02	02064	F5D20004	A		STB,13	*4,1	STORE CURRENT STATUS
9941	02	02065	225FFFFF	A		LI,5	-1	
9942	02	02066	F5500004	A		STB,5	*4,0	STORE FLAG
9943	02	02067	E800207B			B	*:SAVETMP+3	EXIT
9944								
9945						BOUND	B	
9946		02 02068			:SAVETAB	EQU	\$	
9947	02	02068	00000000	A		DATA	0	UNDEFINED 0
9948	02	02069	0000EE00	A		DATA	X'0000EE00'	TIO STATUS 1
9949	02	0206A	0000FF00	A		DATA	X'0000FF00'	OSB STATUS 2
9950	02	0206B	0000EE00	A		DATA	X'0000EE00'	HIO STATUS 3
9951	02	0206C	0000BB00	A		DATA	X'0000BB00'	TDV STATUS 4
9952	02	0206D	0000EE00	A		DATA	X'0000EE00'	SIO STATUS 5
9953	02	0206E	0000FF00	A		DATA	X'0000FF00'	AIO STATUS 6
9954	02	0206F	0000FF00	A		DATA	X'0000FF00'	ISB STATUS 7
9955	02	02070	0000FF00	A		DATA	X'0000FF00'	SBA STATUS 8
9956	02	02071	0000FF00	A		DATA	X'0000FF00'	SBB STATUS 9
9957	02	02072	00000000	A		DATA	0,0,0,0	NOT ASSIGNED 10 - 13
		02 02073	00000000	A				
		02 02074	00000000	A				
		02 02075	00000000	A				
9958	02	02076	00000000	A		DATA	0,0	BYTE COUNT, COMMAND ADR 14 - 15
		02 02077	00000000	A				
9959	02	02078	00000000	A	:SAVETMP	DATA	0,0,0,0	4 TEMP LOC
		02 02079	00000000	A				
		02 0207A	00000000	A				
		02 0207B	00000000	A				
9960	02	0207C	00000000	A	:SAVCOM1	DATA	0	ORIGINAL COMMAND ADDR
9961								
9962	02	0207D	00000000	A	BUFF2	DATA	0	BUFF1 +BUFF2/2 WORDS
9963						BOUND	B	
9964						END		
		02 0207E	0000FF00	A				
		02 0207F	0000BB00	A				
		02 02080	0000FFFF	A				

LINE NO.	MEM PROT KEY	MEMORY ADDRESS	MEMORY CONTENTS	O R I G	LABEL	OPERATION	OPERAND	COMMENTS
0	16:42	AUG 03, '70			SIGMA 5/7 7-CHANNEL MAG TAPE TEST		705735-11/51A00	7/30/70
								155
	02	02081	FFFFFFFE	A				
	02	02082	00001FFF	A				
	02	02083	00000080	A				
	02	02084	00000008	A				
	02	02085	06000000	A				
	02	02086	05000000	A				
	02	02087	08FF0000	A				
	02	02088	08BF0000	A				
	02	02089	02000000	A				
	02	0208A	01000000	A				
	02	0208B	087F0000	A				
	02	0208C	083F0000	A				
	02	0208D	FF000000	A				
	02	0208E	00FFFFFF	A				
	02	0208F	E700C000	A				
	02	02090	EF00C000	A				
	02	02091	8800C000	A				
	02	02092	08000000	A				
	02	02093	0000C000	A				
	02	02094	88000000	A				
	02	02095	80000000	A				
	02	02096	98000002	A				
	02	02097	66000000	A				
	02	02098	04000000	A				
	02	02099	40000000	A				
	02	0209A	E6000000	A				
	02	0209B	0000B300	A				
	02	0209C	0000BF00	A				
	02	0209D	3F3F3F3F	A				
	02	0209E	00400000	A				
	02	0209F	12131415	A				
	02	020A0	32333435	A				
	02	020A1	FFFFFFFF	A				
	02	020A2	000FFFFFF	A				
	02	020A3	00010203	A				
	02	020A4	04040404	A				
	02	020A5	AAAAAAAA	A				
	02	020A6	51F99F15	A				
	02	020A7	60000000	A				
	02	020A8	0F0F0F0F	A				
	02	020A9	00000014	A				
	02	020AA	30303030	A				
	02	020AB	0000FF0	A				
	02	020AC	0000000F	A				
	02	020AD	128980A1	A				
	02	020AE	1033C4D7	A				
	02	020AF	544B2FBA	A				
	02	020B0	000003FF	A				
	02	020B1	0000001F	A				
	02	020B2	FFFFFF00	A				
	02	020B3	FFFFFF00	A				
	02	020B4	00000003	A				
	02	020B5	0D000000	A				
	02	020B6	01FFFFFF	A				
	02	020B7	02FFFFFF	A				
	02	020B8	91000000	A				
	02	020B9	50000000	A				
	02	020BA	00FF0000	A				
	02	020BB	7FFFFFFF	A				
	02	020BC	00004E20	A				
	02	020BD	FFFFC000	A				
	02	020BE	E600C000	A				
	02	020BF	10000000	A				
	02	020C0	80004000	A				
	02	020C1	00008000	A				
	02	020C2	0000FFFF	A				
	02	020C3	00000007	A				
	02	020C4	F0F0F0F0	A				

CONTROL SECTION SUMMARY: 01 0030C PT 0 02 020C5 PT 0

TAPE DRIVE DIAGNOSIS

4/10/80

DISK DRIVE TEST PROGRAM HAS TAPE LIBRARY 7362, 7365, 7372, 7374, 7519
← TYPE IN!

SYST, 877, 7 CHANNEL MAGNETIC TAPE TEST PROGRAM TESTER-ACC MANUAL 0015
TO INHIBIT THE PRINTING OF THIS MESSAGE, SET 97, 4.

THE ** SYST ** DIRECTIVE DESCRIBES THE CYCLES ENVIRONMENT.
IN TESTING OF TAPE STATIONS OF 37.5IPS AND 75IPS DURING THE
EXECUTION OF THE FUNCTIONAL TESTS IS NOT ALLOWED.

FORMAT: SYST, D1, D2, D3, D4, D5, D6, D7, D8, D9, D10

PARAMETERS:

D1 DEVICE STATION (7362, 7365/37.5IPS, 7372, 7374/75IPS)
D2 0
D3 DEVICE ADDRESS (1ST)
D4 DEVICE ADDRESS (2ND)
D5 DEVICE ADDRESS (3RD)
D6 DEVICE ADDRESS (4TH)
D7 DEVICE ADDRESS (5TH)
D8 DEVICE ADDRESS (6TH)
D9 DEVICE ADDRESS (7TH)
D10 DEVICE ADDRESS (8TH)

EXAMPLE 1. SYST, 7372, 0, 01, 03, 07
TAPE DEVICES 01, 03, AND 07 ARE 75IPS UNITS.

EXAMPLE 2. SYST, 7365, 0, 00
TAPE DEVICE 00 IS A 37.5IPS UNIT.

REVISION *A01* (10/20/70)

1. ADD IST1, 36 TO TEST ERASE FUNCTION.
2. ADD IST3, 2, 5 TO TEST CAPSTAN SLIP.
3. REMOVE EOF INDICATION FROM IST1, 40.
4. ADD RETRY AFTER FAILURE TO IST1, 37.
5. ADD TIMEOUT TEST TO IST1, 20. IF TIMEOUT OCCURS, ERROR
MESSAGE 2003 WILL BE PRINTED.

REVISION *A02* (03/03/71)

NO FUNCTIONAL CHANGES HAVE BEEN MADE.

SYST, 7372, 0, 000

IST2, 100, 1

← TYPE IN,

← TYPE IN

PUT FRESH TAPE ON

SELECTED TESTS

STAPLE

STAPLE

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