

**SDS 940 OLDS DIAGNOSTIC
SYSTEM**

UNIT 12 E RAD TEST LISTING

SDS 870036-51A

February 1969

SDS

SCIENTIFIC DATA SYSTEMS • 701 South Aviation Boulevard • El Segundo, Calif., 90245 • 213/772-4511



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00010          OCTAL
*
0 01 00000 ONE      0PD      0100000,1
0 02 00000 TWO     0PD      0200000,1
0 03 00000 THREE   0PD      0300000,1
0 04 00000 FOUR    0PD      0400000,1
0 05 00000 FIVE    0PD      0500000,1
0 06 00000 SIX     0PD      0600000,1
0 07 00000 SEVEN   0PD      0700000,1
0 10 00000 EIGHT   0PD      01000000,1
*
00000400 JAK      EQU      400
00000401 STATUS EQU      401
00000402 SI.     EQU      402
00000403 RASIZ  EQU      403
00000404 DSCSIZ EQU      404
00000405 SYSIZE EQU      405
00000406 SEED   EQU      406
00000407 TIME   EQU      407
00000410 AREG  EQU      410
00000411 BREG  EQU      411
00000412 XREG  EQU      412
00000413 AVRFL EQU      413
00000414 ERRORS EQU      414
00000415 RL1   EQU      415
00000416 RL2   EQU      416
00000417 RL4   EQU      417
00000420 UNIT  EQU      420
00000424 FUNCTN EQU      424
00000430 REJECT EQU      430
00000434 END    EQU      434
00000440 RETURN EQU      440
00000450 DIVERT EQU      450
00000452 DONE  EQU      452
00000454 REPRRT EQU      454
00000456 FDONE  EQU      456

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00000460 ERRSR  EQU      460
*
0 33 00000 PINN   0PD      03300000,1
0 13 00000 P9TT   0PD      01300000,1
0 02 20002 EIRR   0PD      00220002,2
0 0P 20004 DIRR   0PD      00220004,2
00000311 I64    EQU      311
00000313 I65    EQU      313
0 46 20005 ABC    0PD      4620005,2
0 46 10012 BAC    0PD      4610012,2
0 46 00014 XAB    0PD      4600014,2
0 06 00000 F9MM   0PD      600000,1
0 40 00000 SKSS   0PD      04000000,1
0 40 14000 CATC   0PD      4014000,2
0 02 00000 DSCC   0PD      200000,2
0 02 14000 T9PC   0PD      214000,2
0 40 21000 BRTC   0PD      4021000,2
0 40 11000 CETC   0PD      4011000,2
0 40 20010 RETC   0PD      4020010,2
0 02 10000 ALCC   0PD      210000,2
0 40 12000 CZTC   0PD      4012000,2
0 02 12000 ASCC   0PD      212000,2
0 02 02045 DE04   0PD      202045,2
00000243 I31    EQU      243
00000247 I33    EQU      247
00000243 IX1    EQU      I31
00000247 IX2    EQU      I33
00000242 INTX1  EQU      INT31
00000246 INTX2  EQU      INT33
00000242 INT31  EQU      242
00000246 INT33  EQU      246
00000000 RAD=H8  EQU      70000000
00000000 BSS    EQU      04000
00000          RADE12 IDENT

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FORCE 920 BITS
FORCE 920 BITS
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*
*
* FUNCTION 1 = DACC TEST
*
*

04000	0 43 00420	BRM	UNIT	UNIT LINK
04001	0 20 20513	NOP	JPT	UNIT PARAMETER TABLES
04002	0 43 13753	BRM	BRITYP	SET INTERRUPT RETURN BRANCH, BRI OR BRU.
04003	0 43 13766	BRM	RADSK	TEST FOR RAD COUNT
04004	0 43 00424	BRM	FUNCTN	FUNCTION LINK
04005	0 20 20521	NOP	FPT1	FUNCTION PARAMETER TABLES

*
*
* F13801 NO BIT 13 ERR OR 14 ZAC
* BIT 12 SELECT ARM INTRUPTS
*
*

04006	C 43 00430	BRM	OBJECT	
04007	0 43 00440	BRM	RETURN	TO INTRUPT LINK
04010	0 20 04022	NOP	F1001A	
04011	0 06 00000	EBMM	0	CLEAR CHANNEL
04012	0 06 10000	EBMM	010000	ALERT INTERLACE
04013	0 13 24777	PBTY	#0	
04014	0 06 14200	EBMM	014200	BIT 12 ONLY
04015	0 71 25000	LDX	#077765115	10 MS DELAY TIME FOR POSSIBLE INTRUPT
04016	0 02 20002	EIR	*	COUNT OUT TIMER
04017	0 41 04017	BRX	*	
04020	0 02 20004	DIR		
04021	0 01 04032	BRU	F1001D	OK NO INTRUPT OCCURED
04022	0 02 20004	F1001A DIR		
04023	0 46 00001	CLA		
04024	0 76 00450	LDA	DIVERT	CLEAR INTRUPT LINK
04025	0 75 25001	LDB	#37777	
04026	0 70 25002	SKY	#164	TEST FOR CORRECT INTRUPT
04027	0 01 04036	BRU	F1001B	
04030	0 43 00460	BRM	ERRSR	
04031	0 20 22656	NOP	F1001A	INTRUPT MESSAGE
04032	0 53 24505	F1001D SKN	JMPTYP	
04033	0 11 04035	BRI	#42	
04034	0 01 04035	BRU	#41	
04035	0 20 04040	NOP	F1001C	
04036	0 43 14371	F1001B BRM	SPURI	
04037	0 20 25003	NOP	#64	
04040	0 06 00000	F1001C EBMM	0	
04041	0 43 00434	BRM	END	

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*
* F10B02 BIT 13 EOR AND 14 ZWC
* BIT 12 SELECT ARM INTRUPTS
*
04042 0 43 00430 BRM SUBJECT
04043 0 43 00440 BRM RETURN
04044 0 20 04056 NBP F1002A
04045 0 06 00000 E0MM C
04046 0 06 10000 E0MM* 010000 ALERT INTERLACE
04047 0 13 24777 P8TT #0
04050 0 06 17200 E0MM 017200 BIT 12,13,14
04051 0 71 25000 LDX #077765115 10 MS DELAY TIME FOR POSSIBLE INTRUPT
04052 0 02 20000 EIR
04053 0 41 04053 BRX * COUNT OUT TIMER
04054 0 02 20000 DIR
04055 0 01 04066 BRU F1002D NO INTRUPT OCCURED
04056 0 02 20000 F1002A DIR
04057 0 46 00001 CLA
04060 0 76 00450 LDA DIVERT
04061 0 75 25001 LDB #37777
04062 0 70 25000 SKM #164
04063 0 01 04072 BRU F1002B
04064 0 43 00460 BRM ERROR INTRUPT ERROR MESSAGE
04065 0 20 22456 NBP #1001A
04066 0 53 24505 F1002D SKN JUMPTYP
04067 0 11 04071 BRJ #+2
04070 0 01 04071 BRU* #+1
04071 0 20 04074 NBP F1002C
04072 0 43 14071 F1002B BRM SPURI
04073 0 20 25000 NBP #64
04074 0 06 00000 F1002C E0MM C
04075 0 43 00434 BRM END

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*
* F10B03 CHANNEL SKS ACTIVE TEST
*
04076 0 43 00430 BRM SUBJECT
04077 0 43 00440 BRM RETURN
04100 0 20 07150 NBP XTRAI SPURIOUS INTRUPT CONTROL
04101 0 06 00000 E0MM C
04102 0 40 14000 SKSS* 014000 CHANNEL ACTIVE TEST
04103 0 01 04107 BRU F1003A NOT ACTIVE ERROR
04104 0 06 14000 E0MM 014000 SET ACTIVE WITH BIT 9
04105 0 40 14000 SKSS* 014000
04106 0 01 04112 BRU F1003B ACTIVE TEST OK
04107 0 43 00460 F1003A BRM ERROR
04110 0 20 22474 NBP #1003A ERROR MESSAGE
04111 0 06 00000 E0MM C
04112 0 43 00434 F1003B BRM END EXIT TEST

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*
* F10B04 TEST ZERO COUNT SKS
*

04113	0	43	00430	BRM	OBJECT	
04114	0	43	00440	BRM	RETURN	INTRUPT LINK
04115	0	20	07150	NBP	XTRA1	
04116	0	06	00200	EBMM	0	
04117	0	06	10200	EBMM*	010000	ALERT CHANNEL
04120	0	06	14200	EBMM	014200	
04121	0	13	24777	P0TT	#0	
04122	0	40	18200	SKSS*	012000	ZERO TEST
04123	0	43	00460	BRM	ERROR	
04124	0	21	20704	NBP	M10044	SKS OR COUNT FLIP=FLOP FAILURE
04125	0	43	00434	BRM	END	EXIT TEST

*
* F10B05 TEST ADDRESS BIT ZA14 OR C23
*

04126	0	43	00430	BRM	OBJECT	
04127	0	43	00440	BRM	RETURN	
04130	0	20	07150	NBP	XTRA1	
04131	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04132	0	06	12200	EBMM	012000	ALERT TO PIN CHANNEL
04133	0	33	24516	PINN	PINARD	GET LAST RESULT
04134	0	76	24516	LDA	PIN-RD	GET RESULT
04135	0	72	25204	SKA	#01	SKIP IF BIT RESEY
04136	0	43	00460	BRM	ERROR	
04137	0	20	22727	NBP	M1005A	BIT ERROR MESSAGE
04140	0	06	10200	EBMM*	010000	ALERT CHANNEL TO P0T
04141	0	06	14200	EBMM	014200	CLEAR HI BITS
04142	0	13	25204	P0TT	#01	
04143	0	06	12200	EBMM	012000	ALERT CHANNEL TO PIN
04144	0	33	24516	PINN	PINARD	GET INTERLACE ADRS
04145	0	75	25204	LDB	#01	CORRECT TEST WORD
04146	0	71	00430	LDB	OBJECT	GET ADRS OF OBJECT TEST
04147	0	76	24516	LDA	PINARD	
04150	0	70	25204	SKM	#01	TEST BIT IN ERROR
04151	0	43	00460	BRM	ERROR	
04152	*	20	22727	NBP	M1005A,*	BIT ERROR MESSAGE
04153	2	21	22475	NBP	M2013B,*2	HEADING AND REGISTERS
04154	0	43	00434	BRM	END	EXIT TEST

*
* F10B06 TEST ADDRESS BIT 2A13 OR C22
*

04155	0	43	00430	BRM	0BJECT	
04156	0	43	00440	BRM	RETURN	
04157	0	20	07150	VBP	XTR#1	
04160	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04161	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04162	0	33	24516	PINN	PINWRD	GET LAST RESULT
04163	0	76	24516	LDA	PINWRD	GET RESULT
04164	0	72	25005	SKA	#02	SKIP IF BIT RESET
04165	0	43	00460	BRM	ERR0R	
04166	0	20	22736	VBP	M1006A	BIT ERROR MESSAGE
04167	0	06	10000	EBMM*	010000	ALERT CHANNEL TO P0T
04170	0	06	14200	EBMM	014200	SET HI BITS
04171	0	13	25005	P0TT	#02	
04172	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04173	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04174	0	75	25005	LDB	#02	CORRECT TEST WORD
04175	0	71	00430	LDX	0BJECT	GET ADRS OF 0BJECT TEST
04176	0	76	24516	LDA	PINWRD	
04177	0	70	25005	SKM	#02	TEST BIT IN ERROR
04200	0	43	00460	BRM	ERR0R	
04201	4	20	22736	VBP	M1006A,*	BIT ERROR MESSAGE
04202	2	20	23475	VBP	M2013B,2	HEADING AND REGISTERS
04203	0	43	00434	BRM	END	EXIT TEST

*
* F10B07 TEST ADDRESS BIT 2A12 OR C21
*

04204	0	43	00430	BRM	0BJECT	
04205	0	43	00440	BRM	RETURN	
04206	0	20	07150	VBP	XTR#1	
04207	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04210	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04211	0	33	24516	PINN	PINWRD	GET LAST RESULT
04212	0	76	24516	LDA	PINWRD	GET RESULT
04213	0	72	25006	SKA	#04	SKIP IF BIT RESET
04214	0	43	00460	BRM	ERR0R	
04215	0	20	22745	VBP	M1007A	BIT ERROR MESSAGE
04216	0	06	10000	EBMM*	010000	ALERT CHANNEL TO P0T
04217	0	06	14200	EBMM	014200	SET HI BITS
04220	0	13	25006	P0TT	#04	
04221	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04222	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04223	0	75	25006	LDB	#04	CORRECT TEST WORD
04224	0	71	00430	LDX	0BJECT	GET ADRS OF 0BJECT TEST
04225	0	76	24516	LDA	PINWRD	
04226	0	70	25006	SKM	#04	TEST BIT IN ERROR
04227	0	43	00460	BRM	ERR0R	
04230	4	20	22745	VBP	M1007A,*	BIT ERROR MESSAGE
04231	2	20	23475	VBP	M2013B,2	HEADING AND REGISTERS
04232	0	43	00434	BRM	END	EXIT TEST

*
* F19B08 TEST ADDRESS BIT ZA11 OR C20
*

04233	0 43 00430	BRM	OBJECT	
04234	0 43 00440	BRM	RETURN	
04235	0 20 07150	NBP	XTRAI	
04236	0 43 07143	BRM	CLRCHN	CLEAR CHANNEL
04237	0 06 12000	EBMM	C12000	ALERT TO PIN CHANNEL
04240	0 33 24516	PINN	PINARD	GET LAST RESULT
04241	0 76 24516	LDA	PINARD	GET RESULT
04242	0 72 25007	SKA	#010	SKIP IF BIT RESET
04243	0 43 00460	BRM	ERRRR	
04244	0 20 22754	NBP	*1008A	BIT ERROR MESSAGE
04245	0 06 10000	EBMM*	C10000	ALERT CHANNEL TO POT
04246	0 06 14200	EBMM	C14200	SET HI BITS
04247	0 13 25007	PSTT	#010	
04250	0 06 12000	EBMM	C12000	ALERT CHANNEL TO PIN
04251	0 33 24516	PINN	PINARD	GET INTERLACE ADRS
04252	0 75 25007	LDB	#010	CORRECT TEST WORD
04253	0 71 00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04254	0 76 24516	LDA	PINARD	
04255	0 70 25007	SKM	#010	TEST BIT IN ERROR
04256	0 43 00460	BRM	ERRRR	
04257	4 20 22754	NBP	*1008A,4	BIT ERROR MESSAGE
04260	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
04261	0 43 00434	BRM	END	EXIT TEST

*
* F19B09 TEST ADDRESS BIT ZA10 OR C19
*

04262	0 43 00430	BRM	OBJECT	
04263	0 43 07143	BRM	CLRCHN	CLEAR CHANNEL
04264	0 06 12000	EBMM	C12000	ALERT TO PIN CHANNEL
04265	0 33 24516	PINN	PINARD	GET LAST RESULT
04266	0 76 24516	LDA	PINARD	GET RESULT
04267	0 72 25010	SKA	#020	SKIP IF BIT RESET
04270	0 43 00460	BRM	ERRRR	
04271	0 20 22763	NBP	*1009A	BIT ERROR MESSAGE
04272	0 06 10000	EBMM*	C10000	ALERT CHANNEL TO POT
04273	0 06 14200	EBMM	C14200	SET HI BITS
04274	0 13 25010	PSTT	#020	
04275	0 06 12000	EBMM	C12000	ALERT CHANNEL TO PIN
04276	0 33 24516	PINN	PINARD	GET INTERLACE ADRS
04277	0 75 25010	LDB	#020	CORRECT TEST WORD
04300	0 71 00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04301	0 76 24516	LDA	PINARD	
04302	0 70 25010	SKM	#020	TEST BIT IN ERROR
04303	0 43 00460	BRM	ERRRR	
04304	4 20 22763	NBP	*1009A,4	BIT ERROR MESSAGE
04305	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
04306	0 43 00434	BRM	END	EXIT TEST

*
*
* F10B10 TEST ADDRESS BIT 2A09 OR C18
*

04307	0 43 00430	BRM	OBJECT	
04310	0 43 00440	BRM	RETURN	
04311	0 20 07150	NBP	XTRA1	
04312	0 43 07143	BRM	CLRCHN	CLEAR CHANNEL
04313	0 06 12000	EBMM	012000	ALERT TO PIN CHANNEL
04314	0 33 24516	PINN	PINWRD	GET LAST RESULT
04315	0 76 24516	LDA	PINWRD	GET RESULT
04316	0 72 25011	SKA	=040	SKIP IF BIT RESET
04317	0 43 00460	BRM	ERRRR	
04320	0 20 22772	NBP	*1010A	BIT ERROR MESSAGE
04321	0 06*10000	EBMM*	010000	ALERT CHANNEL TO POT
04322	0 06 14200	EBMM	014200	CLEAR HI BITS
04323	0 13 25011	PBTT	=040	
04324	0 06 12000	EBMM	012000	ALERT CHANNEL TO PIN
04325	0 33 24516	PINN	PINWRD	GET INTERLACE ADRS
04326	0 75 25011	LDB	=040	CORRECT TEST WORD
04327	0 71 00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04330	0 76 24516	LDA	PINWRD	
04331	0 70 25011	SKM	=040	TEST BIT IN ERROR
04332	0 43 00460	BRM	ERRRR	
04333	4 20 22772	NBP	*1010A,4	BIT ERROR MESSAGE
04334	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
04335	0 43 00434	BRM	END	EXIT TEST

*
*
* F10B11 TEST ADDRESS BIT 2A08 OR C17
*

04336	0 43 00430	BRM	OBJECT	
04337	0 43 00440	BRM	RETURN	
04340	0 20 07150	NBP	XTRA1	
04341	0 43 07143	BRM	CLRCHN	CLEAR CHANNEL
04342	0 06 12000	EBMM	012000	ALERT TO PIN CHANNEL
04343	0 33 24516	PINN	PINWRD	GET LAST RESULT
04344	0 76 24516	LDA	PINWRD	GET RESULT
04345	0 72 25012	SKA	=0100	SKIP IF BIT RESET
04346	0 43 00460	BRM	ERRRR	
04347	0 20 23001	NBP	*1011A	BIT ERROR MESSAGE
04350	0 06*10000	EBMM*	010000	ALERT CHANNEL TO POT
04351	0 06 14200	EBMM	014200	SET HI BITS
04352	0 13 25012	PBTT	=0100	
04353	0 06 12000	EBMM	012000	ALERT CHANNEL TO PIN
04354	0 33 24516	PINN	PINWRD	GET INTERLACE ADRS
04355	0 75 25012	LDB	=0100	CORRECT TEST WORD
04356	0 71 00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04357	0 76 24516	LDA	PINWRD	
04360	0 70 25012	SKM	=0100	TEST BIT IN ERROR
04361	0 43 00460	BRM	ERRRR	
04362	4 20 23001	NBP	*1011A,4	BIT ERROR MESSAGE
04363	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
04364	0 43 00434	BRM	END	EXIT TEST

*
* F10B12 TEST ADDRESS BIT ZA07 OR C16
*

04365	0	43	00430	BRM	OBJECT	
04366	0	43	00440	BRM	RETURN	
04367	0	20	07150	NBP	XTRAI	
04370	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04371	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04372	0	33	24516	PINN	PINARD	GET LAST RESULT
04373	0	76	24516	LDA	PINARD	GET RESULT
04374	0	72	25013	SKA	#0200	SKIP IF BIT RESET
04375	0	43	00460	BRM	ERRBR	
04376	0	20	23010	NBP	M1012A	BIT ERROR MESSAGE
04377	0	06	10000	EBMM	010000	ALERT CHANNEL TO PBT
04400	0	06	14200	EBMM	014200	SET HI BITS
04401	0	13	25013	PBT	#0200	
04402	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04403	0	33	24516	PINN	PINARD	GET INTERLACE ADRS
04404	0	75	25013	LDB	#0200	CORRECT TEST WORD
04405	0	71	00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04406	0	76	24516	LDA	PINARD	
04407	0	70	25013	SKM	#0200	TEST BIT IN ERROR
04410	0	43	00460	BRM	ERRBR	
04411	4	20	23010	NBP	M1012A,4	BIT ERROR MESSAGE
04412	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04413	0	43	00434	BRM	END	EXIT TEST

*
* F10B13 TEST ADDRESS BIT ZA06 OR C15
*

04414	0	43	00430	BRM	OBJECT	
04415	0	43	00440	BRM	RETURN	
04416	0	20	07150	NBP	XTRAI	
04417	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04420	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04421	0	33	24516	PINN	PINARD	GET LAST RESULT
04422	0	76	24516	LDA	PINARD	GET RESULT
04423	0	72	25014	SKA	#0400	SKIP IF BIT RESET
04424	0	43	00460	BRM	ERRBR	
04425	0	20	23017	NBP	M1013A	BIT ERROR MESSAGE
04426	0	06	10000	EBMM	010000	ALERT CHANNEL TO PBT
04427	0	06	14200	EBMM	014200	SET HI BITS
04430	0	13	25014	PBT	#0400	
04431	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04432	0	33	24516	PINN	PINARD	GET INTERLACE ADRS
04433	0	75	25014	LDB	#0400	CORRECT TEST WORD
04434	0	71	00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04435	0	76	24516	LDA	PINARD	
04436	0	70	25014	SKM	#0400	TEST BIT IN ERROR
04437	0	43	00460	BRM	ERRBR	
04440	4	20	23017	NBP	M1013A,4	BIT ERROR MESSAGE
04441	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04442	0	43	00434	BRM	END	EXIT TEST

*
* F10B14 TEST ADDRESS BIT ZA05 OR C14
*

04443	0	43	00430	BRM	OBJECT	
04444	0	43	00440	BRM	RETURN	
04445	0	20	07150	NBP	XTRA1	
04446	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04447	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04450	0	33	24516	PINN	PINWRD	GET LAST RESULT
04451	0	76	24516	LDA	PINWRD	GET RESULT
04452	0	72	25-15	SKA	=01000	SKIP IF BIT RESET
04453	0	43	00460	BRM	ERROR	
04454	0	20	23-26	NBP	M1014A	BIT ERROR MESSAGE
04455	0	06	12000	EBMM*	010000	ALERT CHANNEL TO POT
04456	0	13	25-15	PBTT	014200	SET HI BITS
04457	0	06	12000	EBMM	012000	
04460	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04461	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04462	0	76	24516	LDB	=01000	CORRECT TEST WORD
04463	0	71	00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04464	0	76	24516	LDA	PINWRD	
04465	0	70	25-15	SK*	=01000	TEST BIT IN ERROR
04466	0	43	00460	BRM	ERROR	
04467	4	20	23-26	NBP	M1014A,4	BIT ERROR MESSAGE
04470	2	20	23-26	NBP	M2013B,2	HEADING AND REGISTERS
04471	0	43	00434	BRM	END	EXIT TEST

*
* F10B15 TEST ADDRESS BIT ZA04 OR C13
*

04472	0	43	00430	BRM	OBJECT	
04473	0	43	00440	BRM	RETURN	
04474	0	20	07150	NBP	XTRA1	
04475	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04476	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04477	0	33	24516	PINN	PINWRD	GET LAST RESULT
04500	0	76	24516	LDA	PINWRD	GET RESULT
04501	0	72	25-16	SKA	=02000	SKIP IF BIT RESET
04502	0	43	00460	BRM	ERROR	
04503	0	20	23-26	NBP	M1015A	BIT ERROR MESSAGE
04504	0	06	12000	EBMM*	010000	ALERT CHANNEL TO POT
04505	0	13	25-16	PBTT	014200	SET HI BITS
04506	0	13	25-16	PBTT	=02000	
04507	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04510	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04511	0	76	24516	LDB	=02000	CORRECT TEST WORD
04512	0	71	00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04513	0	76	24516	LDA	PINWRD	
04514	0	70	25-16	SKM	=02000	TEST BIT IN ERROR
04515	0	43	00460	BRM	ERROR	
04516	4	20	23-26	NBP	M1015A,4	BIT ERROR MESSAGE
04517	2	20	23-26	NBP	M2013B,2	HEADING AND REGISTERS
04520	0	43	00434	BRM	END	EXIT TEST

*
* F19B16 TEST ADDRESS BIT ZA03 OR C12
*

04521	0	43	00430	BRM	OBJECT	
04522	0	43	00440	BRM	RETURN	
04523	0	20	07150	NBP	XTRA1	
04524	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04525	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04526	0	33	24516	PINN	PINWRD	GET LAST RESULT
04527	0	76	24516	LDA	PINWRD	GET RESULT
04530	0	72	25017	SKA	#04000	SKIP IF BIT RESET
04531	0	43	00460	BRM	ERR0R	
04532	0	20	23044	NBP	M1016A	BIT ERROR MESSAGE
04533	0	06	*10000	EBMM	010000	ALERT CHANNEL TO P0T
04534	0	06	14200	EBMM	014200	SET HI BITS
04535	0	13	25017	P0TT	#04000	
04536	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04537	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04540	0	75	25017	LDB	#04000	CORRECT TEST WORD
04541	0	71	00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04542	0	76	24516	LDA	PINWRD	
04543	0	70	25017	SKM	#04000	TEST BIT IN ERROR
04544	0	43	00460	BRM	ERR0R	
04545	4	20	23044	NBP	M1016A,4	BIT ERROR MESSAGE
04546	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04547	0	43	00434	BRM	END	EXIT TEST

*
* F19B17 TEST ADDRESS BIT ZA02 OR C11
*

04550	0	43	00430	BRM	OBJECT	
04551	0	43	00440	BRM	RETURN	
04552	0	20	07150	NBP	XTRA1	
04553	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04554	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04555	0	33	24516	PINN	PINWRD	GET LAST RESULT
04556	0	76	24516	LDA	PINWRD	GET RESULT
04557	0	72	25020	SKA	#010000	SKIP IF BIT RESET
04560	0	43	00460	BRM	ERR0R	
04561	0	20	23054	NBP	M1017A	BIT ERROR MESSAGE
04562	0	06	*10000	EBMM	010000	ALERT CHANNEL TO P0T
04563	0	06	14200	EBMM	014200	SET HI BITS
04564	0	13	25020	P0TT	#010000	
04565	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04566	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04567	0	75	25020	LDB	#010000	CORRECT TEST WORD
04570	0	71	00430	LDX	OBJECT	GET ADRS OF OBJECT TEST
04571	0	76	24516	LDA	PINWRD	
04572	0	70	25020	SKM	#010000	TEST BIT IN ERROR
04573	0	43	00460	BRM	ERR0R	
04574	4	20	23054	NBP	M1017A,4	BIT ERROR MESSAGE
04575	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04576	0	43	00434	BRM	END	EXIT TEST

*
* F19B18 TEST ADDRESS BIT ZA01 OR C10
*

04577	0	43	00430	BRM	9BJECT	
04600	0	43	00440	BRM	RETURN	
04601	0	20	07150	NBP	XTRA1	
04602	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04603	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04604	0	33	24516	PINN	PINWRD	GET LAST RESULT
04605	0	76	24516	LDA	PINWRD	GET RESULT
04606	0	72	25021	SKA	#020000	SKIP IF BIT RESET
04607	0	43	00460	BRM	ERRBR	
04610	0	20	23064	NBP	M1018A	BIT ERROR MESSAGE
04611	0	06	10000	EBMM*	010000	ALERT CHANNEL TO POT
04612	0	06	14200	EBMM	014200	SET HI BITS
04613	0	13	25021	PBT	#020000	
04614	0	06	12000	EBMM	012000	ALERT CHANNEL TO PIN
04615	0	33	24516	PINN	PINWRD	GET INTERLACE ADRS
04616	0	75	25021	LDB	#020000	CORRECT TEST WORD
04617	0	71	00430	LDX	9BJECT	GET ADRS OF OBJECT TEST
04620	0	76	24516	LDA	PINWRD	
04621	0	70	25021	SKV	#020000	TEST BIT IN ERROR
04622	0	43	00460	BRM	ERRBR	
04623	4	20	23064	NBP	M1018A,4	BIT ERROR MESSAGE
04624	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04625	0	43	00434	BRM	END	EXIT TEST

*
* F19B19 TEST ADDRESS BIT ZA0 OR C18
*

04626	0	43	00430	BRM	9BJECT	
04627	0	43	00440	BRM	RETURN	
04630	0	20	07150	NBP	XTRA1	
04631	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04632	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04633	0	33	24516	PINN	PINWRD	GET LAST RESULT
04634	0	76	24516	LDA	PINWRD	GET RESULT
04635	0	72	25022	SKA	#040000	SKIP IF BIT RESET
04636	0	43	00460	BRM	ERRBR	
04637	0	20	23074	NBP	M1019A	ERROR MESSAGE FOR BIT
04640	0	06	10000	EBMM*	010000	ALERT CHANNEL
04641	0	06	14240	EBMM	014240	C18
04642	0	13	24777	PBT	#0	
04643	0	06	12000	EBMM	012000	ALERT TO PIN
04644	0	33	24516	PINN	PINWRD	
04645	0	75	25022	LDB	#040000	
04646	0	71	00430	LDX	9BJECT	
04647	0	76	24516	LDA	PINWRD	
04650	0	70	25022	SKM	#040000	
04651	0	43	00460	BRM	ERRBR	
04652	4	20	23074	NBP	M1019A,4	BIT ERROR MESSAGE
04653	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04654	0	43	00434	BRM	END	

*
* F10B20 TEST ADDRESS BIT ZA00 OR C17
*

04655	0	43	00430	BRM	OBJECT	
04656	0	43	00440	BRM	RETURN	
04657	0	20	07150	NBP	XTRA1	
04660	0	43	07143	BRM	CLRCHN	CLEAR CHANNEL
04661	0	06	12000	EBMM	012000	ALERT TO PIN CHANNEL
04662	0	33	24516	PINN	PINWRD	GET LAST RESULT
04663	0	76	24516	LDA	PINWRD	
04664	0	72	25023	SKA	#0100000	SKIP IF BIT RESET
04665	0	43	00460	BRM	ERRBR	
04666	0	20	23105	NBP	M1020A	BIT ERROR MESSAGE
04667	0	06	10000	EBMM	010000	
04670	0	06	14300	EBMM	014300	C17
04671	0	13	24777	P8TT	#0	
04672	0	06	12000	EBMM	012000	ALERT TO PIN
04673	0	33	24516	PINN	PINWRD	
04674	0	75	25023	LDB	#0100000	
04675	0	71	00430	LDX	OBJECT	
04676	0	76	24516	LDA	PINWRD	
04677	0	70	25023	SKM	#0100000	
04700	0	43	00460	BRM	ERRBR	
04701	*	20	23105	NBP	M1020A,4	BIT ERROR MESSAGE
04702	*	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
04703	0	43	00434	BRM	END	

*
* F10B21 TEST WORD COUNT BIT ZC14 OR C09
*

04704	0	43	00430	BRM	OBJECT	
04705	0	43	00440	BRM	RETURN	INTRUPT LINK
04706	0	20	07150	NBP	XTRA1	
04707	0	06	10000	EBMM	010000	ALERT CHANNEL TO P8T
04710	0	06	14200	EBMM	014200	SET HI BITS
04711	0	13	25022	P8TT	#040000	
04712	0	40	12000	SKSS	012000	TEST FOR ZERO COUNT
04713	0	01	04716	BRU	F1021A	
04714	0	43	00460	BRM	ERRBR	
04715	0	20	23117	NBP	M1023A	BIT ERROR MESSAGE
04716	0	43	00434	F1021A BRM	END	EXIT TEST

*
* F10B22 TEST WORD COUNT BIT ZC13 OR C08
*

04717	0	43	00430	BRM	OBJECT	
04720	0	43	00440	BRM	RETURN	INTRUPT LINK
04721	0	20	07150	NBP	XTRA1	
04722	0	06	10000	EBMM	010000	ALERT CHANNEL TO P8T
04723	0	06	14200	EBMM	014200	SET HI BITS
04724	0	13	25023	P8TT	#0100000	
04725	0	40	12000	SKSS	012000	TEST FOR ZERO COUNT
04726	0	01	04731	BRU	F1022A	
04727	0	43	00460	BRM	ERRBR	
04730	0	20	23126	NBP	M1024A	BIT ERROR MESSAGE
04731	0	43	00434	F1022A BRM	END	EXIT TEST

*
* F10B23 TEST WORD COUNT BIT ZC12 OR C07
*

04732	0	43	00430	BRM	OBJECT	
04733	0	43	00440	BRM	RETURN	INTRUPT LINK
04734	0	20	07150	NBP	XTRA1	
04735	0	06	*10000	EBMM*	010000	ALERT CHANNEL TO P01
04736	0	06	14200	EBMM	014200	SET HI BITS
04737	0	13	25024	P0TT	*02000000	
04740	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
04741	0	01	04744	BRU	F1023A	
04742	0	43	00460	BRM	ERR0R	
04743	0	20	23135	NBP	*1025A	BIT ERROR MESSAGE
04744	0	43	00434	F1023A BRM	END	EXIT TEST

*
* F10B24 TEST WORD COUNT BIT ZC11 OR C06
*

04745	0	43	00430	BRM	OBJECT	
04746	0	43	00440	BRM	RETURN	INTRUPT LINK
04747	0	20	07150	NBP	XTRA1	
04750	0	06	*10000	EBMM*	010000	ALERT CHANNEL TO P01
04751	0	06	14200	EBMM	014200	SET HI BITS
04752	0	13	25025	P0TT	*04000000	
04753	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
04754	0	01	04757	BRU	F1024A	
04755	0	43	00460	BRM	ERR0R	
04756	0	20	23144	NBP	*1026A	BIT ERROR MESSAGE
04757	0	43	00434	F1024A BRM	END	EXIT TEST

*
* F10B25 TEST WORD COUNT BIT ZC10 OR C05
*

04760	0	43	00430	BRM	OBJECT	
04761	0	43	00440	BRM	RETURN	INTRUPT LINK
04762	0	20	07150	NBP	XTRA1	
04763	0	06	*10000	EBMM*	010000	ALERT CHANNEL TO P01
04764	0	06	14200	EBMM	014200	SET HI BITS
04765	0	13	25024	P0TT	*01000000	
04766	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
04767	0	01	04772	BRU	F1025A	
04770	0	43	00460	BRM	ERR0R	
04771	0	20	23153	NBP	*1027A	BIT ERROR MESSAGE
04772	0	43	00434	F1025A BRM	END	EXIT TEST

*
* F10B26 TEST WORD COUNT BIT ZC09 OR C04
*

04773	0	43	00430	BRM	OBJECT	
04774	0	43	00440	BRM	RETURN	INTRUPT LINK
04775	0	20	07150	NBP	XTRA1	
04776	0	06	*10000	EBMM*	010000	ALERT CHANNEL TO P01
04777	0	06	14200	EBMM	014200	SET HI BITS
05000	0	13	25027	P0TT	*02000000	
05001	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
05002	0	01	05005	BRU	F1026A	
05003	0	43	00460	BRM	ERR0R	
05004	0	20	23162	NBP	*1028A	BIT ERROR MESSAGE
05005	0	43	00434	F1026A BRM	END	EXIT TEST

*
* F10B27 TEST WORD COUNT BIT ZC08 OR C03
*

05006	0	43	00430	BRM	OBJECT	
05007	0	43	00440	BRM	RETURN	INTRUPT LINK
05010	0	20	07150	NBP	XTRA1	
05011	0	06	*10000	EGMM*	010000	ALERT CHANNEL TO PBT
05012	0	06	14200	EGMM	014200	SET HI BITS
05013	0	13	25230	PBT	*04000000	
05014	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
05015	0	01	05420	BRU	F1027A	
05016	0	43	00460	BRM	ERROR	
05017	0	20	23171	NBP	*1029A	BIT ERROR MESSAGE
05020	0	43	00434	F1027A BRM	END	EXIT TEST

*
* F10B28 TEST WORD COUNT BIT ZC07 OR C02
*

05021	0	43	00430	BRM	OBJECT	
05022	0	43	00440	BRM	RETURN	INTRUPT LINK
05023	0	20	07150	NBP	XTRA1	
05024	0	06	*10000	EGMM*	010000	ALERT CHANNEL TO PBT
05025	0	06	14200	EGMM	014200	SET HI BITS
05026	0	13	25231	PBT	*010000000	
05027	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
05030	0	01	05033	BRU	F1028A	
05031	0	43	00460	BRM	ERROR	
05032	0	20	23200	NBP	*1030A	BIT ERROR MESSAGE
05033	0	43	00434	F1028A BRM	END	EXIT TEST

*
* F10B29 TEST WORD COUNT BIT ZC06 OR C01
*

05034	0	43	00430	BRM	OBJECT	
05035	0	43	00440	BRM	RETURN	INTRUPT LINK
05036	0	20	07150	NBP	XTRA1	
05037	0	06	*10000	EGMM*	010000	ALERT CHANNEL TO PBT
05040	0	06	14200	EGMM	014200	SET HI BITS
05041	0	13	25232	PBT	*020000000	
05042	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
05043	0	01	05446	BRU	F1029A	
05044	0	43	00460	BRM	ERROR	
05045	0	20	23207	NBP	*1031A	BIT ERROR MESSAGE
05046	0	43	00434	F1029A BRM	END	EXIT TEST

*
* F10B30 TEST WORD COUNT BIT ZC05 OR C00
*

05047	0	43	00430	BRM	OBJECT	
05050	0	43	00440	BRM	RETURN	INTRUPT LINK
05051	0	20	07150	NBP	XTRA1	
05052	0	06	*10000	EGMM*	010000	ALERT CHANNEL TO PBT
05053	0	06	14200	EGMM	014200	SET HI BITS
05054	0	13	25233	PBT	*040000000	
05055	0	40	*12000	SKSS*	012000	TEST FOR ZERO COUNT
05056	0	01	05061	BRU	F1030A	
05057	0	43	00460	BRM	ERROR	
05060	0	20	23216	NBP	*1032A	BIT ERROR MESSAGE
05061	0	43	00434	F1030A BRM	END	EXIT TEST

*
* F10B33 TEST WORD COUNT BIT ZC04 OR C23
*

05062	0	43	00430	BRM	OBJECT	
05063	0	43	00440	BRM	RETURN	
05064	0	20	07150	NBP	XTRA1	
05065	0	06	10000	EBMM*	010000	ALET CHANNEL
05066	0	06	10201	EBMM	010201	ZC04 OR C23
05067	0	13	24777	P8TT	=0	
05070	0	40	12000	SKSS*	012000	
05071	0	01	05074	BRU	F1033A	
05072	0	43	00460	BRM	ERR8R	
05073	0	20	23225	NBP	M1033A	
05074	0	43	00434	F1033A BRM	END	

*
* F10B34 TEST WORD COUNT BIT ZC03 OR C22
*

05075	0	43	00430	BRM	OBJECT	
05076	0	43	00440	BRM	RETURN	
05077	0	20	07150	NBP	XTRA1	
05100	0	06	10000	EBMM*	010000	ALET CHANNEL
05101	0	06	10202	EBMM	010202	ZC03 OR C22
05102	0	13	24777	P8TT	=0	
05103	0	40	12000	SKSS*	012000	
05104	0	01	05107	BRU	F1034A	
05105	0	43	00460	BRM	ERR8R	
05106	0	20	23235	NBP	M1034A	
05107	0	43	00434	F1034A BRM	END	

*
* F10B35 TEST WORD COUNT BIT ZC02 OR C21
*

05110	0	43	00430	BRM	OBJECT	
05111	0	43	00440	BRM	RETURN	
05112	0	20	07150	NBP	XTRA1	
05113	0	06	10000	EBMM*	010000	ALET CHANNEL
05114	0	06	10204	EBMM	010204	ZC02 OR C21
05115	0	13	24777	P8TT	=0	
05116	0	40	12000	SKSS*	012000	
05117	0	01	05122	BRU	F1035A	
05120	0	43	00460	BRM	ERR8R	
05121	0	20	23245	NBP	M1035A	
05122	0	43	00434	F1035A BRM	END	

*
* F10B36 TEST WORD COUNT BIT ZC01 OR C20
*

05123	0	43	00430	BRM	OBJECT	
05124	0	43	00440	BRM	RETURN	
05125	0	20	07150	NBP	XTRA1	
05126	0	06	10000	EBMM*	010000	ALET CHANNEL
05127	0	06	10210	EBMM	010210	ZC01 OR C20
05130	0	13	24777	P8TT	=0	
05131	0	40	12000	SKSS*	012000	
05132	0	01	05135	BRU	F1036A	
05133	0	43	00460	BRM	ERR8R	
05134	0	20	23255	NBP	M1036A	
05135	0	43	00434	F1036A BRM	END	

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*
* F10B37 TEST WORD COUNT BIT ZCO OR C19
*

05136	0	43	00430	BRM	OBJECT	
05137	0	43	00440	BRM	RETURN	
05140	0	20	07150	NOP	XTRA1	
05141	0	06	10000	EBMM*	010000	ALET CHANNEL
05142	0	06	10220	EBMM	010220	ZCO OR C19
05143	0	13	24777	P0TT	#0	
05144	0	40	12000	SKSS*	012000	
05145	0	01	05150	BRU	F1037A	
05146	0	43	00460	BRM	ERROR	
05147	0	20	23265	NOP	M1037A	
05150	0	43	00434	F1037A BRM	END	

*
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*

* F10B38 INTERLACE CARRY TEST ZA14 TO ZA13
*

05151	0	43	00430	BRM	OBJECT	
05152	0	43	00440	BRM	RETURN	
05153	0	20	07150	NOP	XTRA1	
05154	0	76	25004	LDA	#1	ZA14
05155	0	43	05332	BRM	INKMNT	
05156	0	43	00460	BRM	ERROR	
05157	0	20	22727	NOP	M1005A	LOGIC IN ERROR
05160	0	43	00434	BRM	END	

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*
* F10B39 INTERLACE CARRY TEST ZA13 TO ZA12
*

05161	0	43	00430	BRM	OBJECT	
05162	0	43	00440	BRM	RETURN	
05163	0	20	07150	NOP	XTRA1	
05164	0	76	25034	LDA	#03	ZA13
05165	0	43	05332	BRM	INKMNT	
05166	0	43	00460	BRM	ERROR	
05167	0	20	22736	NOP	M1006A	LOGIC IN ERROR
05170	0	43	00434	BRM	END	

*
*
* F10B40 INTERLACE CARRY TEST ZA12 TO ZA11
*

05171	0	43	00430	BRM	OBJECT	
05172	0	43	00440	BRM	RETURN	
05173	0	20	07150	NBP	XTRA1	
05174	0	76	25035	LDA	#07	ZA12
05175	0	43	05332	BRM	INKMNT	
05176	0	43	00460	BRM	ERRBR	
05177	0	20	22745	NBP	M1007A	LOGIC IN ERRBR
05200	0	43	00434	BRM	END	

*
*
* F10B41 INTERLACE CARRY TEST ZA11 TO ZA10
*

05201	0	43	00430	BRM	OBJECT	
05202	0	43	00440	BRM	RETURN	
05203	0	20	07150	NBP	XTRA1	
05204	0	76	25036	LDA	#017	ZA11
05205	0	43	05332	BRM	INKMNT	
05206	0	43	00460	BRM	ERRBR	
05207	0	20	22754	NBP	M1008A	LOGIC IN ERRBR
05210	0	43	00434	BRM	END	

*
*
* F10B42 INTERLACE CARRY TEST ZA10 TO ZA09
*

05211	0	43	00430	BRM	OBJECT	
05212	0	43	00440	BRM	RETURN	
05213	0	20	07150	NBP	XTRA1	
05214	0	76	25037	LDA	#037	ZA10
05215	0	43	05332	BRM	INKMNT	
05216	0	43	00460	BRM	ERRBR	
05217	0	20	22763	NBP	M1009A	LOGIC IN ERRBR
05220	0	43	00434	BRM	END	

*
*
* F10B43 INTERLACE CARRY TEST ZA09 TO ZA08
*

05221	0	43	00430	BRM	OBJECT	
05222	0	43	00440	BRM	RETURN	
05223	0	20	07150	NBP	XTRA1	
05224	0	76	25040	LDA	#077	ZA09
05225	0	43	05332	BRM	INKMNT	
05226	0	43	00460	BRM	ERRBR	
05227	0	20	22772	NBP	M1010A	LOGIC IN ERRBR
05230	0	43	00434	BRM	END	

*
* F10B44 INTERLACE CARRY TEST ZA08 TO ZA07
*

05231	0	43	00430	BRM	OBJECT	
05232	0	43	00440	BRM	RETURN	
05233	0	20	07150	NOP	XTRA1	
05234	0	76	25041	LDA	#0177	ZA08
05235	0	43	05332	BRM	INKMNT	
05236	0	43	00460	BRM	ERROR	
05237	0	20	23001	NOP	M1011A	LOGIC IN ERROR
05240	0	43	00434	BRM	END	

*
* F10B45 INTERLACE CARRY TEST ZA07 TO ZA06
*

05241	0	43	00430	BRM	OBJECT	
05242	0	43	00440	BRM	RETURN	
05243	0	20	07150	NOP	XTRA1	
05244	0	76	25042	LDA	#0377	ZA07
05245	0	43	05332	BRM	INKMNT	
05246	0	43	00460	BRM	ERROR	
05247	0	20	23010	NOP	M1012A	LOGIC IN ERROR
05250	0	43	00434	BRM	END	

*
* F10B46 INTERLACE CARRY TEST ZA06 TO ZA05
*

05251	0	43	00430	BRM	OBJECT	
05252	0	43	00440	BRM	RETURN	
05253	0	20	07150	NOP	XTRA1	
05254	0	76	25043	LDA	#0777	ZA06
05255	0	43	05332	BRM	INKMNT	
05256	0	43	00460	BRM	ERROR	
05257	0	20	23017	NOP	M1013A	LOGIC IN ERROR
05260	0	43	00434	BRM	END	

*
* F10B47 INTERLACE CARRY TEST ZA05 TO ZA04
*

05261	0	43	00430	BRM	OBJECT	
05262	0	43	00440	BRM	RETURN	
05263	0	20	07150	NOP	XTRA1	
05264	0	76	25044	LDA	#01777	ZA05
05265	0	43	05332	BRM	INKMNT	
05266	0	43	00460	BRM	ERROR	
05267	0	20	23026	NOP	M1014A	LOGIC IN ERROR
05270	0	43	00434	BRM	END	

*
* F19848 INTERLACE CARRY TEST ZA04 TO ZA03
*

05271	0	43	00430	BRM	OBJECT	
05272	0	43	00440	BRM	RETURN	
05273	0	20	07150	NBP	XTRA1	
05274	0	76	05045	LDA	#03777	ZA04
05275	0	43	05032	BRM	INXMT	
05276	0	43	00460	BRM	ERR0R	
05277	0	20	23035	NBP	#1015A	LOGIC IN ERR0R
05300	0	43	00434	BRM	END	

*
* F19849 INTERLACE CARRY TEST ZA03 TO ZA02
*

05301	0	43	00430	BRM	OBJECT	
05302	0	43	00440	BRM	RETURN	
05303	0	20	07150	NBP	XTRA1	
05304	0	76	05046	LDA	#07777	ZA03
05305	0	43	05032	BRM	INXMT	
05306	0	43	00460	BRM	ERR0R	
05307	0	20	23044	NBP	#1016A	LOGIC IN ERR0R
05310	0	43	00434	BRM	END	

*
* F19950 INTERLACE CARRY TEST ZA02 TO ZA01
*

05311	0	43	00430	BRM	OBJECT	
05312	0	43	00440	BRM	RETURN	
05313	0	20	07150	NBP	XTRA1	
05314	0	76	05047	LDA	#17777	ZA02
05315	0	43	05032	BRM	INXMT	
05316	0	43	00460	BRM	ERR0R	
05317	0	20	23054	NBP	#1017A	LOGIC IN ERR0R
05320	0	43	00434	BRM	END	

*
* F10851 INTERLACE CARRY TEST ZA01 TO ZA0
*

05321	0	43	00430	BRM	OBJECT	
05322	0	43	00440	BRM	RETURN	
05323	0	20	07150	NOP	XTRA1	
05324	0	76	25001	LDA	#37777	ZA01
05325	0	43	05332	BRM	INKMNT	
05326	0	43	00460	BRM	ERROR	
05327	0	20	23764	NOP	M1018A	LOGIC IN ERROR
05330	0	43	00434	BRM	END	
05331	0	01	05356	BRU	END1	
05332	0	00	00000	INKMNT	ZR0	
05333	0	16	25722	MRG	#040000	
05334	0	35	24513	STA	PBTWRD	
05335	0	17	25722	EOR	#040000	
05336	0	55	25004	ADD	#1	
05337	0	06	10000	EBMM*	010000	ALERT CHANNEL
05340	0	06	14200	INKMNT	EBMM*	14200
05341	0	13	24513	PBT	PBTWRD	SET HI BITS
05342	0	06	02740	EBMM*	02040	OUTPUT WITHOUT LEADER, SET W5
05343	0	20	00000	NOP	0	
05344	0	20	00000	NOP	0	DELAY TO ALLOW PIN
05345	0	20	00000	NOP	0	
05346	0	06	12000	EBMM*	012000	ALERT TO PIN
05347	0	33	24513	PIN	PBTWRD	
05350	0	06	00000	EBMM*	0	CLEAR CHANNEL
05351	0	17	24513	EOR	PBTWRD	
05352	0	72	24513	SKA	PBTWRD	
05353	0	51	05332	BRR	INKMNT	
05354	0	61	05332	MIN	INKMNT	
05355	0	51	05332	BRR	INKMNT	
05356	0	20	00000	END1	NOP	0

*
* F10853 DATA CHAIN TEST
*

05357	0	43	00430	BRM	OBJECT	
05360	0	43	00440	BRM	RETURN	
05361	0	20	07150	NOP	XTRA1	
05362	0	76	24777	LDA	#0	TEST CLEAR
05363	0	43	05441	BRM	INKMNT	
05364	0	43	00460	BRM	ERROR	
05365	0	20	23275	NOP	M1038A	LOGIC IN ERROR
05366	0	43	00434	BRM	END	

*
* F10854 DATA CHAIN TEST ZMP3
*

05367	0	43	00430	BRM	OBJECT	
05370	0	43	00440	BRM	RETURN	
05371	0	20	07150	NOP	XTRA1	
05372	0	76	25750	LDA	#04001	ZMP3
05373	0	43	05441	BRM	INKMNT	
05374	0	43	00460	BRM	ERROR	
05375	0	20	23706	NOP	M1039A	LOGIC IN ERROR
05376	0	43	00434	BRM	END	

*
* F10B55 DATA CHAIN TEST ZMP2
*

05377	0	43	00430	BRM	OBJECT	
05400	0	43	00440	BRM	RETURN	
05401	0	20	07150	NBP	XTRA1	
05402	0	76	25051	LDA	#010002	ZMP2
05403	0	43	00441	BRM	INKMNT	
05404	0	43	00460	BRM	ERRBR	
05405	0	20	23313	NBP	*1040A	LOGIC IN ERRBR
05406	0	43	00434	BRM	END	

*
* F10B56 DATA CHAIN TEST ZMP1
*

05407	0	43	00430	BRM	OBJECT	
05410	0	43	00440	BRM	RETURN	
05411	0	20	07150	NBP	XTRA1	
05412	0	76	25052	LDA	#020004	ZMP1
05413	0	43	00441	BRM	INKMNT	
05414	0	43	00460	BRM	ERRBR	
05415	0	20	23320	NBP	*1041A	LOGIC IN ERRBR
05416	0	43	00434	BRM	END	

*
* F10B57 DATA CHAIN TEST ZMPO
*

05417	0	43	00430	BRM	OBJECT	
05420	0	43	00440	BRM	RETURN	
05421	0	20	07150	NBP	XTRA1	
05422	0	76	25053	LDA	#040010	ZMPO
05423	0	43	00441	BRM	INKMNT	
05424	0	43	00460	BRM	ERRBR	
05425	0	20	23325	NBP	*1042A	LOGIC IN ERRBR
05426	0	43	00434	BRM	END	

*
* F10B58 DATA CHAIN TEST ZMPOO
*

05427	0	43	00430	BRM	OBJECT		
05430	0	43	00440	BRM	RETURN		
05431	0	20	07150	NBP	XTRA1		
05432	0	76	25054	LDA	#0100020	ZMPOO	
05433	0	43	05441	BRM	INKMNT		
05434	0	43	00460	BRM	ERRBR		
05435	0	20	23332	NBP	#1043A	LOGIC IN ERROR	
05436	0	43	00434	BRM	END		
05437	0	43	00456	BRM	FDBNE		
05440	0	01	05464	BRU	FUNCF		
05441	0	00	00000	INKMNT	ZR0		
05442	0	35	24513	STA	PBTWRD		
05443	0	06	10000	EBMM	010000	ALERT CHANNEL	
05444	0	06	14200	EBMM	14200	SET HI BITS	
05445	0	13	25055	PBT	#043777		
05446	0	06	11000	EBMM	011000	ALERT DATA CHAIN	
05447	0	13	24513	PBT	PBTWRD		
05450	0	06	02040	EBMM	02040	OUTPUT WITHOUT LEADER, SET W5	
05451	0	20	00000	NBP	0		
05452	0	20	00000	NBP	0	DELAY TO ALLOW PIN	
05453	0	20	00000	NBP	0		
05454	0	06	12000	EBMM	012000	ALERT TO PIN	
05455	0	33	24513	FIN	PBTWRD		
05456	0	06	00000	EBMM	0	CLEAR CHANNEL	
05457	0	75	25056	LDB	#174000		
05460	0	70	24519	SKM	PBTWRD		
05461	0	51	05441	BRR	INKMNT		
05462	0	61	05441	FIN	INKMNT		
05463	0	51	05441	BRR	INKMNT		

*
* FUNCTION 02 RAD PRIMARY TESTS
*

05464	0	43	00424	FUNCF	BRM	FUNCTN	FUNCTION LINK
05465	0	20	20527		NBP	FPT2	FUNCTION TWO PARAMETERS
05466	0	76	05427		LDA	ZER01	ALERT TO PIN FOR FIRST RAD
05467	0	43	07153		BRM	SETPIN	

*
* F29B01 RAD READY TEST
*

05470	0 43 00430	BRM	BBJECT	
05471	0 43 00440	BRM	RETURN	
05472	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05473	0 06 00000	EBMM	0	
05474	0 71 25022	LDX	#40000	WAIT CONSTANT
05475	0 20 00000	NBP	0	
05476	0 40*10026	SKSS*	010026	RAD READY TEST
05477	0 41 05475	BRX	**2	
05500	0 41 05504	BRX	**4	
05501	0 43 00460	BRM	ERRRR	NBP READY ERRBR
05502	0 20 23342	NBP	*2001A	MESSAGE NOT READY
05503	0 01 05427	BRU	F2001B	
05504	0 02 00004	DIR		
05505	0 06 10026	EBMM	010026	ALERT RAD
05506	0 13 24777	PBT	=0	
05507	0 06*10000	EBMM*	010000	ALERT CHANNEL
05510	0 06 14200	EBMM	014200	SET HI BITS
05511	0 13 25007	PBT	#4000000+RL0	SET INTERLACE
05512	0 06 00026	EBMM	02226	RAD SHOULD HANG UP
05513	0 40*10026	SKSS*	010026	READY TEST
05514	0 01 05417	BRU	F2001A	
05515	0 43 00460	BRM	ERRRR	READY ERRBR
05516	0 20 23370	NBP	*2001B	NOT READY ERRBR
05517	0 71 25022	F2001A LDX	#40000	WAIT CONSTANT
05520	0 20 00000	NBP	0	
05521	0 40*10026	SKSS*	010026	READY TEST
05522	0 41 05520	BRX	**2	
05523	0 41 05525	BRX	**2	
05524	0 43 00460	BRM	ERRRR	
05525	0 20 23342	NBP	*2001A	
05526	0 06 00000	EBMM	0	CLEAR CHANNEL

05527 0 43 00430 F2001B BRM END EXIT TEST

*
*
* F20B04 RAD PIN TEST
*
*

05530	0	43	00430	BRM	OBJECT	
05531	0	43	00440	BRM	RETURN	
05532	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05533	0	76	25004	LDA	#000001	
05534	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
05535	0	43	00460	BRM	ERR0R	
05536	4	20	23416	NBP	M2004A,4	ERROR MESSAGE FOR BIT
05537	0	20	23403	NBP	M2004B	
05540	0	43	00434	BRM	END	EXIT TEST

*
*
* F20B05 RAD PIN TEST
*
*

05541	0	43	00430	BRM	OBJECT	
05542	0	43	00440	BRM	RETURN	
05543	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05544	0	76	25005	LDA	#000002	
05545	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
05546	0	43	00460	BRM	ERR0R	
05547	4	20	23424	NBP	M2005A,4	ERROR MESSAGE FOR BIT
05550	0	20	23403	NBP	M2004B	
05551	0	43	00434	BRM	END	EXIT TEST

*
*
* F20B06 RAD PIN TEST
*
*

05552	0	43	00430	BRM	OBJECT	
05553	0	43	00440	BRM	RETURN	
05554	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05555	0	76	25006	LDA	#000004	
05556	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
05557	0	43	00460	BRM	ERR0R	
05560	4	20	23432	NBP	M2006A,4	ERROR MESSAGE FOR BIT
05561	0	20	23403	NBP	M2004B	
05562	0	43	00434	BRM	END	EXIT TEST

*
*
* F20B07 RAD PIN TEST
*
*

05563	0	43	00430	BRM	OBJECT	
05564	0	43	00440	BRM	RETURN	
05565	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05566	0	76	25007	LDA	#000010	
05567	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
05570	0	43	00460	BRM	ERR0R	
05571	4	20	23440	NBP	M2007A,4	ERROR MESSAGE FOR BIT
05572	0	20	23403	NBP	M2004B	
05573	0	43	00434	BRM	END	EXIT TEST

*
* F29808 RAD PIN TEST
*

05574	0 43 00430	BRM	8BJECT	
05575	0 43 00440	BRM	RETURN	
05576	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05577	0 76 25110	LDA	#000020	
05600	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
05601	0 43 00460	BRM	ERRRR	
05602	4 20 23446	NBP	Y2008A,4	ERROR MESSAGE FOR BIT
05603	0 20 23403	NBP	Y2004B	
05604	0 43 00434	BRM	END	EXIT TEST

*
* F29809 RAD PIN TEST
*

05605	0 43 00430	BRM	8BJECT	
05606	0 43 00440	BRM	RETURN	
05607	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
05610	0 76 25111	LDA	#000040	
05611	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
05612	0 43 00460	BRM	ERRRR	
05613	4 20 23464	NBP	Y2009A,4	ERROR MESSAGE FOR BIT
05614	0 20 23403	NBP	Y2004B	
05615	0 43 00434	BRM	END	EXIT TEST
05616	0 58 24806	SKN	JMPTYP	
05617	0 11 05421	BRI	**2	
05620	0 01 05421	BRU*	**1	
05621	0 20 05422	NBP	**1	
05622	0 43 00434	BRM	END	

*
* FUNCTION 02 TEST SECTOR COUNTER
*

05623	0 43 00430	BRM	8BJECT	FIND THE ZERO SECTOR
05624	0 43 00440	BRM	RETURN	
05625	0 20 07150	NBP	XTRA1	
05626	0 71 25122	LDX	#040000	TIME 40 MILLISECONDS
05627	0 06 10226	ZER01	010226	ALERT TO PIN
05630	0 33 24516	PIN*	PIN*RD	
05631	0 76 24516	LDA	PIN*RD	
05632	0 75 25101	LDB	#37777	
05633	0 70 24777	SKM	#0	
05634	0 41 05427	BRX	ZER01	
05635	0 41 05443	BRX	ZER02	
05636	0 75 24777	LDB	#0	
05637	0 71 00430	LDX	8BJECT	
05640	0 43 00460	BRM	ERRRR	
05641	4 20 23411	NBP	Y2013C,4	NO ZERO
05642	0 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
05643	0 43 00434	ZER02	BRM	END

* F20B14 TEST SECTOR ADRS 01

05644	0	43	00430	BRM	OBJECT	
05645	0	43	00440	BRM	RETURN	
05646	0	20	07150	NBP	XTRA1	
05647	0	75	25004	LDB	#001	SECTOR 01
05650	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
05651	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
05652	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05653	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05654	0	43	00434	BRM	END	

* F20B15 TEST SECTOR ADRS 02

05655	0	43	00430	BRM	OBJECT	
05656	0	43	00440	BRM	RETURN	
05657	0	20	07150	NBP	XTRA1	
05660	0	75	25005	LDB	#002	SECTOR 02
05661	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
05662	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
05663	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05664	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05665	0	43	00434	BRM	END	

* F20B16 TEST SECTOR ADRS 03

05666	0	43	00430	BRM	OBJECT	
05667	0	43	00440	BRM	RETURN	
05670	0	20	07150	NBP	XTRA1	
05671	0	75	25004	LDB	#003	SECTOR 03
05672	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
05673	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
05674	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05675	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05676	0	43	00434	BRM	END	

* F20B17 TEST SECTOR ADRS 04

05677	0	43	00430	BRM	OBJECT	
05700	0	43	00440	BRM	RETURN	
05701	0	20	07150	NBP	XTRA1	
05702	0	75	25006	LDB	#004	SECTOR 04
05703	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
05704	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
05705	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05706	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05707	0	43	00434	BRM	END	

*
* F20B18 TEST SECTOR ADRS 05
*

05710	0	43	00430	BRM	OBJECT	
05711	0	43	00440	BRM	RETURN	
05712	0	20	07150	NBP	XTRA1	
05713	0	75	25160	LDB	#005	SECTOR 05
05714	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
05715	0	43	00460	BRM	ERRRR	RETURN IF ERROR OCCURED
05716	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05717	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05720	0	43	00434	BRM	END	

*
* F20B19 TEST SECTOR ADRS 06
*

05721	0	43	00430	BRM	OBJECT	
05722	0	43	00440	BRM	RETURN	
05723	0	20	07150	NBP	XTRA1	
05724	0	75	25161	LDB	#006	SECTOR 06
05725	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
05726	0	43	00460	BRM	ERRRR	RETURN IF ERROR OCCURED
05727	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05730	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05731	0	43	00434	BRM	END	

*
* F20B20 TEST SECTOR ADRS 07
*

05732	0	43	00430	BRM	OBJECT	
05733	0	43	00440	BRM	RETURN	
05734	0	20	07150	NBP	XTRA1	
05735	0	75	25135	LDB	#007	SECTOR 07
05736	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
05737	0	43	00460	BRM	ERRRR	RETURN IF ERROR OCCURED
05740	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05741	2	20	23475	NBP	M2013B,2	HEADING AND REGISTER
05742	0	43	00434	BRM	END	

*
* F20B21 TEST SECTOR ADRS 10
*

05743	0	43	00430	BRM	OBJECT	
05744	0	43	00440	BRM	RETURN	
05745	0	20	07150	NBP	XTRA1	
05746	0	75	25007	LDB	#010	SECTOR 10
05747	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
05750	0	43	00460	BRM	ERRRR	RETURN IF ERROR OCCURED
05751	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
05752	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
05753	0	43	00434	BRM	END	

*
* F20822 TEST SECTOR ADRS 11
*

05754	0	43	00430	BRM	OBJECT	
05755	0	43	00440	BRM	RETURN	
05756	0	20	07150	NBP	XTRA1	
05757	0	75	25762	LDB	#011	SECTOR 11
05760	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
05761	0	43	00460	BRM	ERR0R	RETURN IF ERR0R OCCURED
05762	4	20	23462	NBP	Y2013A,4	LOGIC ERR0R MSG
05763	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
05764	0	43	00434	BRM	END	

*
* F20823 TEST SECTOR ADRS 12
*

05765	0	43	00430	BRM	OBJECT	
05766	0	43	00440	BRM	RETURN	
05767	0	20	07150	NBP	XTRA1	
05770	0	75	25763	LDB	#012	SECTOR 12
05771	0	43	07755A	BRM	PININ	TO PIN IN SECTOR ADRS
05772	0	43	00460	BRM	ERR0R	RETURN IF ERR0R OCCURED
05773	4	20	23462	NBP	Y2013A,4	LOGIC ERR0R MSG
05774	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
05775	0	43	00434	BRM	END	

*
* F20824 TEST SECTOR ADRS 13
*

05776	0	43	00430	BRM	OBJECT	
05777	0	43	00440	BRM	RETURN	
06000	0	20	07150	NBP	XTRA1	
06001	0	75	25764	LDB	#013	SECTOR 13
06002	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
06003	0	43	00460	BRM	ERR0R	RETURN IF ERR0R OCCURED
06004	4	20	23462	NBP	Y2013A,4	LOGIC ERR0R MSG
06005	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
06006	0	43	00434	BRM	END	

*
* F20825 TEST SECTOR ADRS 14
*

06007	0	43	00430	BRM	OBJECT	
06010	0	43	00440	BRM	RETURN	
06011	0	20	07150	NBP	XTRA1	
06012	0	75	25765	LDB	#014	SECTOR 14
06013	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
06014	0	43	00460	BRM	ERR0R	RETURN IF ERR0R OCCURED
06015	4	20	23462	NBP	Y2013A,4	LOGIC ERR0R MSG
06016	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
06017	0	43	00434	BRM	END	

*
* F20326 TEST SECTOR ADRS 15
*

06020	0	43	00430	BRM	OBJECT	
06021	0	43	00440	BRM	RETURN	
06022	0	20	07150	NBP	XTRA1	
06023	0	75	2016A	LDB	#015	SECTOR 15
06024	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06025	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06026	4	20	23460	NBP	M2013A,4	LOGIC ERROR MSG
06027	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06030	0	43	00434	BRM	END	

*
* F20327 TEST SECTOR ADRS 16
*

06031	0	43	00430	BRM	OBJECT	
06032	0	43	00440	BRM	RETURN	
06033	0	20	07150	NBP	XTRA1	
06034	0	75	20167	LDB	#016	SECTOR 16
06035	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06036	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06037	4	20	23460	NBP	M2013A,4	LOGIC ERROR MSG
06040	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06041	0	43	00434	BRM	END	

*
* F20328 TEST SECTOR ADRS 17
*

06042	0	43	00430	BRM	OBJECT	
06043	0	43	00440	BRM	RETURN	
06044	0	20	07150	NBP	XTRA1	
06045	0	75	20136	LDB	#017	SECTOR 17
06046	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06047	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06050	4	20	23460	NBP	M2013A,4	LOGIC ERROR MSG
06051	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06052	0	43	00434	BRM	END	

*
* F20329 TEST SECTOR ADRS 20
*

06053	0	43	00430	BRM	OBJECT	
06054	0	43	00440	BRM	RETURN	
06055	0	20	07150	NBP	XTRA1	
06056	0	75	20110	LDB	#020	SECTOR 20
06057	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06060	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06061	4	20	23460	NBP	M2013A,4	LOGIC ERROR MSG
06062	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06063	0	43	00434	BRM	END	

*
* F29830 TEST SECTOR ADRS 21
*

06064	0	43	00430	BRM	OBJECT	
06065	0	43	00440	BRM	RETURN	
06066	0	20	07150	NBP	XTRA1	
06067	0	75	25770	LDB	#021	SECTOR 21
06070	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
06071	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06072	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06073	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06074	0	43	00434	BRM	END	

*
* F29831 TEST SECTOR ADRS 22
*

06075	0	43	00430	BRM	OBJECT	
06076	0	43	00440	BRM	RETURN	
06077	0	20	07150	NBP	XTRA1	
06100	0	75	25771	LDB	#022	SECTOR 22
06101	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
06102	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06103	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06104	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06105	0	43	00434	BRM	END	

*
* F29832 TEST SECTOR ADRS 23
*

06106	0	43	00430	BRM	OBJECT	
06107	0	43	00440	BRM	RETURN	
06110	0	20	07150	NBP	XTRA1	
06111	0	75	25772	LDB	#023	SECTOR 23
06112	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
06113	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06114	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06115	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06116	0	43	00434	BRM	END	

*
* F29833 TEST SECTOR ADRS 24
*

06117	0	43	00430	BRM	OBJECT	
06120	0	43	00440	BRM	RETURN	
06121	0	20	07150	NBP	XTRA1	
06122	0	75	25773	LDB	#024	SECTOR 24
06123	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
06124	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06125	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06126	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06127	0	43	00434	BRM	END	

*
*
* F2834 TEST SECTOR ADRS 25
*

06130	0 43 07430	BRM	OBJECT	
06131	0 43 07440	BRM	RETURN	
06132	0 20 07150	NBP	XTRA1	
06133	0 75 25074	LDB	#025	SECTOR 25
06134	0 43 07054	BRM	PININ	TO PIN IN SECTOR ADRS
06135	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06136	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06137	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06140	0 43 07434	BRM	END	

*
*
* F2835 TEST SECTOR ADRS 26
*

06141	0 43 07430	BRM	OBJECT	
06142	0 43 07440	BRM	RETURN	
06143	0 20 07150	NBP	XTRA1	
06144	0 75 25075	LDB	#026	SECTOR 26
06145	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06146	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06147	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06150	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06151	0 43 07434	BRM	END	

*
*
* F2836 TEST SECTOR ADRS 27
*

06152	0 43 07430	BRM	OBJECT	
06153	0 43 07440	BRM	RETURN	
06154	0 20 07150	NBP	XTRA1	
06155	0 75 25076	LDB	#027	SECTOR 27
06156	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06157	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06160	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06161	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06162	0 43 07434	BRM	END	

*
*
* F2837 TEST SECTOR ADRS 30
*

06163	0 43 07430	BRM	OBJECT	
06164	0 43 07440	BRM	RETURN	
06165	0 20 07150	NBP	XTRA1	
06166	0 75 25077	LDB	#030	SECTOR 30
06167	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06170	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
06171	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06172	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06173	0 43 07434	BRM	END	

*
*
* F29B38 TEST SECTOR ADRS 31
*

06174	0	43	00430	BRM	OBJECT	
06175	0	43	00440	BRM	RETURN	
06176	0	20	07150	NBP	XTRA1	
06177	0	75	25100	LDB	#031	SECTOR 31
06200	0	43	00456	BRM	PININ	TO PIN IN SECTOR ADRS
06201	0	43	00460	BRM	ERRR	RETURN IF ERROR OCCURED
06202	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06203	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06204	0	43	00434	BRM	END	

*
*
* F29B39 TEST SECTOR ADRS 32
*

06205	0	43	00430	BRM	OBJECT	
06206	0	43	00440	BRM	RETURN	
06207	0	20	07150	NBP	XTRA1	
06210	0	75	25101	LDB	#032	SECTOR 32
06211	0	43	00456	BRM	PININ	TO PIN IN SECTOR ADRS
06212	0	43	00460	BRM	ERRR	RETURN IF ERROR OCCURED
06213	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06214	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06215	0	43	00434	BRM	END	

*
*
* F29B40 TEST SECTOR ADRS 33
*

06216	0	43	00430	BRM	OBJECT	
06217	0	43	00440	BRM	RETURN	
06220	0	20	07150	NBP	XTRA1	
06221	0	75	25102	LDB	#033	SECTOR 33
06222	0	43	00456	BRM	PININ	TO PIN IN SECTOR ADRS
06223	0	43	00460	BRM	ERRR	RETURN IF ERROR OCCURED
06224	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06225	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06226	0	43	00434	BRM	END	

*
*
* F29B41 TEST SECTOR ADRS 34
*

06227	0	43	00430	BRM	OBJECT	
06230	0	43	00440	BRM	RETURN	
06231	0	20	07150	NBP	XTRA1	
06232	0	75	25103	LDB	#034	SECTOR 34
06233	0	43	00456	BRM	PININ	TO PIN IN SECTOR ADRS
06234	0	43	00460	BRM	ERRR	RETURN IF ERROR OCCURED
06235	4	20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06236	2	20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06237	0	43	00434	BRM	END	

*
* F20842 TEST SECTOR ADRS 35
*

06240	0 43 00430	BRM	OBJECT	
06241	0 43 00440	BRM	RETURN	
06242	0 20 07150	NBP	XTRA1	
06243	0 75 25104	LDB	#035	SECTOR 35
06244	0 43 07054	BRM	PININ	TO PIN IN SECTOR ADRS
06245	0 43 07460	BRM	ERRBR	RETURN IF ERROR OCCURED
06246	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06247	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06250	0 43 00434	BRM	END	

*
* F20843 TEST SECTOR ADRS 36
*

06251	0 43 00430	BRM	OBJECT	
06252	0 43 00440	BRM	RETURN	
06253	0 20 07150	NBP	XTRA1	
06254	0 75 25105	LDB	#036	SECTOR 36
06255	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06256	0 43 07460	BRM	ERRBR	RETURN IF ERROR OCCURED
06257	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06260	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06261	0 43 00434	BRM	END	

*
* F20844 TEST SECTOR ADRS 37
*

06262	0 43 00430	BRM	OBJECT	
06263	0 43 00440	BRM	RETURN	
06264	0 20 07150	NBP	XTRA1	
06265	0 75 25037	LDB	#037	SECTOR 37
06266	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06267	0 43 07460	BRM	ERRBR	RETURN IF ERROR OCCURED
06270	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06271	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06272	0 43 00434	BRM	END	

*
* F20845 TEST SECTOR ADRS 40
*

06273	0 43 00430	BRM	OBJECT	
06274	0 43 00440	BRM	RETURN	
06275	0 20 07150	NBP	XTRA1	
06276	0 75 25011	LDB	#040	SECTOR 40
06277	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06300	0 43 07460	BRM	ERRBR	RETURN IF ERROR OCCURED
06301	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
06302	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
06303	0 43 00434	BRM	END	

*
* F20B46 TEST SECTOR ADRS #1
*

06304	0 43 00430	BRM	OBJECT	
06305	0 43 00440	BRM	RETURN	
06306	0 20 07150	NBP	XTRA1	
06307	0 75 25106	LDB	#041	SECTOR 41
06310	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06311	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
06312	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06313	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06314	0 43 00434	BRM	END	

*
* F20B47 TEST SECTOR ADRS #2
*

06315	0 43 00430	BRM	OBJECT	
06316	0 43 00440	BRM	RETURN	
06317	0 20 07150	NBP	XTRA1	
06320	0 75 25107	LDB	#042	SECTOR 42
06321	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06322	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
06323	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06324	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06325	0 43 00434	BRM	END	

*
* F20B48 TEST SECTOR ADRS #3
*

06326	0 43 00430	BRM	OBJECT	
06327	0 43 00440	BRM	RETURN	
06330	0 20 07150	NBP	XTRA1	
06331	0 75 25110	LDB	#043	SECTOR 43
06332	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06333	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
06334	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06335	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06336	0 43 00434	BRM	END	

*
* F20B49 TEST SECTOR ADRS #4
*

06337	0 43 00430	BRM	OBJECT	
06340	0 43 00440	BRM	RETURN	
06341	0 20 07150	NBP	XTRA1	
06342	0 75 25111	LDB	#044	SECTOR 44
06343	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06344	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
06345	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06346	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06347	0 43 00434	BRM	END	

*
* F29B50 TEST SECTOR ADRS 45
*

06350	0 43 07430	BRM	OBJECT	
06351	0 43 07440	BRM	RETURN	
06352	0 20 07150	NBP	XTRA1	
06353	0 75 25110	LDB	#045	SECTOR 45
06354	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06355	0 43 07460	BRM	ERRR	RETURN IF ERROR OCCURED
06356	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06357	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06360	0 43 07434	BRM	END	

*
* F29B51 TEST SECTOR ADRS 46
*

06361	0 43 07430	BRM	OBJECT	
06362	0 43 07440	BRM	RETURN	
06363	0 20 07150	NBP	XTRA1	
06364	0 75 25110	LDB	#046	SECTOR 46
06365	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06366	0 43 07460	BRM	ERRR	RETURN IF ERROR OCCURED
06367	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06370	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06371	0 43 07434	BRM	END	

*
* F29B52 TEST SECTOR ADRS 47
*

06372	0 43 07430	BRM	OBJECT	
06373	0 43 07440	BRM	RETURN	
06374	0 20 07150	NBP	XTRA1	
06375	0 75 25114	LDB	#047	SECTOR 47
06376	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06377	0 43 07460	BRM	ERRR	RETURN IF ERROR OCCURED
06400	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06401	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06402	0 43 07434	BRM	END	

*
* F29B53 TEST SECTOR ADRS 50
*

06403	0 43 07430	BRM	OBJECT	
06404	0 43 07440	BRM	RETURN	
06405	0 20 07150	NBP	XTRA1	
06406	0 75 25116	LDB	#050	SECTOR 50
06407	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06410	0 43 07460	BRM	ERRR	RETURN IF ERROR OCCURED
06411	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
06412	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
06413	0 43 07434	BRM	END	

•
• F20854 TEST SECTOR ADRS 51
•

06414	0	43	00430	BRM	SUBJECT	
06415	0	43	00440	BRM	RETURN	
06416	0	20	07150	NBP	XTRA1	
06417	0	75	25116	LDB	#051	SECTOR 51
06420	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06421	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06422	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
06423	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06424	0	43	00434	BRM	END	

•
• F20855 TEST SECTOR ADRS 52
•

06425	0	43	00430	BRM	SUBJECT	
06426	0	43	00440	BRM	RETURN	
06427	0	20	07150	NBP	XTRA1	
06430	0	75	25117	LDB	#052	SECTOR 52
06431	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06432	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06433	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
06434	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06435	0	43	00434	BRM	END	

•
• F20856 TEST SECTOR ADRS 53
•

06436	0	43	00430	BRM	SUBJECT	
06437	0	43	00440	BRM	RETURN	
06440	0	20	07150	NBP	XTRA1	
06441	0	75	25120	LDB	#053	SECTOR 53
06442	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06443	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06444	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
06445	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06446	0	43	00434	BRM	END	

•
• F20857 TEST SECTOR ADRS 54
•

06447	0	43	00430	BRM	SUBJECT	
06450	0	43	00440	BRM	RETURN	
06451	0	20	07150	NBP	XTRA1	
06452	0	75	25121	LDB	#054	SECTOR 54
06453	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06454	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06455	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
06456	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
06457	0	43	00434	BRM	END	

*
*
* F28B58 TEST SECTOR ADRS 55
*

06460	0 43	00430	BRM	OBJECT	
06461	0 43	00440	BRM	RETURN	
06462	0 20	07150	NBP	XTRAI	
06463	0 75	25122	LDB	#055	SECTOR 55
06464	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06465	0 43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
06466	4 20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06467	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06470	0 43	00434	BRM	END	

*
*
* F28B59 TEST SECTOR ADRS 56
*

06471	0 43	00430	BRM	OBJECT	
06472	0 43	00440	BRM	RETURN	
06473	0 20	07150	NBP	XTRAI	
06474	0 75	25123	LDB	#056	SECTOR 56
06475	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06476	0 43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
06477	4 20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06500	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06501	0 43	00434	BRM	END	

*
*
* F28B60 TEST SECTOR ADRS 57
*

06502	0 43	00430	BRM	OBJECT	
06503	0 43	00440	BRM	RETURN	
06504	0 20	07150	NBP	XTRAI	
06505	0 75	25124	LDB	#057	SECTOR 57
06506	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06507	0 43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
06510	4 20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06511	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06512	0 43	00434	BRM	END	

*
*
* F28B61 TEST SECTOR ADRS 60
*

06513	0 43	00430	BRM	OBJECT	
06514	0 43	00440	BRM	RETURN	
06515	0 20	07150	NBP	XTRAI	
06516	0 75	25125	LDB	#060	SECTOR 60
06517	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06520	0 43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
06521	4 20	23462	NBP	*2013A,4	LOGIC ERROR MSG
06522	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
06523	0 43	00434	BRM	END	

*
* F20B62 TEST SECTOR ADRS 61
*

06524	0	43	00430	BRM	OBJECT	
06525	0	43	00440	BRM	RETURN	
06526	0	20	07150	NBP	XTRA1	
06527	0	75	25126	LDB	#061	SECTOR 61
06530	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06531	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06532	4	20	23462	NBP	Y2013A,4	LOGIC ERROR MSG
06533	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
06534	0	43	00434	BRM	END	

*
* F20B63 TEST SECTOR ADRS 62
*

06535	0	43	00430	BRM	OBJECT	
06536	0	43	00440	BRM	RETURN	
06537	0	20	07150	NBP	XTRA1	
06540	0	75	25127	LDB	#062	SECTOR 62
06541	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06542	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06543	4	20	23462	NBP	Y2013A,4	LOGIC ERROR MSG
06544	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
06545	0	43	00434	BRM	END	

*
* F20B64 TEST SECTOR ADRS 63
*

06546	0	43	00430	BRM	OBJECT	
06547	0	43	00440	BRM	RETURN	
06550	0	20	07150	NBP	XTRA1	
06551	0	75	25130	LDB	#063	SECTOR 63
06552	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06553	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06554	4	20	23462	NBP	Y2013A,4	LOGIC ERROR MSG
06555	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
06556	0	43	00434	BRM	END	

*
* F20B65 TEST SECTOR ADRS 64
*

06557	0	43	00430	BRM	OBJECT	
06560	0	43	00440	BRM	RETURN	
06561	0	20	07150	NBP	XTRA1	
06562	0	75	25203	LDB	#064	SECTOR 64
06563	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
06564	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06565	4	20	23462	NBP	Y2013A,4	LOGIC ERROR MSG
06566	2	20	23475	NBP	Y2013B,2	HEADING AND REGISTERS
06567	0	43	00434	BRM	END	

*
* F20B66 TEST SECTOR ADRS 65
*

06570	0 43 00430	BRM	OBJECT	
06571	0 43 00440	BRM	RETURN	
06572	0 20 07150	NBP	XTRA1	
06573	0 75 25131	LDB	#065	SECTOR 65
06574	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06575	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
06576	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
06577	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
06600	0 43 00434	BRM	END	

*
* F20B67 TEST SECTOR ADRS 66
*

06601	0 43 00430	BRM	OBJECT	
06602	0 43 00440	BRM	RETURN	
06603	0 20 07150	NBP	XTRA1	
06604	0 75 25130	LDB	#066	SECTOR 66
06605	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06606	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
06607	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
06610	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
06611	0 43 00434	BRM	END	

*
* F20B68 TEST SECTOR ADRS 67
*

06612	0 43 00430	BRM	OBJECT	
06613	0 43 00440	BRM	RETURN	
06614	0 20 07150	NBP	XTRA1	
06615	0 75 25133	LDB	#067	SECTOR 67
06616	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADMS
06617	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
06620	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
06621	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
06622	0 43 00434	BRM	END	

*
* F20B69 TEST SECTOR ADRS 70
*

06623	0 43 00430	BRM	OBJECT	
06624	0 43 00440	BRM	RETURN	
06625	0 20 07150	NBP	XTRA1	
06626	0 75 25134	LDB	#070	SECTOR 70
06627	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
06630	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
06631	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
06632	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
06633	0 43 00434	BRM	END	

*
* F20B70 TEST SECTOR ADRS 71
*

06634	0	43	00430	BRM	OBJECT	
06635	0	43	00440	BRM	RETURN	
06636	0	20	07150	NOP	XTRA1	
06637	0	75	25135	LDB	#071	SECTOR 71
06640	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06641	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06642	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
06643	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
06644	0	43	00434	BRM	END	

*
* F20B71 TEST SECTOR ADRS 72
*

06645	0	43	00430	BRM	OBJECT	
06646	0	43	00440	BRM	RETURN	
06647	0	20	07150	NOP	XTRA1	
06650	0	75	25136	LDB	#072	SECTOR 72
06651	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06652	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06653	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
06654	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
06655	0	43	00434	BRM	END	

*
* F20B72 TEST SECTOR ADRS 73
*

06656	0	43	00430	BRM	OBJECT	
06657	0	43	00440	BRM	RETURN	
06660	0	20	07150	NOP	XTRA1	
06661	0	75	25137	LDB	#073	SECTOR 73
06662	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06663	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06664	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
06665	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
06666	0	43	00434	BRM	END	

*
* F20B73 TEST SECTOR ADRS 74
*

06667	0	43	00430	BRM	OBJECT	
06670	0	43	00440	BRM	RETURN	
06671	0	20	07150	NOP	XTRA1	
06672	0	75	25140	LDB	#074	SECTOR 74
06673	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
06674	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
06675	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
06676	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
06677	0	43	00434	BRM	END	

*
* F25B74 TEST SECTOR ADRS 75
*

06700	0 43 00430	BRM	OBJECT	
06701	0 43 00440	BRM	RETURN	
06702	0 20 07150	NBP	XTRA1	
06703	0 75 25141	LDB	#075	SECTOR 75
06704	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06705	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
06706	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
06707	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
06710	0 43 00434	BRM	END	

*
* F25B75 TEST SECTOR ADRS 76
*

06711	0 43 00430	BRM	OBJECT	
06712	0 43 00440	BRM	RETURN	
06713	0 20 07150	NBP	XTRA1	
06714	0 75 25142	LDB	#076	SECTOR 76
06715	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06716	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
06717	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
06720	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
06721	0 43 00434	BRM	END	

*
* F25B76 TEST SECTOR ADRS 77
*

06722	0 43 00430	BRM	OBJECT	
06723	0 43 00440	BRM	RETURN	
06724	0 20 07150	NBP	XTRA1	
06725	0 75 25140	LDB	#077	SECTOR 77
06726	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
06727	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
06730	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
06731	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
06732	0 43 00434	BRM	END	

*
* F25B77 WRITE DISCONNECT TEST
*

06733	0 43 00430	BRM	OBJECT	
06734	0 43 00440	BRM	RETURN	
06735	0 20 07150	NBP	XTRA1	SPURIOUS INTERRUPT RETURN
06736	0 76 00401	LDA	STATUS	
06737	0 72 25117	SKA	#4000	BIT 12 SOFTWARE READ ONLY
06740	0 01 06753	BRU	F2577A	SKIP TEST
06741	0 76 25143	LDA	##1	
06742	0 43 15202	BRM	SPREAD	LOAD RLB BUFFER
06743	0 76 24777	LOA	#0	
06744	0 43 17422	BRM	AAIT4	TEST RAD READY
06745	0 76 24751	LDA	KCRDE1	
06746	0 43 15147	BRM	ARYT3	
06747	0 43 17422	BRM	AAIT4	
06750	0 40 11126	SKSS*	10026	TEST READY CONDITION
06751	0 43 00460	BRM	ERRRR	
06752	0 20 23472	NBP	"2577A	DISCONNECT LOGIC
06753	0 43 00434	F2577A BRM	END	

* F20B78 READ DISCONNECT TEST

06754	0 43 00430	BRM	OBJECT	
06755	0 43 00440	BRM	RETURN	
06756	0 20 07150	NBP	XTRA1	
06757	0 43 17622	BRM	WAIT4	
06760	0 76 24777	LDA	#0	
06761	0 35 24813	STA	P0TWRD	
06762	0 76 24751	LDA	RCODE1	
06763	0 35 24754	STA	CHANWD	64 WORDS FROM RLE
06764	0 43 15316	BRM	READ7	
06765	0 43 17422	BRM	WAIT4	
06766	0 40 10026	SKSS+	10026	TEST READY
06767	0 43 00460	BRM	ERRR	
06770	0 20 23776	NBP	M2078A	DISCONNECT LOGIC
06771	0 43 00434	BRM	END	

* F20B79 RAD I1,12 TEST

06772	0 43 00430	BRM	OBJECT	
06773	0 43 00440	BRM	RETURN	
06774	0 20 07015	NBP	F2079A	
06775	0 43 17622	BRM	WAIT4	IS RAD READY
06776	0 06 10026	EBMM	10026	ALERT RAD
06777	0 13 24777	P0T	#0	
07000	0 06 10000	EBMM+	10000	ALERT CHANNEL
07001	4 06 17200	EBMM	17200,4	SET EARLY INTRUPT
07002	0 13 25087	P0TT	#4000000+RLE	SEND ONE SECTOR
07003	0 06 02226	EBMM	2226	READ
07004	0 71 25022	LDX	#40000	
07005	0 02 20002	EIR		
07006	0 67 20060	LCY	60	
07007	0 41 07006	BRX	**1	WAIT LOOP
07010	0 02 20004	DIR		
07011	0 43 00460	BRM	ERRR	
07012	4 20 23741	NBP	M2079A,4	CHANNEL LOGIC
07013	0 20 23747	NBP	M2079B	RAD LOGIC
07014	0 01 07025	BRU	F2079B	
07015	0 02 20004	F2079A DIR		
07016	0 76 00450	LDA	DIVERT	
07017	0 75 25001	LDB	#37777	MASK
07020	0 71 25002	LDX	#164	CORRECT INTRUPT LOCATION
07021	0 70 25002	SKM	#164	
07022	0 43 00460	BRM	ERRR	
07023	2 20 23721	NBP	M1059B,2	SPURIOUS ERROR
07024	0 53 24505	SKN	JMPTYP	
07025	0 11 07027	F2079B BRI	**2	
07026	0 01 07027	BRU+	**1	
07027	0 20 07027	NBP	.	
07030	0 43 00440	BRM	RETURN	
07031	0 20 07046	NBP	F2079C	
07032	0 71 25022	LDX	#40000	

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07033	0 02 20002	EIR		
07034	0 67 20060	LCY	60	
07035	0 41 07034	BRX	**1	
07036	0 02 20004	DIR		
07037	0 53 24505	SKN	JMPTYP	
07040	0 11 07042	BRI	**2	
07041	0 01*07042	BRU*	**1	
07042	0 20 07042	NBP	*	
07043	0 43 07040	BRM	ERRER	
07044	4 20 23754	NBP	*2879C,4	CHANNEL LOGIC
07045	0 20 23752	NBP	*2879D	RAD LOGIC
07046	0 02 20004	F2879C DIR		
07047	0 53 24505	SKN	JMPTYP	
07050	0 11 07052	BRI	**2	
07051	0 01*07052	BRU*	**1	
07052	0 20 07052	NBP	*	
07053	0 43 07034	BRM	END	
07054	0 43 07056	BRM	FDSNE	
07055	0 01 07161	BRU	FUNCE	

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07056	0 00 07000	PININ	ZRB		
07057	0 71 25022	LDX	#40000	LOAD TIMER	
07060	0 36 24513	STB	POTARD	SAVE NEXT SECTOR TO TEST	
07061	0 46 10012	BAC			
07062	0 54 25004	SUB	#1	GENERATE PAST SECTOR	
07063	0 06 10226	PININ1	EOMM	ALERT TO PIN	
07064	0 33 24516	PINX	PINARD		
07065	0 75 25001	LDB	#37777		
07066	0 71 24516	SKM	PINARD	IS LAST SECTOR CHANGED YET	
07067	0 41 07063	BRX	PININ1	SECTOR NOT FOUND YET	
07070	0 41 07074	BRX	PININ2	SECTOR FOUND	
07071	0 43 07060	BRM	ERRER		
07072	0 20 24033	NBP	*SGPIN	INCREMENT ERROR	
07073	0 51 07056	BRR	PININ		
07074	0 71 25022	PININ2	LDX	#040000	LOAD TIMER
07075	0 76 24513	LDA	POTARD	GET NEXT SECTOR	
07076	0 06 10226	PININ3	EOMM	ALERT TO PIN RAD	
07077	0 33 24516	PINX	PINARD		
07100	0 75 25001	LDB	#37777		
07101	0 75 24516	SKM	PINARD		
07102	0 41 07076	BRX	PININ3		
07103	0 41 07107	BRX	PININ4	EXIT ON SUCCESS	
07104	0 75 24516	LDB	PINARD	GET BAD WORD	
07105	0 71 07030	LDX	BBJECT		
07106	0 51 07056	BRR	PININ		
07107	0 61 07056	PININ4	PININ		
07110	0 51 07056	BRR	PININ		
07111	0 50 07000	PINSET	ZRB		
07112	0 75 25022	LDB	#40000	LOAD RAD REV TIME	
07113	0 36 24422	STB	TIMOUT	SET SECTOR COUNT FOR 64 SECTORS	
07114	0 06 07000	PINSE1	EOMM	0	
07115	0 06 10226	EOMM	010226	ALERT TO PIN	
07116	0 33 24516	PINX	PINARD		
07117	0 72 24516	SKA	PINARD	TEST FOR ANY ONE BIT	
07120	0 01 07126	BRU	PINSE2		
07121	0 60 24422	SKR	TIMOUT	COUNT PASSES	

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```
07122 0 20 00000 NOP 0
07123 0 53 24422 SKN TIMOUT
07124 0 01 07114 BRU PINSE1
07125 0 51 07111 BRR PINSET
07126 0 36 24422 PINSE2 STB TIMOUT
07127 0 06 10226 PINSE3 EMM 010226
07130 0 33 24516 PIN PINWRD
07131 0 72 24516 SKA PINWRD
07132 0 01 07134 BRU PINSE4
07133 0 01 07141 BRU PINSE5
07134 0 60 24422 PINSE4 SKR TIMOUT
07135 0 20 00000 NOP 0
07136 0 53 24422 SKN TIMOUT
07137 0 01 07127 BRU PINSE3
07140 0 51 07111 BRR PINSET
07141 0 61 07111 PINSE5 MIN PINSET
07142 0 51 07111 BRR PINSET
07143 0 00 00000 CLRCHN ZR0
07144 0 06 10000 EMM* 010000
07145 0 06 14200 EMM 014200
07146 0 13 24777 POTT *0
07147 0 51 07143 BRR CLRCHN
07150 0 43 14371 XTRAI BRM SPUR1
07151 0 20 25003 NOP *64
07152 0 01 00431 BRU SUBJECT+1
07153 0 00 00000 SETPIN ZR0
07154 0 35 07163 STA PININ1
07155 0 35 07176 STA PININ3
07156 0 35 07115 STA PINSE1+1
07157 0 35 07127 STA PINSE3
07160 0 51 07153 BRR SETPIN
```

NOT COUNTED OUT
SET COUNT TO TEST FOR ZEROS
ALERT TO PIN

TEST FOR ANY ZERO

BYPASS ERROR PRINTOUT

ALERT
SET HI ORDER BITS
CLEAR LO BITS

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```
*
*
* FUNCTION 03
*
07161 0 43 00424 FUNC3 BRM FUNCTN
07162 0 20 20535 NOP FPT3
07163 0 43 00430 BRM BBJECT
07164 0 43 13766 BRM RADSK
07165 0 73 25026 SKG #1000000
07166 0 01 10370 BRU FUNC4
07167 0 76 07263 LDA ZER31
07170 0 43 07153 BRM SETPIN
```

FUNCTION THREE PARAMETERS
TEST RAD THREE
TEST FOR 4 ME RAD
SKIP FUNCTION

*
* F38B04 RAD PIN TEST
*

07171	0 43 00430	BRM	BBJECT	
07172	0 43 00440	BRM	RETURN	
07173	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
07174	0 76 25004	LDA	#000001	
07175	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
07176	0 43 00460	BRM	ERRRR	
07177	4 20 23416	NBP	M2004A,4	ERROR MESSAGE FOR BIT
07200	0 20 23403	NBP	M2004B	
07201	0 43 00434	BRM	END	EXIT TEST

*
* F38B05 RAD PIN TEST
*

07202	0 43 00430	BRM	BBJECT	
07203	0 43 00440	BRM	RETURN	
07204	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
07205	0 76 25005	LDA	#000002	
07206	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
07207	0 43 00460	BRM	ERRRR	
07210	4 20 23424	NBP	M2005A,4	ERROR MESSAGE FOR BIT
07211	0 20 23403	NBP	M2004B	
07212	0 43 00434	BRM	END	EXIT TEST

*
* F38B06 RAD PIN TEST
*

07213	0 43 00430	BRM	BBJECT	
07214	0 43 00440	BRM	RETURN	
07215	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
07216	0 76 25006	LDA	#000004	
07217	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
07220	0 43 00460	BRM	ERRRR	
07221	4 20 23432	NBP	M2006A,4	ERROR MESSAGE FOR BIT
07222	0 20 23403	NBP	M2004B	
07223	0 43 00434	BRM	END	EXIT TEST

*
* F38B07 RAD PIN TEST
*

07224	0 43 00430	BRM	BBJECT	
07225	0 43 00440	BRM	RETURN	
07226	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
07227	0 76 25007	LDA	#000010	
07230	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
07231	0 43 00460	BRM	ERRRR	
07232	4 20 23440	NBP	M2007A,4	ERROR MESSAGE FOR BIT
07233	0 20 23403	NBP	M2004B	
07234	0 43 00434	BRM	END	EXIT TEST

*
* F38B08 RAD PIN TEST
*

07235	0	43	00430	BRM	OBJECT	
07236	0	43	00440	BRM	RETURN	
07237	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
07240	0	76	25010	LDA	#000020	
07241	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
07242	0	43	00460	BRM	ERROR	
07243	4	20	23460	NBP	M2008A,4	ERROR MESSAGE FOR BIT
07244	0	20	23403	NBP	M2004B	
07245	0	43	00434	BRM	END	EXIT TEST

*
* F38B09 RAD PIN TEST
*

07246	0	43	00430	BRM	OBJECT	
07247	0	43	00440	BRM	RETURN	
07250	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
07251	0	76	25011	LDA	#000040	
07252	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
07253	0	43	00460	BRM	ERROR	
07254	4	20	23454	NBP	M2009A,4	ERROR MESSAGE FOR BIT
07255	0	20	23403	NBP	M2004B	
07256	0	43	00434	BRM	END	EXIT TEST

*
* FUNCTION 03 TEST SECTOR COUNTER
*

07257	0	43	00430	BRM	OBJECT	FIND THE ZERO SECTOR
07260	0	43	00440	BRM	RETURN	
07261	0	20	07150	NBP	XTRA1	
07262	0	71	25022	LDX	#040000	TIME 40 MILLISECONDS
07263	0	06	12226	ZER31	ESMM	12226
07264	0	33	24516	PINN	PINARD	ALERT TO PIN
07265	0	76	24516	LDA	PINARD	
07266	0	75	25001	LDB	#37777	
07267	0	70	24777	SKM	#0	
07270	0	41	07263	BRX	ZER31	
07271	0	41	07277	BRX	ZER32	
07272	0	75	24777	LDB	#0	
07273	0	71	00430	LDX	OBJECT	
07274	0	43	00460	BRM	ERROR	
07275	4	20	23511	NBP	M2013C,4	NO ZERO
07276	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07277	0	43	00434	ZER32	BRM	END

*
*
* F39B14 TEST SECTOR ADRS 01
*

07300	0 43 00430	BRM	OBJECT	
07301	0 43 00440	BRM	RETURN	
07302	0 20 07150	XBP	XTRA1	
07303	0 75 25004	LDB	#001	SECTOR 01
07304	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
07305	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
07306	4 20 23462	XBP	M2013A,4	LOGIC ERROR MSG
07307	2 20 23475	XBP	M2013B,2	HEADING AND REGISTERS
07310	0 43 00434	BRM	END	

*
*
* F39B15 TEST SECTOR ADRS 02
*

07311	0 43 00430	BRM	OBJECT	
07312	0 43 00440	BRM	RETURN	
07313	0 20 07150	XBP	XTRA1	
07314	0 75 25004	LDB	#002	SECTOR 02
07315	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
07316	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
07317	4 20 23462	XBP	M2013A,4	LOGIC ERROR MSG
07320	2 20 23475	XBP	M2013B,2	HEADING AND REGISTERS
07321	0 43 00434	BRM	END	

*
*
* F39B16 TEST SECTOR ADRS 03
*

07322	0 43 00430	BRM	OBJECT	
07323	0 43 00440	BRM	RETURN	
07324	0 20 07150	XBP	XTRA1	
07325	0 75 25004	LDB	#003	SECTOR 03
07326	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
07327	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
07330	4 20 23462	XBP	M2013A,4	LOGIC ERROR MSG
07331	2 20 23475	XBP	M2013B,2	HEADING AND REGISTERS
07332	0 43 00434	BRM	END	

*
*
* F39B17 TEST SECTOR ADRS 04
*

07333	0 43 00430	BRM	OBJECT	
07334	0 43 00440	BRM	RETURN	
07335	0 20 07150	XBP	XTRA1	
07336	0 75 25004	LDB	#004	SECTOR 04
07337	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
07340	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
07341	4 20 23462	XBP	M2013A,4	LOGIC ERROR MSG
07342	2 20 23475	XBP	M2013B,2	HEADING AND REGISTERS
07343	0 43 00434	BRM	END	

*
* F30B18 TEST SECTOR ADRS 05
*

07344	0	43	00430	BRM	OBJECT	
07345	0	43	00440	BRM	RETURN	
07346	0	20	07150	NBP	XTRA1	
07347	0	75	25060	LDB	#005	SECTOR 05
07350	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07351	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07352	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07353	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07354	0	43	00434	BRM	END	

*
* F30B19 TEST SECTOR ADRS 06
*

07355	0	43	00430	BRM	OBJECT	
07356	0	43	00440	BRM	RETURN	
07357	0	20	07150	NBP	XTRA1	
07360	0	75	25061	LDB	#006	SECTOR 06
07361	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07362	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07363	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07364	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07365	0	43	00434	BRM	END	

*
* F30B20 TEST SECTOR ADRS 07
*

07366	0	43	00430	BRM	OBJECT	
07367	0	43	00440	BRM	RETURN	
07370	0	20	07150	NBP	XTRA1	
07371	0	75	25035	LDB	#007	SECTOR 07
07372	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07373	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07374	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07375	2	20	23475	NBP	M2013B,2	HEADING AND REGISTER
07376	0	43	00434	BRM	END	

*
* F30B21 TEST SECTOR ADRS 10
*

07377	0	43	00430	BRM	OBJECT	
07400	0	43	00440	BRM	RETURN	
07401	0	20	07150	NBP	XTRA1	
07402	0	75	25007	LDB	#010	SECTOR 10
07403	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07404	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07405	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07406	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07407	0	43	00434	BRM	END	

*
*
* F39B22 TEST SECTOR ADRS 11
*

07410	0 43	00430	BRM	0BJECT	
07411	0 43	00440	BRM	RETURN	
07412	0 20	07150	NBP	XTRA1	
07413	0 75	25062	LDB	#011	SECTOR 11
07414	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07415	0 43	00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
07416	4 20	23462	NBP	*2013A,4	LOGIC ERR0R MSG
07417	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
07420	0 43	00434	BRM	END	

*
*
* F39B23 TEST SECTOR ADRS 12
*

07421	0 43	00430	BRM	0BJECT	
07422	0 43	00440	BRM	RETURN	
07423	0 20	07150	NBP	XTRA1	
07424	0 75	25063	LDB	#012	SECTOR 12
07425	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07426	0 43	00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
07427	4 20	23462	NBP	*2013A,4	LOGIC ERR0R MSG
07430	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
07431	0 43	00434	BRM	END	

*
*
* F39B24 TEST SECTOR ADRS 13
*

07432	0 43	00430	BRM	0BJECT	
07433	0 43	00440	BRM	RETURN	
07434	0 20	07150	NBP	XTRA1	
07435	0 75	25064	LDB	#013	SECTOR 13
07436	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07437	0 43	00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
07440	4 20	23462	NBP	*2013A,4	LOGIC ERR0R MSG
07441	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
07442	0 43	00434	BRM	END	

*
*
* F39B25 TEST SECTOR ADRS 14
*

07443	0 43	00430	BRM	0BJECT	
07444	0 43	00440	BRM	RETURN	
07445	0 20	07150	NBP	XTRA1	
07446	0 75	25065	LDB	#014	SECTOR 14
07447	0 43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07450	0 43	00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
07451	4 20	23462	NBP	*2013A,4	LOGIC ERR0R MSG
07452	2 20	23475	NBP	*2013B,2	HEADING AND REGISTERS
07453	0 43	00434	BRM	END	

*
* F30B26 TEST SECTOR ADRS 15
*

07454	0	43	00430	BRM	OBJECT	
07455	0	43	00440	BRM	RETURN	
07456	0	20	07150	NBP	XTRA1	
07457	0	75	25166	LDB	#015	SECTOR 15
07460	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
07461	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07462	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07463	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07464	0	43	00434	BRM	END	

*
* F30B27 TEST SECTOR ADRS 16
*

07465	0	43	00430	BRM	OBJECT	
07466	0	43	00440	BRM	RETURN	
07467	0	20	07150	NBP	XTRA1	
07470	0	75	25167	LDB	#016	SECTOR 16
07471	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
07472	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07473	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07474	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07475	0	43	00434	BRM	END	

*
* F30B28 TEST SECTOR ADRS 17
*

07476	0	43	00430	BRM	OBJECT	
07477	0	43	00440	BRM	RETURN	
07500	0	20	07150	NBP	XTRA1	
07501	0	75	25136	LDB	#017	SECTOR 17
07502	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
07503	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07504	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07505	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07506	0	43	00434	BRM	END	

*
* F30B29 TEST SECTOR ADRS 20
*

07507	0	43	00430	BRM	OBJECT	
07510	0	43	00440	BRM	RETURN	
07511	0	20	07150	NBP	XTRA1	
07512	0	75	25110	LDB	#020	SECTOR 20
07513	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
07514	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07515	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07516	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07517	0	43	00434	BRM	END	

*
* F39B30 TEST SECTOR ADRS 21
*

07520	0	43	07430	BRM	OBJECT	
07521	0	43	07440	BRM	RETURN	
07522	0	20	07150	NBP	XTRA1	
07523	0	75	25070	LDB	#021	SECTOR 21
07524	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07525	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
07526	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07527	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07530	0	43	07434	BRM	END	

*
* F39B31 TEST SECTOR ADRS 22
*

07531	0	43	07430	BRM	OBJECT	
07532	0	43	07440	BRM	RETURN	
07533	0	20	07150	NBP	XTRA1	
07534	0	75	25071	LDB	#022	SECTOR 22
07535	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07536	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
07537	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07540	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07541	0	43	07434	BRM	END	

*
* F39B32 TEST SECTOR ADRS 23
*

07542	0	43	07430	BRM	OBJECT	
07543	0	43	07440	BRM	RETURN	
07544	0	20	07150	NBP	XTRA1	
07545	0	75	25072	LDB	#023	SECTOR 23
07546	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07547	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
07550	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07551	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07552	0	43	07434	BRM	END	

*
* F39B33 TEST SECTOR ADRS 24
*

07553	0	43	07430	BRM	OBJECT	
07554	0	43	07440	BRM	RETURN	
07555	0	20	07150	NBP	XTRA1	
07556	0	75	25073	LDB	#24	SECTOR 24
07557	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07560	0	43	07460	BRM	ERRRR	RETURN IF ERROR OCCURED
07561	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07562	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07563	0	43	07434	BRM	END	

*
* F30B34 TEST SECTOR ADRS 25
*

07564	0	43	00430	BRM	OBJECT	
07565	0	43	00440	BRM	RETURN	
07566	0	20	07150	NBP	XTRA1	
07567	0	75	25074	LDB	#025	SECTOR 25
07570	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07571	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07572	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07573	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07574	0	43	00434	BRM	END	

*
* F30B35 TEST SECTOR ADRS 26
*

07575	0	43	00430	BRM	OBJECT	
07576	0	43	00440	BRM	RETURN	
07577	0	20	07150	NBP	XTRA1	
07600	0	75	25075	LDB	#026	SECTOR 26
07601	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07602	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07603	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07604	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07605	0	43	00434	BRM	END	

*
* F30B36 TEST SECTOR ADRS 27
*

07606	0	43	00430	BRM	OBJECT	
07607	0	43	00440	BRM	RETURN	
07610	0	20	07150	NBP	XTRA1	
07611	0	75	25076	LDB	#027	SECTOR 27
07612	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07613	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07614	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07615	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07616	0	43	00434	BRM	END	

*
* F30B37 TEST SECTOR ADRS 30
*

07617	0	43	00430	BRM	OBJECT	
07620	0	43	00440	BRM	RETURN	
07621	0	20	07150	NBP	XTRA1	
07622	0	75	25077	LDB	#030	SECTOR 30
07623	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
07624	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07625	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07626	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07627	0	43	00434	BRM	END	

*
* F30B38 TEST SECTOR ADRS 31
*

07630	0	43	00430	BRM	OBJECT	
07631	0	43	00440	BRM	RETURN	
07632	0	20	07150	NBP	XTRA1	
07633	0	75	25100	LDB	#031	SECTOR 31
07634	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07635	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07636	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07637	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07640	0	43	00434	BRM	END	

*
* F30B39 TEST SECTOR ADRS 32
*

07641	0	43	00430	BRM	OBJECT	
07642	0	43	00440	BRM	RETURN	
07643	0	20	07150	NBP	XTRA1	
07644	0	75	25101	LDB	#032	SECTOR 32
07645	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07646	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07647	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07650	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07651	0	43	00434	BRM	END	

*
* F30B40 TEST SECTOR ADRS 33
*

07652	0	43	00430	BRM	OBJECT	
07653	0	43	00440	BRM	RETURN	
07654	0	20	07150	NBP	XTRA1	
07655	0	75	25102	LDB	#033	SECTOR 33
07656	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07657	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07660	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07661	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07662	0	43	00434	BRM	END	

*
* F30B41 TEST SECTOR ADRS 34
*

07663	0	43	00430	BRM	OBJECT	
07664	0	43	00440	BRM	RETURN	
07665	0	20	07150	NBP	XTRA1	
07666	0	75	25103	LDB	#034	SECTOR 34
07667	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
07670	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
07671	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
07672	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
07673	0	43	00434	BRM	END	

*
* F30B42 TEST S1 (OR ADRS 35)
*

07674	0 43 00430	BRM	OBJECT	
07675	0 43 00440	BRM	RETURN	
07676	0 20 07150	NBP	XTRA1	
07677	0 75 25104	LDB	#035	SECTOR 35
07700	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07701	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
07702	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
07703	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
07704	0 43 00434	BRM	END	

*
* F30B43 TEST SECTOR ADRS 36
*

07705	0 43 00430	BRM	OBJECT	
07706	0 43 00440	BRM	RETURN	
07707	0 20 07150	NBP	XTRA1	
07710	0 75 25105	LDB	#036	SECTOR 36
07711	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07712	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
07713	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
07714	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
07715	0 43 00434	BRM	END	

*
* F30B44 TEST SECTOR ADRS 37
*

07716	0 43 00430	BRM	OBJECT	
07717	0 43 00440	BRM	RETURN	
07720	0 20 07150	NBP	XTRA1	
07721	0 75 25037	LDB	#037	SECTOR 37
07722	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07723	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
07724	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
07725	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
07726	0 43 00434	BRM	END	

*
* F30B45 TEST SECTOR ADRS 40
*

07727	0 43 00430	BRM	OBJECT	
07730	0 43 00440	BRM	RETURN	
07731	0 20 07150	NBP	XTRA1	
07732	0 75 25011	LDB	#040	SECTOR 40
07733	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07734	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
07735	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
07736	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
07737	0 43 00434	BRM	END	

*
* F38846 TEST SECTOR ADRS 41
*

07740	0 43 00430	BRM	OBJECT	
07741	0 43 00440	BRM	RETURN	
07742	0 20 07150	NBP	XTRA1	
07743	0 75 25106	LDB	#041	SECTOR 41
07744	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07745	0 43 07460	BRM	ERR9R	RETURN IF ERROR OCCURED
07746	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
07747	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
07750	0 43 07434	BRM	END	

*
* F38847 TEST SECTOR ADRS 42
*

07751	0 43 00430	BRM	OBJECT	
07752	0 43 00440	BRM	RETURN	
07753	0 20 07150	NBP	XTRA1	
07754	0 75 25107	LDB	#042	SECTOR 42
07755	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07756	0 43 07460	BRM	ERR9R	RETURN IF ERROR OCCURED
07757	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
07760	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
07761	0 43 07434	BRM	END	

*
* F38848 TEST SECTOR ADRS 43
*

07762	0 43 00430	BRM	OBJECT	
07763	0 43 00440	BRM	RETURN	
07764	0 20 07150	NBP	XTRA1	
07765	0 75 25110	LDB	#043	SECTOR 43
07766	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
07767	0 43 07460	BRM	ERR9R	RETURN IF ERROR OCCURED
07770	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
07771	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
07772	0 43 07434	BRM	END	

*
* F38849 TEST SECTOR ADRS 44
*

07773	0 43 00430	BRM	OBJECT	
07774	0 43 00440	BRM	RETURN	
07775	0 20 07150	NBP	XTRA1	
07776	0 75 25111	LDB	#044	SECTOR 44
07777	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10000	0 43 07460	BRM	ERR9R	RETURN IF ERROR OCCURED
10001	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
10002	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
10003	0 43 07434	BRM	END	

•
•
• F30B50 TEST SECTOR ADRS 45
•

10004	0 43 00430	BRM	OBJECT	
10005	0 43 00440	BRM	RETURN	
10006	0 20 07150	NBP	XTRA1	
10007	0 75 25112	LDB	#045	SECTOR 45
10010	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10011	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10012	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
10013	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
10014	0 43 00434	BRM	END	

•
•
• F30B51 TEST SECTOR ADRS 46
•

10015	0 43 00430	BRM	OBJECT	
10016	0 43 00440	BRM	RETURN	
10017	0 20 07150	NBP	XTRA1	
10020	0 75 25112	LDB	#046	SECTOR 46
10021	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10022	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10023	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
10024	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
10025	0 43 00434	BRM	END	

•
•
• F30B52 TEST SECTOR ADRS 47
•

10026	0 43 00430	BRM	OBJECT	
10027	0 43 00440	BRM	RETURN	
10030	0 20 07150	NBP	XTRA1	
10031	0 75 25114	LDB	#047	SECTOR 47
10032	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10033	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10034	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
10035	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
10036	0 43 00434	BRM	END	

•
•
• F30B53 TEST SECTOR ADRS 50
•

10037	0 43 00430	BRM	OBJECT	
10040	0 43 00440	BRM	RETURN	
10041	0 20 07150	NBP	XTRA1	
10042	0 75 25115	LDB	#050	SECTOR 50
10043	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10044	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10045	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
10046	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
10047	0 43 00434	BRM	END	

*
* F39B54 TEST SECTOR ADRS 51
*

10050	0	43	00430	BRM	OBJECT	
10051	0	43	00440	BRM	RETURN	
10052	0	20	07150	NBP	XTRA1	
10053	0	75	25116	LDB	#051	SECTOR 51
10054	0	43	07054	BRM	PININ	TO PIN IN SECTOR ADRS
10055	0	43	07460	BRM	ERR9R	RETURN IF ERROR OCCURED
10056	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10057	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10060	0	43	00434	BRM	END	

*
* F39B55 TEST SECTOR ADRS 52
*

10061	0	43	00430	BRM	OBJECT	
10062	0	43	00440	BRM	RETURN	
10063	0	20	07150	NBP	XTRA1	
10064	0	75	25117	LDB	#052	SECTOR 52
10065	0	43	07054	BRM	PININ	TO PIN IN SECTOR ADRS
10066	0	43	07460	BRM	ERR9R	RETURN IF ERROR OCCURED
10067	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10070	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10071	0	43	00434	BRM	END	

*
* F39B56 TEST SECTOR ADRS 53
*

10072	0	43	00430	BRM	OBJECT	
10073	0	43	00440	BRM	RETURN	
10074	0	20	07150	NBP	XTRA1	
10075	0	75	25120	LDB	#053	SECTOR 53
10076	0	43	07054	BRM	PININ	TO PIN IN SECTOR ADRS
10077	0	43	07460	BRM	ERR9R	RETURN IF ERROR OCCURED
10100	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10101	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10102	0	43	00434	BRM	END	

*
* F39B57 TEST SECTOR ADRS 54
*

10103	0	43	00430	BRM	OBJECT	
10104	0	43	00440	BRM	RETURN	
10105	0	20	07150	NBP	XTRA1	
10106	0	75	25121	LDB	#054	SECTOR 54
10107	0	43	07054	BRM	PININ	TO PIN IN SECTOR ADRS
10110	0	43	07460	BRM	ERR9R	RETURN IF ERROR OCCURED
10111	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10112	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10113	0	43	00434	BRM	END	

*
* F30B58 TEST SECTOR ADRS 55
*

10114	0 43 00430	BRM	OBJECT	
10115	0 43 00440	BRM	RETURN	
10116	0 20 07150	NBP	XTRA1	
10117	0 75 25122	LDB	#055	SECTOR 55
10120	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10121	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10122	4 20 23462	NBP	"2013A",4	LOGIC ERROR MSG
10123	2 20 23475	NBP	"2013B",2	HEADING AND REGISTERS
10124	0 43 00434	BRM	END	

*
* F30B59 TEST SECTOR ADRS 56
*

10125	0 43 00430	BRM	OBJECT	
10126	0 43 00440	BRM	RETURN	
10127	0 20 07150	NBP	XTRA1	
10130	0 75 25123	LDB	#056	SECTOR 56
10131	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10132	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10133	4 20 23462	NBP	"2013A",4	LOGIC ERROR MSG
10134	2 20 23475	NBP	"2013B",2	HEADING AND REGISTERS
10135	0 43 00434	BRM	END	

*
* F30B60 TEST SECTOR ADRS 57
*

10136	0 43 00430	BRM	OBJECT	
10137	0 43 00440	BRM	RETURN	
10140	0 20 07150	NBP	XTRA1	
10141	0 75 25124	LDB	#057	SECTOR 57
10142	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10143	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10144	4 20 23462	NBP	"2013A",4	LOGIC ERROR MSG
10145	2 20 23475	NBP	"2013B",2	HEADING AND REGISTERS
10146	0 43 00434	BRM	END	

*
* F30B61 TEST SECTOR ADRS 60
*

10147	0 43 00430	BRM	OBJECT	
10150	0 43 00440	BRM	RETURN	
10151	0 20 07150	NBP	XTRA1	
10152	0 75 25125	LDB	#060	SECTOR 60
10153	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10154	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10155	4 20 23462	NBP	"2013A",4	LOGIC ERROR MSG
10156	2 20 23475	NBP	"2013B",2	HEADING AND REGISTERS
10157	0 43 00434	BRM	END	

*
* F39B62 TEST SECTOR ADRS 61
*

10160	0 43 07430	BRM	OBJECT	
10161	0 43 07440	BRM	RETURN	
10162	0 20 07150	NBP	XTRA1	
10163	0 75 25126	LDB	#061	SECTOR 61
10164	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
10165	0 43 07460	BRM	ERR0R	RETURN IF ERROR OCCURED
10166	4 20 23462	NBP	%2013A,4	LOGIC ERROR MSG
10167	2 20 23475	NBP	%2013B,2	HEADING AND REGISTERS
10170	0 43 07434	BRM	END	

*
* F39B63 TEST SECTOR ADRS 62
*

10171	0 43 07430	BRM	OBJECT	
10172	0 43 07440	BRM	RETURN	
10173	0 20 07150	NBP	XTRA1	
10174	0 75 25127	LDB	#062	SECTOR 62
10175	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
10176	0 43 07460	BRM	ERR0R	RETURN IF ERROR OCCURED
10177	4 20 23462	NBP	%2013A,4	LOGIC ERROR MSG
10200	2 20 23475	NBP	%2013B,2	HEADING AND REGISTERS
10201	0 43 07434	BRM	END	

*
* F39B64 TEST SECTOR ADRS 63
*

10202	0 43 07430	BRM	OBJECT	
10203	0 43 07440	BRM	RETURN	
10204	0 20 07150	NBP	XTRA1	
10205	0 75 25130	LDB	#063	SECTOR 63
10206	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
10207	0 43 07460	BRM	ERR0R	RETURN IF ERROR OCCURED
10210	4 20 23462	NBP	%2013A,4	LOGIC ERROR MSG
10211	2 20 23475	NBP	%2013B,2	HEADING AND REGISTERS
10212	0 43 07434	BRM	END	

*
* F39B65 TEST SECTOR ADRS 64
*

10213	0 43 07430	BRM	OBJECT	
10214	0 43 07440	BRM	RETURN	
10215	0 20 07150	NBP	XTRA1	
10216	0 75 25103	LDB	#064	SECTOR 64
10217	0 43 07456	BRM	PININ	TO PIN IN SECTOR ADRS
10220	0 43 07460	BRM	ERR0R	RETURN IF ERROR OCCURED
10221	4 20 23462	NBP	%2013A,4	LOGIC ERROR MSG
10222	2 20 23475	NBP	%2013B,2	HEADING AND REGISTERS
10223	0 43 07434	BRM	END	

*
* F30B66 TEST SECTOR ADRS 65
*

10224	0 43 00430	BRM	OBJECT	
10225	0 43 00440	BRM	RETURN	
10226	0 20 07150	NOP	XTRA1	
10227	0 75 25131	LDB	#065	SECTOR 65
10230	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10231	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10232	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10233	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10234	0 43 00434	BRM	END	

*
* F30B67 TEST SECTOR ADRS 66
*

10235	0 43 00430	BRM	OBJECT	
10236	0 43 00440	BRM	RETURN	
10237	0 20 07150	NOP	XTRA1	
10240	0 75 25132	LDB	#066	SECTOR 66
10241	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10242	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10243	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10244	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10245	0 43 00434	BRM	END	

*
* F30B68 TEST SECTOR ADRS 67
*

10246	0 43 00430	BRM	OBJECT	
10247	0 43 00440	BRM	RETURN	
10250	0 20 07150	NOP	XTRA1	
10251	0 75 25133	LDB	#067	SECTOR 67
10252	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10253	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10254	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10255	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10256	0 43 00434	BRM	END	

*
* F30B69 TEST SECTOR ADRS 70
*

10257	0 43 00430	BRM	OBJECT	
10260	0 43 00440	BRM	RETURN	
10261	0 20 07150	NOP	XTRA1	
10262	0 75 25134	LDB	#070	SECTOR 70
10263	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10264	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10265	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10266	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10267	0 43 00434	BRM	END	

*
* F38B70 TEST SECTOR ADRS 71
*

10270	0 43 00430	BRM	OBJECT	
10271	0 43 00440	BRM	RETURN	
10272	0 20 07150	NBP	XTRA1	
10273	0 75 25135	LDB	#071	SECTOR 71
10274	0 43 07155	BRM	PININ	T8 PIN IN SECTOR ADRS
10275	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
10276	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
10277	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
10300	0 43 00434	BRM	END	

*
* F38B71 TEST SECTOR ADRS 72
*

10301	0 43 00430	BRM	OBJECT	
10302	0 43 00440	BRM	RETURN	
10303	0 20 07150	NBP	XTRA1	
10304	0 75 25134	LDB	#072	SECTOR 72
10305	0 43 07155	BRM	PININ	T8 PIN IN SECTOR ADRS
10306	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
10307	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
10310	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
10311	0 43 00434	BRM	END	

*
* F38B72 TEST SECTOR ADRS 73
*

10312	0 43 00430	BRM	OBJECT	
10313	0 43 00440	BRM	RETURN	
10314	0 20 07150	NBP	XTRA1	
10315	0 75 25137	LDB	#073	SECTOR 73
10316	0 43 07155	BRM	PININ	T8 PIN IN SECTOR ADRS
10317	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
10320	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
10321	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
10322	0 43 00434	BRM	END	

*
* F38B73 TEST SECTOR ADRS 74
*

10323	0 43 00430	BRM	OBJECT	
10324	0 43 00440	BRM	RETURN	
10325	0 20 07150	NBP	XTRA1	
10326	0 75 25140	LDB	#074	SECTOR 74
10327	0 43 07155	BRM	PININ	T8 PIN IN SECTOR ADRS
10330	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
10331	4 20 23462	NBP	"2013A,4	LOGIC ERROR MSG
10332	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
10333	0 43 00434	BRM	END	

*
* F30B74 TEST SECTOR ADRS 75
*

10334	0 43 00430	BRM	OBJECT	
10335	0 43 00440	BRM	RETURN	
10336	0 20 07150	NBP	XTRAI	
10337	0 75 25141	LDB	#075	SECTOR 75
10340	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
10341	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
10342	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
10343	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
10344	0 43 00434	BRM	END	

*
* F30B75 TEST SECTOR ADRS 76
*

10345	0 43 00430	BRM	OBJECT	
10346	0 43 00440	BRM	RETURN	
10347	0 20 07150	NBP	XTRAI	
10350	0 75 25142	LDB	#076	SECTOR 76
10351	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
10352	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
10353	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
10354	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
10355	0 43 00434	BRM	END	

*
* F30B76 TEST SECTOR ADRS 77
*

10356	0 43 00430	BRM	OBJECT	
10357	0 43 00440	BRM	RETURN	
10360	0 20 07150	NBP	XTRAI	
10361	0 75 25140	LDB	#077	SECTOR 77
10362	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
10363	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
10364	4 20 23462	NBP	Y2013A,4	LOGIC ERROR MSG
10365	2 20 23475	NBP	Y2013B,2	HEADING AND REGISTERS
10366	0 43 00434	BRM	END	
10367	0 43 00456	BRM	FD0AE	

*
*
* FUNCTION 04
*
*

10370	0 43 00424	FUNC4	BRM	FUNCTN	
10371	0 20 20543		NBP	FPT4	FUNCTION FOUR PARAMETERS
10372	0 43 00430		BRM	OBJECT	
10373	0 43 13766		BRM	RADBK	TEST RAD FOUR
10374	0 73 25127		SKG	#2000000	TEST FOR 6 MEG RAD
10375	0 01 11877		BRU	FUNC5	SKIP FUNCTION
10376	0 74 11470		LDA	ZER41	
10377	0 43 07153		BRM	SETPIN	SET CORRECT PIN EBM

*
*
* F48B04 RAD PIN TEST
*
*

10400	0 43 07430		BRM	OBJECT	
10401	0 43 07440		BRM	RETURN	SPURIOUS INTRUPT HANDLER
10402	0 20 07150		NBP	XTRA1	
10403	0 76 25004		LDA	#000001	PIN TRANSFER AND TEST ROUTINE
10404	0 43 07111		BRM	PINSET	
10405	0 43 07460		BRM	ERRR8	ERROR MESSAGE FOR BIT
10406	4 20 23416		NBP	#2004A,4	
10407	0 20 23403		NBP	#2004B	
10410	0 43 07434		BRM	END	EXIT TEST

*
*
* F48B05 RAD PIN TEST
*
*

10411	0 43 00430		BRM	OBJECT	
10412	0 43 00440		BRM	RETURN	SPURIOUS INTRUPT HANDLER
10413	0 20 07150		NBP	XTRA1	
10414	0 76 25005		LDA	#000002	PIN TRANSFER AND TEST ROUTINE
10415	0 43 07111		BRM	PINSET	
10416	0 43 00460		BRM	ERRR8	ERROR MESSAGE FOR BIT
10417	4 20 23424		NBP	#2005A,4	
10420	0 21 23403		NBP	#2004B	
10421	0 43 07434		BRM	END	EXIT TEST

*
* F48B06 RAD PIN TEST
*

10422	0 43 00430	BRM	OBJECT	
10423	0 43 00440	BRM	RETURN	
10424	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
10425	0 76 25006	LDA	#000004	
10426	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
10427	0 43 00460	BRM	ERROR	
10430	4 20 23403	NBP	M2006A,4	ERROR MESSAGE FOR BIT
10431	0 20 23403	NBP	M2004B	
10432	0 43 00434	BRM	END	EXIT TEST

*
* F48B07 RAD PIN TEST
*

10433	0 43 00430	BRM	OBJECT	
10434	0 43 00440	BRM	RETURN	
10435	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
10436	0 76 25007	LDA	#000010	
10437	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
10440	0 43 00460	BRM	ERROR	
10441	4 20 23403	NBP	M2007A,4	ERROR MESSAGE FOR BIT
10442	0 20 23403	NBP	M2004B	
10443	0 43 00434	BRM	END	EXIT TEST

*
* F48B08 RAD PIN TEST
*

10444	0 43 00430	BRM	OBJECT	
10445	0 43 00440	BRM	RETURN	
10446	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
10447	0 76 25010	LDA	#000020	
10450	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
10451	0 43 00460	BRM	ERROR	
10452	4 20 23446	NBP	M2008A,4	ERROR MESSAGE FOR BIT
10453	0 20 23403	NBP	M2004B	
10454	0 43 00434	BRM	END	EXIT TEST

*
* F48B09 RAD PIN TEST
*

10455	0 43 00430	BRM	OBJECT	
10456	0 43 00440	BRM	RETURN	
10457	0 20 07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
10460	0 76 25011	LDA	#000040	
10461	0 43 07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
10462	0 43 00460	BRM	ERROR	
10463	4 20 23454	NBP	M2009A,4	ERROR MESSAGE FOR BIT
10464	0 20 23403	NBP	M2004B	
10465	0 43 00434	BRM	END	EXIT TEST

*
*
* FUNCTION 04 TEST SECTOR COUNTER
*

```

10466 0 43 00430 BRM 0BJECT FIND THE ZERO SECTOR
10467 0 43 00440 BRM RETURN
10470 0 20 07150 NBP XTRA1
10471 0 75 25020 LDB #040000 TIME 40 MILLISECONDS
10472 0 06 14226 7ER41 EBMM 14226 ALERT TO PIN
10473 0 35 24516 PINN PINWRD
10474 0 76 24516 LDA PINWRD
10475 0 75 25001 LDB #37777
10476 0 75 24777 SKM #0
10477 0 41 10472 BRX ZER41
10500 0 41 10506 BRX ZER42
10501 0 75 24777 LDB #0
10502 0 71 00430 LDX 0BJECT
10503 0 43 00460 BRM ERR0R
10504 4 20 23462 NBP #2013C,4 NO ZERO
10505 2 20 23475 NBP #2013B,2 HEADING AND REGISTERS
10506 0 43 00434 7ER42 BRM END
    
```

*
*
* F40B14 TEST SECTOR ADRS 01
*

```

10507 0 43 00430 BRM 0BJECT
10510 0 43 00440 BRM RETURN
10511 0 20 07150 NBP XTRA1
10512 0 75 25004 LDB #001 SECTOR 01
10513 0 43 07056 BRM PININ TO PIN IN SECTOR ADRS
10514 0 43 00460 BRM ERR0R RETURN IF ERR0R 0CCURED
10515 4 20 23462 NBP #2013A,4 LOGIC ERR0R MSG
10516 2 20 23475 NBP #2013B,2 HEADING AND REGISTERS
10517 0 43 00434 BRM END
    
```

*
*
* F40B15 TEST SECTOR ADRS 02
*

```

10520 0 43 00430 BRM 0BJECT
10521 0 43 00440 BRM RETURN
10522 0 20 07150 NBP XTRA1
10523 0 75 25005 LDB #002 SECTOR 02
10524 0 43 07056 BRM PININ TO PIN IN SECTOR ADRS
10525 0 43 00460 BRM ERR0R RETURN IF ERR0R 0CCURED
10526 4 20 23462 NBP #2013A,4 LOGIC ERR0R MSG
10527 2 20 23475 NBP #2013B,2 HEADING AND REGISTERS
10530 0 43 00434 BRM END
    
```

*
* F40B16 TEST SECTOR ADRS 03
*

10531	0	43	00430	BRM	OBJECT	
10532	0	43	00440	BRM	RETURN	
10533	0	20	07150	NBP	XTRA1	
10534	0	75	25734	LDB	#003	SECTOR 03
10535	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
10536	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
10537	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10540	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10541	0	43	00434	BRM	END	

*
* F40B17 TEST SECTOR ADRS 04
*

10542	0	43	00430	BRM	OBJECT	
10543	0	43	00440	BRM	RETURN	
10544	0	20	07150	NBP	XTRA1	
10545	0	75	25206	LDB	#004	SECTOR 04
10546	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
10547	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
10550	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10551	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10552	0	43	00434	BRM	END	

*
* F40B18 TEST SECTOR ADRS 05
*

10553	0	43	00430	BRM	OBJECT	
10554	0	43	00440	BRM	RETURN	
10555	0	20	07150	NBP	XTRA1	
10556	0	75	25260	LDB	#005	SECTOR 05
10557	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
10560	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
10561	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10562	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10563	0	43	00434	BRM	END	

*
* F40B19 TEST SECTOR ADRS 06
*

10564	0	43	00430	BRM	OBJECT	
10565	0	43	00440	BRM	RETURN	
10566	0	20	07150	NBP	XTRA1	
10567	0	75	25261	LDB	#006	SECTOR 06
10570	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
10571	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
10572	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10573	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10574	0	43	00434	BRM	END	

*
* F40B20 TEST SECTOR ADRS 07
*

10575	0	43	00430	BRM	OBJECT	
10576	0	43	00440	BRM	RETURN	
10577	0	20	07150	NBP	XTRA1	
10600	0	75	25035	LDB	#007	SECTOR 07
10601	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
10602	0	43	07060	BRM	ERRR0	RETURN IF ERROR OCCURED
10603	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10604	2	20	23475	NBP	M2013B,2	HEADING AND REGISTER
10605	0	43	07034	BRM	END	

*
* F40B21 TEST SECTOR ADRS 10
*

10606	0	43	00430	BRM	OBJECT	
10607	0	43	00440	BRM	RETURN	
10610	0	20	07150	NBP	XTRA1	
10611	0	75	25007	LDB	#010	SECTOR 10
10612	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
10613	0	43	07060	BRM	ERRR0	RETURN IF ERROR OCCURED
10614	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10615	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10616	0	43	07034	BRM	END	

*
* F40B22 TEST SECTOR ADRS 11
*

10617	0	43	00430	BRM	OBJECT	
10620	0	43	00440	BRM	RETURN	
10621	0	20	07150	NBP	XTRA1	
10622	0	75	25062	LDB	#011	SECTOR 11
10623	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
10624	0	43	07060	BRM	ERRR0	RETURN IF ERROR OCCURED
10625	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10626	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10627	0	43	00434	BRM	END	

*
* F40B23 TEST SECTOR ADRS 12
*

10630	0	43	00430	BRM	OBJECT	
10631	0	43	00440	BRM	RETURN	
10632	0	20	07150	NBP	XTRA1	
10633	0	75	25063	LDB	#012	SECTOR 12
10634	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
10635	0	43	07060	BRM	ERRR0	RETURN IF ERROR OCCURED
10636	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
10637	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
10640	0	43	00434	BRM	END	

*
* F40824 TEST SECTOR ADRS 13
*

10641	0 43 00430	BRM	OBJECT	
10642	0 43 00440	BRM	RETURN	
10643	0 20 07150	NOP	XTRA1	
10644	0 75 25764	LDB	#013	SECTOR 13
10645	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10646	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10647	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10650	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10651	0 43 00434	BRM	END	

*
* F40825 TEST SECTOR ADRS 14
*

10652	0 43 00430	BRM	OBJECT	
10653	0 43 00440	BRM	RETURN	
10654	0 20 07150	NOP	XTRA1	
10655	0 75 25765	LDB	#014	SECTOR 14
10656	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10657	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10660	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10661	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10662	0 43 00434	BRM	END	

*
* F40826 TEST SECTOR ADRS 15
*

10663	0 43 00430	BRM	OBJECT	
10664	0 43 00440	BRM	RETURN	
10665	0 20 07150	NOP	XTRA1	
10666	0 75 25766	LDB	#015	SECTOR 15
10667	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10670	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10671	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10672	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10673	0 43 00434	BRM	END	

*
* F40827 TEST SECTOR ADRS 16
*

10674	0 43 00430	BRM	OBJECT	
10675	0 43 00440	BRM	RETURN	
10676	0 20 07150	NOP	XTRA1	
10677	0 75 25767	LDB	#016	SECTOR 16
10700	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10701	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10702	4 20 23462	NOP	"2013A,4	LOGIC ERROR MSG
10703	2 20 23475	NOP	"2013B,2	HEADING AND REGISTERS
10704	0 43 00434	BRM	END	

*
* F48B28 TEST SECTOR ADRS 17
*

10705	0 43 00430	BRM	OBJECT	
10706	0 43 00440	BRM	RETURN	
10707	0 20 07150	VBP	XTRA1	
10710	0 75 2503A	LDB	#017	SECTOR 17
10711	0 43 0705A	BRM	PININ	TO PIN IN SECTOR ADRS
10712	0 43 00460	BRM	ERR0R	RETURN IF ERR0R @CCURED
10713	4 20 23462	NBP	*2013A,4	LOGIC ERR0R MSG
10714	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
10715	0 43 00434	BRM	END	

*
* F48B29 TEST SECTOR ADRS 20
*

10716	0 43 00430	BRM	OBJECT	
10717	0 43 00440	BRM	RETURN	
10720	0 20 07150	NBP	XTRA1	
10721	0 75 25 10	LDB	#020	SECTOR 20
10722	0 43 0705A	BRM	PININ	TO PIN IN SECTOR ADRS
10723	0 43 00460	BRM	ERR0R	RETURN IF ERR0R @CCURED
10724	4 20 23462	NBP	*2013A,4	LOGIC ERR0R MSG
10725	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
10726	0 43 00434	BRM	END	

*
* F48B30 TEST SECTOR ADRS 21
*

10727	0 43 00430	BRM	OBJECT	
10730	0 43 00440	BRM	RETURN	
10731	0 20 07150	VBP	XTRA1	
10732	0 75 25070	LDB	#021	SECTOR 21
10733	0 43 0705A	BRM	PININ	TO PIN IN SECTOR ADRS
10734	0 43 00460	BRM	ERR0R	RETURN IF ERR0R @CCURED
10735	4 20 23462	NBP	*2013A,4	LOGIC ERR0R MSG
10736	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
10737	0 43 00434	BRM	END	

*
* F48B31 TEST SECTOR ADRS 22
*

10740	0 43 00430	BRM	OBJECT	
10741	0 43 00440	BRM	RETURN	
10742	0 20 07150	VBP	XTRA1	
10743	0 75 25071	LDB	#022	SECTOR 22
10744	0 43 0705A	BRM	PININ	TO PIN IN SECTOR ADRS
10745	0 43 00460	BRM	ERR0R	RETURN IF ERR0R @CCURED
10746	4 20 23462	NBP	*2013A,4	LOGIC ERR0R MSG
10747	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
10750	0 43 00434	BRM	END	

* F40B32 TEST SECTOR ADRS 23

10751	0 43 00430	BRM	OBJECT	
10752	0 43 00440	BRM	RETURN	
10753	0 20 07150	NBP	XTRA1	
10754	0 75 25072	LDB	#023	SECTOR 23
10755	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10756	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10757	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
10760	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
10761	0 43 00434	BRM	END	

* F40B33 TEST SECTOR ADRS 24

10762	0 43 00430	BRM	OBJECT	
10763	0 43 00440	BRM	RETURN	
10764	0 20 07150	NBP	XTRA1	
10765	0 75 25072	LDB	#024	SECTOR 24
10766	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
10767	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
10770	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
10771	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
10772	0 43 00434	BRM	END	

* F40B34 TEST SECTOR ADRS 25

10773	0 43 00430	BRM	OBJECT	
10774	0 43 00440	BRM	RETURN	
10775	0 20 07150	NBP	XTRA1	
10776	0 75 25074	LDB	#025	SECTOR 25
10777	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11000	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11001	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
11002	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
11003	0 43 00434	BRM	END	

* F40B35 TEST SECTOR ADRS 26

11004	0 43 00430	BRM	OBJECT	
11005	0 43 00440	BRM	RETURN	
11006	0 20 07150	NBP	XTRA1	
11007	0 75 25075	LDB	#026	SECTOR 26
11010	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11011	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11012	4 20 23462	NBP	^2013A,4	LOGIC ERROR MSG
11013	2 20 23475	NBP	^2013B,2	HEADING AND REGISTERS
11014	0 43 00434	BRM	END	

*
* F40B36 TEST SECTOR ADRS 27
*

11015	0 43 00430	BRM	SBJECT	
11016	0 43 00440	BRM	RETURN	
11017	0 20 07150	NBP	XTRA1	
11020	0 75 20774	LDB	#027	SECTOR 27
11021	0 43 07254	BRM	PININ	T0 PIN IN SECTOR ADRS
11022	0 43 00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11023	4 20 23462	NBP	"2013A,"4	LOGIC ERROR MSG
11024	2 20 23475	NBP	"2013B,"2	HEADING AND REGISTERS
11025	0 43 00434	BRM	END	

*
* F40B37 TEST SECTOR ADRS 30
*

11026	0 43 00430	BRM	SBJECT	
11027	0 43 00440	BRM	RETURN	
11029	0 20 07150	NBP	XTRA1	
11031	0 75 20774	LDB	#030	SECTOR 30
11032	0 43 07254	BRM	PININ	T0 PIN IN SECTOR ADRS
11033	0 43 00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11034	4 20 23462	NBP	"2013A,"4	LOGIC ERROR MSG
11035	2 20 23475	NBP	"2013B,"2	HEADING AND REGISTERS
11036	0 43 00434	BRM	END	

*
* F40B38 TEST SECTOR ADRS 31
*

11037	0 43 00430	BRM	SBJECT	
11040	0 43 00440	BRM	RETURN	
11041	0 20 07150	NBP	XTRA1	
11042	0 75 20774	LDB	#031	SECTOR 31
11043	0 43 07254	BRM	PININ	T0 PIN IN SECTOR ADRS
11044	0 43 00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11045	4 20 23462	NBP	"2013A,"4	LOGIC ERROR MSG
11046	2 20 23475	NBP	"2013B,"2	HEADING AND REGISTERS
11047	0 43 00434	BRM	END	

*
* F40B39 TEST SECTOR ADRS 32
*

11050	0 43 00430	BRM	SBJECT	
11051	0 43 00440	BRM	RETURN	
11052	0 20 07150	NBP	XTRA1	
11053	0 75 20774	LDB	#032	SECTOR 32
11054	0 43 07254	BRM	PININ	T0 PIN IN SECTOR ADRS
11055	0 43 00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11056	4 20 23462	NBP	"2013A,"4	LOGIC ERROR MSG
11057	2 20 23475	NBP	"2013B,"2	HEADING AND REGISTERS
11060	0 43 00434	BRM	END	

*
* F40B40 TEST SECTOR ADRS 33
*

11061	0 43 00430	BRM	OBJECT	
11062	0 43 00440	BRM	RETURN	
11063	0 20 07150	NOP	XTRA1	
11064	0 75 25102	LDB	#033	SECTOR 33
11065	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11066	0 43 00460	BRM	ERR9R	RETURN IF ERROR OCCURED
11067	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11070	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11071	0 43 00434	BRM	END	

*
* F40B41 TEST SECTOR ADRS 34
*

11072	0 43 00430	BRM	OBJECT	
11073	0 43 00440	BRM	RETURN	
11074	0 20 07150	NOP	XTRA1	
11075	0 75 25103	LDB	#034	SECTOR 34
11076	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11077	0 43 00460	BRM	ERR9R	RETURN IF ERROR OCCURED
11100	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11101	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11102	0 43 00434	BRM	END	

*
* F40B42 TEST SECTOR ADRS 35
*

11103	0 43 00430	BRM	OBJECT	
11104	0 43 00440	BRM	RETURN	
11105	0 20 07150	NOP	XTRA1	
11106	0 75 25104	LDB	#035	SECTOR 35
11107	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11110	0 43 00460	BRM	ERR9R	RETURN IF ERROR OCCURED
11111	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11112	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11113	0 43 00434	BRM	END	

*
* F40B43 TEST SECTOR ADRS 36
*

11114	0 43 00430	BRM	OBJECT	
11115	0 43 00440	BRM	RETURN	
11116	0 20 07150	NOP	XTRA1	
11117	0 75 25105	LDB	#036	SECTOR 36
11120	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11121	0 43 00460	BRM	ERR9R	RETURN IF ERROR OCCURED
11122	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11123	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11124	0 43 00434	BRM	END	

*
*
* F49B44 TEST SECTOR ADRS 37
*

11125	0 43 07437	BRM	ABJECT	
11126	0 43 07440	BRM	RETURN	
11127	0 20 07150	NBP	XTRA1	
11130	0 75 25137	LDB	#037	SECTOR 37
11131	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11132	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
11133	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
11134	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
11135	0 43 07434	BRM	END	

*
* F49B45 TEST SECTOR ADRS 40
*

11136	0 43 07437	BRM	ABJECT	
11137	0 43 07440	BRM	RETURN	
11140	0 20 07150	NBP	XTRA1	
11141	0 75 25111	LDB	#040	SECTOR 40
11142	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11143	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
11144	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
11145	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
11146	0 43 07434	BRM	END	

*
* F49B46 TEST SECTOR ADRS 41
*

11147	0 43 07437	BRM	ABJECT	
11150	0 43 07440	BRM	RETURN	
11151	0 20 07150	NBP	XTRA1	
11152	0 75 25106	LDB	#041	SECTOR 41
11153	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11154	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
11155	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
11156	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
11157	0 43 07434	BRM	END	

*
* F49B47 TEST SECTOR ADRS 42
*

11160	0 43 07437	BRM	ABJECT	
11161	0 43 07440	BRM	RETURN	
11162	0 20 07150	NBP	XTRA1	
11163	0 75 25107	LDB	#042	SECTOR 42
11164	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11165	0 43 07460	BRM	ERRRR	RETURN IF ERROR OCCURED
11166	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
11167	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
11170	0 43 07434	BRM	END	

*
* F40B48 TEST SECTOR ADRS 43
*

11171	0 43 00430	BRM	OBJECT	
11172	0 43 00440	BRM	RETURN	
11173	0 20 07150	NBP	XTRA1	
11174	0 75 25110	LDB	#043	SECTOR 43
11175	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11176	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11177	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11200	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11201	0 43 00434	BRM	END	

*
* F40B49 TEST SECTOR ADRS 44
*

11202	0 43 00430	BRM	OBJECT	
11203	0 43 00440	BRM	RETURN	
11204	0 20 07150	NBP	XTRA1	
11205	0 75 25111	LDB	#044	SECTOR 44
11206	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11207	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11210	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11211	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11212	0 43 00434	BRM	END	

*
* F40B50 TEST SECTOR ADRS 45
*

11213	0 43 00430	BRM	OBJECT	
11214	0 43 00440	BRM	RETURN	
11215	0 20 07150	NBP	XTRA1	
11216	0 75 25112	LDB	#045	SECTOR 45
11217	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11220	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11221	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11222	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11223	0 43 00434	BRM	END	

*
* F40B51 TEST SECTOR ADRS 46
*

11224	0 43 00430	BRM	OBJECT	
11225	0 43 00440	BRM	RETURN	
11226	0 20 07150	NBP	XTRA1	
11227	0 75 25113	LDB	#046	SECTOR 46
11230	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11231	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11232	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11233	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11234	0 43 00434	BRM	END	

* F49B52 TEST SECTOR ADRS 47

11235	0 43 00430	BRM	SBJECT	
11236	0 43 00440	BRM	RETURN	
11237	0 20 07150	NBP	XTRAI	
11240	0 75 25114	LDB	#047	SECTOR 47
11241	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
11242	0 43 07160	BRM	ERROR	RETURN IF ERROR OCCURED
11243	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11244	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11245	0 43 00434	BRM	END	

* F49B53 TEST SECTOR ADRS 50

11246	0 43 00430	BRM	SBJECT	
11247	0 43 00440	BRM	RETURN	
11250	0 20 07150	NBP	XTRAI	
11251	0 75 25116	LDB	#050	SECTOR 50
11252	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
11253	0 43 07160	BRM	ERROR	RETURN IF ERROR OCCURED
11254	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11255	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11256	0 43 00434	BRM	END	

* F49B54 TEST SECTOR ADRS 51

11257	0 43 00430	BRM	SBJECT	
11260	0 43 00440	BRM	RETURN	
11261	0 20 07150	NBP	XTRAI	
11262	0 75 25116	LDB	#051	SECTOR 51
11263	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
11264	0 43 07160	BRM	ERROR	RETURN IF ERROR OCCURED
11265	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11266	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11267	0 43 00434	BRM	END	

* F49B55 TEST SECTOR ADRS 52

11270	0 43 00430	BRM	SBJECT	
11271	0 43 00440	BRM	RETURN	
11272	0 20 07150	NBP	XTRAI	
11273	0 75 25117	LDB	#052	SECTOR 52
11274	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
11275	0 43 07160	BRM	ERROR	RETURN IF ERROR OCCURED
11276	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11277	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11300	0 43 00434	BRM	END	

*
* F40B56 TEST SECTOR ADRS 53
*

11301	0 43 00430	BRM	OBJECT	
11302	0 43 00440	BRM	RETURN	
11303	0 20 07150	NOP	XTRA1	
11304	0 75 25120	LDB	#053	SECTOR 53
11305	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11306	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11307	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11310	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11311	0 43 00434	BRM	END	

*
* F40B57 TEST SECTOR ADRS 54
*

11312	0 43 00430	BRM	OBJECT	
11313	0 43 00440	BRM	RETURN	
11314	0 20 07150	NOP	XTRA1	
11315	0 75 25121	LDB	#054	SECTOR 54
11316	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11317	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11320	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11321	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11322	0 43 00434	BRM	END	

*
* F40B58 TEST SECTOR ADRS 55
*

11323	0 43 00430	BRM	OBJECT	
11324	0 43 00440	BRM	RETURN	
11325	0 20 07150	NOP	XTRA1	
11326	0 75 25122	LDB	#055	SECTOR 55
11327	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11330	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11331	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11332	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11333	0 43 00434	BRM	END	

*
* F40B59 TEST SECTOR ADRS 56
*

11334	0 43 00430	BRM	OBJECT	
11335	0 43 00440	BRM	RETURN	
11336	0 20 07150	NOP	XTRA1	
11337	0 75 25123	LDB	#056	SECTOR 56
11340	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11341	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11342	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11343	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11344	0 43 00434	BRM	END	

*
* F40B60 TEST SECTOR ADRS 57
*

11345	0	43	00430	BRM	OBJECT	
11346	0	43	00440	BRM	RETURN	
11347	0	20	07150	NBP	XTRA1	
11350	0	75	25124	LDB	#057	SECTOR 57
11351	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
11352	0	43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11353	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
11354	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
11355	0	43	00434	BRM	END	

*
* F40B61 TEST SECTOR ADRS 60
*

11356	0	43	00430	BRM	OBJECT	
11357	0	43	00440	BRM	RETURN	
11360	0	20	07150	NBP	XTRA1	
11361	0	75	25125	LDB	#060	SECTOR 60
11362	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
11363	0	43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11364	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
11365	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
11366	0	43	00434	BRM	END	

*
* F40B62 TEST SECTOR ADRS 61
*

11367	0	43	00430	BRM	OBJECT	
11370	0	43	00440	BRM	RETURN	
11371	0	20	07150	NBP	XTRA1	
11372	0	75	25126	LDB	#061	SECTOR 61
11373	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
11374	0	43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11375	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
11376	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
11377	0	43	00434	BRM	END	

*
* F40B63 TEST SECTOR ADRS 62
*

11400	0	43	00430	BRM	OBJECT	
11401	0	43	00440	BRM	RETURN	
11402	0	20	07150	NBP	XTRA1	
11403	0	75	25127	LDB	#062	SECTOR 62
11404	0	43	07156	BRM	PININ	TO PIN IN SECTOR ADRS
11405	0	43	00460	BRM	ERR0R	RETURN IF ERROR OCCURED
11406	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
11407	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
11410	0	43	00434	BRM	END	

*
* F40B64 TEST SECTOR ADRS 63
*

11411	0 43 00430	BRM	OBJECT	
11412	0 43 00440	BRM	RETURN	
11413	0 20 07150	NOP	XTRA1	
11414	0 75 25130	LDB	#063	SECTOR 63
11415	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11416	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11417	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11420	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11421	0 43 00434	BRM	END	

*
* F40B65 TEST SECTOR ADRS 64
*

11422	0 43 00430	BRM	OBJECT	
11423	0 43 00440	BRM	RETURN	
11424	0 20 07150	NOP	XTRA1	
11425	0 75 25003	LDB	#064	SECTOR 64
11426	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11427	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11430	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11431	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11432	0 43 00434	BRM	END	

*
* F40B66 TEST SECTOR ADRS 65
*

11433	0 43 00430	BRM	OBJECT	
11434	0 43 00440	BRM	RETURN	
11435	0 20 07150	NOP	XTRA1	
11436	0 75 25131	LDB	#065	SECTOR 65
11437	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11440	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11441	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11442	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11443	0 43 00434	BRM	END	

*
* F40B67 TEST SECTOR ADRS 66
*

11444	0 43 00430	BRM	OBJECT	
11445	0 43 00440	BRM	RETURN	
11446	0 20 07150	NOP	XTRA1	
11447	0 75 25132	LDB	#066	SECTOR 66
11450	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11451	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11452	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11453	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11454	0 43 00434	BRM	END	

*
* F48B68 TEST SECTOR ADRS 67
*

11455	0 43 00430	BRM	OBJECT	
11456	0 43 00440	BRM	RETURN	
11457	0 20 07150	NOP	XTRA1	
11460	0 75 25133	LDB	#067	SECTOR 67
11461	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11462	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11463	* 20 23462	NOP	"2013A,"4	LOGIC ERROR MSG
11464	2 20 23475	NOP	"2013B,"2	HEADING AND REGISTERS
11465	0 43 00434	BRM	END	

*
* F48B69 TEST SECTOR ADRS 70
*

11466	0 43 00430	BRM	OBJECT	
11467	0 43 00440	BRM	RETURN	
11470	0 20 07150	NOP	XTRA1	
11471	0 75 25134	LDB	#070	SECTOR 70
11472	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11473	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11474	* 20 23462	NOP	"2013A,"4	LOGIC ERROR MSG
11475	2 20 23475	NOP	"2013B,"2	HEADING AND REGISTERS
11476	0 43 00434	BRM	END	

*
* F48B70 TEST SECTOR ADRS 71
*

11477	0 43 00430	BRM	OBJECT	
11500	0 43 00440	BRM	RETURN	
11501	0 20 07150	NOP	XTRA1	
11502	0 75 25135	LDB	#071	SECTOR 71
11503	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11504	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11505	* 20 23462	NOP	"2013A,"4	LOGIC ERROR MSG
11506	2 20 23475	NOP	"2013B,"2	HEADING AND REGISTERS
11507	0 43 00434	BRM	END	

*
* F48B71 TEST SECTOR ADRS 72
*

11510	0 43 00430	BRM	OBJECT	
11511	0 43 00440	BRM	RETURN	
11512	0 20 07150	NOP	XTRA1	
11513	0 75 25136	LDB	#072	SECTOR 72
11514	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11515	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11516	* 20 23462	NOP	"2013A,"4	LOGIC ERROR MSG
11517	2 20 23475	NOP	"2013B,"2	HEADING AND REGISTERS
11520	0 43 00434	BRM	END	

*
* F40B72 TEST SECTOR ADRS 73
*

11521	0 43 00430	BRM	OBJECT	
11522	0 43 00440	BRM	RETURN	
11523	0 20 07150	NOP	XTRAI	
11524	0 75 25137	LDB	#073	SECTOR 73
11525	0 43 07556	BRM	PININ	TO PIN IN SECTOR ADRS
11526	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11527	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11530	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11531	0 43 00434	BRM	END	

*
* F40B73 TEST SECTOR ADRS 74
*

11532	0 43 00430	BRM	OBJECT	
11533	0 43 00440	BRM	RETURN	
11534	0 20 07150	NOP	XTRAI	
11535	0 75 25140	LDB	#074	SECTOR 74
11536	0 43 07556	BRM	PININ	TO PIN IN SECTOR ADRS
11537	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11540	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11541	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11542	0 43 00434	BRM	END	

*
* F40B74 TEST SECTOR ADRS 75
*

11543	0 43 00430	BRM	OBJECT	
11544	0 43 00440	BRM	RETURN	
11545	0 20 07150	NOP	XTRAI	
11546	0 75 25141	LDB	#075	SECTOR 75
11547	0 43 07556	BRM	PININ	TO PIN IN SECTOR ADRS
11550	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11551	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11552	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11553	0 43 00434	BRM	END	

*
* F40B75 TEST SECTOR ADRS 76
*

11554	0 43 00430	BRM	OBJECT	
11555	0 43 00440	BRM	RETURN	
11556	0 20 07150	NOP	XTRAI	
11557	0 75 25142	LDB	#076	SECTOR 76
11560	0 43 07556	BRM	PININ	TO PIN IN SECTOR ADRS
11561	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11562	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11563	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11564	0 43 00434	BRM	END	

*
*
* F48B76 TEST SECTOR ADRS 77
*

11565	0	43	00430	BRM	OBJECT	
11566	0	43	00440	BRM	RETURN	
11567	0	20	07150	NBP	XTRA1	
11570	0	75	25740	LDB	#077	SECTOR 77
11571	0	43	07756	BRM	PININ	TO PIN IN SECTOR ADRS
11572	0	43	07460	BRM	ERRBR	RETURN IF ERROR OCCURED
11573	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
11574	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
11575	0	43	00434	BRM	END	
11576	0	43	00456	BRM	FDONE	

*
*
* FUNCTION 05
*

11577	0	43	01424	FUNCS	BRM	FUNCTN	
11600	0	20	27551		NBP	FPT5	
11601	0	43	00430		BRM	OBJECT	
11602	0	43	13764		BRM	RAD8K	
11603	0	73	25144		SKG	#3000000	TEST FOR 8 MEG RAD
11604	0	01	13006		BRU	FUNC6	
11605	0	76	11701		LDA	ZER51	
11606	0	43	07153		BRM	SETPIN	

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* F50804 RAD PIN TEST

11607	0	43	00430	BRM	OBJECT	
11610	0	43	00440	BRM	RETURN	
11611	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
11612	0	76	25004	LDA	#000001	
11613	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
11614	0	43	00460	BRM	ERRR	
11615	4	20	23416	NBP	M2004A,4	ERROR MESSAGE FOR BIT
11616	0	20	23403	NBP	M2004B	
11617	0	43	00434	BRM	END	EXIT TEST

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*
*

* F50805 RAD PIN TEST

11620	0	43	00430	BRM	OBJECT	
11621	0	43	00440	BRM	RETURN	
11622	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
11623	0	76	25005	LDA	#000002	
11624	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
11625	0	43	00460	BRM	ERRR	
11626	4	20	23424	NBP	M2005A,4	ERROR MESSAGE FOR BIT
11627	0	20	23403	NBP	M2004B	
11630	0	43	00434	BRM	END	EXIT TEST

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*
*

* F50806 RAD PIN TEST

11631	0	43	00430	BRM	OBJECT	
11632	0	43	00440	BRM	RETURN	
11633	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
11634	0	76	25006	LDA	#000004	
11635	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
11636	0	43	00460	BRM	ERRR	
11637	4	20	23432	NBP	M2006A,4	ERROR MESSAGE FOR BIT
11640	0	20	23403	NBP	M2004B	
11641	0	43	00434	BRM	END	EXIT TEST

*
*
*
*
*

* F50807 RAD PIN TEST

11642	0	43	00430	BRM	OBJECT	
11643	0	43	00440	BRM	RETURN	
11644	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
11645	0	76	25007	LDA	#000010	
11646	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
11647	0	43	00460	BRM	ERRR	
11650	4	20	23440	NBP	M2007A,4	ERROR MESSAGE FOR BIT
11651	0	20	23403	NBP	M2004B	
11652	0	43	00434	BRM	END	EXIT TEST

*
* F50808 RAD PIN TEST
*

11653	0	43	00430	BRM	OBJECT	
11654	0	43	00440	BRM	RETURN	
11655	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
11656	0	76	25110	LDA	#000020	
11657	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
11660	0	43	00460	BRM	ERR0R	
11661	4	20	23446	NBP	M2008A,4	ERROR MESSAGE FOR BIT
11662	0	20	23403	NBP	M2004B	
11663	0	43	00434	BRM	END	EXIT TEST

*
* F50809 RAD PIN TEST
*

11664	0	43	00430	BRM	OBJECT	
11665	0	43	00440	BRM	RETURN	
11666	0	20	07150	NBP	XTRA1	SPURIOUS INTRUPT HANDLER
11667	0	76	25111	LDA	#000040	
11670	0	43	07111	BRM	PINSET	PIN TRANSFER AND TEST ROUTINE
11671	0	43	00460	BRM	ERR0R	
11672	4	20	23454	NBP	M2009A,4	ERROR MESSAGE FOR BIT
11673	0	20	23403	NBP	M2004B	
11674	0	43	00434	BRM	END	EXIT TEST

*
* FUNCTION 05 TEST SECTOR COUNTER
*

11675	0	43	00430	BRM	OBJECT	FIND THE ZERO SECTOR
11676	0	43	00440	BRM	RETURN	
11677	0	20	07150	NBP	XTRA1	
11700	0	71	25122	LDX	#040000	TIME 40 MILLISECONDS
11701	0	06	16226	ZER51	EDMM	16226
11702	0	33	24516	PINN	PINKRD	ALERT TO PIN
11703	0	76	24516	LDA	PINKRD	
11704	0	75	25001	LDB	#37777	
11705	0	70	24777	SKM	#0	
11706	0	41	11701	BRX	ZER51	
11707	0	41	11715	BRX	ZER52	
11710	0	75	24777	LDB	#0	
11711	0	71	00430	LDX	OBJECT	
11712	0	43	00460	BRM	ERR0R	
11713	4	20	23411	NBP	M2013C,4	NO ZERO
11714	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
11715	0	43	00434	ZER52	BRM	END

*
* F50B14 TEST SECTOR ADRS 01
*

11716	0 43 00430	BRM	OBJECT	
11717	0 43 00440	BRM	RETURN	
11720	0 20 07150	NBP	XTRA1	
11721	0 75 25004	LDB	#001	SECTOR 01
11722	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11723	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11724	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11725	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11726	0 43 00434	BRM	END	

*
* F50B15 TEST SECTOR ADRS 02
*

11727	0 43 00430	BRM	OBJECT	
11730	0 43 00440	BRM	RETURN	
11731	0 20 07150	NBP	XTRA1	
11732	0 75 25005	LDB	#002	SECTOR 02
11733	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11734	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11735	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11736	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11737	0 43 00434	BRM	END	

*
* F50B16 TEST SECTOR ADRS 03
*

11740	0 43 00430	BRM	OBJECT	
11741	0 43 00440	BRM	RETURN	
11742	0 20 07150	NBP	XTRA1	
11743	0 75 25034	LDB	#003	SECTOR 03
11744	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11745	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11746	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11747	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11750	0 43 00434	BRM	END	

*
* F50B17 TEST SECTOR ADRS 04
*

11751	0 43 00430	BRM	OBJECT	
11752	0 43 00440	BRM	RETURN	
11753	0 20 07150	NBP	XTRA1	
11754	0 75 25006	LDB	#004	SECTOR 04
11755	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11756	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
11757	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
11760	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
11761	0 43 00434	BRM	END	

*
* F50B18 TEST SECTOR ADRS 05
*

11762	0 43 00430	BRM	OBJECT	
11763	0 43 00440	BRM	RETURN	
11764	0 20 07150	NOP	XTRA1	
11765	0 75 25060	LDB	#005	SECTOR 05
11766	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
11767	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
11770	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
11771	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
11772	0 43 00434	BRM	END	

*
* F50B19 TEST SECTOR ADRS 06
*

11773	0 43 00430	BRM	OBJECT	
11774	0 43 00440	BRM	RETURN	
11775	0 20 07150	NOP	XTRA1	
11776	0 75 25061	LDB	#006	SECTOR 06
11777	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12000	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12001	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12002	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12003	0 43 00434	BRM	END	

*
* F50B20 TEST SECTOR ADRS 07
*

12004	0 43 00430	BRM	OBJECT	
12005	0 43 00440	BRM	RETURN	
12006	0 20 07150	NOP	XTRA1	
12007	0 75 25035	LDB	#007	SECTOR 07
12010	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12011	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12012	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12013	2 20 23475	NOP	M2013B,2	HEADING AND REGISTER
12014	0 43 00434	BRM	END	

*
* F50B21 TEST SECTOR ADRS 10
*

12015	0 43 00430	BRM	OBJECT	
12016	0 43 00440	BRM	RETURN	
12017	0 20 07150	NOP	XTRA1	
12020	0 75 25007	LDB	#010	SECTOR 10
12021	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12022	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12023	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12024	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12025	0 43 00434	BRM	END	

*
* F50B22 TEST SECTOR ADRS 11
*

12026	0 43 00430	BRM	OBJECT	
12027	0 43 00440	BRM	RETURN	
12030	0 20 07150	NBP	XTRA1	
12031	0 75 25062	LDB	#011	SECTOR 11
12032	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12033	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12034	4 20 23462	NBP	M2013A,4	LOGIC ERR0R MSG
12035	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12036	0 43 00434	BRM	END	

*
* F50B23 TEST SECTOR ADRS 12
*

12037	0 43 00430	BRM	OBJECT	
12040	0 43 00440	BRM	RETURN	
12041	0 20 07150	NBP	XTRA1	
12042	0 75 25062	LDB	#012	SECTOR 12
12043	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12044	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12045	4 20 23462	NBP	M2013A,4	LOGIC ERR0R MSG
12046	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12047	0 43 00434	BRM	END	

*
* F50B24 TEST SECTOR ADRS 13
*

12050	0 43 00430	BRM	OBJECT	
12051	0 43 00440	BRM	RETURN	
12052	0 20 07150	NBP	XTRA1	
12053	0 75 25064	LDB	#013	SECTOR 13
12054	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12055	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12056	4 20 23462	NBP	M2013A,4	LOGIC ERR0R MSG
12057	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12060	0 43 00434	BRM	END	

*
* F50B25 TEST SECTOR ADRS 14
*

12061	0 43 00430	BRM	OBJECT	
12062	0 43 00440	BRM	RETURN	
12063	0 20 07150	NBP	XTRA1	
12064	0 75 25065	LDB	#014	SECTOR 14
12065	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12066	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12067	4 20 23462	NBP	M2013A,4	LOGIC ERR0R MSG
12070	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12071	0 43 00434	BRM	END	

*
* F50B26 TEST SECTOR ADRS 15
*

12072	0	43	00430	BRM	OBJECT	
12073	0	43	00440	BRM	RETURN	
12074	0	20	07150	NOP	XTRA1	
12075	0	75	25166	LDB	#015	SECTOR 15
12076	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12077	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12100	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
12101	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
12102	0	43	00434	BRM	END	

*
* F50B27 TEST SECTOR ADRS 16
*

12103	0	43	00430	BRM	OBJECT	
12104	0	43	00440	BRM	RETURN	
12105	0	20	07150	NOP	XTRA1	
12106	0	75	25167	LDB	#016	SECTOR 16
12107	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12110	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12111	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
12112	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
12113	0	43	00434	BRM	END	

*
* F50B28 TEST SECTOR ADRS 17
*

12114	0	43	00430	BRM	OBJECT	
12115	0	43	00440	BRM	RETURN	
12116	0	20	07150	NOP	XTRA1	
12117	0	75	25136	LDB	#017	SECTOR 17
12120	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12121	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12122	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
12123	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
12124	0	43	00434	BRM	END	

*
* F50B29 TEST SECTOR ADRS 20
*

12125	0	43	00430	BRM	OBJECT	
12126	0	43	00440	BRM	RETURN	
12127	0	20	07150	NOP	XTRA1	
12130	0	75	25110	LDB	#020	SECTOR 20
12131	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12132	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12133	4	20	23462	NOP	M2013A,4	LOGIC ERROR MSG
12134	2	20	23475	NOP	M2013B,2	HEADING AND REGISTERS
12135	0	43	00434	BRM	END	

•
• F50B30 TEST SECTOR ADRS 21
•

12136	0 43 00430	BRM	OBJECT	
12137	0 43 00440	BRM	RETURN	
12140	0 20 07150	NBP	XTRA1	
12141	0 75 25070	LDB	#021	SECTOR 21
12142	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12143	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12144	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12145	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12146	0 43 00434	BRM	END	

•
• F50B31 TEST SECTOR ADRS 22
•

12147	0 43 00430	BRM	OBJECT	
12150	0 43 00440	BRM	RETURN	
12151	0 20 07150	NBP	XTRA1	
12152	0 75 25071	LDB	#022	SECTOR 22
12153	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12154	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12155	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12156	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12157	0 43 00434	BRM	END	

•
• F50B32 TEST SECTOR ADRS 23
•

12160	0 43 00430	BRM	OBJECT	
12161	0 43 00440	BRM	RETURN	
12162	0 20 07150	NBP	XTRA1	
12163	0 75 25072	LDB	#023	SECTOR 23
12164	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12165	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12166	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12167	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12170	0 43 00434	BRM	END	

•
• F50B33 TEST SECTOR ADRS 24
•

12171	0 43 00430	BRM	OBJECT	
12172	0 43 00440	BRM	RETURN	
12173	0 20 07150	NBP	XTRA1	
12174	0 75 25073	LDB	#024	SECTOR 24
12175	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12176	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12177	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12200	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12201	0 43 00434	BRM	END	

*
* F50B34 TEST SECTOR ADRS 25
*

12202	0	43	00430	BRM	OBJECT	
12203	0	43	00440	BRM	RETURN	
12204	0	20	07150	NBP	XTRA1	
12205	0	75	25074	LDB	#025	SECTOR 25
12206	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12207	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12210	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12211	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12212	0	43	00434	BRM	END	

*
* F50B35 TEST SECTOR ADRS 26
*

12213	0	43	00430	BRM	OBJECT	
12214	0	43	00440	BRM	RETURN	
12215	0	20	07150	NBP	XTRA1	
12216	0	75	25075	LDB	#026	SECTOR 26
12217	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12220	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12221	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12222	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12223	0	43	00434	BRM	END	

*
* F50B36 TEST SECTOR ADRS 27
*

12224	0	43	00430	BRM	OBJECT	
12225	0	43	00440	BRM	RETURN	
12226	0	20	07150	NBP	XTRA1	
12227	0	75	25076	LDB	#027	SECTOR 27
12230	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12231	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12232	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12233	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12234	0	43	00434	BRM	END	

*
* F50B37 TEST SECTOR ADRS 30
*

12235	0	43	00430	BRM	OBJECT	
12236	0	43	00440	BRM	RETURN	
12237	0	20	07150	NBP	XTRA1	
12240	0	75	25077	LDB	#030	SECTOR 30
12241	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12242	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12243	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12244	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12245	0	43	00434	BRM	END	

*
* F50B38 TEST SECTOR ADRS 31
*

12246	0 43 00430	BRM	OBJECT	
12247	0 43 00440	BRM	RETURN	
12250	0 20 07150	NBP	XTRA1	
12251	0 75 25100	LDB	#031	SECTOR 31
12252	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12253	0 43 00460	BRM	ERRR	RETURN IF ERROR OCCURED
12254	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12255	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12256	0 43 00434	BRM	END	

*
* F50B39 TEST SECTOR ADRS 32
*

12257	0 43 00430	BRM	OBJECT	
12260	0 43 00440	BRM	RETURN	
12261	0 20 07150	NBP	XTRA1	
12262	0 75 25101	LDB	#032	SECTOR 32
12263	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12264	0 43 00460	BRM	ERRR	RETURN IF ERROR OCCURED
12265	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12266	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12267	0 43 00434	BRM	END	

*
* F50B40 TEST SECTOR ADRS 33
*

12270	0 43 00430	BRM	OBJECT	
12271	0 43 00440	BRM	RETURN	
12272	0 20 07150	NBP	XTRA1	
12273	0 75 25102	LDB	#033	SECTOR 33
12274	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12275	0 43 00460	BRM	ERRR	RETURN IF ERROR OCCURED
12276	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12277	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12300	0 43 00434	BRM	END	

*
* F50B41 TEST SECTOR ADRS 34
*

12301	0 43 00430	BRM	OBJECT	
12302	0 43 00440	BRM	RETURN	
12303	0 20 07150	NBP	XTRA1	
12304	0 75 25103	LDB	#034	SECTOR 34
12305	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12306	0 43 00460	BRM	ERRR	RETURN IF ERROR OCCURED
12307	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12310	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12311	0 43 00434	BRM	END	

*
* F50B42 TEST SECTOR ADRS 35
*

12312	0 43 00430	BRM	OBJECT	
12313	0 43 00440	BRM	RETURN	
12314	0 20 07150	NOP	XTRA1	
12315	0 75 25104	LDB	#035	SECTOR 35
12316	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12317	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
12320	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12321	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12322	0 43 00434	BRM	END	

*
* F50B43 TEST SECTOR ADRS 36
*

12323	0 43 00430	BRM	OBJECT	
12324	0 43 00440	BRM	RETURN	
12325	0 20 07150	NOP	XTRA1	
12326	0 75 25105	LDB	#036	SECTOR 36
12327	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12330	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
12331	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12332	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12333	0 43 00434	BRM	END	

*
* F50B44 TEST SECTOR ADRS 37
*

12334	0 43 00430	BRM	OBJECT	
12335	0 43 00440	BRM	RETURN	
12336	0 20 07150	NOP	XTRA1	
12337	0 75 25137	LDB	#037	SECTOR 37
12340	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12341	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
12342	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12343	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12344	0 43 00434	BRM	END	

*
* F50B45 TEST SECTOR ADRS 40
*

12345	0 43 00430	BRM	OBJECT	
12346	0 43 00440	BRM	RETURN	
12347	0 20 07150	NOP	XTRA1	
12350	0 75 25111	LDB	#040	SECTOR 40
12351	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12352	0 43 00460	BRM	ERRBR	RETURN IF ERROR OCCURED
12353	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12354	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12355	0 43 00434	BRM	END	

*
* F50846 TEST SECTOR ADRS 41
*

12356	0 43 00430	BRM	SBJECT	
12357	0 43 00440	BRM	RETURN	
12360	0 20 07150	NBP	XTRA1	
12361	0 75 25106	LDB	#041	SECTOR 41
12362	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12363	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
12364	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
12365	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
12366	0 43 00434	BRM	END	

*
* F50847 TEST SECTOR ADRS 42
*

12367	0 43 00430	BRM	SBJECT	
12370	0 43 00440	BRM	RETURN	
12371	0 20 07150	NBP	XTRA1	
12372	0 75 25107	LDB	#042	SECTOR 42
12373	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12374	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
12375	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
12376	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
12377	0 43 00434	BRM	END	

*
* F50848 TEST SECTOR ADRS 43
*

12400	0 43 00430	BRM	SBJECT	
12401	0 43 00440	BRM	RETURN	
12402	0 20 07150	NBP	XTRA1	
12403	0 75 25110	LDB	#043	SECTOR 43
12404	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12405	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
12406	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
12407	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
12410	0 43 00434	BRM	END	

*
* F50849 TEST SECTOR ADRS 44
*

12411	0 43 00430	BRM	SBJECT	
12412	0 43 00440	BRM	RETURN	
12413	0 20 07150	NBP	XTRA1	
12414	0 75 25111	LDB	#044	SECTOR 44
12415	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12416	0 43 00460	BRM	ERRRR	RETURN IF ERROR OCCURED
12417	4 20 23462	NBP	*2013A,4	LOGIC ERROR MSG
12420	2 20 23475	NBP	*2013B,2	HEADING AND REGISTERS
12421	0 43 00434	BRM	END	

*
* F50B50 TEST SECTOR ADRS 45
*

12422	0 43 00430	BRM	OBJECT	
12423	0 43 00440	BRM	RETURN	
12424	0 20 07150	NBP	XTRA1	
12425	0 75 25112	LDB	#045	SECTOR 45
12426	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12427	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12430	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12431	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12432	0 43 00434	BRM	END	

*
* F50B51 TEST SECTOR ADRS 46
*

12433	0 43 00430	BRM	OBJECT	
12434	0 43 00440	BRM	RETURN	
12435	0 20 07150	NBP	XTRA1	
12436	0 75 25113	LDB	#046	SECTOR 46
12437	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12440	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12441	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12442	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12443	0 43 00434	BRM	END	

*
* F50B52 TEST SECTOR ADRS 47
*

12444	0 43 00430	BRM	OBJECT	
12445	0 43 00440	BRM	RETURN	
12446	0 20 07150	NBP	XTRA1	
12447	0 75 25114	LDB	#047	SECTOR 47
12450	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12451	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12452	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12453	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12454	0 43 00434	BRM	END	

*
* F50B53 TEST SECTOR ADRS 50
*

12455	0 43 00430	BRM	OBJECT	
12456	0 43 00440	BRM	RETURN	
12457	0 20 07150	NBP	XTRA1	
12460	0 75 25115	LDB	#050	SECTOR 50
12461	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12462	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12463	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12464	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12465	0 43 00434	BRM	END	

*
* F50854 TEST SECTOR ADRS 51
*

12466	0	43	00430	BRM	OBJECT	
12467	0	43	00440	BRM	RETURN	
12470	0	20	07150	NOP	XTRA1	
12471	0	75	25116	LDB	#051	SECTOR 51
12472	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12473	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12474	4	20	23462	NOP	Y2013A,4	LOGIC ERROR MSG
12475	2	20	23475	NOP	Y2013B,2	HEADING AND REGISTERS
12476	0	43	00434	BRM	END	

*
* F50855 TEST SECTOR ADRS 52
*

12477	0	43	00430	BRM	OBJECT	
12500	0	43	00440	BRM	RETURN	
12501	0	20	07150	NOP	XTRA1	
12502	0	75	25117	LDB	#052	SECTOR 52
12503	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12504	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12505	4	20	23462	NOP	Y2013A,4	LOGIC ERROR MSG
12506	2	20	23475	NOP	Y2013B,2	HEADING AND REGISTERS
12507	0	43	00434	BRM	END	

*
* F50856 TEST SECTOR ADRS 53
*

12510	0	43	00430	BRM	OBJECT	
12511	0	43	00440	BRM	RETURN	
12512	0	20	07150	NOP	XTRA1	
12513	0	75	25120	LDB	#053	SECTOR 53
12514	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12515	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12516	4	20	23462	NOP	Y2013A,4	LOGIC ERROR MSG
12517	2	20	23475	NOP	Y2013B,2	HEADING AND REGISTERS
12520	0	43	00434	BRM	END	

*
* F50857 TEST SECTOR ADRS 54
*

12521	0	43	00430	BRM	OBJECT	
12522	0	43	00440	BRM	RETURN	
12523	0	20	07150	NOP	XTRA1	
12524	0	75	25121	LDB	#054	SECTOR 54
12525	0	43	07056	BRM	PININ	TO PIN IN SECTOR ADRS
12526	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12527	4	20	23462	NOP	Y2013A,4	LOGIC ERROR MSG
12530	2	20	23475	NOP	Y2013B,2	HEADING AND REGISTERS
12531	0	43	00434	BRM	END	

* F50858 TEST SECTOR ADRS 55

12532	0 43 00430	BRM	OBJECT	
12533	0 43 00440	BRM	RETURN	
12534	0 20 07150	NOP	XTRA1	
12535	0 75 25122	LDB	#055	SECTOR 55
12536	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12537	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12540	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12541	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12542	0 43 00434	BRM	END	

* F50859 TEST SECTOR ADRS 56

12543	0 43 00430	BRM	OBJECT	
12544	0 43 00440	BRM	RETURN	
12545	0 20 07150	NOP	XTRA1	
12546	0 75 25123	LDB	#056	SECTOR 56
12547	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12550	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12551	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12552	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12553	0 43 00434	BRM	END	

* F50860 TEST SECTOR ADRS 57

12554	0 43 00430	BRM	OBJECT	
12555	0 43 00440	BRM	RETURN	
12556	0 20 07150	NOP	XTRA1	
12557	0 75 25124	LDB	#057	SECTOR 57
12560	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12561	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12562	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12563	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12564	0 43 00434	BRM	END	

* F50861 TEST SECTOR ADRS 60

12565	0 43 00430	BRM	OBJECT	
12566	0 43 00440	BRM	RETURN	
12567	0 20 07150	NOP	XTRA1	
12570	0 75 25125	LDB	#060	SECTOR 60
12571	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12572	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12573	4 20 23462	NOP	M2013A,4	LOGIC ERROR MSG
12574	2 20 23475	NOP	M2013B,2	HEADING AND REGISTERS
12575	0 43 00434	BRM	END	

*
* F50B62 TEST SECTOR ADRS 61
*

12576	0 43 00430	BRM	OBJECT	
12577	0 43 00440	BRM	RETURN	
12600	0 20 07150	NBP	XTRA1	
12601	0 75 25126	LDB	#061	SECTOR 61
12602	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12603	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12604	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12605	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12606	0 43 00434	BRM	END	

*
* F50B63 TEST SECTOR ADRS 62
*

12607	0 43 00430	BRM	OBJECT	
12610	0 43 00440	BRM	RETURN	
12611	0 20 07150	NBP	XTRA1	
12612	0 75 25127	LDB	#062	SECTOR 62
12613	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12614	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12615	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12616	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12617	0 43 00434	BRM	END	

*
* F50B64 TEST SECTOR ADRS 63
*

12620	0 43 00430	BRM	OBJECT	
12621	0 43 00440	BRM	RETURN	
12622	0 20 07150	NBP	XTRA1	
12623	0 75 25130	LDB	#063	SECTOR 63
12624	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12625	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12626	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12627	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12630	0 43 00434	BRM	END	

*
* F50B65 TEST SECTOR ADRS 64
*

12631	0 43 00430	BRM	OBJECT	
12632	0 43 00440	BRM	RETURN	
12633	0 20 07150	NBP	XTRA1	
12634	0 75 25103	LDB	#064	SECTOR 64
12635	0 43 07156	BRM	PININ	TO PIN IN SECTOR ADRS
12636	0 43 00460	BRM	ERROR	RETURN IF ERROR OCCURED
12637	4 20 23462	NBP	M2013A,4	LOGIC ERROR MSG
12640	2 20 23475	NBP	M2013B,2	HEADING AND REGISTERS
12641	0 43 00434	BRM	END	

*
* F50B66 TEST SECTOR ADRS 65
*

12642	0	43	00430	BRM	OBJECT	
12643	0	43	00440	BRM	RETURN	
12644	0	20	07150	NBP	XTRA1	
12645	0	75	25131	LDB	#065	SECTOR 65
12646	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
12647	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12650	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12651	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12652	0	43	00434	BRM	END	

*
* F50B67 TEST SECTOR ADRS 66
*

12653	0	43	00430	BRM	OBJECT	
12654	0	43	00440	BRM	RETURN	
12655	0	20	07150	NBP	XTRA1	
12656	0	75	25132	LDB	#066	SECTOR 66
12657	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
12660	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12661	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12662	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12663	0	43	00434	BRM	END	

*
* F50B68 TEST SECTOR ADRS 67
*

12664	0	43	00430	BRM	OBJECT	
12665	0	43	00440	BRM	RETURN	
12666	0	20	07150	NBP	XTRA1	
12667	0	75	25133	LDB	#067	SECTOR 67
12670	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
12671	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12672	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12673	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12674	0	43	00434	BRM	END	

*
* F50B69 TEST SECTOR ADRS 70
*

12675	0	43	00430	BRM	OBJECT	
12676	0	43	00440	BRM	RETURN	
12677	0	20	07150	NBP	XTRA1	
12700	0	75	25134	LDB	#070	SECTOR 70
12701	0	43	07456	BRM	PININ	TO PIN IN SECTOR ADRS
12702	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12703	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12704	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12705	0	43	00434	BRM	END	

*
* F50B70 TEST SECTOR ADRS 71
*

12706	0 43 00430	BRM	OBJECT	
12707	0 43 00440	BRM	RETURN	
12710	0 20 07150	NBP	XTRA1	
12711	0 75 25135	LDB	#071	SECTOR 71
12712	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12713	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12714	4 20 23462	NBP	"2013A,4	LOGIC ERR0R MSG
12715	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
12716	0 43 00434	BRM	END	

*
* F50B71 TEST SECTOR ADRS 72
*

12717	0 43 00430	BRM	OBJECT	
12720	0 43 00440	BRM	RETURN	
12721	0 20 07150	NBP	XTRA1	
12722	0 75 25136	LDB	#072	SECTOR 72
12723	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12724	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12725	4 20 23462	NBP	"2013A,4	LOGIC ERR0R MSG
12726	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
12727	0 43 00434	BRM	END	

*
* F50B72 TEST SECTOR ADRS 73
*

12730	0 43 00430	BRM	OBJECT	
12731	0 43 00440	BRM	RETURN	
12732	0 20 07150	NBP	XTRA1	
12733	0 75 25137	LDB	#073	SECTOR 73
12734	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12735	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12736	4 20 23462	NBP	"2013A,4	LOGIC ERR0R MSG
12737	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
12740	0 43 00434	BRM	END	

*
* F50B73 TEST SECTOR ADRS 74
*

12741	0 43 00430	BRM	OBJECT	
12742	0 43 00440	BRM	RETURN	
12743	0 20 07150	NBP	XTRA1	
12744	0 75 25140	LDB	#074	SECTOR 74
12745	0 43 07056	BRM	PININ	TO PIN IN SECTOR ADRS
12746	0 43 00460	BRM	ERR0R	RETURN IF ERR0R 0CCURED
12747	4 20 23462	NBP	"2013A,4	LOGIC ERR0R MSG
12750	2 20 23475	NBP	"2013B,2	HEADING AND REGISTERS
12751	0 43 00434	BRM	END	

*
* F50B74 TEST SECTOR ADRS 75
*

12752	0	43	00430	BRM	OBJECT	
12753	0	43	00440	BRM	RETURN	
12754	0	20	07150	NBP	XTRA1	
12755	0	75	25141	LDB	#075	SECTOR 75
12756	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
12757	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12760	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12761	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12762	0	43	00434	BRM	END	

*
* F50B75 TEST SECTOR ADRS 76
*

12763	0	43	00430	BRM	OBJECT	
12764	0	43	00440	BRM	RETURN	
12765	0	20	07150	NBP	XTRA1	
12766	0	75	25142	LDB	#076	SECTOR 76
12767	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
12770	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
12771	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
12772	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
12773	0	43	00434	BRM	END	

*
* F50B76 TEST SECTOR ADRS 77
*

12774	0	43	00430	BRM	OBJECT	
12775	0	43	00440	BRM	RETURN	
12776	0	20	07150	NBP	XTRA1	
12777	0	75	25040	LDB	#077	SECTOR 77
13000	0	43	07256	BRM	PININ	TO PIN IN SECTOR ADRS
13001	0	43	00460	BRM	ERROR	RETURN IF ERROR OCCURED
13002	4	20	23462	NBP	M2013A,4	LOGIC ERROR MSG
13003	2	20	23475	NBP	M2013B,2	HEADING AND REGISTERS
13004	0	43	00434	BRM	END	
13005	0	43	00456	BRM	FDONE	

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13006	0 43 00424	FUNC6	BRM	FUNCTN	CONTROL LINK
13007	0 20 20457		NOP	FRT6	PARAMETER FOR THIS FUNCTION
13010	0 43 00440		BRM	RETURN	
13011	0 20 07150		NOP	XTRA1	
13012	0 76 00401		LDA	STATUS	
13013	0 72 25017		SKA	#4000	SOFTWARE RAD READ ONLY
13014	0 01 15410		BRU	FUNC10	SKIP TEST
13015	0 43 13766		BRM	RADSK	

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*
*
* FUNCTION 06 OBJECT TEST 01
*
*
13016 0 43 00430 BRM OBJECT
13017 0 76 25145 LDA #070007000 DATA FOR HEAD
13020 0 43 15202 BRM SPREAD FILL OUTPUT BUFFER
13021 0 76 24777 LDA #00000 STARTING ADRS.
13022 0 43 15424 BRM YMSG YDRIVER CONTRL
13023 4 20 23561 NOP YMSG02,4 WRITE LOGIC MESSAGE
13024 0 20 23525 NOP YMSG036
13025 0 43 00434 BRM END 8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 02
*
*
13026 0 43 00430 BRM OBJECT
13027 0 76 25012 LDA #00100 STARTING ADRS.
13030 0 43 15424 BRM YMSG YDRIVER CONTRL
13031 4 20 23563 NOP YMSG021,4 WRITE LOGIC MESSAGE
13032 0 20 23534 BRM YMSG037
13033 0 43 00434 BRM END 8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 03
*
*
13034 0 43 00430 BRM OBJECT
13035 0 76 25012 LDA #00200 STARTING ADRS.
13036 0 43 15424 BRM YMSG YDRIVER CONTRL
13037 4 20 23565 NOP YMSG022,4 WRITE LOGIC MESSAGE
13040 0 20 23543 BRM YMSG038
13041 0 43 00434 BRM END 8 HEADS

*
* FUNCTION 06 OBJECT TEST 04
*

13042	0	43	00430	BRM	OBJECT	
13043	0	76	25146	LDA	#00300	STARTING ADRS.
13044	0	43	15424	BRM	YMSG	YDRIVER CONTRL
13045	4	20	23567	NOP	MSG023,4	WRITE LOGIC MESSAGE
13046	0	20	23562	NOP	MSG039	
13047	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 05
*

13050	0	43	00430	BRM	OBJECT	
13051	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13052	0	76	24777	LDA	#0000	STARTING SECTOR
13053	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
13054	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTRL
13055	0	76	25150	LDA	#00030001	
13056	0	43	15364	BRM	DECR11	
13057	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 06
*

13060	0	43	00430	BRM	OBJECT	
13061	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13062	0	76	25112	LDA	#100	STARTING SECTOR
13063	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
13064	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTRL
13065	0	76	25151	LDA	#20005	SIDE AND TB STRIP
13066	0	43	15364	BRM	DECR11	
13067	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 07
*

13070	0	43	00430	BRM	OBJECT	
13071	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13072	0	76	25013	LDA	#200	STARTING SECTOR
13073	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
13074	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTRL
13075	0	76	25152	LDA	#10011	SIDE AND TB STRIP 9
13076	0	43	15364	BRM	DECR11	
13077	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 08
*

13100	0	43	00430	BRM	OBJECT	
13101	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13102	0	76	25146	LDA	#300	STARTING SECTOR
13103	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
13104	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13105	0	76	25153	LDA	#40103	SIDE AND TB STRIP
13106	0	43	15364	BRM	DECR11	
13107	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 09
*

13110	0	43	00430	BRM	OBJECT	
13111	0	76	25154	LDA	#007000700	DATA FOR HEAD
13112	0	43	15302	BRM	SPREAD	FILL OUTPUT BUFFER
13113	0	76	24777	LDA	#00000	STARTING ADRS,
13114	0	43	15424	BRM	YMSG	YDRIVER CONTROL
13115	4	20	23571	NOP	MSG024,4	WRITE LOGIC MESSAGE
13116	0	20	23525	NOP	MSG036	
13117	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 10
*

13120	0	43	00430	BRM	OBJECT	
13121	0	76	25112	LDA	#00100	STARTING ADRS,
13122	0	43	15424	BRM	YMSG	YDRIVER CONTROL
13123	4	20	23573	NOP	MSG025,4	WRITE LOGIC MESSAGE
13124	0	20	23534	NOP	MSG037	
13125	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 11
*

13126	0	43	00430	BRM	OBJECT	
13127	0	76	25113	LDA	#00200	STARTING ADRS,
13130	0	43	15424	BRM	YMSG	YDRIVER CONTROL
13131	4	20	23575	NOP	MSG026,4	WRITE LOGIC MESSAGE
13132	0	20	23543	NOP	MSG038	
13133	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 12
*

13134	0	43	00430	BRM	OBJECT	
13135	0	76	25146	LDA	#00300	STARTING ADRS,
13136	0	43	15424	BRM	YMSG	YDRIVER CONTROL
13137	4	20	23577	NOP	MSG027,4	WRITE LOGIC MESSAGE
13140	0	20	23552	NOP	MSG039	
13141	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 04
*

13042	0 43 00430	BRM	OBJECT	
13043	0 76 25146	LDA	#00300	STARTING ADRS.
13044	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13045	4 20 23567	NOP	MSG023,4	WRITE LOGIC MESSAGE
13046	0 20 23562	NOP	MSG039	
13047	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 05
*

13050	0 43 00430	BRM	OBJECT	
13051	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13052	0 76 24777	LDA	#0000	STARTING SECTOR
13053	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13054	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13055	0 76 25150	LDA	#00030001	
13056	0 43 15364	BRM	DECR11	
13057	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 06
*

13060	0 43 00430	BRM	OBJECT	
13061	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13062	0 76 25112	LDA	#100	STARTING SECTOR
13063	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13064	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13065	0 76 25151	LDA	#20005	SIDE AND TB STRIP
13066	0 43 15364	BRM	DECR11	
13067	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 07
*

13070	0 43 00430	BRM	OBJECT	
13071	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13072	0 76 25013	LDA	#200	STARTING SECTOR
13073	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13074	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13075	0 76 25152	LDA	#10011	SIDE AND TB STRIP 9
13076	0 43 15364	BRM	DECR11	
13077	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 08
*

13100	0 43 00430	BRM	OBJECT	
13101	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13102	0 76 25146	LDA	#300	STARTING SECTOR
13103	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13104	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13105	0 76 25153	LDA	#40103	SIDE AND TB STRIP
13106	0 43 15364	BRM	DECR11	
13107	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 09
*

13110	0 43 00430	BRM	OBJECT	
13111	0 76 25154	LDA	#007000700	DATA FOR HEAD
13112	0 43 15202	BRM	SPREAD	FILL OUTPUT BUFFER
13113	0 76 24777	LDA	#00000	STARTING ADRS,
13114	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13115	4 20 23571	NOP	MSG024,4	WRITE LOGIC MESSAGE
13116	0 20 23525	NOP	MSG036	
13117	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 10
*

13120	0 43 00430	BRM	OBJECT	
13121	0 76 25112	LDA	#00100	STARTING ADRS,
13122	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13123	4 20 23573	NOP	MSG025,4	WRITE LOGIC MESSAGE
13124	0 20 23534	NOP	MSG037	
13125	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 11
*

13126	0 43 00430	BRM	OBJECT	
13127	0 76 25113	LDA	#00200	STARTING ADRS,
13130	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13131	4 20 23575	NOP	MSG026,4	WRITE LOGIC MESSAGE
13132	0 20 23543	NOP	MSG038	
13133	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 12
*

13134	0 43 00430	BRM	OBJECT	
13135	0 76 25146	LDA	#00300	STARTING ADRS,
13136	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13137	4 20 23577	NOP	MSG027,4	WRITE LOGIC MESSAGE
13140	0 20 23552	NOP	MSG039	
13141	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 06 OBJECT TEST 13
*

13142	C	43	00430	BRM	OBJECT	
13143	C	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
13144	C	76	24777	LDA	#0	STARTING SECTOR
13145	C	71	25154	LDX	#007000700	DATA FOR HEAD SETS
13146	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13147	C	76	25156	LDA	#30002	
13150	C	43	15354	BRM	INCR11	
13151	C	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 14
*

13152	C	43	00430	BRM	OBJECT	
13153	C	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
13154	C	76	25112	LDA	#0100	STARTING SECTOR
13155	C	71	25154	LDX	#007000700	DATA FOR HEAD SETS
13156	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13157	C	76	25157	LDA	#20006	SIDE AND TB STRIP
13160	C	43	15354	BRM	INCR11	
13161	C	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 15
*

13162	C	43	00430	BRM	OBJECT	
13163	C	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
13164	C	76	25113	LDA	#200	STARTING SECTOR
13165	C	71	25154	LDX	#007000700	DATA FOR HEAD SETS
13166	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13167	C	76	25160	LDA	#10100	SIDE AND TB STRIP
13170	C	43	15354	BRM	INCR11	
13171	C	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 16
*

13172	C	43	00430	BRM	OBJECT	
13173	C	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
13174	C	76	25146	LDA	#300	STARTING SECTOR
13175	C	71	25154	LDX	#007000700	DATA FOR HEAD SETS
13176	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13177	C	76	25161	LDA	#40104	SIDE AND TB STRIP
13200	C	43	15354	BRM	INCR11	
13201	C	43	00434	BRM	END	

*
*
* FUNCTION 06 OBJECT TEST 17
*

13202	0 43	00430	BRM	OBJECT	
13203	0 76	25162	LDA	#000700070	DATA FOR HEAD
13204	0 43	15902	BRM	SPREAD	FILL OUTPUT BUFFER
13205	0 76	24777	LDA	#00000	STARTING ADRS.
13206	0 43	15424	BRM	YMSG	YDRIVER CONTROL
13207	4 20	23401	NOP	MSG028,4	WRITE LOGIC MESSAGE
13210	0 20	23525	NOP	MSG036	
13211	0 43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 18
*

13212	0 43	00430	BRM	OBJECT	
13213	0 76	25012	LDA	#0100	STARTING ADRS.
13214	0 43	15424	BRM	YMSG	YDRIVER CONTROL
13215	4 20	23403	NOP	MSG029,4	WRITE LOGIC MESSAGE
13216	0 20	23534	NOP	MSG037	
13217	0 43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 19
*

13220	0 43	00430	BRM	OBJECT	
13221	0 76	25013	LDA	#00200	STARTING ADRS.
13222	0 43	15424	BRM	YMSG	YDRIVER CONTROL
13223	4 20	23405	NOP	MSG030,4	WRITE LOGIC MESSAGE
13224	0 20	23547	NOP	MSG038	
13225	0 43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 20
*

13226	0 43	00430	BRM	OBJECT	
13227	0 76	25146	LDA	#00300	STARTING ADRS.
13230	0 43	15424	BRM	YMSG	YDRIVER CONTROL
13231	4 20	23407	NOP	MSG031,4	WRITE LOGIC MESSAGE
13232	0 20	23552	NOP	MSG039	
13233	0 43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 21
*

13234	0 43	00430	BRM	OBJECT	
13235	0 75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13236	0 76	24777	LDA	#0	STARTING SECTOR
13237	0 71	25162	LDX	#000700070	DATA FOR HEAD SETS
13240	0 43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13241	0 76	25164	LDA	#00020003	SIDE AND TB STRIP
13242	0 43	15364	BRM	DECR11	
13243	0 43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 22
*

13244	0	43	00430	BRM	OBJECT	
13245	0	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13246	0	76	25112	LDA	#100	STARTING SECTOR
13247	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13250	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13251	0	76	25165	LDA	#10007	SIDE AND TB STRIP
13252	0	43	15364	BRM	DECR11	
13253	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 23
*

13254	0	43	00430	BRM	OBJECT	
13255	0	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13256	0	76	25113	LDA	#0200	STARTING SECTOR
13257	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13260	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13261	0	76	25164	LDA	#40101	SIDE AND TB STRIP
13262	0	43	15364	BRM	DECR11	
13263	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 24
*

13264	0	43	00430	BRM	OBJECT	
13265	0	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13266	0	76	25144	LDA	#300	STARTING SECTOR
13267	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13270	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13271	0	76	25167	LDA	#30105	SIDE AND TB STRIP
13272	0	43	15364	BRM	DECR11	
13273	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 25
*

13274	0	43	00430	BRM	OBJECT	
13275	0	76	25170	LDA	#000070007	DATA FOR HEAD
13276	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
13277	0	76	24777	LDA	#00000	STARTING ADDR.
13300	0	43	15424	BRM	YMSG	YDRIVER CONTROL
13301	4	20	23411	NBP	MSG032,4	WRITE LOGIC MESSAGE
13302	0	20	23525	NBP	MSG036	
13303	0	43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 26
*

13304	0 43 00430	BRM	OBJECT	
13305	0 76 25012	LDA	#00100	STARTING ADRS.
13306	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13307	4 20 23613	NBP	MSG033,4	WRITE LOGIC MESSAGE
13310	0 20 23634	NBP	MSG037	
13311	0 43 00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 27
*

13312	0 43 00430	BRM	OBJECT	
13313	0 76 25013	LDA	#00200	STARTING ADRS.
13314	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13315	4 20 23615	NBP	MSG034,4	WRITE LOGIC MESSAGE
13316	0 20 23643	NBP	MSG038	
13317	0 43 00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 28
*

13320	0 43 00430	BRM	OBJECT	
13321	0 76 25144	LDA	#00300	STARTING ADRS.
13322	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13323	4 20 23617	NBP	MSG035,4	WRITE LOGIC MESSAGE
13324	0 20 23552	NBP	MSG039	
13325	0 43 00434	BRM	END	8 HEADS

*
*
* FUNCTION 06 OBJECT TEST 29
*

13326	0 43 00430	BRM	OBJECT	
13327	0 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13330	0 76 24777	LDA	#0	STARTING SECTOR
13331	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13332	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13333	0 76 25052	LDA	#20004	SIDE AND TB STRIP
13334	0 43 15354	BRM	INCR11	
13335	0 43 00434	BRM	END	

*
*
* FUNCTION 06 OBJECT TEST 30
*

13336	0 43 00430	BRM	OBJECT	
13337	0 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13340	0 76 25012	LDA	#100	STARTING SECTOR
13341	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13342	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13343	0 76 25172	LDA	#10010	SIDE AND TB STRIP 8
13344	0 43 15354	BRM	INCR11	
13345	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 22
*

13244	0	43	00430	BRM	OBJECT	
13245	0	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13246	0	76	25162	LDA	#100	STARTING SECTOR
13247	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13250	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13251	0	76	25165	LDA	#10007	SIDE AND TB STRIP
13252	0	43	15364	BRM	DECR11	
13253	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 23
*

13254	0	43	00430	BRM	OBJECT	
13255	0	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13256	0	76	25163	LDA	#0200	STARTING SECTOR
13257	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13260	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13261	0	76	25164	LDA	#40101	SIDE AND TB STRIP
13262	0	43	15364	BRM	DECR11	
13263	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 24
*

13264	0	43	00430	BRM	OBJECT	
13265	0	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13266	0	76	25164	LDA	#300	STARTING SECTOR
13267	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13270	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13271	0	76	25167	LDA	#30105	SIDE AND TB STRIP
13272	0	43	15364	BRM	DECR11	
13273	0	43	00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 25
*

13274	0	43	00430	BRM	OBJECT	
13275	0	76	25170	LDA	#000070007	DATA FOR HEAD
13276	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
13277	0	76	24777	LDA	#00000	STARTING ADRS.
13300	0	43	15424	BRM	YMSG	YDRIVER CONTROL
13301	4	20	23411	NBP	#MSG032,4	WRITE LOGIC MESSAGE
13302	0	20	23525	NBP	#MSG036	
13303	0	43	00434	BRM	END	8 HEADS

•
•
• FUNCTION 06 OBJECT TEST 26
•

13304	0 43 00430	BRM	OBJECT	
13305	0 76 25012	LDA	#00100	STARTING ADRS.
13306	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13307	4 20 23613	NBP	MSG033,4	WRITE LOGIC MESSAGE
13310	0 20 23634	NBP	MSG037	
13311	0 43 00434	BRM	END	8 HEADS

•
•
• FUNCTION 06 OBJECT TEST 27
•

13312	0 43 00430	BRM	OBJECT	
13313	0 76 25113	LDA	#00200	STARTING ADRS.
13314	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13315	4 20 23615	NBP	MSG034,4	WRITE LOGIC MESSAGE
13316	0 20 23643	NBP	MSG038	
13317	0 43 00434	BRM	END	8 HEADS

•
•
• FUNCTION 06 OBJECT TEST 28
•

13320	0 43 00430	BRM	OBJECT	
13321	0 76 25144	LDA	#00300	STARTING ADRS.
13322	0 43 15424	BRM	YMSG	YDRIVER CONTROL
13323	4 20 23617	NBP	MSG035,4	WRITE LOGIC MESSAGE
13324	0 20 23652	NBP	MSG039	
13325	0 43 00434	BRM	END	8 HEADS

•
•
• FUNCTION 06 OBJECT TEST 29
•

13326	0 43 00430	BRM	OBJECT	
13327	0 75 25171	LDB	#MSG010	HEAD LOGIC MESSAGE
13330	0 76 24777	LDA	#0	STARTING SECTOR
13331	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13332	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13333	0 76 25052	LDA	#20004	SIDE AND TB STRIP
13334	0 43 15354	BRM	INCR11	
13335	0 43 00434	BRM	END	

•
•
• FUNCTION 06 OBJECT TEST 30
•

13336	0 43 00430	BRM	OBJECT	
13337	0 75 25171	LDB	#MSG010	HEAD LOGIC MESSAGE
13340	0 76 25012	LDA	#100	STARTING SECTOR
13341	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13342	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13343	0 76 25172	LDA	#10010	SIDE AND TB STRIP 8
13344	0 43 15354	BRM	INCR11	
13345	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 31
*

13346	0 43 00430	BRM	OBJECT	
13347	0 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13350	0 76 25113	LDA	#200	STARTING SECTOR
13351	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13352	0 43 15937	BRM	SETWRD	INITIALIZE READ CONTROL
13353	0 76 25173	LDA	#40102	SIDE AND TB STRIP
13354	0 43 15954	BRM	INCR11	
13355	0 43 00434	BRM	END	

*
* FUNCTION 06 OBJECT TEST 32
*

13356	0 43 00430	BRM	OBJECT	
13357	0 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13360	0 76 25146	LDA	#0300	STARTING SECTOR
13361	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13362	0 43 15937	BRM	SETWRD	INITIALIZE READ CONTROL
13363	0 76 25174	LDA	#30106	SIDE AND TB STRIP
13364	0 43 15954	BRM	INCR11	
13365	0 43 00434	BRM	END	
13366	0 43 00456	BRM	FDONE	

13367	0 43 00424	FUNC7	BRM	FUNCTN	CONTROL LINK
13370	0 20 20665		NOP	FPT7	PARAMETER FOR THIS FUNCTION
13371	0 43 00440		BRM	RETURN	
13372	0 20 07150		NOP	XTRAI	
13373	0 43 13766		BRM	RADOK	
13374	0 73 25026		SKG	#1000000	TEST FOR TWO RADS
13375	0 01 15510		BRU	FUNC10	LAST RAD
13376	0 76 00401		LDA	STATUS	
13377	0 72 25017		SKA	#4000	SOFTWARE RAD READ ONLY
13400	0 01 15510		BRU	FUNC10	

*
* FUNCTION 07 OBJECT TEST 01
*

13401	0 43 00430	BRM	OBJECT	
13402	0 76 25145	LDA	#070007000	DATA FOR HEAD
13403	0 43 15202	BRM	SPREAD	FILL OUTPUT BUFFER
13404	0 76 25117	LDA	#4000	STARTING ADRS.
13405	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13406	4 20 23561	NBP	MSG020,4	WRITE LOGIC MESSAGE
13407	0 20 23525	NBP	MSG036	
13410	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 02
*

13411	0 43 00430	BRM	OBJECT	
13412	0 76 25175	LDA	#4100	STARTING ADRS.
13413	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13414	4 20 23563	NBP	MSG021,4	WRITE LOGIC MESSAGE
13415	0 20 23534	NBP	MSG037	
13416	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 03
*

13417	0 43 00430	BRM	OBJECT	
13420	0 76 25176	LDA	#4200	STARTING ADRS.
13421	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13422	4 20 23565	NBP	MSG022,4	WRITE LOGIC MESSAGE
13423	0 20 23543	NBP	MSG038	
13424	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 04
*

13425	0 43 00430	BRM	OBJECT	
13426	0 76 25177	LDA	#4300	STARTING ADRS.
13427	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13430	4 20 23567	NBP	MSG023,4	WRITE LOGIC MESSAGE
13431	0 20 23552	NBP	MSG039	
13432	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 05
*

13433	0 43 00430	BRM	OBJECT	
13434	0 75 25147	LDB	MSG01A	HEAD LOGIC MESSAGE
13435	0 76 25117	LDA	#4000	STARTING SECTOR
13436	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13437	0 43 15337	BRM	SETAR0	INITIALIZE READ CONTROL
13440	0 76 25150	LDA	#00030001	
13441	0 43 15404	BRM	DECR12	
13442	0 43 00434	BRM	END	

•
• FUNCTION 07 OBJECT TEST 06
•

13443	0 43 00430	BRM	OBJECT	
13444	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13445	0 76 25175	LDA	#4100	STARTING SECTOR
13446	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13447	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13450	0 76 25151	LDA	#20005	SIDE AND TB STRIP
13451	0 43 15404	BRM	DECR12	
13452	0 43 00434	BRM	END	

•
• FUNCTION 07 OBJECT TEST 07
•

13453	0 43 00430	BRM	OBJECT	
13454	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13455	0 76 25176	LDA	#4200	STARTING SECTOR
13456	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13457	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13460	0 76 25152	LDA	#10011	SIDE AND TB STRIP 9
13461	0 43 15404	BRM	DECR12	
13462	0 43 00434	BRM	END	

•
• FUNCTION 07 OBJECT TEST 08
•

13463	0 43 00430	BRM	OBJECT	
13464	0 75 25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
13465	0 76 25177	LDA	#4300	STARTING SECTOR
13466	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
13467	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13470	0 76 25153	LDA	#40103	SIDE AND TB STRIP
13471	0 43 15404	BRM	DECR12	
13472	0 43 00434	BRM	END	

•
• FUNCTION 07 OBJECT TEST 09
•

13473	0 43 00430	BRM	OBJECT	
13474	0 76 25154	LDA	#007000700	DATA FOR HEAD
13475	0 43 15202	BRM	SPREAD	FILL OUTPUT BUFFER
13476	0 76 25017	LDA	#4000	STARTING ADRS.
13477	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13500	4 20 23571	NBP	#SG024,4	WRITE LOGIC MESSAGE
13501	0 20 23525	NBP	MSG036	
13502	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 10
*

13503	0	43	00430	BRM	OBJECT	
13504	0	76	25175	LDA	#4100	STARTING ADRS,
13505	0	43	15441	BRM	YMSG7	YDRIVER CONTROL
13506	4	20	23573	NOP	MSG025,4	WRITE LOGIC MESSAGE
13507	0	20	23534	NOP	MSG037	
13510	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 11
*

13511	0	43	00430	BRM	OBJECT	
13512	0	76	25176	LDA	#4200	STARTING ADRS,
13513	0	43	15441	BRM	YMSG7	YDRIVER CONTROL
13514	4	20	23575	NOP	MSG026,4	WRITE LOGIC MESSAGE
13515	0	20	23543	NOP	MSG038	
13516	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 12
*

13517	0	43	00430	BRM	OBJECT	
13520	0	76	25177	LDA	#4300	STARTING ADRS,
13521	0	43	15441	BRM	YMSG7	YDRIVER CONTROL
13522	4	20	23577	NOP	MSG027,4	WRITE LOGIC MESSAGE
13523	0	20	23552	NOP	MSG039	
13524	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 13
*

13525	0	43	00430	BRM	OBJECT	
13526	0	75	25155	LDB	#MSG018	HEAD LOGIC MESSAGE
13527	0	76	25117	LDA	#4000	STARTING SECTOR
13530	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
13531	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13532	0	76	25156	LDA	#30002	
13533	0	43	15374	BRM	INCR12	
13534	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 14
*

13535	0	43	00430	BRM	OBJECT	
13536	0	75	25155	LDB	#MSG018	HEAD LOGIC MESSAGE
13537	0	76	25175	LDA	#4100	STARTING SECTOR
13540	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
13541	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13542	0	76	25157	LDA	#20006	SIDE AND TB STRIP
13543	0	43	15374	BRM	INCR12	
13544	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 15
*

13545	0	43	00430	BRM	OBJECT	
13546	0	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
13547	0	76	25176	LDA	#4200	STARTING SECTOR
13550	0	71	25154	LDA	#007000700	DATA FOR HEAD SETS
13551	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13552	0	76	25160	LDA	#10100	SIDE AND TB STRIP
13553	0	43	15374	BRM	INCR12	
13554	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 16
*

13555	0	43	00430	BRM	OBJECT	
13556	0	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
13557	0	76	25177	LDA	#4300	STARTING SECTOR
13560	0	71	25154	LDA	#007000700	DATA FOR HEAD SETS
13561	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
13562	0	76	25161	LDA	#40104	SIDE AND TB STRIP
13563	0	43	15374	BRM	INCR12	
13564	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 17
*

13565	0	43	00430	BRM	OBJECT	
13566	0	76	25162	LDA	#000700070	DATA FOR HEAD
13567	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
13570	0	76	25017	LDA	#4000	STARTING ADRS.
13571	0	43	15441	BRM	YMSG7	YDRIVER CONTROL
13572	4	20	23601	NOP	MSG029,4	WRITE LOGIC MESSAGE
13573	0	20	23525	NOP	MSG036	
13574	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 18
*

13575	0	43	00430	BRM	OBJECT	
13576	0	76	25175	LDA	#4100	STARTING ADRS.
13577	0	43	15441	BRM	YMSG7	YDRIVER CONTROL
13600	4	20	23603	NOP	MSG029,4	WRITE LOGIC MESSAGE
13601	0	20	23534	NOP	MSG037	
13602	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 19
*

13603	0	43	00430	BRM	OBJECT	
13604	0	76	25176	LDA	#4200	STARTING ADRS.
13605	0	43	15441	BRM	YMSG7	YDRIVER CONTROL
13606	4	20	23605	NOP	MSG030,4	WRITE LOGIC MESSAGE
13607	0	20	23549	NOP	MSG038	
13610	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 20
*

13611	0	43	00430	BRM	OBJECT	
13612	0	76	25177	LDA	#4300	STARTING ADDR.
13613	0	43	15441	BRM	YMSG7	YDRIVER CONTRL
13614	4	20	23407	NOP	MSG031,4	WRITE LOGIC MESSAGE
13615	0	20	23452	NOP	MSG039	
13616	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 21
*

13617	0	43	00430	BRM	OBJECT	
13620	0	76	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13621	0	76	25017	LDA	#4000	STARTING SECTOR
13622	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13623	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTRL
13624	0	76	25164	LDA	#00020003	SIDE AND TB STRIP
13625	0	43	15404	BRM	DECR12	
13626	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 22
*

13627	0	43	00430	BRM	OBJECT	
13630	0	76	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13631	0	76	25175	LDA	#4100	STARTING SECTOR
13632	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13633	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTRL
13634	0	76	25165	LDA	#10007	SIDE AND TB STRIP
13635	0	43	15404	BRM	DECR12	
13636	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 23
*

13637	0	43	00430	BRM	OBJECT	
13640	0	76	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
13641	0	76	25176	LDA	#4200	STARTING SECTOR
13642	0	71	25162	LDX	#000700070	DATA FOR HEAD SETS
13643	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTRL
13644	0	76	25166	LDA	#40101	SIDE AND TB STRIP
13645	0	43	15404	BRM	DECR12	
13646	0	43	00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 24
*

13647	0 43 00430	BRM	OBJECT	
13650	0 75 25163	LDB	#MSG01C	READ LOGIC MESSAGE
13651	0 76 25177	LDA	#4300	STARTING SECTOR
13652	0 71 25162	LDX	#000700070	DATA FOR HEAD SETS
13653	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13654	0 76 25167	LDA	#30105	SIDE AND TB STRIP
13655	0 43 15404	BRM	DECRI2	
13656	0 43 00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 25
*

13657	0 43 00430	BRM	OBJECT	
13660	0 76 25170	LDA	#000070007	DATA FOR HEAD
13661	0 43 15202	BRM	SPREAD	FILL OUTPUT BUFFER
13662	0 76 25117	LDA	#4000	STARTING ADRS.
13663	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13664	4 20 23411	NOP	MSG032,4	WRITE LOGIC MESSAGE
13665	0 20 23425	NOP	MSG036	
13666	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 26
*

13667	0 43 00430	BRM	OBJECT	
13670	0 76 25175	LDA	#4100	STARTING ADRS.
13671	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13672	4 20 23413	NOP	MSG033,4	WRITE LOGIC MESSAGE
13673	0 20 23434	NOP	MSG037	
13674	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 27
*

13675	0 43 00430	BRM	OBJECT	
13676	0 76 25176	LDA	#4200	STARTING ADRS.
13677	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13700	4 20 23415	NOP	MSG034,4	WRITE LOGIC MESSAGE
13701	0 20 23443	NOP	MSG038	
13702	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 28
*

13703	0 43 00430	BRM	OBJECT	
13704	0 76 25177	LDA	#4300	STARTING ADRS.
13705	0 43 15441	BRM	YMSG7	YDRIVER CONTROL
13706	4 20 23417	NOP	MSG035,4	WRITE LOGIC MESSAGE
13707	0 20 23452	NOP	MSG039	
13710	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 07 OBJECT TEST 29
*

13711	O 43 00430	BRM	OBJECT	
13712	O 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13713	O 76 25171	LDA	#4000	STARTING SECTOR
13714	O 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13715	O 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13716	O 76 25152	LDA	#20004	SIDE AND TB STRIP
13717	O 43 15374	BRM	INCR12	
13720	O 43 00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 30
*

13721	O 43 00430	BRM	OBJECT	
13722	O 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13723	O 76 25175	LDA	#4100	STARTING SECTOR
13724	O 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13725	O 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13726	O 76 25172	LDA	#10010	SIDE AND TB STRIP 8
13727	O 43 15374	BRM	INCR12	
13730	O 43 00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 31
*

13731	O 43 00430	BRM	OBJECT	
13732	O 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13733	O 76 25176	LDA	#4200	STARTING SECTOR
13734	O 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13735	O 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13736	O 76 25173	LDA	#40102	SIDE AND TB STRIP
13737	O 43 15374	BRM	INCR12	
13740	O 43 00434	BRM	END	

*
* FUNCTION 07 OBJECT TEST 32
*

13741	O 43 00430	BRM	OBJECT	
13742	O 75 25171	LDB	#MSG01D	HEAD LOGIC MESSAGE
13743	O 76 25177	LDA	#4300	STARTING SECTOR
13744	O 71 25170	LDX	#000070007	DATA FOR HEAD SETS
13745	O 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
13746	O 76 25174	LDA	#30106	SIDE AND TB STRIP
13747	O 43 15374	BRM	INCR12	
13750	O 43 00434	BRM	END	
13751	O 43 00456	BRM	FDONE	
13752	O 01 14008	BRU	FUNC8	

13753	O 00 00000	BR1TYP	ZR0	
13754	O 36 24503	STB	HOLD3	
13755	O 35 24502	STA	HOLD2	
13756	O 75 25143	LDB	#1	
13757	O 76 00401	LDA	STATUS	
13760	O 72 25006	SKA	#4	TEST FOR 940
13761	O 75 24777	LDB	#0	YES

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13762	0	36	24505	STB	JMPTYP
13763	0	76	24502	LDA	HOLD2
13764	0	75	24503	LDB	HOLD3
13765	0	51	13753	BRR	BRITYP
				*	
13766	0	00	00000	RADBK	ZR6
13767	0	43	00430	BRM	OBJECT
13770	0	76	00403	LDA	RADSIZ
13771	0	72	25200	SKA	*RADWH0
13772	0	01	13774	BRU	**2
13773	0	43	00456	BRM	FDONE
13774	0	14	25200	ETR	*RADWH0
13775	0	46	20005	ABC	
13776	0	76	25200	LDA	*RADWH0
13777	0	66	00003	RSH	3
14000	0	14	25201	ETR	*7000000
14001	0	67	10054	N0D	54
14002	0	66	00002	RSH	2
14003	0	46	10012	BAC	
14004	0	51	13766	BRR	RADBK

BREAKPOINT TEST
ANY RADS ON THIS CHANNEL
NO

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14005	0	43	00424	FUNCB	BRM	FUNCTN
14006	0	20	20073		N0P	FPTR
14007	0	43	00440		BRM	RETURN
14010	0	20	07150		N0P	XTRA1
14011	0	43	00430		BRM	OBJECT
14012	0	43	13766		BRM	RADBK
14013	0	73	25027		SKG	*2000000
14014	0	01	15510		BRU	FUNCT0
14015	0	76	00401		LDA	STATUS
14016	0	72	25017		SKA	*4000
14017	0	01	15510		BRU	FUNCT0

CONTROL LINK
PARAMETER FOR THIS FUNCTION

TEST FOR THREE RADS
LAST RAD
SOFTWARE RAD READ ONLY

*
* FUNCTION 08 OBJECT TEST 01
*

14020	0	43	00430	BRM	OBJECT	
14021	0	76	25145	LDA	#070007000	DATA FOR HEAD
14022	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
14023	0	76	25020	LDA	#10000	STARTING ADRS.
14024	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14025	4	20	23561	NOP	MSG020,4	WRITE LOGIC MESSAGE
14026	0	20	23525	NOP	MSG036	
14027	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 02
*

14030	0	43	00430	BRM	OBJECT	
14031	0	76	25160	LDA	#10100	STARTING ADRS.
14032	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14033	4	20	23563	NOP	MSG021,4	WRITE LOGIC MESSAGE
14034	0	20	23534	NOP	MSG037	
14035	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 03
*

14036	0	43	00430	BRM	OBJECT	
14037	0	76	25702	LDA	#10200	STARTING ADRS.
14040	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14041	4	20	23565	NOP	MSG022,4	WRITE LOGIC MESSAGE
14042	0	20	23543	NOP	MSG038	
14043	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 04
*

14044	0	43	00430	BRM	OBJECT	
14045	0	76	25203	LDA	#10300	STARTING ADRS.
14046	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14047	4	20	23567	NOP	MSG023,4	WRITE LOGIC MESSAGE
14050	0	20	23552	NOP	MSG039	
14051	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 05
*

14052	0	43	00430	BRM	OBJECT	
14053	0	75	25147	LDB	MSG01A	HEAD LOGIC MESSAGE
14054	0	76	25720	LDA	#10000	STARTING SECTOR
14055	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
14056	0	43	15337	BRM	SETARD	INITIALIZE READ CONTROL
14057	0	76	25204	LDA	#30107	
14060	0	43	15404	BRM	DECRI2	
14061	0	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 06
*

14062	0	43	00430	BRM	OBJECT	
14063	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
14064	0	76	25160	LDA	#10100	STARTING SECTOR
14065	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
14066	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14067	0	76	25205	LDA	#20201	SIDE AND TB STRIP
14070	0	43	15404	BRM	DECR12	
14071	0	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 07
*

14072	0	43	00430	BRM	OBJECT	
14073	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
14074	0	76	25202	LDA	#10200	STARTING SECTOR
14075	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
14076	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14077	0	76	25206	LDA	#10205	SIDE AND TB STRIP 9
14100	0	43	15404	BRM	DECR12	
14101	0	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 08
*

14102	0	43	00430	BRM	OBJECT	
14103	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
14104	0	76	25203	LDA	#10300	STARTING SECTOR
14105	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
14106	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14107	0	76	25207	LDA	#40201	SIDE AND TB STRIP
14110	0	43	15404	BRM	DECR12	
14111	0	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 09
*

14112	0	43	00430	BRM	OBJECT	
14113	0	76	25154	LDA	#007000700	DATA FOR HEAD
14114	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
14115	0	76	25220	LDA	#10000	STARTING ADDR.
14116	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14117	4	20	23571	NOP	MSG024,4	WRITE LOGIC MESSAGE
14120	0	20	23525	NOP	MSG036	
14121	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 10
*

14122	0	43	00430	BRM	OBJECT	
14123	0	76	25160	LDA	#10100	STARTING ADRS.
14124	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14125	4	20	23573	NOP	MSG025,4	WRITE LOGIC MESSAGE
14126	0	20	23534	NOP	MSG037	
14127	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 11
*

14130	0	43	00430	BRM	OBJECT	
14131	0	76	25207	LDA	#10200	STARTING ADRS.
14132	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14133	4	20	23575	NOP	MSG026,4	WRITE LOGIC MESSAGE
14134	0	20	23543	NOP	MSG038	
14135	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 12
*

14136	0	43	00430	BRM	OBJECT	
14137	0	76	25203	LDA	#10300	STARTING ADRS.
14140	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14141	4	20	23577	NOP	MSG027,4	WRITE LOGIC MESSAGE
14142	0	20	23552	NOP	MSG039	
14143	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 13
*

14144	0	43	00430	BRM	OBJECT	
14145	0	75	25155	LDB	MSG018	HEAD LOGIC MESSAGE
14146	0	76	25220	LDA	#10000	STARTING SECTOR
14147	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14150	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14151	0	76	25210	LDA	#30110	
14152	0	43	15374	BRM	INCR12	
14153	0	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 14
*

14154	0	43	00430	BRM	OBJECT	
14155	0	75	25155	LDB	MSG018	HEAD LOGIC MESSAGE
14156	0	76	25160	LDA	#10100	STARTING SECTOR
14157	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14160	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14161	0	76	25211	LDA	#20202	SIDE AND TB STRIP
14162	0	43	15374	BRM	INCR12	
14163	0	43	00434	BRM	END	

FUNCTION 08 OBJECT TEST 15

14164	0	43	00430	BRM	OBJECT	
14165	0	75	25155	LDB	#MSG018	READ LOGIC MESSAGE
14166	0	76	25202	LDA	#10200	STARTING SECTOR
14167	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14170	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14171	0	76	25212	LDA	#10206	SIDE AND TB STRIP
14172	0	43	15374	BRM	INCR12	
14173	0	43	00434	BRM	END	

FUNCTION 08 OBJECT TEST 16

14174	0	43	00430	BRM	OBJECT	
14175	0	75	25155	LDB	#MSG018	READ LOGIC MESSAGE
14176	0	76	25203	LDA	#10300	STARTING SECTOR
14177	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14200	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14201	0	76	25213	LDA	#*0300	IDE AND TB STRIP
14202	0	43	15374	BRM	INCR12	
14203	0	43	00434	BRM	END	

FUNCTION 08 OBJECT TEST 17

14204	0	43	00430	BRM	OBJECT	
14205	0	76	25162	LDA	#000700070	DATA FOR HEAD
14206	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
14207	0	76	25220	LDA	#10000	STARTING ADRS.
14210	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14211	4	20	23601	NBP	MSG028,4	WRITE LOGIC MESSAGE
14212	0	20	23525	NBP	MSG036	
14213	0	43	00434	BRM	END	8 HEADS

FUNCTION 08 OBJECT TEST 18

14214	0	43	00430	BRM	OBJECT	
14215	0	76	25160	LDA	#10100	TARTING ADRS.
14216	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14217	4	20	23603	NBP	MSG029,4	WRITE LOGIC MESSAGE
14220	0	20	23534	NBP	MSG037	
14221	0	43	00434	BRM	END	8 HEADS

FUNCTION 08 OBJECT TEST 19

14222	0	43	00430	BRM	OBJECT	
14223	0	76	25202	LDA	#10200	STARTING ADRS.
14224	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14225	4	20	23605	NBP	MSG030,4	WRITE LOGIC MESSAGE
14226	0	20	23543	NBP	MSG038	
14227	0	43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 08 OBJECT TEST 20
*
*

14230	C	43	00430	BRM	OBJECT	
14231	C	76	25203	LDA	#10300	STARTING ADRS.
14232	C	43	15456	BRM	YMSG8	YDRIVER CONTROL
14233	C	20	23407	XBP	MSG031,4	WRITE LOGIC MESSAGE
14234	C	20	23552	XBP	MSG039	
14235	C	43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 08 OBJECT TEST 21
*
*

14236	C	43	00430	BRM	OBJECT	
14237	C	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
14240	C	76	25220	LDA	#10000	STARTING SECTOR
14241	C	71	25162	LDX	#000700070	DATA FOR HEAD SETS
14242	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14243	C	76	25214	LDA	#10111	SIDE AND TB STRIP
14244	C	43	15404	BRM	DECRI2	
14245	C	43	00434	BRM	END	

*
*
* FUNCTION 08 OBJECT TEST 22
*
*

14246	C	43	00430	BRM	OBJECT	
14247	C	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
14250	C	76	25160	LDA	#10100	STARTING SECTOR
14251	C	71	25162	LDX	#000700070	DATA FOR HEAD SETS
14252	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14253	C	76	25215	LDA	#10203	SIDE AND TB STRIP
14254	C	43	15404	BRM	DECRI2	
14255	C	43	00434	BRM	END	

*
*
* FUNCTION 08 OBJECT TEST 23
*
*

14256	C	43	00430	BRM	OBJECT	
14257	C	75	25163	LDB	#MSG01C	HEAD LOGIC MESSAGE
14260	C	76	25202	LDA	#10200	STARTING SECTOR
14261	C	71	25162	LDX	#000700070	DATA FOR HEAD SETS
14262	C	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14263	C	76	25216	LDA	#40207	SIDE AND TB STRIP
14264	C	43	15404	BRM	DECRI2	
14265	C	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 24
*

14266	0	43	00430	BRM	OBJECT	
14267	0	75	25163	LDB	*MSG01C	HEAD LOGIC MESSAGE
14270	0	76	25203	LDA	*10300	STARTING SECTOR
14271	0	71	25162	LDX	*000700070	DATA FOR HEAD SETS
14272	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
14273	0	76	25217	LDA	*30301	SIDE AND TB STRIP
14274	0	43	15404	BRM	DECRI2	
14275	0	43	00434	BRM	END	

*
* FUNCTION 08 OBJECT TEST 25
*

14276	0	43	00430	BRM	OBJECT	
14277	0	76	25170	LDA	*000070007	DATA FOR HEAD
14300	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
14301	0	76	25220	LDA	*10000	STARTING ADRS.
14302	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14303	4	20	23611	NBP	*SG032,4	WRITE LOGIC MESSAGE
14304	0	20	23525	NBP	*SG036	
14305	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 26
*

14306	0	43	00430	BRM	OBJECT	
14307	0	76	25162	LDA	*10100	STARTING ADRS.
14310	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14311	4	20	23613	NBP	*SG033,4	WRITE LOGIC MESSAGE
14312	0	20	23534	NBP	*SG037	
14313	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 27
*

14314	0	43	00430	BRM	OBJECT	
14315	0	76	25202	LDA	*10200	STARTING ADRS.
14316	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14317	4	20	23615	NBP	*SG034,4	WRITE LOGIC MESSAGE
14320	0	20	23543	NBP	*SG038	
14321	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 08 OBJECT TEST 28
*

14322	0	43	00430	BRM	OBJECT	
14323	0	76	25203	LDA	*10300	STARTING ADRS.
14324	0	43	15456	BRM	YMSG8	YDRIVER CONTROL
14325	4	20	23617	NBP	*SG035,4	WRITE LOGIC MESSAGE
14326	0	20	23552	NBP	*SG039	
14327	0	43	00434	BRM	END	8 HEADS

•
•
• FUNCTION 08 OBJECT TEST 29
•
•

14330	0 43 00430	BRM	OBJECT	
14331	0 75 25171	LDB	#MSG010	HEAD LOGIC MESSAGE
14332	0 76 25200	LDA	#10000	STARTING SECTOR
14333	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
14334	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14335	0 76 25220	LDA	#20200	SIDE AND TB STRIP
14336	0 43 15374	BRM	INCR12	
14337	0 43 00434	BRM	END	

•
•
• FUNCTION 08 OBJECT TEST 30
•
•

14340	0 43 00430	BRM	OBJECT	
14341	0 75 25171	LDB	#MSG010	HEAD LOGIC MESSAGE
14342	0 76 25160	LDA	#10100	STARTING SECTOR
14343	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
14344	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14345	0 76 25221	LDA	#10204	SIDE AND TB STRIP 8
14346	0 43 15374	BRM	INCR12	
14347	0 43 00434	BRM	END	

•
•
• FUNCTION 08 OBJECT TEST 31
•
•

14350	0 43 00430	BRM	OBJECT	
14351	0 75 25171	LDB	#MSG010	HEAD LOGIC MESSAGE
14352	0 76 25202	LDA	#10200	STARTING SECTOR
14353	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
14354	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14355	0 76 25222	LDA	#40210	SIDE AND TB STRIP
14356	0 43 15374	BRM	INCR12	
14357	0 43 00434	BRM	END	

•
•
• FUNCTION 08 OBJECT TEST 32
•
•

14360	0 43 00430	BRM	OBJECT	
14361	0 75 25171	LDB	#MSG010	HEAD LOGIC MESSAGE
14362	0 76 25203	LDA	#10300	STARTING SECTOR
14363	0 71 25170	LDX	#000070007	DATA FOR HEAD SETS
14364	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14365	0 76 25223	LDA	#30302	SIDE AND TB STRIP
14366	0 43 15374	BRM	INCR12	
14367	0 43 00434	BRM	END	
14370	0 43 00456	BRM	FDONE	


```

*
* PROCESS SPURIOUS POP, INTERRUPT, OR TRAP
*
14371 0 00 00000 SPURI PZE 0
14372 0 14 25001 ETR #37777
14373 0 73 25740 SKG #77 WAS SPIT LEGAL
14374 0 01 14405 BRU IEXT NO
14375 0 73 25741 SKG #177 WAS IT A POP
14376 0 01 14413 BRU POP YES
14377 0 73 25224 SKG #237 WAS IT LEGAL
14400 0 01 14405 BRU IEXT NO
14401 0 73 25225 SKG #273 WAS IT 130 = T44
14402 0 01 14421 BRU 130T44 YES
14403 0 73 25742 SKG #377 WAS IT 156 = 174
14404 0 01 14420 BRU 156174 YES

```

```

*
* PROCESS ILLEGAL OR EXTERNAL INTERRUPT
*
14405 0 76 25143 IEXT LDA #1
14406 0 35 14460 STA ITABLE+1 RECEIVED
14407 0 76 00450 LDA DIVERT MARK
14410 0 43 00454 BRM REPORT
14411 0 20 14463 NOP ILLEXT
14412 0 01 14431 BRU COMMON

```

```

*
* PROCESS SPURIOUS POPS
*
14413 0 35 14460 POP STA ITABLE+1 RECEIVED
14414 0 76 00000 LDA 0 MARK
14415 0 43 00454 BRM REPORT
14416 0 20 14476 NOP POPED
14417 0 01 14431 BRU COMMON

```

```

*
* PROCESS 156 THROUGH 174
*
14420 0 55 25010 156174 ADD #20

```

```

*
* PROCESS 130 THROUGH T44
*
14421 0 54 25226 130T44 SUB #161
14422 0 66 00001 RSH 1
14423 0 35 14460 STA ITABLE+1 RECEIVED
14424 0 77 00450 EAX* DIVERT
14425 2 77 37777 EAX =1,2
14426 2 76 00000 LDA 0,2
14427 0 43 00454 BRM REPORT
14430 0 20 14502 NOP SPRINT

```

```

*
* COMMON INTERRUPT ROUTINE
*
14431 0 35 14461 COMMON STA ITABLE+2 MARK
14432 0 76 14461 LDA ITABLE+2
14433 0 35 14462 STA ITABLE+3 INSTRUCTION
14434 0 61 14371 IN SPURI
14435 0 77 14371 EAX SPURI
14436 2 76 00000 LDA 0,2
14437 0 35 14457 STA ITABLE EXPECTED
14440 0 43 00454 BRM REPORT REPORT ERROR
14441 4 20 14311 NOP MSG+4 MESSAGE
14442 0 04 14457 FOUR ITABLE DATA
14443 0 43 14447 BRM CLEAR CLEAR PRESENT INTERRUPT
14444 0 43 00460 BRM ERROR GO TO CONTROL
14445 0 20 24212 NOP ENDIT (NO MESSAGE)
14446 0 51 14371 BRR SPURI RETURN
    
```

```

*
* CLEAR PRESENT INTERRUPT
*
14447 0 00 00000 CLEAR PZE 0
14450 0 76 00401 LDA STATUS
14451 0 72 25006 SKA *4 SKIP IF NOT 940
14452 0 11 14454 BRI **2 940
14453 0 01 14454 BRU *+1 925/930
14454 0 20 14454 NOP *
14455 0 02 20002 EIR ENABLE INTERRUPTS
14456 0 51 14447 BRR CLEAR RETURN
*
* MESSAGES
*
14457 0 00 00000 ITABLE PZE 0 INTERRUPTS EXPECTED
14460 0 00 00000 PZE 0 INTERRUPT RECEIVED
14461 0 00 00000 PZE 0 LOCATION AT TIME OF INTERRUPT/TRAP
14462 0 00 00000 PZE 0 INSTRUCTION BEING EXECUTED
14463 52526445 ILLEXT BCD 1 UNDEFINED ILLEGAL OR EXTERNAL INTERRUPT!!
14464 24252631
14465 45252412
14466 31434325
14467 27214312
14470 46511225
14471 67632651
14472 48214312
14473 31456325
14474 51516447
14475 63371212
14476 52624764 POPED BCD 1 SPURIOUS POP!!
14477 51314664
14500 62124746
14501 47371212
14502 52624764 SPRINT BCD 1 SPURIOUS INTERRUPT OR TRAP!!
14503 51314664
14504 62123145
    
```

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14505	63255151			
14506	64476312			
14507	46511263			
14510	51214737			
14511	52256747	MSG	BCD	' EXPECTED RECEIVED LOCATION CONTENTS ''
14512	25236325			
14513	24125125			
14514	23253165			
14515	25241243			
14516	46232163			
14517	31464512			
14520	23464563			
14521	25456362			
14522	52371212			

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14523	0 43 00424	FUNC9	BRM	FUNCTN	CONTROL LINK
14524	0 20 20601		NBP	FPT9	PARAMETER FOR THIS FUNCTION
14525	0 43 00440		BRM	RETURN	
14526	0 20 07150		NBP	XTRA1	
14527	0 43 00430		BRM	OBJECT	
14530	0 43 13766		BRM	RADOK	
14531	0 73 25144		SKG	#3000000	TEST FOR FOUR RADS
14532	0 01 15510		BRU	FUNC10	
14533	0 76 00401		LDA	STATUS	
14534	0 72 25017		SKA	#4000	SOFTWARE RAD READ ONLY
14535	0 01 15510		BRU	FUNC10	

•
• FUNCTION 09 OBJECT TEST 01
•

14536	0	43	00430	BRM	OBJECT	
14537	0	76	25145	LDA	#070007000	DATA FOR HEAD
14540	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
14541	0	76	25227	LDA	#1400C	STARTING ADRS.
14542	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14543	4	20	23561	NOP	MSG020,4	WRITE LOGIC MESSAGE
14544	0	20	23525	NOP	MSG036	
14545	0	43	00434	BRM	END	8 HEADS

•
• FUNCTION 09 OBJECT TEST 02
•

14546	0	43	00430	BRM	OBJECT	
14547	0	76	25230	LDA	#14100	STARTING ADRS.
14550	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14551	4	20	23563	NOP	MSG021,4	WRITE LOGIC MESSAGE
14552	0	20	23534	NOP	MSG037	
14553	0	43	00434	BRM	END	8 HEADS

•
• FUNCTION 09 OBJECT TEST 03
•

14554	0	43	00430	BRM	OBJECT	
14555	0	76	25231	LDA	#14200	STARTING ADRS.
14556	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14557	4	20	23565	NOP	MSG022,4	WRITE LOGIC MESSAGE
14560	0	20	23543	NOP	MSG038	
14561	0	43	00434	BRM	END	8 HEADS

•
• FUNCTION 09 OBJECT TEST 04
•

14562	0	43	00430	BRM	OBJECT	
14563	0	76	25232	LDA	#14300	STARTING ADRS.
14564	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14565	4	20	23567	NOP	MSG023,4	WRITE LOGIC MESSAGE
14566	0	20	23552	NOP	MSG039	
14567	0	43	00434	BRM	END	8 HEADS

•
• FUNCTION 09 OBJECT TEST 05
•

14570	0	43	00430	BRM	OBJECT	
14571	0	75	25147	LDB	#MSG01A	HEAD LOGIC MESSAGE
14572	0	76	25227	LDA	#14000	STARTING SECTOR
14573	0	71	25145	LDX	#070007000	DATA FOR HEAD SETS
14574	0	43	15337	BRM	SETARD	INITIALIZE READ CONTROL
14575	0	76	25204	LDA	#30107	
14576	0	43	15404	BRM	DECR12	
14577	0	43	00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 06
*

14600	0 43 00430	BRM	OBJECT	
14601	0 75 25147	LDB	MSG01A	HEAD LOGIC MESSAGE
14602	0 76 25230	LDA	#14100	STARTING SECTOR
14603	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
14604	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14605	0 76 25205	LDA	#20201	SIDE AND TB STRIP
14606	0 43 15404	BRM	DECR12	
14607	0 43 00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 07
*

14610	0 43 00430	BRM	OBJECT	
14611	0 75 25147	LDB	MSG01A	HEAD LOGIC MESSAGE
14612	0 76 25231	LDA	#14200	STARTING SECTOR
14613	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
14614	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14615	0 76 25206	LDA	#10205	SIDE AND TB STRIP 9
14616	0 43 15404	BRM	DECR12	
14617	0 43 00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 08
*

14620	0 43 00430	BRM	OBJECT	
14621	0 75 25147	LDB	MSG01A	HEAD LOGIC MESSAGE
14622	0 76 25232	LDA	#14300	STARTING SECTOR
14623	0 71 25145	LDX	#070007000	DATA FOR HEAD SETS
14624	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
14625	0 76 25207	LDA	#40201	SIDE AND TB STRIP
14626	0 43 15404	BRM	DECR12	
14627	0 43 00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 09
*

14630	0 43 00430	BRM	OBJECT	
14631	0 76 25154	LDA	#007000700	DATA FOR HEAD
14632	0 43 15202	BRM	SPREAD	FILL OUTPUT BUFFER
14633	0 76 25227	LDA	#14000	STARTING ADDR.
14634	0 43 15473	BRM	YMSG9	YDRIVER CONTROL
14635	4 20 23571	NOP	MSG024,4	WRITE LOGIC MESSAGE
14636	0 20 23525	NOP	MSG036	
14637	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 10
*

14640	0	43	00430	BRM	OBJECT	
14641	0	76	25230	LDA	#14100	STARTING ADRS.
14642	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14643	4	20	23573	NBP	MSG025,4	WRITE LOGIC MESSAGE
14644	0	20	23534	NBP	MSG037	
14645	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 11
*

14646	0	43	00430	BRM	OBJECT	
14647	0	76	25231	LDA	#14200	STARTING ADRS.
14650	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14651	4	20	23575	NBP	MSG026,4	WRITE LOGIC MESSAGE
14652	0	20	23543	NBP	MSG038	
14653	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 12
*

14654	0	43	00430	BRM	OBJECT	
14655	0	76	25232	LDA	#14300	STARTING ADRS.
14656	0	43	15473	BRM	YMSG9	YDRIVER CONTROL
14657	4	20	23577	NBP	MSG027,4	WRITE LOGIC MESSAGE
14660	0	20	23552	NBP	MSG039	
14661	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 13
*

14662	0	43	00430	BRM	OBJECT	
14663	0	75	25155	LDB	#MSG018	HEAD LOGIC MESSAGE
14664	0	76	25227	LDA	#14000	STARTING SECTOR
14665	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14666	0	43	15337	BRM	SETARD	INITIALIZE READ CONTROL
14667	0	76	25210	LDA	#30110	
14670	0	43	15374	BRM	INCR12	
14671	0	43	00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 14
*

14672	0	43	00430	BRM	OBJECT	
14673	0	75	25155	LDB	#MSG018	HEAD LOGIC MESSAGE
14674	0	76	25230	LDA	#14100	STARTING SECTOR
14675	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14676	0	43	15337	BRM	SETARD	INITIALIZE READ CONTROL
14677	0	76	25211	LDA	#20202	SIDE AND TB STRIP
14700	0	43	15374	BRM	INCR12	
14701	0	43	00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 15
*

14702	0	43	00430	BRM	OBJECT	
14703	0	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
14704	0	76	25231	LDA	#14200	STARTING SECTOR
14705	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14706	0	43	15737	BRM	SETWRD	INITIALIZE READ CONTRBL
14707	0	76	25212	LDA	#10206	SIDE AND TB STRIP
14710	0	43	15774	BRM	INCR12	
14711	0	43	00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 16
*

14712	0	43	00430	BRM	OBJECT	
14713	0	75	25155	LDB	#MSG01B	HEAD LOGIC MESSAGE
14714	0	76	25232	LDA	#14300	STARTING SECTOR
14715	0	71	25154	LDX	#007000700	DATA FOR HEAD SETS
14716	0	43	15737	BRM	SETWRD	INITIALIZE READ CONTRBL
14717	0	76	25213	LDA	#40300	IDE AND TB STRIP
14720	0	43	15774	BRM	INCR12	
14721	0	43	00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 17
*

14722	0	43	00430	BRM	OBJECT	
14723	0	76	25162	LDA	#000700070	DATA FOR HEAD
14724	0	43	15202	BRM	SPREAD	FILL OUTPUT BUFFER
14725	0	76	25227	LDA	#14000	STARTING ADRS.
14726	0	43	15473	BRM	YMSG9	YDRIVER CONTRBL
14727	4	20	23601	NBP	MSG028,4	WRITE LOGIC MESSAGE
14730	0	20	23525	NBP	MSG036	
14731	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 18
*

14732	0	43	00430	BRM	OBJECT	
14733	0	76	25230	LDA	#14100	STARTING ADRS.
14734	0	43	15473	BRM	YMSG9	YDRIVER CONTRBL
14735	4	20	23603	NBP	MSG029,4	WRITE LOGIC MESSAGE
14736	0	20	23534	NBP	MSG037	
14737	0	43	00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 19
*

14740	0	43	00430	BRM	OBJECT	
14741	0	76	25231	LDA	#14200	STARTING ADRS.
14742	0	43	15473	BRM	YMSG9	YDRIVER CONTRBL
14743	4	20	23605	NBP	MSG030,4	WRITE LOGIC MESSAGE
14744	0	20	23543	NBP	MSG038	
14745	0	43	00434	BRM	END	8 HEADS

*
*
* FUNCTION 09 OBJECT TEST 20
*
*

14746	0 43 00430	BRM	OBJECT	
14747	0 76 25232	LDA	#14300	STARTING ADRS.
14750	0 43 15473	BRM	YMSG9	YDRIVER CONTROL
14751	4 20 23607	NBP	MSG031,*	WRITE LOGIC MESSAGE
14752	0 20 23652	NBP	MSG039	
14753	0 43 00434	BRM	END	3 HEADS

*
*
* FUNCTION 09 OBJECT TEST 21
*
*

14754	0 43 00430	BRM	OBJECT	
14755	0 75 25163	LDB	MSG01C	HEAD LOGIC MESSAGE
14756	0 76 25227	LDA	#14000	STARTING SECTOR
14757	0 71 25162	LDX	#000700070	DATA FOR HEAD SETS
14760	0 43 15237	BRM	SETWRD	INITIALIZE READ CONTROL
14761	0 76 25214	LDA	#10111	SIDE AND TB STRIP
14762	0 43 15404	BRM	DECR12	
14763	0 43 00434	BRM	END	

*
*
* FUNCTION 09 OBJECT TEST 22
*
*

14764	0 43 00430	BRM	OBJECT	
14765	0 75 25163	LDB	MSG01C	HEAD LOGIC MESSAGE
14766	0 76 25230	LDA	#14100	STARTING SECTOR
14767	0 71 25162	LDX	#000700070	DATA FOR HEAD SETS
14770	0 43 15237	BRM	SETWRD	INITIALIZE READ CONTROL
14771	0 76 25215	LDA	#10203	SIDE AND TB STRIP
14772	0 43 15404	BRM	DECR12	
14773	0 43 00434	BRM	END	

*
*
* FUNCTION 09 OBJECT TEST 23
*
*

14774	0 43 00430	BRM	OBJECT	
14775	0 75 25163	LDB	MSG01C	HEAD LOGIC MESSAGE
14776	0 76 25231	LDA	#14200	STARTING SECTOR
14777	0 71 25162	LDX	#000700070	DATA FOR HEAD SETS
15000	0 43 15237	BRM	SETWRD	INITIALIZE READ CONTROL
15001	0 76 25216	LDA	#40207	SIDE AND TB STRIP
15002	0 43 15404	BRM	DECR12	
15003	0 43 00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 24
*

15004	0 43 00430	BRM	OBJECT	
15005	0 76 25163	LDB	MSG01C	HEAD LOGIC MESSAGE
15006	0 76 25232	LDA	#14300	STARTING SECTOR
15007	0 71 25162	LDX	#000700070	DATA FOR HEAD SETS
15010	0 43 15337	BRM	SETWRD	INITIALIZE READ CONTROL
15011	0 76 25217	LDA	#30301	SIDE AND TB STRIP
15012	0 43 15404	BRM	DECRI2	
15013	0 43 00434	BRM	END	

*
* FUNCTION 09 OBJECT TEST 25
*

15014	0 43 00430	BRM	OBJECT	
15015	0 76 25170	LDA	#000070007	DATA FOR HEAD
15016	0 43 15402	BRM	SPREAD	FILL OUTPUT BUFFER
15017	0 76 25227	LDA	#14000	STARTING ADRS.
15020	0 43 15473	BRM	YMSG9	YDRIVER CONTROL
15021	4 20 23611	NOP	MSG032,4	WRITE LOGIC MESSAGE
15022	0 20 23625	NOP	MSG036	
15023	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 26
*

15024	0 43 00430	BRM	OBJECT	
15025	0 76 25230	LDA	#14100	STARTING ADRS.
15026	0 43 15473	BRM	YMSG9	YDRIVER CONTROL
15027	4 20 23613	NOP	MSG033,4	WRITE LOGIC MESSAGE
15030	0 20 23634	NOP	MSG037	
15031	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 27
*

15032	0 43 00430	BRM	OBJECT	
15033	0 76 25231	LDA	#14200	STARTING ADRS.
15034	0 43 15473	BRM	YMSG9	YDRIVER CONTROL
15035	4 20 23615	NOP	MSG034,4	WRITE LOGIC MESSAGE
15036	0 20 23643	NOP	MSG038	
15037	0 43 00434	BRM	END	8 HEADS

*
* FUNCTION 09 OBJECT TEST 28
*

15040	0 43 00430	BRM	OBJECT	
15041	0 76 25232	LDA	#14300	STARTING ADRS.
15042	0 43 15473	BRM	YMSG9	YDRIVER CONTROL
15043	4 20 23617	NOP	MSG035,4	WRITE LOGIC MESSAGE
15044	0 20 23652	NOP	MSG039	
15045	0 43 00434	BRM	END	8 HEADS

•
• FUNCTION 09 OBJECT TEST 29
•

15046	0	43	00430	BRM	OBJECT	
15047	0	75	25171	LDB	#MSG010	HEAD LOGIC MESSAGE
15050	0	76	25227	LDA	#14000	STARTING SECTOR
15051	0	71	25170	LDX	#000070007	DATA FOR HEAD SETS
15052	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
15053	0	76	25220	LDA	#20200	SIDE AND TB STRIP
15054	0	43	15374	BRM	INCR12	
15055	0	43	00434	BRM	END	

•
• FUNCTION 09 OBJECT TEST 30
•

15056	0	43	00430	BRM	OBJECT	
15057	0	75	25171	LDB	#MSG010	HEAD LOGIC MESSAGE
15060	0	76	25230	LDA	#14100	STARTING SECTOR
15061	0	71	25170	LDX	#000070007	DATA FOR HEAD SETS
15062	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
15063	0	76	25221	LDA	#10204	SIDE AND TB STRIP 8
15064	0	43	15374	BRM	INCR12	
15065	0	43	00434	BRM	END	

•
• FUNCTION 09 OBJECT TEST 31
•

15066	0	43	00430	BRM	OBJECT	
15067	0	75	25171	LDB	#MSG010	HEAD LOGIC MESSAGE
15070	0	76	25231	LDA	#14200	STARTING SECTOR
15071	0	71	25170	LDX	#000070007	DATA FOR HEAD SETS
15072	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
15073	0	76	25222	LDA	#40210	SIDE AND TB STRIP
15074	0	43	15374	BRM	INCR12	
15075	0	43	00434	BRM	END	

•
• FUNCTION 09 OBJECT TEST 32
•

15076	0	43	00430	BRM	OBJECT	
15077	0	75	25171	LDB	#MSG010	HEAD LOGIC MESSAGE
15100	0	76	25232	LDA	#14300	STARTING SECTOR
15101	0	71	25170	LDX	#000070007	DATA FOR HEAD SETS
15102	0	43	15337	BRM	SETWRD	INITIALIZE READ CONTROL
15103	0	76	25223	LDA	#30302	SIDE AND TB STRIP
15104	0	43	15374	BRM	INCR12	
15105	0	43	00434	BRM	END	
15106	0	43	00456	BRM	FDBNE	
15107	0	01	15510	BRU	FUNC10	

•
• SECTOR WRITE AND MESSAGE GENERATOR
•

15110	0	00	00000	WRYT	ZR0	
15111	0	61	15110	YIN	WRYT	SET ADRS TO MESSAGE
15112	0	71	25233	LDX	#4	SET CYCLE COUNTER FOR FOUR CYCLES

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15113 0 37 24756 STX INCR1 CLEAR COUNTER
15114 2 46 00000 WRYT1 CLX
15115 0 37 24750 STX ERRIR
15116 0 75 25040 LDA #077 COUNT FOR 64 SECTORS
15117 0 76 24513 WRYT9 PBTWRD
15120 0 70 25040 SKP #077
15121 0 01 15152 BRU WRYT5
15122 0 43 17422 BRM WAIT4
15123 0 76 25057 LDA #4000000+RLB
15124 0 43 15167 BRM WRYT3 WRITE LAST SECTOR
15125 0 76 24513 LDA PBTWRD
15126 0 14 25234 ETR #077777700 RESET SECTOR TO ZERO
15127 0 55 25014 ADD #400 UPDATE Y ADRS
15130 0 35 24513 STA PBTWRD
15131 0 75 24750 LDA ERRIR
15132 0 73 24777 SKG #0 CELL ZERO ON NO ERRORS
15133 0 01 15135 BRU **2
15134 0 01 15141 BRU WRYT4 LAST BAND
15135 0 61 24754 WRYT10 MIN INCR1 TEST FOR FOUR CYCLES
15136 0 53 24756 SKN INCR1
15137 0 51 15110 BRR WRYT
15140 0 01 15114 BRU WRYT1
15141 0 76 15110 WRYT4 LDA* WRYT
15142 0 35 15146 STA WRYT6
15143 0 75 24777 LDA #0
15144 0 35 24750 STB ERRIR
15145 0 43 00460 BRM ERROR
15146 0 20 15146 WRYT6 NBP *
15147 0 20 15147 WRYT7 NBP *
15150 0 20 15150 WRYT8 NBP *
15151 0 01 15135 BRU WRYT10
15152 0 76 25057 WRYT5 LDA #4000000+RLB 64 WORDS FROM RLB
15153 0 71 25022 WRYT2 LDX #40000 ONE SECTOR TIME DELAY
15154 0 40 10026 SKSS* 10026 HAD READY TEST
15155 0 41 15154 BRX **1
15156 0 41 15162 BRX ***

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15157 0 43 00460 BRM ERROR
15160 0 20 24073 NBP SKSERR NOT READY ERROR
15161 0 51 15110 BRR WRYT
15162 0 43 15167 BRM WRYT3 SEND DATA
15163 0 76 24513 LDA PBTWRD
15164 0 55 25004 ADD #1 UPDATE SECTOR
15165 0 35 24513 STA PBTWRD
15166 0 01 15117 BRU WRYT9
15167 0 00 00000 WRYT3 ZR0
15170 0 35 24754 STA CHANWD SAVE CHANNEL PBT WORD
15171 0 40 11026 SKSS* 11026 HAD ERROR TEST
15172 0 61 24750 MIN ERRIR
15173 0 06 10026 E0MM 010026 ALERT RAD
15174 0 13 24513 POTT PBTWRD
15175 0 06 10000 E0MM* 10000 ALERT CHANNEL
15176 0 06 14200 E0MM 14200 10SD WITH NO INTRUPTS
15177 0 13 24754 PBT CHANWD CHANNEL COUNT AND ADRS
15200 0 06 02266 E0MM 02266 HAD DRIVE CODE
15201 0 51 15167 BRR WRYT3
15202 0 00 00000 SPREAD ZR0
15203 0 71 25234 LDX #=100 SET FOR 64 WORDS
15204 2 35 24640 STA RLB#100,2 FILL BUFFER
15205 0 41 15204 BRX **1
15206 0 51 15202 BRR SPREAD

```

```

*
* READ AND CHECK SECTOR
*
15207 0 00 00000 READ ZR0
15210 0 35 23627 STA HD
15211 0 36 24472 STB COUNT1
15212 0 46 27005 READ0 ABC
15213 0 35 24750 STA ERRIR
15214 0 35 24540 STA RLB DISTURB READ BUFFER
15215 0 35 24600 STA RLB+40
15216 0 35 24635 STA RLB+75
15217 0 43 15316 BRM READ7 HEAD FIRST SECTOR
15220 0 75 25040 READ1 LDB #077
15221 0 76 24513 LDA PTRNRD
15222 0 70 25040 SKM #077
15223 0 01 15262 BRU READ4
15224 0 14 25234 ETR #077777700 MASK SECTOR ADRS
15225 0 55 25014 ADD #0400
15226 0 35 24513 STA PTRNRD UPDATE Y ADRS
15227 0 76 25235 LDA #27600166+RL0 TEST LAST SECTOR
15230 0 35 15210 STA READ6
15231 0 43 17422 BRM WAIT4 DELAY TO GET LAST BLOCK
15232 0 43 15206 BRM READ5
15233 0 76 24750 LDA ERRIR
15234 0 73 24777 SKG #0 TEST IF ANY ERROR OCCURED
15235 0 01 15250 BRU READ2
15236 0 76 15210 LDA READ6
15237 0 54 2513P SUB #66
15240 0 14 25001 ETR #37777 GET BUFFER ADRS
15241 0 46 27005 ABC
15242 0 76 24750 LDA ERRIR
15243 0 71 24513 LDX PTRNRD
15244 0 43 00460 BRM ERRSR
15245 4 20 23621 VBP MSG00A,4 PRINT SIDE TO STRIP HEAD LOCATION

```

```

15246 0 20 23431 READ3 VBP MSG01A HEAD LOGIC AND REGISTERS
15247 2 20 24406 READ2 NBP HEDER/2 REGISTER HEADING
15250 0 61 24472 MIN COUNT1
15251 0 53 24472 SKN COUNT1 COUNT EIGHT CYCLES
15252 0 51 15207 BRR READ
15253 0 53 24757 SKN INCRSW
15254 0 01 15260 BRU ***
15255 0 60 23627 SKR HD
15256 0 20 00000 NBP 0
15257 0 01 15212 BRU READ0
15260 0 61 23427 MIN HD
15261 0 01 15212 BRU READ0
15262 0 55 25004 READ4 ADD #1
15263 0 35 24513 STA PTRNRD
15264 0 76 24753 LDA FLAG1 TOGGLE FLAG
15265 0 75 24751 LDB RC0DE1 FIRST BUFFER
15266 0 73 24777 SKG #0 TEST TOGGLE FLAG
15267 0 75 24752 LDB RC0DE2 SECOND BUFFER
15270 0 36 24754 STB CHAN4D SET CHANNEL COUNT AND ADRS
15271 0 71 24754 LDX CHAN4D
15272 0 75 25235 LDB #27600166+RL0
15273 0 73 24777 SKG #0
15274 0 75 25234 LDB #027600066+RL0
15275 0 36 15210 STB READ6
15276 0 17 25004 EOR #1 TOGGLE FLAG
15277 0 35 24753 STA FLAG1 FLAG STARTS EQUAL TO ZERO
15300 2 35 00000 STA 0,2
15301 2 35 00040 STA #0,2
15302 2 35 00066 STA 66,2 DISTURB NEXT READ BUFFER
15303 0 43 15316 BRM READ7
15304 0 43 15306 BRM READ5
15305 0 01 15220 BRU READ1
15306 0 00 00000 READ5 ZR0
15307 0 71 25237 LDX #066 SET TO TEST 50 WORDS
15310 0 76 25240 READ6 LDA #RL0 +166,2 BUFFER BEING TESTED
15311 0 75 25143 LDB #1

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15312	0	70	24755	SKM	TSTWRD	
15313	0	61	24750	MIN	ERRIR	
15314	0	41	15310	BRX	READ6	
15315	0	51	15306	BRR	READ5	
15316	0	00	00000	ZR0	READ7	
15317	0	40	*11026	SKSS*	11026	
15320	0	61	24750	MIN	ERRIR	
15321	0	71	25022	LDX	*40000	ONE SECTOR TIME DELAY
15322	0	40	*10026	SKSS*	10026	RAD READY TEST
15323	0	41	15322	BRX	**1	
15324	0	41	15330	BRX	READ8	ASSURE CORRECT RESPONSE
15325	0	43	00460	BRM	ERR0R	
15326	0	20	24773	NOP	SKSERR	READY ERROR MESSAGE
15327	0	51	15207	BRR	READ	RESTART OBJECT TEST
15330	0	06	10026	READ8	EBMM	ALERT RAD
15331	0	13	24513	P0TT	P0TWRD	
15332	0	06	*10000	EBMM*	10000	ALERT CHANNEL
15333	0	06	14200	EBMM	14200	1080 WITH NO INTRUPTS
15334	0	13	24754	READ9	P0T	64 WORDS TO RLB
15335	0	06	02226	EBMM	02226	RAD DRIVE CODE
15336	0	51	15316	BRR	READ7	
15337	0	00	00000	SETWRD	ZR0	
15340	0	35	24513	STA	P0TWRD	ADDRESS FOR RAD
15341	0	46	10712	BAC		
15342	0	16	25241	YRG	*42000000	SET LINK
15343	0	35	15246	STA	READ3	SET ERROR MESSAGE
15344	0	37	24755	STX	TSTWRD	HEAD DATA
15345	0	46	00001	CLA		
15346	0	35	24753	STA	FLAG1	
15347	0	74	24751	LDA	RCODE1	FIRST READ BUFFER
15350	0	35	24754	STA	CHANWD	SET CHANNEL COUNT AND ADRS
15351	0	74	25236	LDA	*27600066*RL0	TEST BUFFER ONE
15352	0	35	15310	STA	READ6	
15353	0	51	15337	BRR	SETWRD	

```

*
*
* COUNTUP AND COUNTDN ROUTINES
*
*
15354 0 00 00000 INCR11 ZR0
15355 0 43 15414 BRM SSIDE SET PARAMETERS
15356 0 76 24777 LDA #0
15357 0 35 24757 STA INCRSW FORCE INCREMENT MODE
15360 0 76 25004 LDA #01 STARTING ADRS AT HEAD 01
15361 0 75 25242 LDB #=10 COUNT EIGHT CYCLES
15362 0 43 15207 BRM READ HEAD 64 SECTORS
15363 0 51 15354 BRR INCR11
15364 0 00 00000 DECR11 ZR0
15365 0 43 15414 BRM SSIDE SET PARAMETERS
15366 0 76 25143 LDA #=1
15367 0 35 24757 STA INCRSA FORCE DECREMENT MODE
15370 0 76 25243 LDA #0110 STARTING ADRS AT HEAD 18
15371 0 75 25242 LDB #=10
15372 0 43 15207 BRM READ HEAD DATA
15373 0 51 15364 BRR DECR11
15374 0 00 00000 INCR12 ZR0
15375 0 43 15414 BRM SSIDE SET PARAMETERS
15376 0 76 24777 LDA #0
15377 0 35 24757 STA INCRSW FORCE INCREMENT MODE
15400 0 76 25244 LDA #0101 STARTING ADRS AT HEAD 11
15401 0 75 25242 LDB #=10 COUNT EIGHT CYCLES
15402 0 43 15207 BRM READ HEAD 64 SECTORS
15403 0 51 15374 BRR INCR12
15404 0 00 00000 DECR12 ZR0
15405 0 43 15414 BRM SSIDE SET PARAMETERS
15406 0 76 25143 LDA #=1
15407 0 35 24757 STA INCRSW FORCE DECREMENT MODE
15410 0 76 25207 LDA #10 STARTING ADRS AT HEAD 8
15411 0 75 25242 LDB #=10
15412 0 43 15207 BRM READ HEAD DATA

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15413	0	51	15404	BRR	DECR12
15414	0	00	00000	SSIDE	ZR0
15415	0	46	20005		ABC
15416	0	67	00014	LSH	14
15417	0	35	23423	STA	SIDE
15420	0	46	10012	BAC	
15421	0	66	00014	RSH	14
15422	0	35	23425	STA	TB
15423	0	51	15414	BRR	SSIDE

SPLIT SIDE FROM TB STRIP

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*
* Y MESSAGE ERROR DRIVER
*
YMSG ZR0
15424 0 00 00000
15425 0 35 24513 STA PBTWRD
15426 0 61 15424 MIN YMSG
15427 0 76*15424 LDA* YMSG
15430 0 35 15147 STA WRYT7
15431 0 61 15424 MIN YMSG
15432 0 76*15424 LDA* YMSG
15433 0 35 15150 STA WRYT8
15434 0 43 15110 BRM WRYT
15435 4 20 23471 NBP MSG05A,4
15436 0 43 15110 BRM WRYT
15437 4 20 23474 NBP MSG05B,4
15440 0 51 15424 BRR YMSG

GET REST OF MESSAGES

TEST FOUR HEADS
Y DRIVE MESSAGE

*
* Y MESSAGE ERROR DRIVER
*
YMSG7 ZR0

15441 0 00 00000
15442 0 35 24513 STA PBTWRD
15443 0 61 15441 MIN YMSG7
15444 0 76*15441 LDA* YMSG7
15445 0 35 15147 STA WRYT7
15446 0 61 15441 MIN YMSG7
15447 0 76*15441 LDA* YMSG7
15450 0 35 15150 STA WRYT8
15451 0 43 15110 BRM WRYT
15452 4 20 23477 NBP MSG05C,4
15453 0 43 15110 BRM WRYT
15454 4 20 23702 NBP MSG05D,4
15455 0 51 15441 BRR YMSG7

GET REST OF MESSAGES

TEST FOUR HEADS
Y DRIVE MESSAGE

*
* Y MESSAGE ERROR DRIVER
*

15456	0 00 00000	YMSG8	ZR0		
15457	0 35 24513		STA	P0TRD	
15460	0 61 15456		MIN	YMSG8	GET REST OF MESSAGES
15461	0 76*15456		LDA*	YMSG8	
15462	0 35 15147		STA	WRYT7	
15463	0 61 15456		MIN	YMSG8	
15464	0 76*15456		LDA*	YMSG8	
15465	0 35 15150		STA	WRYT8	TEST FOUR HEADS
15466	0 43 15110		BRM	WRYT	Y DRIVE MESSAGE
15467	4 20 23705		N0P	MSG05E,4	
15470	0 43 15110		BRM	WRYT	
15471	4 20 23710		N0P	MSG05F,4	
15472	0 51 15456		BRR	YMSG8	

*
* Y MESSAGE ERROR DRIVER
*

15473	0 00 00000	YMSG9	ZR0		
15474	0 35 24513		STA	P0TRD	
15475	0 61 15473		MIN	YMSG9	GET REST OF MESSAGES
15476	0 76*15473		LDA*	YMSG9	
15477	0 35 15147		STA	WRYT7	
15500	0 61 15473		MIN	YMSG9	
15501	0 76*15473		LDA*	YMSG9	
15502	0 35 15150		STA	WRYT8	TEST FOUR HEADS
15503	0 43 15110		BRM	WRYT	Y DRIVE MESSAGE
15504	4 20 23713		N0P	MSG05G,4	
15505	0 43 15110		BRM	WRYT	
15506	4 20 23716		N0P	MSG05H,4	
15507	0 51 15473		BRR	YMSG9	

15510	0 76 25245	FUNC10	LDA	#11103300	
15511	0 35 24425		STA	MODES	
15512	0 76 25143		LDA	##1	
15513	0 35 24433		STA	FIXBLK	
15514	0 43 13766		BRM	RAD0K	
15515	0 73 24777		SKG	#0	
15516	0 01 20353		BRU	ALLDUN	ONE RAD
15517	0 75 25247		LDB	#17777	
15520	0 73 25026		SKG	#1000000	
15521	0 01 15531		BRU	FUN10A	TWO RADS
15522	0 75 25201		LDB	#37777	
15523	0 73 25027		SKG	#2000000	
15524	0 01 15531		BRU	FUN10A	THREE RADS
15525	0 75 25246		LDB	#57777	
15526	0 73 25144		SKG	#3000000	
15527	0 01 15531		BRU	FUN10A	FOUR RADS
15530	0 75 25247		LDB	#77777	
15531	0 36 24431	FUNC10A	STB	RADH1	
15532	0 76 24425		LDA	MODES	
15533	0 14 25250		ETR	#77773377	REMOVE POSSIBLE READ ONLY BITS
15534	0 35 24425		STA	MODES	READ ONLY TEST WILL RESET
15535	0 76 00405		LDA	SYSIZE	
15536	0 75 25251		LDB	#177777	64K
15537	0 72 25006		SKA	##	
15540	0 01 15547		BRU	FUN10B	
15541	0 75 25252		LDB	#137777	48K
15542	0 72 25005		SKA	#2	
15543	0 01 15547		BRU	FUN10B	
15544	0 75 25247		LDB	#77777	32K
15545	0 72 25004		SKA	#1	
15546	0 75 25001		LDB	#37777	16K
15547	0 36 24427	FUNC10B	STB	CORH1	
15550	0 76 00401		LDA	STATUS	
15551	0 75 24777		LDB	#0	
15552	0 72 25006		SKA	##	IS THIS A 940
15553	0 75 25143		LDB	##1	

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```
15554 0 36 24763 STB SKP940
15555 0 76 25253 LDA #1100000*INTR1E 940 RETURN
15556 0 53 24763 SKN SKP940
15557 0 76 25254 LDA #140000*INTR1E 925 RETURN
15560 0 35 17335 STA INTRE2
15561 0 76 25255 LDA #1100000*INTRE6 940 RETURN
15562 0 53 24763 SKN SKP940
15563 0 76 25256 LDA #140000*INTRE6 925 RETURN
15564 0 35 17336 STA INTRE3
15565 0 46 20005 ABC
15566 0 35 24507 STA KEYS*
15567 0 76 24432 LDA PATERN
15570 0 35 24437 STA PADERN
15571 0 43 00424 BRM FUNCTN
15572 0 20 20A07 NOP FPT10
15573 0 43 00440 BRM RETURN SET UP INTRUPT RETURNS
15574 0 20 17350 NOP INTR2
15575 0 43 00430 BRM 9BJECT
15576 0 76 25227 LDA #2000000 NOP 0
15577 0 35 17251 STA TRAN14
15600 0 35 17306 STA TRAN24 CLEAR LINK TO DATA CHAIN
15601 0 76 24434 LDA CYCLE
15602 0 35 24473 STA CYCLE1
15603 0 76 25257 LDA #04300000*INTR1F
15604 0 35 00064 STA 064 SET EARLY INTRUPT RETURN
15605 0 76 17335 LDA INTRE2
15606 0 35 17334 STA INTRE1 SET INTRUPT TO A BRI RETURN
15607 0 76 24426 LDA CORL0
15610 0 73 24512 SKG LAST LAST PROGRAM LOCATION
15611 0 01 15731 BRU INIT7
15612 0 35 24467 STA CORINK LOAD SEQUENCE INCREMENT VALUE
15613 0 76 24427 LDA CORH1 HIGHEST INPUT CORE ADRS
15614 0 54 24426 SUB CORL0
15615 0 35 24470 STA CORMAX
15616 0 73 25260 SKG #067776 TEST FOR MORE THAN 28K
15617 0 01 15621 BRU INIT1
```

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```
15620 0 76 25260 LDA #067776
15621 0 46 20005 INIT1 ABC
15622 0 66 00007 RSH 7 HALVE AND SET RELATIVE TO RAD ADRS
15623 0 46 10012 BAC
15624 0 75 25143 LDB #=1
15625 0 36 24500 STB HEADS* SET TO PRINT HEADING
15626 0 70 24777 SKM #0
15627 0 01 15631 BRU INIT3
15630 0 76 25005 LDA #0P SMALLEST BUFFER INCREMENT
15631 0 35 24454 INIT3 STA BLKMAX
15632 0 76 24431 LDA RADH1 HIGHEST INPUT RAD ADRS
15633 0 54 24430 SUB RADL0
15634 0 35 24517 STA RADMAX
15635 0 43 20143 BRM MASKER GENERATE BIT MASK
15636 0 35 24520 STA RADMSK
15637 0 76 24517 LDA RADMAX
15640 0 73 24454 SKG BLKMAX
15641 0 01 15643 BRU INIT2
15642 0 76 24454 LDA BLKMAX
15643 0 55 25004 INIT2 ADD #1 FORCE GREATER IN CASE OF EQUAL
15644 0 73 24433 SKG FIXBLK
15645 0 01 15723 BRU INIT4 FIXED BLOCK TO LARGE
15646 0 54 25004 SUB #1
15647 0 46 20005 ABC
15650 0 67 00006 LSH 6 SET BLKMAX RELATIVE TO CORE ADRS
15651 0 46 10012 BAC
15652 0 35 24454 STA BLKMAX BLKMAX EQUALS CORE/2 OR 14K OR RADMAX
15653 0 43 20143 BRM MASKER GENERATE BIT MASK
15654 0 35 24455 STA BLKMSK MASK = 00003777 (TYP)
15655 0 43 13766 BRM RAD0K
15656 0 75 25143 LDB #=1
15657 0 36 24514 STB PRNTE SET PRINT SWITCH AND HEADING SW
15660 0 36 24762 STB SEKST SET SECTOR COMPARE
15661 0 70 24777 SKM #0 TEST FOR ANY RADS
15662 0 01 15664 BRU **2
15663 0 01 15726 BRU INIT6 TO ERROR MESSAGE
```


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15664	0 14 25201		ETR	#7000000	GET MAX RAD AVAILABLE
15665	0 46 20005		ABC		
15666	0 66 00005		RSH	5	
15667	0 46 10012		BAC		
15670	0 54 25220		SUB	#010000	HADSIZ IS IN MULTIPLES OF TWO
15671	0 16 25246		MRG	#07777	SET HIGHEST ADDR
15672	0 55 25204		ADD	#1	FORCE GREATER WHEN ACTUAL EQUALITY
15673	0 73 24431		SKG	RADHI	ASSURE RAD ADRS IN LIMITS OF RADBSZ
15674	0 01 15734		BRU	INIT8	
15675	0 54 25204		SUB	#1	
15676	0 17 24431		EBR	RADHI	
15677	0 72 25143		SKA	#*1	
15700	0 01 15704		BRU	INIT5	
15701	0 76 24431		LDA	RADHI	
15702	0 54 25204		SUB	#1	REDUCE ADRS BY ONE TO STOP HANGUP
15703	0 35 24431		STA	RADHI	
15704	0 76 24430	INIT5	LDA	RADL0	
15705	0 35 24521		STA	RADINK	SET RAD ADRS INCREMENT TABLE
15706	0 76 24425		LDA	MODES	
15707	0 72 25261		SKA	#3300	ANY BUFFERS IN
15710	0 01 15712		BRU	#*2	
15711	0 01 15737		BRU	INIT9	
15712	0 75 25143		LDB	#*1	
15713	0 76 24432		LDA	FIXBLK	
15714	0 70 24777		SKM	#0	
15715	0 01 15717		BRU	#*2	
15716	0 01 15742		BRU	INIT10	
15717	0 76 00401		LDA	STATUS	
15720	0 72 25217		SKA	#4000	SOFTWARE READ ONLY
15721	0 01 15745		BRU	INIT11	
15722	0 01 15756		BRU	KEYRAD	
15723	0 43 00460	INIT4	BRM	ERR0R	
15724	0 20 24306		NBP	FIXB1G	
15725	0 01 15510		BRU	FUNC10	
15726	0 43 00460	INIT6	BRM	ERR0R	
15727	0 20 24264		NBP	NBRAD	

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15730	0 01 15510		BRU	FUNC10	
15731	0 43 00460	INIT7	BRM	ERR0R	
15732	0 20 24353		NBP	CORERR	
15733	0 01 15510		BRU	FUNC10	
15734	0 43 00460	INIT8	BRM	ERR0R	
15735	0 20 24330		NBP	RADBSZ	
15736	0 01 15510		BRU	FUNC10	
15737	0 43 00460	INIT9	BRM	ERR0R	
15740	0 20 24272		NBP	N0BUFR	
15741	0 01 15510		BRU	FUNC10	
15742	0 43 00460	INIT10	BRM	ERR0R	
15743	0 20 24322		NBP	FIXZ00	
15744	0 01 15510		BRU	FUNC10	
15745	0 76 25140	INIT11	LDA	#60C	MAXIMUM BLK SIZE IS 60 SECTORS
15746	0 35 24433		STA	FIXBLK	
15747	0 76 24425		LDA	MODES	
15750	0 14 25262		ETR	#77000077	
15751	0 16 25263		MRG	#475500	HEAD ONLY
15752	0 35 24425		STA	MODES	
15753	0 76 25143		LDA	#*1	
15754	0 35 24507		STA	KEYSW	
15755	0 01 16236		BRU	PROGEN	

*
* KEY THE RAD WITH RANDOM DATA THROUGHOUT
*

15756	0 53 24507	KEYRAD SKN	KEYSW	IS KEY COMPLETED
15757	0 01 15776	BRU	KEYRA2	NO
15760	0 76 24432	LDA	PATERN	
15761	0 17 24437	EOR	PADERN	
15762	0 72 25143	SKA	**1	
15763	0 01 15776	BRU	KEYRA2	
15764	0 76 24425	LDA	MODES	
15765	0 75 25264	LDB	*700000	
15766	0 70 24511	SKM	KEYSAV	
15767	0 01 15776	BRU	KEYRA2	
15770	0 76 24431	LDA	RADHI	
15771	0 75 25143	LOB	**1	
15772	0 70 24510	SKM	KEYADR	TEST IF RAD ADRS CHANGED
15773	0 01 15775	BRU	**2	
15774	0 01 16036	BRU	PROGEN	SKIP KEY IF DATA AND RAD ADR ARE SAME
15775	0 35 24510	STA	KEYADR	
15776	0 76 24432	KEYRA2 LDA	PATERN	
15777	0 35 24437	STA	PADERN	
16000	0 76 24431	LDA	RADHI	
16001	0 35 24510	STA	KEYADR	
16002	0 76 24425	LDA	MODES	
16003	0 35 24511	STA	KEYSAV	SAVE OLD DATA TYPE
16004	0 14 25264	ETR	*0700000	SAVE DATA MODE
16005	0 16 25265	MRG	*22066600	SET SEQUENTIAL AND WRITE BUFFERS
16006	0 35 24446	STA	*0DF	MODE TEMP FOR PROCESS GENERATOR
16007	0 46 25005	ABC		
16010	0 35 24507	STA	KEYSW	SET KEY RETURN
16011	0 76 24446	KEYRA1 LDA	MODE	
16012	0 01 16070	BRU	FRMKEY	GO TO GENERATOR
16013	0 76 24446	KEYEND LDA	MODE	GET CONTROL WORD
16014	0 72 25266	SKA	*3000	IS ONE BEING USED

16015	0 01 16017	BRU	**2	YES
16016	0 01 16033	BRU	KEYEN1	NO
16017	0 72 25146	SKA	*300	IS TWO BEING USED
16020	0 01 16022	BRU	**2	YES
16021	0 01 16033	BRU	KEYEN1	
16022	0 76 24451	LDA	BUFSAV	GET BUFFER IN USE
16023	0 72 25004	SKA	*1	IS IT TWO
16024	0 01 16033	BRU	KEYEN1	YES SEND BOTH
16025	0 76 25143	LDA	**1	
16026	0 35 24464	STA	BUFSKP	FORCE ONE BUFFER
16027	0 35 24507	STA	KEYSW	NO SEND ONLY ONE
16030	0 76 24446	LDA	MODE	
16031	0 71 24451	LDX	BUFSAV	
16032	0 01 16110	BRU	PROGE2	
16033	0 76 25143	KEYEN1 LDA	**1	
16034	0 35 24507	STA	KEYSW	
16035	0 01 16055	BRU	RADADF	

*
 * PROCESS GENERATOR
 * THE GENERATOR CONTROLS THE METHOD OF USE DETERMINED BY THE
 * MODE WORD.
 *

16036	0 76 24425	PRGEN	LDA	MODES	
16037	0 72 25022	GENER3	SKA	#040000	FIXED MODE
16040	0 01 16067		BRU	GENER1	
16041	0 72 25021		SKA	#20000	IS IT RANDOM ALL
16042	0 01 16054		BRU	GENER2	YES
16043	0 76 00406		LDA	SEED	YES
16044	0 43 16603		BRM	RANDOM	
16045	0 14 25272		ETR	#00070000	GET TRANSMISSION MODE
16046	0 35 24501		STA	HOLD	
16047	0 76 24425		LDA	MODES	
16050	0 14 25272		ETR	#77707777	CLEAR MODE WORD
16051	0 16 24501		MRG	HOLD	
16052	0 35 24446		STA	MODE	
16053	0 01 16037		BRU	GENER3	
16054	0 76 00406	GENER2	LDA	SEED	
16055	0 43 16603		BRM	RANDOM	
16056	0 72 25271		SKA	#030000	EARLY 3 OF 4
16057	0 01 16061		BRU	**2	
16060	0 01 16064		BRU	GENER4	
16061	0 76 24425		LDA	MODES	
16062	0 16 25272		MRG	#060000	MERGE FINAL FIXED MODE
16063	0 01 16067		BRU	GENER1	
16064	0 76 24425	GENER4	LDA	MODES	
16065	0 14 25273		ETR	#77757777	REMOVE EARLY BIT
16066	0 16 25022		MRG	#40000	FIX FINAL MODE
16067	0 35 24446	GENER1	STA	MODE	PREPARE FOR POSSIBLE RANDOM MODES
16070	0 02 20002	FRMKEY	EIR		
16071	0 72 25266		SKA	#03000	IS BUFFER ONE IN

16072	0 01 16102		BRU	PRGE1	
16073	0 75 25143		LDB	**1	
16074	0 36 24464		STB	BUFSKP	
16075	0 72 25146		SKA	#0300	IS BUFFER TWO IN
16076	0 01 16146		BRU	PRGES	NO BUFFERS SELECTED
16077	0 43 00460		BRM	ERRR	
16100	0 20 24272		NOP	NBBUFR	
16101	0 01 15510		BRU	FUNCI0	
16102	0 71 24777	PRGE1	LDX	#0	
16103	0 43 16427		BRM	RADADR	
16104	0 72 25146		SKA	#0300	IS TWO IN
16105	0 01 16215		BRU	PRGE8	
16106	0 75 25143		LDB	**1	
16107	0 36 24464		STB	BUFSKP	FORCE SINGLE BUFFER CONTROL
16110	0 43 16215	PRGE2	BRM	CORADR	
16111	0 43 16655		BRM	SETUP	
16112	0 75 25274		LDB	#07000	MASK FOR DRIVE CODE ONE
16113	0 43 16614		BRM	RADDRV	
16114	0 43 16722		BRM	DATA	
16115	0 72 25020		SKA	#010000	IS IT INTRUPT
16116	0 01 16206		BRU	PRGE4A	
16117	0 43 17422		BRM	WAIT4	
16120	0 43 00430		BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16121	0 76 25275		LDA	**1	GET RETURN ADRS
16122	0 01 17564		BRU	WAIT1	SEND BUFFER ONE, NO INTRUPT
16123	0 43 17422	PRGE3	BRM	WAIT4	
16124	0 43 16271		BRM	ERRTST	
16125	0 71 24777		LDX	#0	
16126	0 43 17107		BRM	CHECK	TEST READ DATA
16127	0 43 00434		BRM	END	
16130	0 53 24464		SKN	BUFSKP	
16131	0 01 16146		BRU	PRGES	
16132	0 53 24507	PRGE4	SKN	KEYS*	
16133	0 01 16211		BRU	KEYRA1	
16134	0 53 24473		SKN	CYCLE1	
16135	0 01 16137		BRU	**2	

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16136	0 01 16036	BRU	PRGGEN	
16137	0 60 24473	SKR	CYCLE1	
16140	0 20 00000	NOP	0	
16141	0 53 24473	SKN	CYCLE1	
16142	0 01 16036	BRU	PRGGEN	
16143	0 43 17422	BRM	WAIT4	LET RAD FINISH
16144	0 43 00456	BRM	FDBNE	
16145	0 01 20154	BRU	FUNCI1	
16146	0 76 24466	PRGGE5 LDA	MODE	
16147	0 71 25004	LDX	#1	
16150	0 43 16300	BRM	STATST	
16151	0 43 16427	BRM	RADADR	
16152	0 43 16315	BRM	CORADR	
16153	0 43 16655	BRM	SETUP	
16154	0 75 25276	LDB	#0700	MASK DRIVE CODE FOR TWO
16155	0 43 16614	BRM	RADDRV	
16156	0 43 16722	BRM	DATA	
16157	0 72 25020	SKA	#010000	IS INTRUPT IN
16160	0 01 16173	BRU	PRGGE7	
16161	0 43 17422	BRM	WAIT4	
16162	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16163	0 76 25077	LDA	###1	
16164	0 01 17403	BRU	WAIT2	NO INTRUPT SEND BUFFFF
16165	0 43 17422	PRGGE6 BRM	WAIT4	
16166	0 43 16271	BRM	ERRTST	
16167	0 71 25004	LDX	#1	
16170	0 43 17107	BRM	CHECK	
16171	0 43 00434	BRM	END	
16172	0 01 16132	BRU	PRGGE4	
16173	0 43 17422	PRGGE7 BRM	WAIT4	
16174	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16175	0 72 25011	SKA	#040	DATA CHAIN SELECTED
16176	0 43 17427	BRM	CHAIN2	YES
16177	0 76 17337	LDA	INTRE4	NO SEND VIA INTRUPT
16200	0 43 17273	BRM	TRANS2	
16201	0 53 24505	SKN	JMPTYP	

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16202	0 11 16204	BRU	##2	
16203	0 01 16204	BRU*	##1	
16204	0 20 16205	NOP	##1	RESET INTRUPT
16205	0 01 16165	BRU	PRGGE6	
16206	0 43 17422	PRGGE4 BRM	WAIT4	
16207	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16210	0 72 25011	SKA	#040	IS DATA CHAIN ON
16211	0 43 17455	BRM	CHAIN1	
16212	0 76 17336	LDA	INTRE3	
16213	0 43 17236	BRM	TRANS1	
16214	0 01 16123	BRU	PRGGE3	
16215	0 75 24777	PRGGE8 LDB	#0	
16216	0 36 24464	STB	BUFSKP	
16217	0 72 25021	SKA	#020000	IS EARLY SELECTED
16220	0 01 16222	BRU	##2	YES
16221	0 01 16110	BRU	PRGGE2	NO
16222	0 71 25004	LDX	#1	
16223	0 43 16300	BRM	STATST	
16224	0 43 16427	BRM	RADADR	
16225	0 71 24777	LDX	#0	
16226	0 43 16315	BRM	CORADR	
16227	0 43 16655	BRM	SETUP	
16230	0 75 25274	LDB	#07000	MASK FOR DRIVE CODE ONE
16231	0 43 16614	BRM	RADDRV	
16232	0 43 16722	BRM	DATA	
16233	0 71 25004	LDX	#1	
16234	0 43 16655	BRM	SETUP	
16235	0 75 25276	LDB	#0700	MASK FOR DRIVE CODE TWO
16236	0 43 16614	BRM	RADDRV	
16237	0 43 16722	BRM	DATA	
16240	0 72 25020	SKA	#010000	IS INTRUPT ON
16241	0 01 16254	BRU	PRGGE9	YES
16242	0 43 17422	BRM	WAIT4	
16243	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16244	0 76 25300	LDA	###1	SET RETURN FOR TRANS1
16245	0 01 17564	BRU	WAIT1	

*
 * PROCESS GENERATOR
 * THE GENERATOR CONTROLS THE METHOD OF USE DETERMINED BY THE
 * MODE WORD.
 *

16036	0	76	24425	PRBGEN	LDA	MODES	
16037	0	72	25022	GENER3	SKA	#040000	FIXED MODE
16040	0	01	16067		BRU	GENER1	
16041	0	72	25021		SKA	#20000	IS IT RANDOM ALL
16042	0	01	16054		BRU	GENER2	
16043	0	76	24406		LDA	SEED	YES
16044	0	43	16603		BRM	RANDOM	
16045	0	14	25267		ETR	#00070000	GET TRANSMISSION MODE
16046	0	35	24501		STA	HOLD	
16047	0	76	24425		LDA	MODES	
16050	0	14	25270		ETR	#77707777	CLEAR MODE WORD
16051	0	16	24501		MRG	HOLD	
16052	0	35	24446		STA	MODE	
16053	0	01	16037		BRU	GENER3	
16054	0	76	24406	GENER2	LDA	SEED	
16055	0	43	16603		BRM	RANDOM	
16056	0	72	25271		SKA	#030000	EARLY 3 OF 4
16057	0	01	16061		BRU	**2	
16060	0	01	16064		BRU	GENER4	
16061	0	76	24425		LDA	MODES	
16062	0	16	25272		MRG	#060000	MERGE FINAL FIXED MODE
16063	0	01	16067		BRU	GENER1	
16064	0	76	24425	GENER4	LDA	MODES	
16065	0	14	25273		ETR	#77757777	REMOVE EARLY BIT
16066	0	16	25022		MRG	#40000	FIX FINAL MODE
16067	0	35	24446	GENER1	STA	MODE	PREPARE FOR POSSIBLE RANDOM MODES
16070	0	02	20002	FRMKEY	EIR		
16071	0	72	25266		SKA	#03000	IS BUFFER ONE IN

16072	0	01	16102		BRU	PRBGE1	
16073	0	75	25143		LDB	**1	
16074	0	36	24464		STB	BUFSKP	
16075	0	72	25146		SKA	#0300	IS BUFFER TWO IN
16076	0	01	16146		BRU	PRBGE5	
16077	0	43	20460		BRM	ERROR	NO BUFFERS SELECTED
16100	0	20	24272		NBP	NBBUFR	
16101	0	01	15510		BRU	FUNC10	
16102	0	71	24777	PRBGE1	LDX	#0	
16103	0	43	16427		BRM	RADADR	
16104	0	72	25146		SKA	#0300	IS TWO IN
16105	0	01	16215		BRU	PRBGE8	
16106	0	75	25143		LDB	**1	
16107	0	36	24464		STB	BUFSKP	FORCE SINGLE BUFFER CONTROL
16110	0	43	16215	PRBGE2	BRM	CORADR	
16111	0	43	16655		BRM	SETUP	
16112	0	75	25274		LDB	#07000	MASK FOR DRIVE CODE ONE
16113	0	43	16614		BRM	RADDRV	
16114	0	43	16722		BRM	DATA	
16115	0	72	25020		SKA	#010000	IS IT INTRUPT
16116	0	01	16206		BRU	PRBGE4A	
16117	0	43	17422		BRM	WAIT4	
16120	0	43	20430		BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16121	0	76	25275		LDA	**1	GET RETURN ADRS
16122	0	01	17564		BRU	WAIT1	SEND BUFFER ONE, NO INTRUPT
16123	0	43	17422	PRBGE3	BRM	WAIT4	
16124	0	43	16271		BRM	ERRTST	
16125	0	71	24777		LDX	#0	
16126	0	43	17107		BRM	CHECK	TEST READ DATA
16127	0	43	20434		BRM	END	
16130	0	53	24464		SKN	BUFSKP	
16131	0	01	16146		BRU	PRBGE5	
16132	0	53	24507	PRBGE4	SKN	KEYSW	
16133	0	01	16011		BRU	KEYRA1	
16134	0	53	24473		SKN	CYCLE1	
16135	0	01	16137		BRU	**2	

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16136	0 01 16036	BRU	PRGEN	
16137	0 60 24473	SKR	CYCLE1	
16140	0 20 00000	NOP	0	
16141	0 53 24473	SKN	CYCLE1	
16142	0 01 16036	BRU	PRGEN	
16143	0 43 17422	BRM	WAIT4	LET RAD FINISH
16144	0 43 00456	BRM	FDONE	
16148	0 01 20154	BRU	FUNC11	
16146	0 76 24446	PRGGE5 LDA	MODE	
16147	0 71 25004	LDX	#1	
16150	0 43 16300	BRM	STATST	
16151	0 43 16427	BRM	RADADR	
16152	0 43 16315	BRM	CORADR	
16153	0 43 16655	BRM	SETUP	
16154	0 75 25276	LDB	#0700	MASK DRIVE CODE FOR TWO
16155	0 43 16614	BRM	RADDRV	
16156	0 43 16722	BRM	DATA	
16157	0 72 25020	SKA	#010000	IS INTRUPT IN
16160	0 01 16173	BRU	PRGGE7	
16161	0 43 17422	BRM	WAIT4	
16162	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16163	0 76 25077	LDA	###1	
16164	0 01 17403	BRU	WAIT2	NO INTRUPT SEND BUFFER
16165	0 43 17422	PRGGE6 BRM	WAIT4	
16166	0 43 16271	BRM	ERRTST	
16167	0 71 25004	LDX	#1	
16170	0 43 17107	BRM	CHECK	
16171	0 43 00434	BRM	END	
16172	0 01 16132	BRU	PRGGE4	
16173	0 43 17422	PRGGE7 BRM	WAIT4	
16174	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16175	0 72 25011	SKA	#040	DATA CHAIN SELECTED
16176	0 43 17427	BRM	CHAIN2	YES
16177	0 76 17337	LDA	INTRE4	NO SEND VIA INTRUPT
16200	0 43 17273	BRM	TRANS2	
16201	0 53 24505	SKN	JMPTYP	

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16202	0 11 16204	BRJ	##2	
16203	0 01 16204	BRU*	##1	
16204	0 20 16205	NOP	##1	RESET INTRUPT
16208	0 01 16165	BRU	PRGGE6	
16206	0 43 17422	PRGGE4 BRM	WAIT4	
16207	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16210	0 72 25011	SKA	#040	IS DATA CHAIN ON
16211	0 43 17455	BRM	CHAIN1	
16212	0 76 17336	LDA	INTRE3	
16213	0 43 17336	BRM	TRANS1	
16214	0 01 16123	BRU	PRGGE3	
16215	0 75 24777	PRGGE8 LDB	#0	
16216	0 36 24464	STB	BUFSKP	
16217	0 72 25021	SKA	#020000	IS EARLY SELECTED
16220	0 01 16222	BRU	##2	YES
16221	0 01 16110	BRU	PRGGE2	NO
16222	0 71 25004	LDX	#1	
16223	0 43 16300	BRM	STATST	
16224	0 43 16427	BRM	RADADR	
16225	0 71 24777	LDX	#0	
16226	0 43 16315	BRM	CORADR	
16227	0 43 16655	BRM	SETUP	
16230	0 75 25276	LDB	#07000	MASK FOR DRIVE CODE ONE
16231	0 43 16614	BRM	RADDRV	
16232	0 43 16722	BRM	DATA	
16233	0 71 25004	LDX	#1	
16234	0 43 16655	BRM	SETUP	
16235	0 75 25276	LDB	#0700	MASK FOR DRIVE CODE TWO
16236	0 43 16614	BRM	RADDRV	
16237	0 43 16722	BRM	DATA	
16240	0 72 25020	SKA	#010000	IS INTRUPT ON
16241	0 01 16254	BRU	PRGGE9	YES
16242	0 43 17422	BRM	WAIT4	
16243	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16244	0 76 25300	LDA	###1	SET RETURN FOR TRANS1
16245	0 01 17564	BRU	WAIT1	

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16246	0 43 16271	BRM	ERRTST	
16247	0 76 25701	PRBG11 LDA	**1	SET RETURN FOR TRANS2
16250	0 01 17603	BRU	WAIT2	
16251	0 71 24777	PRBG12 LDX	#0	
16252	0 43 17107	BRM	CHECK	
16253	0 01 16165	BRU	PRGE6	
16254	0 43 17622	PRGE9 BRM	WAIT4	
16255	0 43 00430	BRM	OBJECT	ALLOW RAD TO FINISH BEFORE CONTROL
16256	0 76 17336	LDA	INTRE3	USE INTRUPT
16257	0 43 17236	BRM	TRANS1	
16260	0 76 17337	LDA	INTRE4	
16261	0 43 17273	BRM	TRANS2	
16262	0 53 24805	SKN	JMPTYP	
16263	0 11 16265	BRI	**2	
16264	0 01 16265	BRU	**1	CLEAR RECOGNIZED INTRUPT
16265	0 20 16265	NOP	.	
16266	0 71 24777	LDX	#0	
16267	0 43 17107	BRM	CHECK	
16270	0 01 16165	BRU	PRGE6	
		*		
16271	0 00 00000	ERRTST ZR0		
16272	0 40 11026	SKSS*	11026	HAD ERROR TEST
16273	0 43 00454	BRM	REP9RT	
16274	0 20 24131	NOP	RADER	
16275	0 40 11000	SKSS*	11000	CHANNEL ERROR TEST
16276	0 43 17670	BRM	CHANER	
16277	0 51 16271	BRR	ERRTST	
		*		
16300	0 00 00000	STATST ZR0		
16301	0 35 24765	STA	STAHL0	
16302	0 76 00401	LDA	STATUS	
16303	0 72 25017	SKA	#4000	HAD READ LOCK IN BIT
16304	0 01 16307	BRU	**3	
16305	0 76 24765	STATS1 LDA	STAHL0	
16306	0 51 16300	BRR	STATST	
16307	0 76 24462	LDA	BUF1RA	

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16310	0 35 24463	STA	BUF2RA	FORCE IDENTICAL RAD ADDRESSES
16311	0 76 24452	LDA	BUF1BL	
16312	0 35 24453	STA	BUF2BL	FORCE IDENTICAL RAD BLOCK LENGTHS
16313	0 61 16300	MIN	STATST	SKIP RADADR SUBROUTINE
16314	0 01 16305	BRU	STATS1	

*
* CORE ADDRESS AND BLOCK LENGTH FIT GENERATOR
*

16315	0 00 00000	CORADR	ZR0		
16316	0 37 24451		STX	BUFSAV	
16317	0 76 24446		LDA	MODE	HANDOM CORE ADRS
16320	0 72 25026		SKA	#01000000	
16321	0 01 16331		BRU	CORAD1	
16322	0 72 25027		SKA	#02000000	SEQUENCE MODE
16323	0 01 16371		BRU	CORAD4	
16324	0 72 25030		SKA	#04000000	FIXED MODE
16325	0 01 16357		BRU	CORAD3	
16326	0 43 00460		BRM	ERR0R	
16327	0 20 24301		N0P	MCORE	
16330	0 01 15510		BRU	FUNC10	
16331	0 76 24427	CORAD1	LDA	CORHI	MAXIMUM UPPER CORE LIMIT
16332	2 54 24452		SUB	BUF1BL,2	
16333	0 53 24464		SKN	BUFSKP	TEST TO DO TWO BUFFERS
16334	0 54 24453		SUB	BUF2BL	BUFFER 2 BLOCK LENGH
16335	0 54 24426		SUB	CORL0	FIND RELATIVE SPAN
16336	0 35 24504		STA	H0LD3B	
16337	0 43 20143		BRM	MASKER	GENERATE BIT MASK
16340	0 35 24761		STA	SAVARD	
16341	0 76 00406		LDA	SEED	
16342	0 43 16603		BRM	RAND0M	
16343	0 14 24761		ETR	SAVARD	
16344	0 73 24504		SKG	H0LD3B	
16345	0 01 16347		BRU	**2	
16346	0 54 24504		SUB	H0LD3B	
16347	0 54 25005		SUB	#2	
16350	0 55 24426		ADD	CORL0	
16351	0 71 24451		LDX	BUFSAV	
16352	2 35 24460	CORAD6	STA	BUF1CA,2	
16353	2 55 24452		ADD	BUF1BL,2	

16354	0 53 24464		SKN	BUFSKP	TEST TO SET BOTH BUFFERS
16355	0 35 24461	CORAD8	STA	BUF2CA	
16356	0 01 16424		BRU	CORADA	
16357	0 76 24446	CORAD3	LDA	MODE	
16360	0 72 25021		SKA	#20000	TEST FOR EARLY MODE
16361	0 01 15363		BRU	**2	
16362	0 01 16366		BRU	CORAD9	
16363	0 43 00460		BRM	ERR0R	DISALLOW EARLY ON FIXED CORE ADR
16364	0 20 24371		N0P	BADBIT	
16365	0 01 15510		BRU	FUNC10	
16366	0 76 24426	CORAD9	LDA	CORL0	CORL0 ADDRESS # FIXED
16367	0 35 24460		STA	BUF1CA	
16370	0 01 16355		BRU	CORAD8	
16371	0 76 24467	CORAD4	LDA	CORINK	INCREMENT CELL
16372	0 75 24467		LDB	CORINK	
16373	2 55 24452		ADD	BUF1BL,2	ADD BLOCK LENGTH ONE
16374	0 73 24427		SKG	CORHI	
16375	0 01 16401		BRU	CORAD5	
16376	0 76 24426		LDA	CORL0	RESET IF ABOVE CORHI
16377	0 35 24467		STA	CORINK	
16400	0 01 16352		BRU	CORAD6	
16401	2 36 24460	CORAD5	STB	BUF1CA,2	
16402	0 35 24467		STA	CORINK	
16403	0 53 24464		SKN	BUFSKP	
16404	0 01 16406		BRU	**2	
16405	0 01 16424		BRU	CORADA	
16406	0 55 24453		ADD	BUF2BL	UPDATE SECOND BUFFER ADRS
16407	0 73 24427		SKG	CORHI	
16410	0 01 16421		BRU	CORAD7	
16411	0 76 24426		LDA	CORL0	RESET IF ABOVE CORHI
16412	0 35 24467		STA	CORINK	
16413	0 76 24427		LDA	CORHI	
16414	0 54 24453		SUB	BUF2BL	
16415	0 35 24461		STA	BUF2CA	
16416	0 54 24452		SUB	BUF1BL	
16417	0 35 24460		STA	BUF1CA	

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16420	0	01	16424	BRU	CORADA	
16421	0	75	24467	CORAD7	LDB	CORINK
16422	0	35	24467		STA	CORINK
16423	0	36	24461		STB	BUF2CA
16424	0	76	24466	CORADA	LDA	MODE
16425	0	71	24451		LDA	BUFSAV
16426	0	51	16315	BRR	CORADR	

SET SECOND CORE ADRS

RESET AND RETURN

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*
* RANDOM RAD STARTING ADDRESS AND BLOCK LENGTH GENERATOR.
*
* BLKMAX IS THE SMALLER OF 14K, WHICH IS THE GREATEST
* RELABEL COUNT OR CBRMAX/2, WHICH IS THE GREATEST
* CORE SIZE SPECIFIED, OR RADMAX/2 WHICH IS THE RAD SIZE SPECIFIED.
*
RADADR ZR0
16427 0 00 00000
16430 0 37 24451 STX BUFSAV
16431 0 72 25031 SKA #10000000 TEST RANDOM
16432 0 01 16442 BRU RADAD1
16433 0 72 25032 SKA #20000000 TEST SEQUENTIAL
16434 0 01 16524 BRU RADAD2
16435 0 72 25033 SKA #40000000
16436 0 01 16560 BRU RADAD3 FIXED ADDRESS
16437 0 43 00460 BRM ERROR
16440 0 20 24264 NOP NBRAD
16441 0 01 15910 BRU FUNC10
16442 0 76 00406 RADAD1 LDA SEED
16443 0 43 16403 BRM RANDOM
16444 0 14 24520 ETR RADMSK ASSURE CORRECT BIT SCALING
16445 0 73 24517 SKG RADMAX
16446 0 01 16450 BRU **2
16447 0 54 24517 SUB RADMAX
16450 0 55 24430 ADD RADLB
16451 0 35 24743 STA SAVADR
16452 0 75 24454 LDB BLKMAX
16453 0 53 24707 SKN KEYS*
16454 0 01 16463 BRU RADAD4
16455 0 53 24433 SKN FIXBLK
16456 0 01 16461 BRU RADAD9
16457 0 43 16567 BRM GETBLK GENERATE RANDOM BLK LENGTH
16460 0 01 16463 BRU RADAD4
16461 0 75 24433 RADAD9 LDB FIXBLK
16462 0 67 00006 LSH 6 FIXBLK IS IN SECTORS

16463	0 76 24743	RADAD4	LDA	SAVADR	
16464	0 43 16473	RADAD5	BRM	RADADA	
16465	2 35 24462		STA	BUF1RA,2	
16466	0 67 00006		LSH	6	
16467	2 36 24452		STB	BUF1BL,2	SET BUFFER CONSTANTS
16470	0 76 24446		LDA	MODE	
16471	0 71 24451		LDX	BUFSAV	
16472	0 51 16427		BRR	RADADR	
16473	0 00 00000	RADADA	ZRO		
16474	0 35 24743		STA	SAVADR	
16475	0 76 24777		LDA	*0	
16476	0 66 00006		RSW	6	
16477	0 36 24746		STB	SAVBLK	
16500	0 76 24431		LDA	RADHI	
16501	0 54 24743		SUB	SAVADR	TEST OVER BOUND BLOCK LENGTH
16502	0 55 25004		ADD	*1	
16503	0 73 24746		SKG	SAVBLK	PICK SAVADR LESS THAN RADHI
16504	0 35 24746		STA	SAVBLK	
16505	0 76 24746		LDA	SAVBLK	RECOVER IF NO CHANGE
16506	0 55 24743		ADD	SAVADR	
16507	0 75 25267		LDB	*070000	
16510	0 70 24743		SKM	SAVADR	TEST FOR NO RAD UNIT CHANGE
16511	0 01 16514		BRU	RADADD	
16512	0 75 24746		LDB	SAVBLK	
16513	0 01 16522		BRU	RADADC	
16514	0 76 24743	RADADD	LDA	SAVADR	
16515	0 14 25267		ETR	*070000	
16516	0 55 25046		ADD	*07777	SET ADRS AT BOUNDRY
16517	0 54 24743		SUB	SAVADR	GENERATE NEW BLK LENGTH
16520	0 55 25004		ADD	*1	
16521	0 46 20005		ABC		
16522	0 76 24743	RADADC	LDA	SAVADR	
16523	0 51 16473		BRR	RADADA	
16524	0 75 24454	RADAD2	LDB	BLK*AX	
16525	0 53 24507		SKN	KEYS*	TEST FOR KEY CONDITION
16526	0 01 16535		BRU	RADADG	

16527	0 53 24433		SKN	FIXBLK	
16530	0 01 16533		BRU	RADADH	
16531	0 43 16547		BRM	GETBLK	
16532	0 01 16535		BRU	RADADG	
16533	0 75 24433	RADADH	LDB	FIXBLK	
16534	0 67 00006		LSH	6	
16535	0 76 24521	RADADG	LDA	RADINK	SEQUENCE INCREMENT STORAGE
16536	0 43 16473		BRM	RADADA	
16537	2 35 24462		STA	BUF1RA,2	
16540	2 36 24452		STB	BUF1BL,2	
16541	2 55 24452		ADD	BUF1BL,2	
16542	0 35 24521		STA	RADINK	UPDATE INCRMENT VALUF
16543	0 67 00006		LSH	6	
16544	2 36 24452		STB	BUF1BL,2	TRUE BUFFER BLOCK LENGTH
16545	0 76 24521		LDA	RADINK	
16546	0 75 24520		LDB	RADMSK	
16547	0 73 24431		SKG	RADHI	
16550	0 01 16555		BRU	RADADP	
16551	0 76 24430		LDA	RADLO	
16552	0 35 24521		STA	RADINK	
16553	0 53 24507		SKN	KEYS*	
16554	0 01 16013		BRU	KEYEND	
16555	0 76 24446	RADADP	LDA	MODE	
16556	0 71 24451		LDX	BUFSAV	
16557	0 51 16427		BRR	RADADR	
16560	0 75 24433	RADAD3	LDB	FIXBLK	
16561	0 67 00006		LSH	6	
16562	0 53 24433		SKN	FIXBLK	
16563	0 01 16565		BRU	**2	
16564	0 43 16547		BRM	GETBLK	
16565	0 76 24430		LDA	RADLO	
16566	0 01 16464		BRU	RADAD5	

*
*
* RANDOM BLOCK LENGTH GENERATOR
*

16567	0 00 00000	GETBLK	ZR0		
16570	0 76 00406		LDA	SEED	
16571	0 43 16603		BRM	RANDOM	
16572	0 14 24455		ETR	BLKMSK	ASSURE CORECT BIT SCALING
16573	0 73 24454		SKG	BLKMAX	
16574	0 01 16576		BRU	**2	
16575	0 54 24454		SUB	BLKMAX	
16576	0 72 25234		SKA	#77777700	
16577	0 01 16601		BRU	**2	
16600	0 76 25012		LDA	#100	FORCE AT LEAST ONE SECTOR
16601	0 46 20005		ABC		
16602	0 51 16567		BRR	GETBLK	

*
*
* RANDOM NUMBER GENERATOR
*

16603	0 00 00000	RANDOM	ZR0	0	
16604	0 37 24523		STX	RAN4X	REGISTER SAVER
16605	0 46 20005		ABC		
16606	0 67 00013		LSH	013	
16607	0 55 00406		ADD	SEED	
16610	0 55 25302		ADD	#53577045	RANDOM CONSTANT
16611	0 35 00406		STA	SEED	SAVE NEW NUMBER
16612	0 71 24523		LDX	RAN4X	
16613	0 51 16603		BRR	RANDOM	RETURN

*
*
* RAD DRIVE CODE GENERATOR
*

16614	0 00 00000	RADDRV	ZR0		
16615	0 37 24451		STX	BUFSAV	
16616	0 36 24501		STB	HOLD	
16617	0 14 24501		ETR	HOLD	GET DRIVE CODE
16620	0 72 25303		SKA	#04400	IS IT FIXED
16621	0 01 16646		BRU	RADDR2	YES
16622	0 76 24501		LDA	HOLD	
16623	0 17 25143		EBR	#=1	INVERT MASK
16624	0 14 24446		ETR	MODE	CLEAR DRIVE SLOT
16625	0 35 24446		STA	MODE	
16626	0 76 00406		LDA	SEED	
16627	0 43 16603		BRM	RANDOM	
16630	0 72 25020		SKA	#10000	TEST BIT 10
16631	0 01 16642		BRU	RADDR4	
16632	0 76 24773		LDA	WRITE	
16633	2 35*24770		STA*	TRE0M*2	
16634	0 76 25304		LDA	#02200	GET WRITE CODE
16635	0 14 24501	RADDR3	ETR	HOLD	
16636	0 16 24446		MRG	MODE	FORCE CODE TO MODE
16637	0 35 24446		STA	MODE	
16640	0 71 24451		LDX	BUFSAV	
16641	0 51 16614		BRR	RADDRV	
16642	0 76 24524	RADDR4	LDA	READA	
16643	2 35*24770		STA*	TRE0M*2	
16644	0 76 25305		LDA	#01100	FORCE READ CODE
16645	0 01 16635		BRU	RADDR3	
16646	0 75 24773	RADDR2	LDB	WRITE	
16647	0 72 25305		SKA	#01100	SKIP IF WRITE
16650	0 75 24524		LDB	READA	NO
16651	2 36*24770		STB*	TRE0M*2	
16652	0 76 24446	RADDR1	LDA	MODE	

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 16653 C 71 24451 LDX BUFSAV
 16654 C 51 16614 BRR RADDRV

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```

*
*
* CALCULATE AND PLACE NEW EOM AND PBT VALUES FOR THE TRANSMIT TABLE
*
*
16655 C 00 00000 SETUP ZR0 0
16656 C 37 24451 STX BUFSAV
16657 C 46 20005 ABC
16660 C 75 24452 LDB BUF1BL#2
16661 C 67 00016 LSH 016
16662 C 16 24477 *RG EOMBIT
16663 C 35 24502 STA H0LD2
16664 C 36 24503 STB H0LD3
16665 C 46 10012 BAC
16666 C 76 24460 LDA BUF1CA#2
16667 C 14 25306 ETR #0140000
16670 C 66 00011 RSH 011
16671 C 16 24502 *RG H0LD2
16672 C 35 24502 STA H0LD2
16673 C 76 24446 LDA #0DE
16674 C 72 25020 SETUP4 SKA #010000
16675 C 01 16477 BRU **2
16676 C 01 16706 BRU SETJ3B
16677 C 72 25021 SKA #20000
16700 C 01 16702 BRU **2
16701 C 01 16711 BRU SETJ3A
16702 C 76 24502 SETUP8 LDA H0LD2
16703 C 16 25033 *RG #40000000
16704 C 35 24502 STA H0LD2
16705 C 01 16711 BRU SETJ3A
16706 C 76 24502 SETUP3B LDA H0LD2
16707 C 14 25307 ETR #37774777
16710 C 35 24502 STA H0LD2
16711 C 75 24502 SETUP3A LDB H0LD2
16712 C 76 24460 LDA BUF1CA#2
16713 C 14 25001 ETR #037777

```

CLEAR AREG
 GET BLOCK LENGTH
 ISOLATE 5 HI ORDER BITS FOR EOM
 EOM = 0617200
 SAVE EOM FOR HI ADRS
 SAVE LO WORD COUNT FOR ADRS BITS
 CLEAR BREG
 CESS ADRS WORD
 ISOLATE HI BITS
 ALIGN HI BITS FOR EOM WORD
 FINAL EOM

IS IT INTRUPT
 *2
 *8
 TEST FOR EARLY BIT

YES
 EARLY INTERRUPT BIT

YES

REMOVE I1,I2 ARMING+ EARLY BIT

FINAL EOM TO BREG
 GET ADRS WORD
 ISOLATE LO ORDER ADRS BITS

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RADE12 TAP=3.0      01/17 06111  PAGE 297
16714 0 16 24503      MRG      HOLD3      CHANNEL PBT WORD
16715 2 35 24456      STA      BUF1KA,2
16716 2 36 24766      STB      TCEM,2      SET CHANNEL EDM
16717 0 76 24446      LDA      MODE
16720 0 71 24451      LDX      BUFSAV
16721 0 51 16455      BRM      SETUP      RETURN

```

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*
* DATA GENERATOR
* EITHER RANDOM FIXED OR SEQUENTIAL DATA IS SPREAD
*
16722 0 00 00000      DATA  ZR0
16723 0 37 24451      STX      BUFSAV
16724 2 76 24770      LDA      TREC,2      GET RAD EDM WORD
16725 0 72 25011      SKA      #040      TEST WRITE
16726 0 01 16730      BRU      #42
16727 0 01 16773      BRU      DATA15
16730 2 76 24462      LDA      BUF1RA,2
16731 0 35 24504      STA      HOLD3B
16732 2 76 24460      LDA      BUF1CA,2
16733 2 75 24452      LDB      BUF1BL,2
16734 0 43 17013      BRM      RELABL
16735 0 55 24425      ADD      RELBL
16736 0 16 24774      MRG      WRDSTA      TO SET RELABELLING REGISTERS
16737 0 46 20005      ABC      WRDSTA      CREATE HI CORE ADRS
16740 0 54 24525      SUB      RELBL
16741 0 35 24501      STA      HOLD
16742 0 71 24501      LDX      HOLD
16743 0 76 24446      LDA      MODE
16744 0 72 25023      SKA      #0100000
16745 0 01 16755      BRU      DATA9      GET CORRECT BLOCK LENGTH
16746 0 72 25024      SKA      #0200000
16747 0 01 17003      BRU      DATA13
16750 0 72 25025      SKA      #0400000
16751 0 01 16776      BRU      DATA12
16752 0 43 00460      BRM      ERRRR
16753 0 20 24257      NOP      NO DATA
16754 0 01 15510      BRU      FUNC10
16755 0 46 10012      DATA9 BAC
16756 0 35 16766      STA      DATA10      RANDOM WRITE SECTION

```

16757	0 17 25310	EBR	#06000000	GENERATE AN ADD, 035 EBR 60 = 55
16760	0 35 16771	STA	DATA11	
16761	0 76 00406	LDA	SEED	
16762	0 46 20005	ABC		
16763	0 67 00013	LSH	013	
16764	0 55 00406	ADD	SEED	
16765	0 55 25302	DATA9A	ADD #53577045	RANDOM DATA LOOP
16766	6 35 00000	DATA10	STA 0,6	
16767	0 46 20005	ABC		
16770	0 67 00013	LSH	013	
16771	6 55 00000	DATA11	ADD 0,6	
16772	0 41 16765	BRX	DATA9A	
16773	0 76 24446	DATA15	LDA #8DE	
16774	0 71 24451	LDX	BUFSAV	
16775	0 51 16722	BRR	DATA	
16776	0 76 24432	DATA12	LDA PATER.	CONSTANT DATA LOOP
16777	0 36 17000	DATA14	STB DATA19	BLOCK LENGTH PLUS STORE WORD
17000	6 35 00000	DATA19	STA 0,6	
17001	0 41 17000	BRX	DATA19	
17002	0 01 16773	BRU	DATA15	
17003	0 36 17007	DATA13	STB DATA16	SEQUENTIAL DATA LOOP
17004	0 76 24504	LDB	HOLD3B	
17005	0 67 00006	LSH	6	
17006	0 46 10012	BAC		
17007	6 35 00000	DATA16	STA 0,6	STORE RELABELLED DATA
17010	0 55 25004	ADD	#1	
17011	0 41 17007	BRX	DATA16	
17012	0 01 16773	BRU	DATA15	

*
 * RELABELLING ROUTINE FOR 940 MODE
 * AREG = STARTING CORE ADRS. BREG = BLOCK LENGTH.
 *
 *
 *
 17013 0 00 00000 RELABL ZR0
 17014 0 35 24526 STA RELCA CORE ADRS
 17015 0 36 24526 STB RELBL BLOCK LENGTH
 17016 0 46 10012 BAC
 17017 0 55 24526 ADD RELCA CALCULATE ENDING ADRS
 17020 0 46 20005 ABC
 17021 0 66 00013 RSH 13 SET BITS 8,9,10,11,12 FROM HI ADRS
 17022 0 46 10012 BAC
 17023 0 35 24537 STA RHIAOR
 17024 0 46 10012 BAC CLEAR BREG
 17025 0 76 24526 LDB RELCA
 17026 0 66 00013 RSH 13 ISOLATE LB ADRS BITS
 17027 0 46 10012 BAC
 17030 0 35 24740 STA RLBAOR
 17031 0 36 24501 STB HLD
 17032 0 46 10012 BAC
 17033 0 71 25242 LDX ##10 CLEAR AREG, BREG, HLD
 17034 0 76 24740 RELAB4 LDA RLBAOR SET FOR 8 RL LOOPS
 17035 0 17 24537 EBR RHIAOR LOW RAD ADRS BITS FOR RELABL
 17036 0 72 25143 SKA ##1
 17037 0 01 17075 BRU RELAB6
 17040 0 76 24740 LDA RLBAOR
 17041 0 16 25011 MRG #400000040 ADD INTRUPT AN FORCE NEGATIVE BIT
 17042 2 35 24537 STA RFIELD+10,2
 17043 0 76 24501 LDA HLD
 17044 0 67 20006 LCY 6
 17045 0 16 24740 MRG RLBAOR
 17046 0 41 17057 BRX ##2
 17047 0 01 17057 BRU RELAB7
 17050 0 35 24501 STA HLD

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17051	0 76 24777	LDA	#0	
17052	2 35 24837	STA	RFIELD+10,2	END CHAIN FIELD
17053	0 76 24801	LDA	HOLD	
17054	0 67 20006	RELAB8	LCY	6
17055	0 16 25011	MRG	#040	FORCE READ ONLY TRAP IF ACCESS IS WRONT
17056	0 41 17054	BRX	RELAB8	
17057	0 36 00415	RELAB7	STB	RL1
17060	0 35 00416	STA	RL2	
17061	0 53 24763	SKN	SKP940	
17062	0 01 17067	BRU	RELAB5	
17063	0 02 20400	EBM	020400	
17064	0 13 00415	PBT	RL1	
17065	0 02 21000	EBM	021000	
17066	0 13 00416	PBT	RL2	
17067	0 76 24826	RELAB5	LDA	RELCA
17070	0 53 24763	SKN	SKP940	
17071	0 01 17073	BRU	**2	
17072	0 14 25045	ETR	#03777	
17073	0 75 24825	LDB	RELBL	
17074	0 51 17013	BRR	RELABL	
17075	0 76 24740	RELAB6	LDA	RLBADR
17076	0 16 25011	MRG	#400000040	ADD INTRUPT AND FORCE NEGATIVE BIT
17077	2 35 24837	STA	RFIELD+10,2	LOAD DATA CHAIN TABLE
17100	0 76 24801	LDA	HOLD	
17101	0 67 20006	LCY	6	
17102	0 16 24740	MRG	RLBADR	
17103	0 35 24801	STA	HOLD	LOAD RL PBT WRDS IN AREG, BREG
17104	0 61 24740	YIN	RLBADR	
17105	0 41 17034	BRX	RELAB4	
17106	0 01 17057	BRU	RELAB7	

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		*		
		*		
		*	DATA CHECKING ROUTINE	
		*		
		*		
17107	0 00 00000	CHECK	ZRB	
17110	0 37 24451	STX	BUFSAV	
17111	2 76 24770	LDA	TRE0M,2	GET RAD E0M WORD
17112	0 72 25011	SKA	#040	
17113	0 01 17205	BRU	CHECK8	
17114	2 76 24462	LDA	BUF1RA,2	
17115	0 35 24804	STA	HOLD3B	
17116	0 76 00401	LDA	STATUS	
17117	2 75 24452	LDB	BUF1BL,2	SOFTWARE RAD READ ONLY
17120	0 72 25017	SKA	#4000	
17121	0 01 17210	BRU	CHECK9	
17122	2 76 24460	LDA	BUF1CA,2	
17123	0 43 17013	BRM	RELABL	TO RELABELLING ROUTINE
17124	0 55 24825	ADD	RELBL	
17125	0 16 24775	MRG	*RDSKM	TEST WORD
17126	0 46 20005	ABC		
17127	0 54 24825	SUB	RELBL	
17130	0 35 24801	STA	HOLD	
17131	0 71 24801	LDX	HOLD	PUT NEGATIVE BLK IN XREG
17132	0 76 24446	LDA	#0DE	
17133	0 72 25023	SKA	#0100000	RANDOM
17134	0 01 17156	BRU	CHECK7	
17135	0 72 25024	SKA	#0200000	SEQUENTIAL
17136	0 01 17144	BRU	CHECK12	
17137	0 72 25025	SKA	#0400000	FIXED
17140	0 01 17177	BRU	CHECK4	
17141	0 43 00460	BRM	ERROR	
17142	0 20 24857	NBP	NB0DATA	
17143	0 01 15510	BRU	FUNCI0	
17144	0 36 17151	CHEC12	STB	CHEC13
17145	0 75 24804	LDB	HOLD3B	SEQUENTIAL DATA TEST LOOP

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```
17146 0 67 00006 LSH 6
17147 0 46 10012 BAC
17150 0 75 25143 LDB **1
17151 6 70 00000 CHECK13 SKM 0,6
17152 0 43 17721 BRM ERRBUT
17153 0 55 25004 ADD #1
17154 0 41 17151 BRX CHECK13
17155 0 01 17205 BRU CHECK8
17156 0 36 17174 CHECK7 STB CHECK22
17157 0 46 10012 BAC
17160 0 17 25211 EBR #500000 MAKE A LDB, 70 EBR 05 = 75
17161 0 35 17165 STA CHECK21
17162 0 17 25227 EBR #2000000 MAKE AN ADD, 75 EBR 20 = 55
17163 0 35 17170 STA CHECK71
17164 0 46 20005 CHECK72 ABC
17165 6 75 00000 CHECK21 LDB 0,6
17166 0 67 00013 LSH 013
17167 0 75 25143 LDB **1
17170 6 55 00000 CHECK71 ADD 0,6
17171 0 55 25202 ADD #53577045 RANDOM CONSTANT
17172 0 41 17174 BRX **2
17173 0 01 17205 BRU CHECK8
17174 6 70 00000 CHECK22 SKM 0,6 RANDOM DATA TEST LOOP
17175 0 43 17721 BRM ERRBUT
17176 0 01 17164 BRU CHECK72
17177 0 36 17202 CHECK4 STB CHECK6
17200 0 76 24432 LDA PATERN
17201 0 75 25143 LDB **1
17202 6 70 00000 CHECK6 SKM 0,6 CONSTANT DATA TEST LOOP
17203 0 43 17721 BRM ERRBUT
17204 0 41 17202 BRX CHECK6
17205 0 71 24451 CHECK8 LDX BUFSAV
17206 0 76 24446 LDA *BDE
17207 0 51 17107 BRR CHECK
17210 0 43 17622 CHECK9 BRM WAIT4
17211 0 76 24452 LDA BUF1BL
```

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```
17212 0 55 24452 ADD BUF2BL GET BOTH SECTOR COUNTS
17213 0 46 20005 ABC
17214 0 76 24460 LDA BUF1CA
17215 0 43 17213 BRM RELABL
17216 0 55 24452 ADD BUF1BL SET LDA FOR FIRST BUFFER
17217 0 16 25312 YRG #67600000
17220 0 35 17231 STA CHECK3
17221 0 55 24453 ADD BUF2BL SET SECOND BUFFER
17222 0 17 25213 EBR #600000 MAKE A SKM
17223 0 35 17232 STA CHECK5
17224 0 46 20005 ABC
17225 0 54 24452 SUB BUF1BL SET BLOCK LENGTH
17226 0 35 24501 STA HBLD
17227 0 71 24501 LDX HBLD
17230 0 75 25143 LDB **1
17231 6 76 00000 CHECK3 LDA 0,6
17232 6 70 00000 CHECK5 SKM 0,6
17233 0 43 17721 BRM ERRBUT
17234 0 41 17231 BRX CHECK3
17235 0 01 17205 BRU CHECK8
```


*
 * TRANSMIT TABLE ONE
 *
 * CALCULATED ADDRESSES AND BLOCK LENGTH CODES ARE INSERTED IN
 * TABLE FOR TRANSMISSION TO THE RAD CONTROLLER
 *

17236	0 00 01000	TRANS1	ZR0	0	
17237	0 35 17234		STA	INTRE1	CUE TRANS1, BRU TRAN12
17240	0 40 14000		SKSS*	14000	CHANNEL ACTIVE TEST
17241	0 01 17250		BRU	RADTIM	TIME OUT FOR RAD INTRUPT WAIT
17242	0 06 10026	TRAN12	EBMM	0010026	ALERT RAD, ERRORS ARE NOT CLEARED
17243	0 13 24462		PBT	BUF1RA	STARTING RAD ADDRESS
17244	0 47 11000		SKSS*	011000	TEST CHANNEL ERROR
17245	0 43 17272		BRM	CHAMER	ANALYZE CHANNEL ERROR
17246	0 06 10000		EBMM*	010000	ALERT CHANNEL
17247	0 06 17000	TCEBM1	EBMM	0017200	ARM 11, 12, 10SD, AND HI BITS
17250	0 18 24456		PBT	BUF1KA	CHANNEL LO BITS
17251	0 20 00000	TRAN14	NOP	0	LINK TO DATA CHAIN
17252	0 40 11026	TRAN11	SKSS*	011026	RAD ERROR TEST
17253	0 43 17710		BRM	PBTERR	ONLY A PBT ERROR CAN OCCUR HERE
17254	0 06 00000	TREBM1	EBMM	0000000	RAD DRIVE CODE INSERTED HERE
17255	0 06 10000		EBMM	012000	ALERT TO PIN INTERLACE
17256	0 33 24416		FIN	PINARD	
17257	0 76 17236		LDA	INTRE2	
17260	0 35 17234		STA	INTRE1	RESET FOR FAST RETURN
17261	0 75 24777		LDB	0	
17262	0 36 24415		STB	LDDABL	
17263	0 43 17444		BRM	PINTST	
17264	0 53 17254		SKN	TREBM1	
17265	0 01 17272		BRU	TRAN13	TEST FOR EARLY INTRUPT
17266	0 40 10026		SKSS*	010026	TEST RAD READY
17267	0 01 17271		BRU	**2	
17270	0 43 00460		BRM	ERRR	
17271	0 20 24463		NBP	ERIFRR	

17272 0 51 17236 TRAN13 BRR TRANS1 RETURN TO MAIN LOOP

* TRANSMIT TABLE TAP
 * CALCULATED ADDRESSES AND BLOCK LENGTH CODES ARE INSERTED IN
 * TABLE FOR TRANSMISSION TO THE RAD CONTROLLER

17273	0 00 00000	TRANS2 ZR0	0	
17274	0 35 17234	STA	INTRE1	CUE TRANS2, BRU TRAN12
17275	0 40 14000	SKSS*	14000	CHANNEL ACTIVE TEST
17276	0 01 17650	BRU	RADTIM	TIME OUT FOR RAD INTRUPT WAIT
17277	0 06 10026	TRAN22 E0MM	0010026	ALERT RAD, ERRORS ARE NOT CLEARED
17300	0 13 24463	PBT	SUF2RA	STARTING RAD ADDRESS
17301	0 40 11000	SKSS*	011000	TEST CHANNEL ERROR
17302	0 43 17670	BRM	CHNER	ANALYZE CHANNEL ERROR
17303	0 06 10000	E0MM*	010000	ALERT CHANNEL
17304	0 06 17200	TCE0M2 E0MM	0017200	ARM 11, 12, 10SD, AND HI BITS
17305	0 13 24457	PBT	SUF2KA	CHANNEL L0 BITS
17306	0 20 00000	TRAN24 N0P	0	LINK TO DATA CHAIN
17307	0 40 11026	TRAN21 SKSS*	011026	RAD ERROR TEST
17310	0 43 17710	BRM	P0TERR	ONLY A P0T ERROR CAN OCCUR HERE
17311	0 06 00000	TRE0M2 E0MM	0000000	RAD DRIVE CODE INSERTED HERE
17312	0 06 12000	E0MM	012000	ALERT TO PIN INTERLACE
17313	0 33 24614		PIN	PINARD
17314	0 75 25004		LOB	#1
17315	0 36 24515		STB	L0DABL
17316	0 43 17444		BRM	PINTST
17317	0 76 17335	TRAN25 LDA	INTRE2	CHECK FOR CORRECT PIN WORD
17320	0 35 17334	STA	INTRE1	RESET FOR FAST RETURN
17321	0 61 17273	MIN	TRANS2	INCREMENT RETURN FOR BRI
17322	0 53 17311	SKN	TRE0M2	
17323	0 01 17330	BRU	TRAN23	TEST FOR EARLY INTRUPT
17324	0 40 10026	SKSS*	010026	TEST RAD READY
17325	0 01 17327	BRU	**2	
17326	0 43 00460	BRM	ERR0R	
17327	0 20 24063	N0P	ERRIERR	
17330	0 53 24505	TRAN23 SKN	JMPTYP	

17331	0 11 17273	BRI	TRANS2	RETURN
17332	0 01 17273	BRU*	TRANS2	925 RETURN

```

*
* INTRUPT ROUTINE ONE AND TWO
*
* THIS IS THE ENTRY FOR INTRUPT ONE
*
17333 0 00 00000 INTR1E ZHO
17334 0 11 17333 INTR1E BRI INTR1E
17335 0 11 17333 INTR2E BRI INTR1E BUFFER NOT SET YET RETURN
17336 0 11 17347 INTR3E BRI INTR2E LINK TO FIRST BUFFER
17337 0 01 17341 INTR4E BRU WAIT5 LINK TO SECOND BUFFER
17340 0 01 17477 INTR5E BRU DCHAIN LINK TO DATA CHAIN CONTROL
17341 0 40 10026 WAIT5 SKSS* 10026
17342 0 41 17341 BRX **1
17343 0 41 17277 BRX TRAN22 TO SECOND BUFFER
17344 0 43 00460 BRM ERROR
17345 0 20 24073 NOP SKSERR
17346 0 01 17317 BRU TRAN25 CLEAR BUFFER BEFORE END
17347 0 20 17242 INTR6E NOP TRAN12
*
* ENTRY WHEN ERROR INTRUPT OCCURS
*
17350 0 40 11026 INTR2 SKSS* 011026 RAD ERROR SKS
17351 0 01 17377 BRU INTR2B YES RAD ERROR
17352 0 40 11000 SKSS* 011000 NO, TEST CHANNEL ERROR
17353 0 01 17371 BRU INTR2A YES CHANNEL ERROR
17354 0 43 17443 BRM RESREG SAVE REGISTERS
17355 0 76 00450 INTR21 LDA DIVERT
17356 0 76 25001 LDB #37777 MASK
17357 0 70 25314 SKM #165 TEST FOR REAL 12
17360 0 01 17362 BRU **2

```

```

17361 0 01 17365 BRU INTR22
17362 0 43 14371 BRM SPURI
17363 0 20 25131 NOP #65 SPRIOUS INTRUPT
17364 0 01 15510 BRU FUNC10 RESTART
17365 0 43 17450 INTR22 BRM RESTOR GET REGISTERS
17366 0 53 24505 SKN JMPTYP
17367 0 11 00312 BRI 312 165 RETURN LINK
17370 0 01 00246 BRU* 246
17371 0 43 00460 INTR2A BRM ERROR
17372 0 20 24102 NOP ERCHAN
17373 0 76 24446 LDA MODE
17374 0 53 24505 SKN JMPTYP
17375 0 11 00312 BRI 312 165 RETURN LINK
17376 0 01 00246 BRU* 246
17377 0 43 17443 INTR2B BRM RESREG
17400 0 71 24515 LDX LODABL
17401 0 06 10026 EGM 010026 ALERT RAD TO PBT ADDRESS
17402 2 13 24462 PBT BUF1RA,2
17403 0 76 25022 LDA #0*0000 DELAY FOR PBT
17404 0 35 24472 STA COUNT1
17405 0 60 24472 INTR2C SKR COUNT1
17406 0 20 00000 NOP
17407 0 53 24472 SKN COUNT1
17410 0 01 17405 BRU INTR2C
17411 0 40 13026 SKSS* 013026 TIME OUT AND SKS FILE PROTECT
17412 0 01 17426 BRU WTPRO
17413 0 02 20004 DIR
17414 0 53 24505 SKN JMPTYP
17415 0 11 17417 BRI **2
17416 0 01 17417 BRU* **1
17417 0 20 17420 NOP **1
17420 2 76 24462 LDA BUF1RA,2
17421 0 71 00430 LDX SUBJECT
17422 0 43 00460 BRM ERROR
17423 4 20 24214 NOP ADRERR,4
17424 0 03 00410 THREE AREG DUMP REGISTERS

```

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```
17425 0 01 17441 BRU WRTPR1
17426 2 76 24462 WRTPR0 LDA BUF1RA,2
17427 0 71 00430 LDX OBJECT
17430 2 75 24462 LDB BUF1RA,2
17431 0 02 20004 DIR
17432 0 53 24505 SKN JMPTYP
17433 0 11 17435 BRI **2
17434 0 01 17435 BRU* **1
17435 0 20 17436 NOP **1
17436 0 43 00460 BRM ERROR
17437 4 20 24107 NOP FILPR0,4
17440 0 03 00410 THREE AREG
17441 0 43 17450 WRTPR1 BRM RESTOR
17442 0 01 00425 BRU FUNCTN*1
17443 0 00 00000 RESREG ZR0
17444 0 35 24742 STA SAVA4I
17445 0 36 24745 STB SAVB4I
17446 0 37 24760 STX SAVX4I
17447 0 51 17443 BRM RESREG
17450 0 00 00000 RESTOR ZR0
17451 0 76 24742 LDA SAVA4I
17452 0 75 24745 LDB SAVB4I
17453 0 71 24760 LDX SAVX4I
17454 0 51 17450 BRM RESTOR
```

FILE PROTECT MESSAGE
DUMP REGISTERS

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```
*
*
* DATA CHAIN CONTRL ROUTINE
*
17455 0 00 00000 CHAIN1 ZR0
17456 0 76 25315 LDA #100000*DCHA3
17457 0 35 17251 STA TRAN14
17460 0 71 25316 LDX #7
17461 0 37 24466 STX CHAINC
17462 0 76 17340 LDA INTRES
17463 0 43 17236 BRM TRANS1
17464 0 01 17474 BRU DCHA1
17465 2 53 24537 DCHA3 SKN RFIELD*10,2
17466 0 01 17252 BRU TRAN11
17467 0 06 11000 EBMM 11000
17470 2 13 24537 PBT RFIELD*10,2
17471 2 77 00001 EAX 1,2
17472 0 37 24466 STX CHAINC
17473 0 01 17252 BRU TRAN11
17474 0 76 17340 DCHA1 LDA INTRES
17475 0 35 17334 STA INTRE1
17476 0 01 17550 BRU RADTIM
17477 0 71 24466 DCHAIN LDX CHAINC
17500 2 53 24537 SKN RFIELD*10,2
17501 0 01 17515 BRU DCHA2
17502 0 06 11000 EBMM 011000
17503 2 13 24537 PBT RFIELD*10,2
17504 0 76 17340 LDA INTRES
17505 0 35 17334 STA INTRE1
17506 2 77 00001 EAX 1,2
17507 0 37 24466 STX CHAINC
17510 0 53 24505 SKN JMPTYP
17511 0 11 17513 BRI **2
17512 0 01 17513 BRU* **1
17513 0 20 17513 NOP *
```

ALERT CHAIN REQ

BACK TO TRANSMIT BLOCK
FORCE INTRUPT RETURN

WAIT FOR THE INTRUPT
RETURN ON INTRUPT
TEST FOR LAST SET

ALERT DATA CHAIN
GET NEXT CHAIN SET

```

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17514 0 01 17550      BRU      RADTIM      WAIT FOR INTRUPT
17515 0 61 17455      DCHA2   MIN      CHAIN1
17516 0 61 17455      MIN      CHAIN1
17517 0 76 25027      LDA      #2000000   NOP 0
17520 0 35 17251      STA      TRAN14
17521 0 35 17506      STA      TRAN24   RESET CHAIN LINK
17522 0 53 24505      SKN      JMPTYP
17523 0 11 17525      BRU      **2
17524 0 01 17525      BRU      **1
17525 0 20 17525      NOP      *
17526 0 51 17455      BRR      CHAIN1
17527 0 00 00000      CHAIN2  ZR0      0      RETURN FOR ALL INTRUPTS
17530 0 71 25216      LDX      **7
17531 0 37 24466      STX      CHAINC
17532 0 76 25217      LDA      #100000+DCHA4
17533 0 35 17306      STA      TRAN24
17534 0 76 17527      LDA      CHAIN2
17535 0 35 17455      STA      CHAIN1
17536 0 76 17340      LDA      INTRES
17537 0 43 17273      BRM      TRANS2
17540 0 01 17474      BRU      DCHA1
17541 2 53 24537      DCHA4   SKN      RFIELD+10,2
17542 0 01 17307      BRU      TRAN21
17543 0 00 11000      EBM      11000   ALERT CHAIN REG
17544 2 13 24537      PBT      RFIELD+10,2
17545 2 77 00001      EAX      1,2
17546 0 37 24466      STX      CHAINC
17547 0 01 17307      BRU      TRAN21

```

```

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*
*
* RAD TIME BUT CALCULATOR
*
*
17550 0 71 25220      RADTIM  LDX      #77752014   170 MS TIME BUT
17551 0 20 00000      RADTIM  NOP      0
17552 0 20 00000      NOP      0   SINGLE CYCLE TIME BUT LOOP
17553 0 20 00000      NOP      0
17554 0 20 00000      NOP      0
17555 0 20 00000      NOP      0
17556 0 20 00000      NOP      0
17557 0 20 00000      NOP      0
17560 0 41 17551      BRX      RADTIM
17561 0 43 00460      BRM      ERROR
17562 0 20 24123      NOP      TIMERR
17563 0 01 00431      BRU      SUBJECT+1
17564 0 35 17236      WAIT1   STA      TRAN51   SET RETURN
17565 0 71 25321      LDX      #77740000   SET DELAY
17566 0 40 14000      WAIT11  SKSS*   14000   CHANNEL ACTIVE TEST
17567 0 01 17573      BRU      *AIT13
17570 0 40 10026      WAIT12  SKSS*   10026   RAD READY TEST
17571 0 41 17566      BRX      *AIT11
17572 0 01 17576      BRU      *AIT14
17573 0 40 14000      WAIT13  SKSS*   14000
17574 0 41 17566      BRX      *AIT11
17575 0 01 17570      BRU      *AIT12
17576 0 02 20004      WAIT14  DIR
17577 0 41 17242      BRX      TRAN12
17600 0 43 00460      BRM      ERROR
17601 0 20 24073      NOP      SKSERR
17602 0 01 00431      BRU      SUBJECT+1
17603 0 35 17273      WAIT2   STA      TRANS2   SET RETURN
17604 0 71 25321      LDX      #77740000   SET DELAY
17605 0 40 14000      WAIT21  SKSS*   14000   CHANNEL ACTIVE TEST
17606 0 01 17612      BRU      *AIT23

```

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17607	0 40	10026	WAIT22	SKSS*	10026	HAD READY TEST
17610	0 41	17405		BRX	WAIT21	
17611	0 01	17415		BRU	WAIT2*	
17612	0 40	14000	WAIT23	SKSS*	14000	
17613	0 41	17405		BRX	WAIT21	
17614	0 01	17407		BRU	WAIT22	
17615	0 02	20004	WAIT24	DIR		
17616	0 41	17277		BRX	TRAN22	
17617	0 43	00460		BRM	ERR9R	
17620	0 20	24073		NOP	SKSERR	
17621	0 01	00431		BRU	OBJECT+1	
17622	0 00	00000	WAIT4	ZR0		
17623	0 37	24776		STX	*SAVE	
17624	0 71	25221		LDX	#77740000	SET DELAY
17625	0 40	14000	WAIT41	SKSS*	14000	CHANNEL ACTIVE TEST
17626	0 01	17432		BRU	WAIT43	
17627	0 40	10026	WAIT42	SKSS*	10026	HAD READY TEST
17630	0 41	17425		BRX	WAIT41	
17631	0 01	17435		BRU	WAIT44	
17632	0 40	14000	WAIT43	SKSS*	14000	
17633	0 41	17425		BRX	WAIT41	
17634	0 01	17427		BRU	WAIT42	
17635	0 76	24446	WAIT44	LDA	MODE	
17636	0 41	17442		BRX	WAIT45	
17637	0 43	00460		BRM	ERR9R	
17640	0 20	24073		NOP	SKSERR	
17641	0 01	00431		BRU	OBJECT+1	
17642	0 71	24776	WAIT45	LCX	*SAVE	
17643	0 51	17422		BRR	WAIT4	
17644	0 00	00000	PINTST	ZR0		
17645	0 71	24515		LDB	L0DABL	
17646	0 76	25322		LDA	#6	COUNT DOWN CONSTANT
17647	0 35	24472		STA	COUNT1	
17650	0 76	24516		LDA	PINWRD	
17651	0 75	25143		LDB	#1	
17652	2 70	24460	PINTS1	SKM	BUF1CA#2	TEST FOR ADDRESS ACCURACY

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17653	0 01	17455		BRU	**2	
17654	0 51	17444		BRR	PINTST	
17655	0 54	25004		SUB	#1	
17656	0 61	24472		MIN	COUNT1	
17657	0 53	24472		SKN	COUNT1	
17660	0 01	17462		BRU	**2	
17661	0 01	17452		BRU	PINTS1	
17662	0 76	24516		LDA	PINWRD	
17663	2 75	24460		LDB	BUF1CA#2	
17664	0 71	00430		LDX	OBJECT	
17665	0 43	00460		BRM	ERR9R	
17666	2 20	24077		NOP	PINERR#2	
17667	0 51	17444		BRR	PINTST	

*
* CHANNEL ERROR REPORT ROUTINE
*

17670	0	00	00000	CHANER	ZRS		
17671	0	71	24515		LDX	L0DABL	
17672	2	75	24462		LDB	BUF1RA,2	
17673	2	76	24770		LDA	TRE0M,2	
17674	0	72	25011		SKA	#040	TEST FOR WRITE INSTRUCTION
17675	0	01	17703		BRU	CHANE1	
17676	0	76	24515		LDA	L0DABL	
17677	0	71	00430		LDX	0BJECT	
17700	0	43	00460		BRM	ERR0R	
17701	2	20	24137		N0P	READP,2	HEAD PARITY
17702	0	51	17670		BRR	CHANE1	
17703	0	76	24515	CHANE1	LDA	L0DABL	
17704	0	71	00430		LDX	0BJECT	
17705	0	43	00460		BRM	ERR0R	
17706	2	20	24137		N0P	R1TEP,2	
17707	0	51	17670		BRR	CHANE1	

*
* P0T ERROR ROUTINE
*

17710	0	00	00000	P0TERR	PZE		
17711	0	40	10026		SKSS*	010026	HAD READY SKS
17712	0	01	17716		BRU	P0TER1	
17713	0	43	00460		BRM	ERR0R	
17714	0	20	24227		N0P	XTRAPT	SPURIOUS P0T ERROR
17715	0	51	17710		BRR	P0TERR	
17716	0	43	00460	P0TER1	BRM	ERR0R	
17717	0	20	24177		N0P	BADP0T	P0T ERR AND POSSIBLE READY CKT ERROR
17720	0	51	17710		BRR	P0TERR	RETRY

*
* COMPARE ERROR REPORT ROUTINE
*

17721	0	00	00000	ERR0U1	ZRS		
17722	0	35	24741		STA	ERRSVA	
17723	0	36	24744		STB	ERRSVB	
17724	0	46	10012		BAC		
17725	0	37	24747		STX	ERRSVX	
17726	0	76	00406		LDA	SEED	
17727	0	35	24764		STA	SVSEED	
17730	0	71	24451		LDX	BUFSAV	
17731	2	76	24452		LDA	BUF1BL,2	GET BLOCK SIZE
17732	0	55	24747		ADD	ERRSVX	BLK LGNTH = WDS OUT = ERROR WORD COUNT
17733	0	14	25323		ETR	#37777777	R1D NEGATIVE SIGN
17734	0	35	24503		STA	H0LD3	
17735	2	76	24462		LDA	BUF1RA,2	
17736	0	35	24502		STA	H0LD2	
17737	0	67	00006		LSH	6	
17740	0	55	24503		ADD	H0LD3	FIND PRESENT RAD ADRS
17741	0	35	24501		STA	H0LD	
17742	0	75	25324		LDB	#7700	
17743	0	70	24762		SKM	SEKSTT	GENERATE AND TEST RAD ADRS
17744	0	01	17746		BRU	ERR0U2	NEW SECTOR
17745	0	01	17756		BRU	ERR0U8	
17746	0	53	24514	ERR0U2	SKN	PRNTED	
17747	0	43	20072		BRM	ERR0J6	PRINT 0LD RESULT
17750	0	76	24501		LDA	H0LD	
17751	0	35	24444		STA	ADDRS	
17752	0	35	24762		STA	SEKSTT	PRINTED
17753	0	76	24447		LDA	ERRCNT	
17754	0	14	25200		ETR	#70000000	SAVE BUFFER CODE
17755	0	35	24447		STA	ERRCNT	ZERO ERROR COUNT
17756	0	61	24447	ERR0U8	MIN	ERRCNT	
17757	0	76	24447		LDA	ERRCNT	

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17760	0	14	25325	ETR	#7777777
17761	0	73	25034	SKG	#3
17762	0	01	17771	BRU	ERR0U9
17763	0	76	24446	LDA	MODE
17764	0	72	25006	SKA	#4
17765	0	01	17771	BRU	ERR0U9
17766	0	76	24777	LDA	#0
17767	0	35	24514	STA	PRNTED
17770	0	01	20440	BRU	ERR0U4
17771	0	76	24502	LDA	H0LD2
17772	0	35	24443	STA	RADSTT
17773	0	76	17721	LDA	ERR0UT
17774	0	54	25004	SUB	#1
17775	0	35	24501	STA	H0LD
17776	0	71	24747	LDA	ERRSVX
17777	0	76	24501	LDA	H0LD
20000	0	17	25313	EBR	#600000
20001	0	35	20002	STA	**1
20002	6	76	00000	LDA	0,6
20003	0	35	24442	STA	BADWRD
20004	0	76	24741	LDA	ERRSVX
20005	0	35	24441	STA	GDWRD
20006	0	76	24447	LDA	ERRCNT
20007	0	14	25325	ETR	#07777777
20010	0	35	24447	STA	ERRCNT
20011	0	76	24451	LDA	BUFSAV
20012	0	71	24451	LDA	BUFSAV
20013	0	55	25004	ADD	#1
20014	0	46	20005	ABC	
20015	0	66	20003	RCY	3
20016	0	16	24447	MRG	ERRCNT
20017	0	35	24447	STA	ERRCNT
20020	2	76	24452	LDA	BUF1BL,2
20021	0	35	24450	STA	BLKSIZ
20022	0	76	24503	LDA	H0LD3
20023	0	75	24777	LDB	#0

CLIP OFF BUFFER CODE
 SKIP ALL ERRORS AFTER THREE
 TEST TO PRINT ALL
 SET PRINTED TO GO AT SECTOR CHANGE
 INITIAL RAD ADDRESS
 GET DATA BLOCK POINTER
 MAKE A LDA, TO EBR 06 = 76
 GET ERROR WORD
 CLR BUFFER CODE
 RESTORE BUFFER POINTER
 SET BUFFER CODE IN ERR COUNT WORD
 TO ERROR TABLE
 WORDS TESTED
 CLEAR BREG

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20024	2	55	24460	ADD	BUF1CA,2
20025	0	35	24445	STA	K0RADR
20026	0	76	24446	LDA	MODE
20027	0	72	25023	SKA	#0100000
20030	0	01	20120	BRU	ERR037
20031	0	72	25024	SKA	#2000000
20032	0	01	20061	BRU	ERR042
20033	0	72	25025	SKA	#4000000
20034	0	01	20044	BRU	ERR0U1
20035	0	43	00460	BRM	ERROR
20036	0	20	24257	N0P	N0DATA
20037	0	01	15810	BRU	FUNC10
20040	0	71	24747	LDA	ERRSVX
20041	0	75	24744	LDB	ERRSVB
20042	0	76	24441	LDA	GDWRD
20043	0	51	17721	BRR	ERR0UT
20044	0	76	24441	LDA	GDWRD
20045	0	75	25046	LDB	#00007777
20046	0	70	24442	SKM	BADWRD
20047	0	01	20055	BRU	ERR032
20050	0	75	24442	LDB	BADWRD
20051	0	43	00454	BRM	REPORT
20052	0	20	24337	N0P	SYNC
20053	0	43	20072	BRM	ERR0U6
20054	0	01	20040	BRU	ERR0U4
20055	0	75	25026	LDB	#77770000
20056	0	70	24442	SKM	BADWRD
20057	0	01	20111	BRU	ERR036
20060	0	01	20050	BRU	ERR033
20061	0	76	24441	LDA	GDWRD
20062	0	75	25327	LDB	#07777700
20063	0	70	24442	SKM	BADWRD
20064	0	01	20066	BRU	ERR041
20065	0	01	20115	BRU	ERR043
20066	0	75	25330	LDB	#07770000
20067	0	70	24442	SKM	BADWRD

GENERATE CORE ADRS
 RANDOM MODE
 SEQUENCE MODE
 FIXED MODE
 RESET AND GO BACK TO TEST
 TEST FOR HALF WRD SHIFT
 CHECK HALF WORD
 TEST FOR CORRECT RAD UNIT

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20070	0	01	20111	BRU	ERR036	
20071	0	01	20115	BRU	ERR043	
20072	0	00	00000	ERR006	ZR0	
20073	0	43	17422	BRM	WAIT4	
20074	0	76	25143	LDA	#=1	
20075	0	35	24514	STA	PRNTED	CLEAR PRINTED SWITCH
20076	0	53	24500	SKN	HEADSW	TEST TO PRINT HEADING
20077	0	01	20104	BRU	ERR060	
20100	0	76	24777	LDA	#0	
20101	0	35	24500	STA	HEADSW	CLEAR HEADING SWITCH
20102	0	43	00454	BRM	REPORT	
20103	0	20	24234	NOP	TITLE	
20104	0	43	00454	ERR060	BRM	REPORT
20105	0	10	24441	EIGHT	GDWRD	
20106	0	43	00460	BRM	ERR0R	
20107	0	20	24213	NOP	NDIT	
20110	0	51	20072	BRR	ERR006	
20111	0	76	24764	ERR036	LDA	SVSEED
20112	0	35	00406	STA	SEED	REPLACE SEED
20113	0	43	20072	BRM	ERR006	
20114	0	01	20040	BRU	ERR004	
20115	0	43	00454	ERR043	BRM	REPORT
20116	0	20	24363	NOP	ADALRT	
20117	0	01	20111	BRU	ERR036	
20120	0	76	00406	ERR037	LDA	SEED
20121	0	35	24764	STA	SVSEED	
20122	0	76	17174	LDA	CHEC22	
20123	0	35	20133	STA	ERR038	
20124	0	71	24747	LDX	ERRSVX	
20125	0	77	00001	EAX	1/2	
20126	0	46	10012	BAC		
20127	0	76	24442	LDA	BADWRD	
20130	0	35	00406	STA	SEED	TRY NEW BEGINNING SEQUENCE
20131	0	43	16603	BRM	RANDOM	
20132	0	75	25143	LDB	#=1	
20133	6	70	00000	ERR038	SKM	0/6

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20134	0	01	20111	BRU	ERR036	
20135	0	76	24764	LDA	SVSEED	
20136	0	35	00406	STA	SEED	
20137	0	76	24447	LDA	ERRCNT	
20140	0	54	25004	SUB	#1	DELETE ERROR COUNT
20141	0	35	24447	STA	ERRCNT	
20142	0	51	17721	BRR	ERR00T	RETURN ALL IS WELL
20143	0	00	00000	MASKER	ZR0	
20144	0	75	25143	LDB	#=1	LDA MASK CONSTANT
20145	0	67	10054	N0D	054	NORMALIZE COUNTT
20146	0	46	10012	BAC		MASK = 77770000 (TYP)
20147	0	17	25143	E0R	#=1	FLIP TO LOW ORDER DIGITS
20150	0	75	24777	LDB	#0	
20151	0	67	10054	N0D	54	
20152	0	17	25323	E0R	#037777777	FINAL RESULT
20153	0	51	20143	BRR	MASKER	

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20154	0	43	00424	FUNC11	BRM	FUNCTN	
20155	0	20	20615		NOP	PPT11	
20156	0	43	00440		BRM	RETURN	
20157	0	20	07150		NOP	XTRA1	
20160	0	43	13766		BRM	RADSK	
20161	0	76	00401		LDA	STATUS	
20162	0	72	25117		SKA	#4000	SOFTWARE RAD READ ONLY
20163	0	01	20152		BRU	ALLDUN=1	

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* F119=01 INHIBIT INCREMENT TEST

20164	0	43	00430		BRM	OBJECT	
20165	0	43	00440		BRM	RETURN	
20166	0	20	07150		NOP	XTRA1	
20167	0	76	24777		LDA	#0	
20170	0	43	15202		BRM	SPREAD	LOAD RLO BUFFER
20171	0	76	25140		LDA	#77	
20172	0	35	24513		STA	POTARD	SET RAD ADRS
20173	0	43	17422		BRM	WAIT4	
20174	0	76	24751		LDA	RCODE1	64 WORDS FROM RLO
20175	0	43	15167		BRM	WRYT3	
20176	0	76	24777		LDA	#0	
20177	0	35	24513		STA	POTARD	
20200	0	43	17422		BRM	WAIT4	
20201	0	76	24751		LDA	RCODE1	
20202	0	43	15167		BRM	WRYT3	CLEAR ADRS 77 AND 00
20203	0	76	25112		LDA	#100	
20204	0	35	24513		STA	POTARD	
20205	0	43	17422		BRM	WAIT4	
20206	0	76	24751		LDA	RCODE1	
20207	0	43	15167		BRM	WRYT3	
20210	0	76	25143		LDA	#1	
20211	0	43	15202		BRM	SPREAD	
20212	0	71	25234		LDX	#100	
20213	2	35	24740		STA	RLO=200,2	CLEAR SECOND BUFFER
20214	0	41	20213		BRX	#1	
20215	0	76	25140		LDA	#77	
20216	0	35	24513		STA	POTARD	
20217	0	43	17422		BRM	WAIT4	
20220	0	06	11226		EDMM	11026	INHIBIT INCREMENT
20221	0	13	24513		POT	POTARD	
20222	0	06	10200		EDMM	10000	
20223	0	06	14200		EDMM	14200	10SD WITH NO INTRUPTS
20224	0	13	25331		POT	#10000000+RLO	SEND TWO SECTORS

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20225	0 06	02766	E0MM	2266	WRITE RECORD
20226	0 76	24777	LDA	#0	
20227	0 43	15202	BRM	SPREAD	CLEAR RLB BUFFER
20230	0 76	25040	LDA	#77	
20231	0 35	24513	STA	POTWRD	
20232	0 76	24751	LDA	RCODE1	
20233	0 35	24754	STA	CHANWD	
20234	0 43	17622	BRM	WAIT4	
20235	0 43	15316	BRM	READ7	
20236	0 43	17622	BRM	WAIT4	
20237	0 76	24540	LDA	RLB	
20240	0 75	25143	LDB	==1	
20241	0 70	25143	SKM	==1	TEST FOR WRITTEN DATA
20242	0 01	20265	BRU	F1101A	BAD DATA
20243	0 76	24777	LDA	#0	
20244	0 43	15202	BRM	SPREAD	
20245	0 76	24777	LDA	#000	
20246	0 35	24513	STA	POTWRD	
20247	0 43	15316	BRM	READ7	
20250	0 43	17622	BRM	WAIT4	DELAY TO CHECK
20251	0 76	24540	LDA	RLB	
20252	0 75	25143	LDB	==1	
20253	0 70	25143	SKM	==1	
20254	0 01	20265	BRU	F1101A	
20255	0 76	25012	LDA	#100	
20256	0 35	24513	STA	POTWRD	
20257	0 43	15316	BRM	READ7	
20260	0 43	17622	BRM	WAIT4	
20261	0 76	24540	LDA	RLB	
20262	0 75	25143	LDB	==1	
20263	0 70	25143	SKM	==1	
20264	0 01	20267	BRU	F1101B	
20265	0 43	00460	F1101A BRM	ERROR	
20266	0 20	24002	NBP	M1101A	INHIBIT LOGIC
20267	0 43	00434	F1101B BRM	END	

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* F110B02 PARTIAL SECTOR WRITE

20270	0 43	00430	BRM	OBJECT	
20271	0 43	00440	BRM	RETURN	
20272	0 20	07150	NBP	XTRA1	
20273	0 76	24440	LDA	PATRN	
20274	0 43	15202	BRM	SPREAD	LOAD RLB WITH PATRN
20275	0 76	24435	LDA	RADRS	
20276	0 35	24513	STA	POTWRD	SET ADDRESS
20277	0 75	24436	LDB	WDKAWN	SET ADDRESS
20300	0 14	25040	ETR	#077	FORCE ONE SECTOR OR LESS
20301	0 67	00016	LSH	16	ORIENT FOR ADRS
20302	0 46	10012	BAC		
20303	0 16	25240	MRG	#RLB	
20304	0 35	24754	STA	CHANWD	
20305	0 43	17622	BRM	WAIT4	
20306	0 76	24754	LDA	CHANWD	
20307	0 43	15167	BRM	XRYT3	WRITE FROM RLB
20310	0 43	17622	BRM	WAIT4	DELAY FOR CONTROL LINK
20311	0 40	11026	SKSS	11026	EST FOR ERROR
20312	0 01	20314	BRU	==2	
20313	0 01	20321	BRU	F1102A	
20314	0 76	24777	LDA	#0	
20315	0 75	24435	LDB	RADRS	
20316	0 71	00430	LDX	OBJECT	
20317	0 43	00460	BRM	ERROR	
20320	2 20	24157	NBP	R1TEP,2	BUFFER RAD ADRS OBJECT TEST OVRFLD ERRORS
20321	0 43	00434	F1102A BRM	END	

* F110B03 PARTIAL SECTOR READ

20322	0 43	00430	BRM	OBJECT	
20323	0 43	00440	BRM	RETURN	
20324	0 20	07150	NBP	XTRA1	
20325	0 76	24435	LDA	RADRS	
20326	0 35	24513	STA	POTWRD	

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20327 0 76 24751      LDA   RCODE1      64 WORDS
20330 0 35 24754      STA   CHANWD
20331 0 43 15316      BRM   READ7
20332 0 43 17422      BRM   WAIT4
20333 0 71 25234      LDX   #100      SET X FOR 64 WORDS
20334 0 76 24440      LDA   PATRN
20335 0 75 25143      LDB   #1
20336 2 70 24440      F1103A SKM   RLB*100,2
20337 0 01 20341      BRU   #2
20340 0 41 20336      BRX   F1103A
20341 0 76 24777      LDA   #0
20342 2 70 24440      F1103B SKM   RLB*100,2
20343 0 01 20346      BRU   F1103C      TEST FOR ZEROS
20344 0 41 20342      BRX   F1103B
20345 0 01 20351      BRU   F1103D
20346 2 75 24440      F1103C LDB   RLB*100,2
20347 0 43 00460      BRM   ERROR
20350 2 20 24712      NBP   ZROBAD,2    GOOD WD BAD WD INDEX OVRFLD ERRORS
20351 0 43 00434      F1103D BRM   END
20352 0 43 00456      BRM   DONE
20353 0 43 00452      ALLDUN BRM   DONE
*
* F12 SINGLE SECTOR READ WITH PRINT OPTION
*
20354 0 43 00424      FUNC12 BRM   FUNCTN
20355 0 20 20420      NBP   FPT12
20356 0 43 00440      BRM   RETURN
20357 0 20 07150      NBP   XTRA1
20360 0 43 00460      BRM   ERROR
20361 0 20 20400      NBP   MS12
20362 0 76 24435      LDA   RADRS
20363 0 35 24513      STA   PBTWRD
20364 0 76 24751      LDA   RCODE1      64 WORDS
20365 0 35 24754      STA   CHANWD
20366 0 43 15316      BRM   READ7
20367 0 43 17422      BRM   WAIT4

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20370 0 43 00454      BRM   REPORT
20371 4 20 20412      NBP   MS12A,4
20372 4 01 20415      ONE   PLACE,4
20373 0 20 20416      NBP   MS12B
20374 0 43 00460      BRM   ERROR
20375 0 20 24212      NBP   ENDIT
20376 0 43 00454      BRM   DONE
20377 0 01 20354      BRU   FUNC12
20400 52464525      MS12  BCD      ' ONE SECTOR READ ONLY. TYPE #PV THEN #T!!
20401 12622523
20402 63465112
20403 51252124
20404 12464543
20405 70331263
20406 70472512
20407 40266512
20410 63302545
20411 12406337
20412 52242163      MS12A BCD      ' DATA AT '
20413 21122163
20414 12523712
20415 0 00 24540      PLACE ZR0      RLB
20416 64622512      MS12B BCD      ' USE #P!!
20417 40473712
20420 0 20 20426      FPT12 NBP      FIM12
20421 0 20 20445      NBP      FAM12
20422 0 20 20510      NBP      FVM12      ABSTRACT
20423 0 01 24435      ONE      RADRS      VARIABLE HEADING
20424 0 00 20353      ZR0      ALLDUN    VARIABLE
20425 00004000      DATA     4000     LAST FUNCTION
20426 52122612      FIM12 BCD      ' F 12 = READ ANY SECTOR ON THE RAD. TYPE #PV FOR VARIABLE.!!
20427 01021240
20430 12512521
20431 24122145
20432 70126225
20433 23634451

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20434 12464512
20435 63302512
20436 51212433
20437 1263747
20440 25124026
20441 65122646
20442 51126521
20443 51312122
20444 43253337
20445 52126330
20446 25126225
20447 23634651
20450 12512521
20451 24123162
20452 12264451
20453 23257412
20454 22701262
20455 25636331
20456 45271263
20457 30251265
20460 21513121
20461 22432533
20462 12124751
20463 31456331
20464 45271263
20465 30251212
20466 52627523
20467 63465112
20470 31621224
20471 46452512
20472 22701264
20473 62314527
20474 12633025
20475 12475131
20476 45631226
20477 64452263

FAM12 BCD THE SECTOR READ IS FORCED BY SETTING THE VARIABLE. PRINTING THE

BCD SECTOR IS DONE BY USING THE PRINT FUNCTION FROM THE ADDRESS OUTPUTTED.

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20500 31464512
20501 26514444
20502 12633025
20503 12212424
20504 51256262
20505 12466463
20506 47646363
20507 25243337
20510 52512124
20511 12212451
20512 62523712

FVM12 BCD RAD ADRS

*
* UNIT AND FUNCTION PARAMETERS AND MESSAGES
*

20513	0	20	20626	UPT	NOP	UIM	UNIT ID MSG ADRS
20514	0	20	20643		NOP	UAM	UNIT ABSTRACT MSG ADR
20515	0	20	20623		NOP	UVM	UNIT VARIABLES MSG ADRS
20516	0	01	20620		ONE	UVT	UNIT VARIABLE COUNT
20517			00004000		DATA	400C	UNIT TWELVE ID WORD BIT 12
20520			37030000	UVT	DATA	37030000	F1,2,3,4,5,6,7,8,9,10,11 ACCESS WORD
20521	0	20	21013	FPT1	NOP	FIM1	IDENTIFIER MESSAGE
20522	0	20	21030		NOP	FAM1	ABSTRACT MESSAGE
20523	0	20	21010		NOP	FVM1	VARIABLE MESSAGE
20524	0	01	20526		ONE	FVT1	DISPLAYABLE VARIABLES
20525	0	00	05464		PZE	FUNC2	FUNCTION LINK
20526			02000000	FVT1	DATA	02000000	FUNCTION IDENTIFIER BIT 1
20527	0	20	21173	FPT2	NOP	FIM2	IDENTIFIER MESSAGE
20530	0	20	21160		NOP	FAM2	ABSTRACT MESSAGE
20531	0	20	21155		NOP	FVM2	VARIABLE MESSAGE
20532	0	01	21534		ONE	FVT2	DISPLAYABLE VARIABLES
20533	0	00	07161		PZE	FUNC3	NEXT FUNCTION
20534			01000000	FVT2	DATA	01000000	FUNCTION IDENTIFIER BIT2
20535	0	20	21211	FPT3	NOP	FIM3	IDENTIFIER FOR FUNCTION THREE
20536	0	20	21225		NOP	FAM3	ABSTRACT MESSAGE FOR THREE
20537	0	20	21206		NOP	FVM3	VARIABLE HEADING
20540	0	01	20542		ONE	FVT3	VARIABLE CONSTANT
20541	0	00	10370		ZRO	FUNC4	NEXT FUNCTION
20542			04000000	FVT3	DATA	04000000	
20543	0	20	21252	FPT4	NOP	FIM4	IDENTIFIER FOR FUNCTION FOUR
20544	0	20	21266		NOP	FAM4	ABSTRACT MSG FOR FOUR
20545	0	20	21247		NOP	FVM4	VARIABLE HEADING
20546	0	01	20550		ONE	FVT4	VARIABLE CONSTANT
20547	0	00	11577		ZRO	FUNC5	NEXT FUNCTION
20550			02000000	FVT4	DATA	02000000	
20551	0	20	21313	FPT5	NOP	FIM5	

20552	0	20	21227		NOP	FAM5	
20553	0	20	21310		NOP	FVM5	
20554	0	01	20556		ONE	FVT5	
20555	0	00	13706		ZRO	FUNC6	NEXT FUNCTION
20556			01000000	FVT5	DATA	01000000	
20557	0	20	21351	FPT6	NOP	FIM6	IDENTIFIER MESSAGE
20560	0	20	21366		NOP	FAM6	ABSTRACT MESSAGE
20561	0	20	21564		NOP	FVM6	VARIABLE HEADING
20562	0	01	20564		ONE	FVT6	AMOUNT OF VARIABLES
20563	0	00	13767		ZRO	FUNC7	LINK TO NEXT FUNCTION
20564			00400000	FVT6	DATA	400000	BIT 6 FOR FUNCTION 6
20565	0	20	21567	FPT7	NOP	FIM7	IDENT MSG
20566	0	20	21604		NOP	FAM7	ABSTRACT MSG
20567	0	20	21416		NOP	FVM7	VARIABLE HEADING
20570	0	01	20572		ONE	FVT7	VARIABLE COUNT
20571	0	00	14205		ZRO	FUNC8	LINK TO NEXT FUNCTION
20572			00200000	FVT7	DATA	200000	BIT 7 FOR FUNCTION 7
20573	0	20	21421	FPT8	NOP	FIM8	IDENT MSG
20574	0	20	21636		NOP	FAM8	ABSTRACT MSG
20575	0	20	21450		NOP	FVM8	VARIABLE HEADING
20576	0	01	20600		ONE	FVT8	VARIABLE COUNT
20577	0	00	14523		ZRO	FUNC9	LINK TO NEXT FUNCTION
20600			00100000	FVT8	DATA	100000	BIT 8 FOR FUNCTION 8
20601	0	20	21453	FPT9	NOP	FIM9	IDENT MSG
20602	0	20	21470		NOP	FAM9	ABSTRACT MSG
20603	0	20	21702		NOP	FVM9	VARIABLE HEADING
20604	0	01	20606		ONE	FVT9	VARIABLE COUNT
20605	0	00	15810		ZRO	FUNC10	LINK TO NEXT FUNCTION
20606			00040000	FVT9	DATA	400000	BIT 9 FOR FUNCTION 9
20607	0	20	21705	FPT10	NOP	FIM10	IDENTIFIER MESSAGE
20610	0	20	21720		NOP	FAM10	ABSTRACT MESSAGE
20611	0	20	22526		NOP	FVM10	VARIABLE HEADING
20612	0	10	24475		EIGHT	MSDES	
20613	0	00	20154		ZRO	FUNC11	NEXT FUNCTION
20614			00020000	FPT11	DATA	020000	FUNCTION IDENTIFIER BIT 10
20615	0	20	22551	FPT11	NOP	FIM11	IDENTIFIER MSG

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20616	0 20 22571		NOP	FAM11	ABSTRACT MSG
20617	0 20 22646		NOP	FVM11	VARIABLE HEADING
20620	0 03 24435		THREE	RADRS	DISPLAYABLE VARIABLES
20621	0 00 20354		ZR0	FUNC12	NEXT FUNCTION
20622	00010000		DATA	10000	FUNCTION IDENTIFIER BIT 11
20623	52121212	BVM	BCD	! FAW !!	
20624	26216452				
20625	37121212				
20626	52641201	UIM	BCD	! U 12 = E CHANNEL AND 9367 (26=66) RAD TESTS 3,011	
20627	02124012				
20630	25122330				
20631	21454525				
20632	43122145				
20633	24121103				
20634	06071274				
20635	02064006				
20636	06341251				
20637	11241263				
20640	25624362				
20641	12033300				
20642	37121212				
20643	52320664	UAM	BCD	! FUNC1: CHANNEL LOGIC TESTS. NO I/O REQUIRED.!	
20644	45230115				
20645	12232021				
20646	45452543				
20647	12434427				
20650	31231263				
20651	25624362				
20652	33124546				
20653	12316146				
20654	12512550				
20655	64315125				
20656	24331212				
20657	52266445		BCD	! FUNC2: RAD SKS AND PRIMARY TRANSFER TESTS.!	
20660	23021512				
20661	51212412				

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20662	62426212				
20663	21452412				
20664	47513144				
20665	21517012				
20666	63512145				
20667	62262551				
20670	12632562				
20671	63623312				
20672	52266445		BCD	! FUNC3: RAD TWO PIN TESTS.!	
20673	23031512				
20674	51212412				
20675	63664612				
20676	47314512				
20677	63256263				
20700	62331212				
20701	52266445		BCD	! FUNC4: RAD THREE PIN TESTS.!	
20702	23041512				
20703	51212412				
20704	63305125				
20705	25124731				
20706	45126325				
20707	62636233				
20710	52266445		BCD	! FUNC5: RAD FOUR PIN TESTS.!	
20711	23051512				
20712	51212412				
20713	26466451				
20714	12473145				
20715	12632562				
20716	63623312				
20717	52266445		BCD	! FUNC6: RAD ONE HEAD TEST.!	
20720	23061512				
20721	51212412				
20722	46452512				
20723	30252124				
20724	12632562				
20725	63331212				

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20726	52266445	BCD	' FUNC7: RAD TWO HEAD TEST.'
20727	23071512		
20730	51212412		
20731	63664412		
20732	30252124		
20733	12632562		
20734	63331212		
20735	52266445	BCD	' FUNC8: RAD THREE HEAD TEST.'
20736	23101512		
20737	51212412		
20740	63355125		
20741	25123025		
20742	21241263		
20743	25626333		
20744	52266445	BCD	' FUNC9: RAD FOUR HEAD TEST.'
20745	23111512		
20746	51212412		
20747	26466451		
20750	12302521		
20751	24126325		
20752	62633212		
20753	52266445	BCD	' FUNC10: RANDOM RAD EXERCISER.'
20754	23010215		
20755	12512145		
20756	24464412		
20757	51212412		
20760	25672551		
20761	23316223		
20762	51331212		
20763	52266445	BCD	' FUNC11: PARTIAL BLOCK AND INHIBIT INCREMENT TEST.'
20764	2301 115		
20765	12472151		
20766	63312143		
20767	12224346		
20770	23421221		
20771	45241231		

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20772	45303122		
20773	31631231		
20774	45235126		
20775	44254563		
20776	12632562		
20777	63331212		
21000	52266445	BCD	' FUNC12: ONE SECTOR READ ONLY.'
21001	23010215		
21002	12464525		
21003	12622523		
21004	63465112		
21005	51252124		
21006	12464543		
21007	71333712		
21010	52121212	FVM1 BCD	' FAW !!'
21011	12262166		
21012	52371212		
21013	52122412	FIM1 BCD	' F 01 = CHANNEL ACCESS TEST FOR 9367 RAD CHANNEL!!'
21014	00011240		
21015	12233021		
21016	45452543		
21017	12212225		
21020	62621263		
21021	25626312		
21022	26465112		
21023	11032607		
21024	12512124		
21025	12233021		
21026	45452543		
21027	37121212		
21030	52322664	FVM1 BCD	' FUNCTION ONE DIAGNOSES FAULTS IN THE 940 CHANNEL CONNECTED TO THE RAD.'
21031	45236331		
21032	46451246		
21033	45251224		
21034	31212745		
21035	46622562		

21036 12262164
 21037 43636212
 21040 31451263
 21041 30251211
 21042 04001223
 21043 30214545
 21044 25431223
 21045 46454525
 21046 23637524
 21047 12634612
 21050 63307512
 21051 51212433
 21052 52214343
 21053 12110400
 21054 12243121
 21055 27454462
 21056 63312362
 21057 12444462
 21060 63125164
 21061 45122346
 21062 51512223
 21063 63437433
 21064 12123126
 21065 12214512
 21066 25515146
 21067 51123121
 21070 43631246
 21071 23236451
 21072 62151212
 21073 52215125
 21074 67121212
 21075 25515146
 21076 51124446
 21077 51241212
 21100 22512527
 21101 12131263

BCD ! ALL 940 DIAGNOSTICS MUST RUN CORRECTLY. IF AN ERROR HALT OCCURS!!

BCD ! AREG = ERROR WORD BREG = TEST WORD XREG = OBJECT TEST.!

21102 25626312
 21103 66465124
 21104 12126751
 21105 25271213
 21106 12462241
 21107 25236312
 21110 63256263
 21111 33121212
 21112 52633025
 21113 12212323
 21114 46444721
 21115 45703145
 21116 27124751
 21117 31456346
 21120 64631224
 21121 25263145
 21122 25621262
 21123 31274521
 21124 43124521
 21125 44256212
 21126 21452412
 21127 44462464
 21130 43256212
 21131 51254321
 21132 63252412
 21133 63461263
 21134 30251226
 21135 21314364
 21136 51231212
 21137 52255151
 21140 46511251
 21141 25626443
 21142 63621221
 21143 51251223
 21144 46452325
 21145 51452524

BCD ! THE ACCOMPANYING PRINTOUT DEFINES SIGNAL NAMES AND MODULES RELATED TO THE FAILURE!

BCD ! ERROR RESULTS ARE CONCERNED WITH CHANNEL LOGIC ONLY.!!

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21146	12663163			
21147	30122330			
21150	21454525			
21151	43124746			
21152	27312312			
21153	46454370			
21154	33371212			
21155	52121212	FVM2	BCD	' FAW 11
21156	26216652			
21157	37121212			
21160	52322664	FAM2	BCD	' FUNC2 DIAGNOSES THE 9367 RAD CONTROLLER.11
21161	45230212			
21162	24312127			
21163	45466225			
21164	67126330			
21165	25121103			
21166	06071251			
21167	21241223			
21170	46456351			
21171	46434325			
21172	51333712			
21173	52122612	FIM2	BCD	' F Q2 = RAD ACCESS TEST FOR THE 9367 RAD.11
21174	00021240			
21175	12512124			
21176	12212323			
21177	25626212			
21200	63256263			
21201	12264451			
21202	12633025			
21203	12110306			
21204	07125121			
21205	24371212			
21206	52121212	FVM3	BCD	' FAW 11
21207	26216652			
21210	37121212			
21211	52122612	FIM3	BCD	' F Q3 = SECTOR COUNTER TEST FOR 9367 RAD Q2.11

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21212	00031240			
21213	12622523			
21214	63465112			
21215	23466445			
21216	63255112			
21217	63256263			
21220	12264451			
21221	12110306			
21222	07125121			
21223	24120002			
21224	37121212			
21225	52322664	FAM3	BCD	' FUNC3 TESTS FOR SELECTOR LOGIC ON RAD Q2, ADDRESSES 20000 TO 37777.11
21226	45230312			
21227	63256263			
21230	62122646			
21231	51126225			
21232	43252363			
21233	46511243			
21234	46273123			
21235	12464512			
21236	51212412			
21237	00027312			
21240	21242451			
21241	25626225			
21242	62120200			
21243	00000012			
21244	63461203			
21245	07070707			
21246	37121212			
21247	52121212	FVM4	BCD	' FAW 11
21250	26216652			
21251	37121212			
21252	52122612	FIM4	BCD	' F Q4 = SECTOR COUNTER TEST FOR 9367 RAD Q3.11
21253	00041240			
21254	12622523			
21255	63465112			

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21256	23466445			
21257	63255112			
21260	63256263			
21261	12264651			
21262	12110306			
21263	07125121			
21264	24120003			
21265	37121212			
21266	52322664	FAM4	BCD	FUNC4 TESTS FOR SELECTOR LOGIC ON RAD 03, ADDRESSES 40000 TO 5777711
21267	45230412			
21270	63256263			
21271	62122446			
21272	51126225			
21273	43252363			
21274	46511243			
21275	46273123			
21276	12464512			
21277	51212412			
21300	00037312			
21301	21242451			
21302	25626225			
21303	62120400			
21304	00000012			
21305	63461205			
21306	07070707			
21307	37121212			
21310	52121212	FVM5	BCD	FAM 11
21311	26216652			
21312	37121212			
21313	52122412	FIM5	BCD	F 05 = SECTOR COUNTER TEST FOR 9367 RAD 0411
21314	00051240			
21315	12622423			
21316	63465112			
21317	23466445			
21320	63255112			
21321	63256263			

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21322	12264651			
21323	12110306			
21324	07125121			
21325	24120004			
21326	37121212			
21327	52322664	FAM5	BCD	FUNC5 TESTS FOR SELECTOR LOGIC ON RAD 04, ADDRESSES 60000 TO 7777711
21330	45230512			
21331	63256263			
21332	62122446			
21333	51126225			
21334	43252363			
21335	46511243			
21336	46273123			
21337	12464512			
21340	51212412			
21341	00047312			
21342	21242451			
21343	25626225			
21344	62120400			
21345	00000012			
21346	63461207			
21347	07070707			
21350	37121212			
21351	52122412	FIM6	BCD	F 06 = SELECTOR UNIT 01 HEAD CHECK FOR 9367 RAD11
21352	00061240			
21353	12622443			
21354	25236346			
21355	51126445			
21356	31631200			
21357	01122025			
21360	21241223			
21361	30252342			
21362	12264651			
21363	12110306			
21364	07125121			
21365	24371212			

21366 52322464
 21367 45236731
 21370 44451206
 21371 12632562
 21372 53621221
 21373 43431230
 21374 45212462
 21375 12255144
 21376 44122124
 21377 24512562
 21400 62120000
 21401 00001263
 21402 46120107
 21403 17077712
 21404 26465112
 21405 23465151
 21406 25236712
 21407 46472551
 21410 21633146
 21411 45121212
 21412 52314512
 21413 22466230
 21414 12512521
 21415 24122145
 21416 24122451
 21417 31632512
 21420 44462425
 21421 62331212
 21422 24214321
 21423 12644225
 21424 24123162
 21425 12214343
 21426 12464525
 21427 62331212
 21430 35212330
 21431 12300521

FAM6 BCD FUNCTION 6 TESTS ALL HEADS FROM ADDRESS 0000 TO 17777 FOR CORRECT OPERATION

BCD IN BOTH READ AND WRITE MODES. DATA USED IS ALL ONES. EACH HEAD

21432 24121212
 21433 52316212
 21434 23302523
 21435 42257412
 21436 46451221
 21437 43431262
 21440 25236346
 21441 51621246
 21442 26123163
 21443 62122221
 21444 45241221
 21445 24512562
 21446 62331212
 21447 63302512
 21450 5125224
 21451 12255151
 21452 46511244
 21453 25624221
 21454 27251212
 21455 32471231
 21456 45636215
 21457 12126231
 21460 24256767
 21461 67671263
 21462 22404767
 21463 67671230
 21464 24404767
 21465 67673312
 21466 12633225
 21467 62251221
 21470 51251263
 21471 30251262
 21472 31242512
 21473 46261263
 21474 30251251
 21475 21241212

BCD IS CHECKED ON ALL SECTORS OF ITS BAND ADDRESS. THE READ ERROR MESSAGE

BCD PRINTS: SIDExxxx TB=xxxx HD=xxxx. THESE ARE THE SIDE OF THE RAD

21476	52663031	BCD	' WHICH IS OPENED TO ACCESS THE HEAD, THE TB STRIP CONCERNED AND THE '
21477	23301231		
21500	62124667		
21501	25452524		
21502	12634612		
21503	21232562		
21504	62126330		
21505	25123025		
21506	21247312		
21507	63302512		
21510	63221262		
21511	63513147		
21512	12234645		
21513	23255145		
21514	25241221		
21515	45241263		
21516	30251212		
21517	52450444	BCD	' NUMBER OF THE JACK WHERE THE HEAD WOULD BE NORMALLY PLUGGED. SIDE'
21520	22255112		
21521	46261263		
21522	30251241		
21523	21234212		
21524	66302551		
21525	25126330		
21526	25123025		
21527	21241266		
21530	46644324		
21531	12222512		
21532	45465144		
21533	21434270		
21534	12474264		
21535	27272524		
21536	33121262		
21537	31242512		
21540	52464525	BCD	' ONE OF THE RAD UNIT IS THE FRONT DOOR. THE OTHER SIDES ARE COUNTED'
21541	12462612		

21542	63302512		
21543	51212412		
21544	64433163		
21545	12316212		
21546	63302512		
21547	26514645		
21550	63122446		
21551	46513312		
21552	12633025		
21553	12466330		
21554	25511262		
21555	31242562		
21556	12215125		
21557	12234664		
21560	45632524		
21561	52234246	BCD	' CLOCKWISE.!!
21562	23426631		
21563	62253337		
21564	52121212	FVM6	BCD ' FAV !!
21565	26216652		
21566	37121212		
21567	52122612	FIM7	BCD ' F 07 = SELECTOR UNIT 02 HEAD CHECK FOR 9367 RAD!!
21570	00071240		
21571	12622543		
21572	25236346		
21573	51126445		
21574	31631200		
21575	02123025		
21576	21241223		
21577	30252342		
21600	12264651		
21601	12110306		
21602	07125121		
21603	24371212		
21604	52322664	FAM7	BCD ' FUNC7 PRINT F 6 ABSTRACT FOR DETAILS!!
21605	45230712		

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21606	47513145				
21607	63122412				
21610	06122122				
21611	62635121				
21612	23631226				
21613	46511224				
21614	25632131				
21615	43623712				
21616	52121212	FVM7	BCD	1	FAW 11
21617	12262166				
21620	52371212				
21621	52122412	FIM8	BCD	1	F 08 = SELECTOR UNIT 03 HEAD CHECK FOR 9367 RAD11
21622	00101240				
21623	12622543				
21624	25236346				
21625	51126445				
21626	31631200				
21627	03123025				
21630	21241223				
21631	30252342				
21632	12264651				
21633	12110306				
21634	07125121				
21635	24371212				
21636	52322664	FAM8	BCD	1	FUNC8 PRINT F 6 ABSTRACT FOR DETAILS11
21637	45231112				
21640	47513145				
21641	63122412				
21642	06122122				
21643	62635121				
21644	23631226				
21645	46511224				
21646	25632131				
21647	43623712				
21650	52121212	FVM8	BCD	1	FAW 11
21651	12262166				

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21652	52371212				
21653	52122412	FIM9	BCD	1	F 09 = SELECTOR UNIT 04 HEAD CHECK FOR 9367 RAD11
21654	00111240				
21655	12622543				
21656	25236346				
21657	51126445				
21660	31631200				
21661	04123025				
21662	21241223				
21663	30252342				
21664	12264651				
21665	12110306				
21666	07125121				
21667	24371212				
21670	52322664	FAM9	BCD	1	FUNC9 PRINT F 6 ABSTRACT FOR DETAILS11
21671	45231112				
21672	47513145				
21673	63122412				
21674	06122122				
21675	62635121				
21676	23631226				
21677	46511224				
21700	25632131				
21701	43623712				
21702	52121212	FVM9	BCD	1	FAW 11
21703	12262166				
21704	52371212				
21705	52122412	FIM10	BCD	1	F 10 = 9367 RAD EXERCISER FOR E CHANNEL11
21706	01001240				
21707	12110306				
21710	07125121				
21711	24122567				
21712	25512731				
21713	62255112				
21714	26445112				
21715	25122330				

21716	21454525		
21717	43371212		
21720	52323145	FAM10	BCD ' IN FUNCTION 10 TYPES OF CONTROLLING MOTIFS FOR THE RAD ARE SET BY CHANGING THE'
21721	12266445		
21722	23633146		
21723	45120100		
21724	12637747		
21725	25621246		
21726	26122346		
21727	45635146		
21730	43433145		
21731	27124446		
21732	63312462		
21733	12264651		
21734	12633225		
21735	12512124		
21736	12215125		
21737	12622563		
21740	12227512		
21741	23302145		
21742	27314527		
21743	12633225		
21744	52266445	BCD	' FUNCTION VARIABLE MODES ACCORDING TO THE CHART BELOW.'
21745	23633146		
21746	45126521		
21747	51312122		
21750	43251212		
21751	44462425		
21752	02121221		
21753	23234651		
21754	24314527		
21755	12634412		
21756	6330212		
21757	23302151		
21760	63122225		
21761	43466633		

21762	52525454	BCD	' **IF A ONE BIT IS INIT** '
21763	31261221		
21764	12464525		
21765	12223163		
21766	12316212		
21767	31451515		
21770	54545212		
21771	52223163	BCD	' BIT 0 FIX, 1 SEQUENCE, 2 RANDOM, RAD ADDRESSES.'
21772	12001226		
21773	31677312		
21774	01126225		
21775	50642545		
21776	23257312		
21777	02125121		
22000	45244444		
22001	73125121		
22002	24122124		
22003	24512562		
22004	62256233	BCD	' BIT 3 FIX, 4 SEQUENCE, 5 RANDOM, CORE ADDRESSES.'
22005	52223163		
22006	12031226		
22007	31677312		
22010	04126225		
22011	50642545		
22012	23257312		
22013	05125121		
22014	45244444		
22015	73122346		
22016	51251221		
22017	24245125		
22020	6222562		
22021	33121212	BCD	' BIT 6 FIX, 7 SEQUENCE, 8 RANDOM, DATA.'
22022	52223163		
22023	12061226		
22024	31677312		
22025	07126225		

22026	50642546		
22027	23257212		
22030	10125121		
22031	45244444		
22032	73122421		
22033	63213312		
22034	52223163	BCD	' BIT 9 FIX, 10 EARLY, 11 INTRUPT, TRANSMISSION MODE.'
22035	12111226		
22036	31677312		
22037	01001225		
22040	21514370		
22041	73121101		
22042	12314563		
22043	51644763		
22044	73126351		
22045	21456244		
22046	31626231		
22047	46451244		
22050	44242533		
22051	52223163	BCD	' BIT 12 FIX, 13 WRITE, 14 READ, FOR BUFFER ONE.'
22052	12010212		
22053	26316773		
22054	12010212		
22055	66513163		
22056	25731201		
22057	04125125		
22060	21247312		
22061	26465112		
22062	22642626		
22063	25511246		
22064	45253212		
22065	52223163	BCD	' BIT 15 FIX, 16 WRITE, 17 READ, FOR BUFFER TWO.'
22066	12010512		
22067	26316773		
22070	12010612		
22071	66513163		

22072	25731201		
22073	04125125		
22074	21247312		
22075	26465112		
22076	22642626		
22077	25511263		
22100	06463312		
22101	52223163	BCD	' BIT 18 SET DATA CHAINING MODE.'
22102	12011012		
22103	62256312		
22104	24216321		
22105	12233021		
22106	31453145		
22107	27124446		
22110	24253312		
22111	52223163	BCD	' BIT 21 PRINT ALL ERRORS, IF ZERO THE FIRST THREE ERRORS ARE PRINTED.'
22112	12020112		
22113	47513145		
22114	63122143		
22115	43122551		
22116	51465162		
22117	73123126		
22120	12712551		
22121	46126330		
22122	25122631		
22123	51626312		
22124	63305125		
22125	25122551		
22126	51465162		
22127	12215125		
22130	12475131		
22131	45632524		
22132	33121012		
22133	52312612	BCD	' IF THE MODE IS FIX=ZERO FOR TRANSMISSION MODE AND BUFFER'
22134	63302512		
22135	44462425		

22136 12316712
 22137 26316713
 22140 71255146
 22141 12264451
 22142 12635121
 22143 45624431
 22144 62623146
 22145 45124446
 22146 24251221
 22147 45241222
 22150 64262425
 22151 51121212
 22152 52444424
 22153 25731221
 22154 12512145
 22155 24464412
 22156 62254325
 22157 23633146
 22160 45123162
 22161 12442124
 22162 25122446
 22163 51121330
 22164 25124721
 22165 51214425
 22166 43251333
 22167 12121630
 22170 25451245
 22171 46121212
 22172 52512521
 22173 24124451
 22174 12665131
 22175 63251231
 22176 62124225
 22177 63122446
 22200 51122112
 22201 22642626

BCD ' MODE, A RANDOM SELECTION IS MADE FOR THE PARAMETER. WHEN NO

BCD ' READ OR WRITE IS SET FOR A BUFFER, THE BUFFER IS NOT USED.'

22202 25517312
 22203 63302512
 22204 22642626
 22205 25511231
 22206 62124546
 22207 63126462
 22210 25243312
 22211 52312612
 22212 24216321
 22213 12233221
 22214 31451226
 22215 31671346
 22216 45251231
 22217 62124421
 22220 24257312
 22221 23302131
 22222 45314527
 22223 12663143
 22224 43122225
 22225 12214343
 22226 46662224
 22227 12663225
 22230 45121212
 22231 52633225
 22232 12314563
 22233 51644763
 22234 12444624
 22235 25123162
 22236 12454463
 22237 12252151
 22240 43701266
 22241 46512433
 22242 52256721
 22243 44474325
 22244 15124446
 22245 24256213

BCD ' IF DATA CHAIN FIX, ONE IS MADE, CHAINING WILL BE ALLOWED WHEN

BCD ' THE INTERRUPT MODE IS NOT EARLY WORD.'

BCD ' EXAMPLE: MODES, 14263600 SELECTS RANDOM RAD AND FIXED CORE ADDRESSES, I

22246 12010402
22247 06030600
22250 00126225
22251 43252343
22252 62125121
22253 45244644
22254 12512124
22255 12214424
22256 12263167
22257 25241223
22260 46512512
22261 21242451
22262 25424225
22263 62731212
22264 52622550
22265 64254563
22266 31214312
22267 24216321
22270 73122521
22271 51437012
22272 43216325
22273 45237012
22274 66316330
22275 46646312
22276 31456351
22277 64476373
22300 52512145
22301 24464412
22302 51252124
22303 12465112
22304 66513163
22305 25122446
22306 51122264
22307 26267551
22310 12464525
22311 73731226

BCD ' SEQUENTIAL DATA, EARLY LATENCY WITHOUT INTERRUPT.'

BCD ' RANDOM READ OR WRITE FOR BUFFER ONE,, FIXED WRITE ONLY FOR'

22312 31672524
22313 12665131
22314 63251246
22315 45437012
22316 26465112
22317 52226426
22320 26255112
22321 63664673
22322 12214524
22323 12454612
22324 24216321
22325 12233021
22326 31453145
22327 27331212
22330 52633031
22331 62124446
22332 24251266
22333 46644324
22334 12516445
22335 12264651
22336 12633025
22337 12512547
22340 25633163
22341 31464562
22342 12242526
22343 31452524
22344 12314512
22345 23702343
22346 25623312
22347 12312612
22350 23702343
22351 25621212
22352 52234445
22353 63213145
22354 62122112
22355 45252721

BCD ' BUFFER TWO, AND NO DATA CHAINING.'

BCD ' THIS MODE WOULD RUN FOR THE REPETITIONS DEFINED IN CYCLES. IF CYCLES'

BCD ' CONTAINS A NEGATIVE NUMBER THE MODE WILL RUN INDEFINITELY.'

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22356 63316525
22357 12456444
22360 22255112
22361 63302512
22362 44462425
22363 12663143
22364 43125164
22365 45123145
22366 24252631
22367 45316325
22370 43703312
22371 52633025
22372 12512124
22373 12215125
22374 21126225
22375 43252363
22376 25241266
22377 31434312
22400 22251242
22401 25702524
22402 12663163
22403 30126730
22404 25126225
22405 43252363
22406 25241224
22407 21632112
22410 22252646
22411 51251212
22412 52633025
22413 12444624
22414 25122346
22415 45635146
22416 43123162
22417 12314563
22420 25514751
22421 25632524

BCD THE RAD AREA SELECTED WILL BE KEYED WITH THE SELECTED DATA BEFORE!

BCD THE MODE CONTROL IS INTERPRETED. SEQUENTIAL DATA CONTAINS THE !

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22422 33121262
22423 25506425
22424 45633121
22425 43122421
22426 63211223
22427 46456321
22430 31456212
22431 63302512
22432 52512124
22433 12644531
22434 63127467
22435 34731263
22436 30251251
22437 21241221
22440 24245125
22441 62621274
22442 70707070
22443 34731221
22444 45241263
22445 30251262
22446 25236346
22447 51126646
22450 51241274
22451 71713412

BCD RAD UNIT (X), THE RAD ADDRESS (YYYY), AND THE SECTOR WORD (ZZ)!

22562 63253312
22563 63704725
22564 12402665
22565 12264651
22566 12652151
22567 31212243
22570 25623712
22571 52323145
22572 12266445
22573 23010112
22574 47215163
22575 31214312
22576 22434623
22577 42126351
22600 21456226
22601 25516212
22602 23214512
22603 22251262
22604 25631266
22605 30312330
22606 12215125
22607 12432562
22610 62126330
22611 21451246
22612 45251262
22613 25236346
22614 51331212
22615 52637047
22616 25122612
22617 01016373
22620 12766512
22621 26465112
22622 65215131
22623 21224325
22624 62122346
22625 45232551

FAM11 BCD 1 IN FUNC11 PARTIAL BLOCK TRANSFERS CAN BE SET WHICH ARE LESS THAN ONE SECTOR.1

BCD 1 TYPE F 11T, FV FOR VARIABLES CONCERNING THE TRANSFERS, INHIBIT 1

22626 45314527
22627 12633025
22630 12635121
22631 45622625
22632 51623312
22633 12314430
22634 31223163
22635 12121212
22636 52314523
22637 51254425
22640 45631263
22641 25625362
22642 12464512
22643 22214524
22644 12712551
22645 46371212
22646 52512124
22647 12212451
22650 62126624
22651 12234664
22652 45631212
22653 47216363
22654 25514552
22655 37121212

BCD 1 INCREMENT TESTS ON BAND ZERO.1

FVM11 BCD 1 RAD ADRS WD COUNT PATTERN 11

*
* ERROR MESSAGES
*

22656	52310171		
22657	73310271		
22660	40021122		
22661	73010522		
22662	73021724		
22663	12317142		
22664	40010522		
22665	12317141		
22666	40020022		
22667	12317123		
22670	20626340		
22671	01052212		
22672	25312540		
22673	02062437		
22674	52715125	*1003A BCD	' ZREG=25B,22B,24C,16B \$KRX=22E''
22675	27400205		
22676	22730202		
22677	22730204		
22700	23730110		
22701	22126242		
22702	51674002		
22703	02253712		
22704	52624251	*1004A BCD	' SKRZ=22E,28F C13=27E IZ=16B IZC+SI=15B IZMC=26C ZCD=28B ZC=9B,10B,11B,28''
22705	71400202		
22706	25730210		
22707	26122301		
22710	03400207		
22711	25123171		
22712	40010622		
22713	12317123		
22714	20626340		
22715	01052212		

22716	31714423		
22717	40020623		
22720	12712324		
22721	40021022		
22722	12712340		
22723	11227301		
22724	00227301		
22725	01227301		
22726	02223712		
22727	52230203	*1005A BCD	' C23=32E ZA14=9B IZP=16B''
22730	40030225		
22731	12712101		
22732	04401122		
22733	12317147		
22734	40010622		
22735	37121212		
22736	52230202	*1006A BCD	' C22=32E ZA13=9B IZP=16B''
22737	40030225		
22740	12712101		
22741	03401122		
22742	12317147		
22743	40010622		
22744	37121212		
22745	52230201	*1007A BCD	' C21=32E ZA12=8B IZP=16B''
22746	40030225		
22747	12712101		
22750	02401022		
22751	12317147		
22752	40010622		
22753	37121212		
22754	52230200	*1008A BCD	' C20=32E ZA11=8B IZP=16B''
22755	40030225		
22756	12712101		
22757	01401022		
22760	12317147		
22761	40010622		

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22762	37121212		
22763	52230111	M1009A BCD	' C19=28E ZA10=8B IZP=16B''
22764	40030225		
22765	12712101		
22766	00401022		
22767	12317147		
22770	40010622		
22771	37121212		
22772	52230110	M1010A BCD	' C18=28E ZA09=7B IZP=16B''
22773	40021025		
22774	12712100		
22775	11400722		
22776	12317147		
22777	40010622		
23000	37121712		
23001	52230107	M1011A BCD	' C17=28E ZA08=7B IZP=16B''
23002	40021025		
23003	12712100		
23004	10400722		
23005	12317147		
23006	40010622		
23007	37121212		
23010	52230106	M1012A BCD	' C16=28E ZA07=7B IZP=16B''
23011	40021025		
23012	12712100		
23013	07400722		
23014	12317147		
23015	40010622		
23016	37121212		
23017	52230105	M1013A BCD	' C15=31E ZA06=6B IZP=16B''
23020	40030125		
23021	12712100		
23022	06400622		
23023	12317147		
23024	40010622		
23025	37121212		

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23026	52230104	M1014A BCD	' C14=31E ZA05=6B IZP=16B''
23027	40030125		
23030	12712100		
23031	05400622		
23032	12317147		
23033	40010622		
23034	37121212		
23035	52230103	M1015A BCD	' C13=27E ZA04=6B IZP=16B''
23036	40020725		
23037	12712100		
23040	04400622		
23041	12317147		
23042	40010622		
23043	37121212		
23044	52230102	M1016A BCD	' C12=31I ZA03=5B ZR3=20C,18D''
23045	40030131		
23046	12712100		
23047	03400522		
23050	12715103		
23051	40020023		
23052	73011024		
23053	37121212		
23054	52230101	M1017A BCD	' C11=32E ZA02=5B ZR2=19C,18D''
23055	40030225		
23056	12712100		
23057	02400522		
23060	12715102		
23061	40011123		
23062	73011024		
23063	37121212		
23064	52230100	M1018A BCD	' C10=32E ZA01=5B ZR1=17C,18D''
23065	40030225		
23066	12712100		
23067	01400522		
23070	12715101		
23071	40010723		

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23072	73011024		
23073	37121212		
23074	52230110	M1019A BCD	' C18=28E ZAO=4B ZRO=17C IZE=17B,24B''
23075	40021025		
23076	12712100		
23077	40042212		
23100	71510040		
23101	01072312		
23102	31712540		
23103	01072273		
23104	02042237		
23105	52230107	M1020A BCD	' C17=28E ZA00=4B ZK00=18D IZE=17B,24B''
23106	40021025		
23107	12712100		
23110	00400422		
23111	12715146		
23112	46400110		
23113	24123171		
23114	25400107		
23115	22730204		
23116	22371212		
23117	52230011	M1023A BCD	' C09=32E ZC14=9B IZP=16B''
23120	40030225		
23121	12712301		
23122	04401122		
23123	12317147		
23124	40010422		
23125	37121212		
23126	52230010	M1024A BCD	' C08=31E ZC13=10B IZP=16B''
23127	40030125		
23130	12712301		
23131	03400100		
23132	22123171		
23133	47400106		
23134	22371212		
23135	52230007	M1025A BCD	' C07=31E ZC12=10B IZP=16B''

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23136	40030125		
23137	12712301		
23140	02400100		
23141	22123171		
23142	47400106		
23143	22371212		
23144	52230006	M1026A BCD	' C06=31E ZC11=10B IZP=16B''
23145	40030125		
23146	12712301		
23147	01400100		
23150	22123171		
23151	47400106		
23152	22371212		
23153	52230005	M1027A BCD	' C05=31E ZC10=11B IZP=16B''
23154	40030125		
23155	12712301		
23156	00400101		
23157	22123171		
23160	47400106		
23161	22371212		
23162	52230004	M1028A BCD	' C04=31E ZC09=11B IZP=16B''
23163	40030125		
23164	12712300		
23165	11400101		
23166	22123171		
23167	47400106		
23170	22371212		
23171	52230003	M1029A BCD	' C03=31E ZC08=11B IZP=16B''
23172	40030125		
23173	12712300		
23174	10400101		
23175	22123171		
23176	47400106		
23177	22371212		
23200	52230002	M1030A BCD	' C02=31E ZC07=12B IZP=16B''
23201	40030125		

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23202	12712300		
23203	07400102		
23204	22123171		
23205	47400106		
23206	22371212		
23207	52230001	M1031A BCD	' C01=31E ZC06=128 IZP=168''
23210	40030125		
23211	12712300		
23212	06400102		
23213	22123171		
23214	47400106		
23215	22371212		
23216	52230000	M1032A BCD	' C00=31E ZC05=128 IZP=168''
23217	40030125		
23220	12712300		
23221	05400102		
23222	22123171		
23223	47400106		
23224	22371212		
23225	52230203	M1033A BCD	' C23=32E ZC4=138 IZE=17B,24B''
23226	40030225		
23227	12712304		
23230	40010322		
23231	12317125		
23232	40010722		
23233	73020422		
23234	37121212		
23235	52230202	M1034A BCD	' C22=32E ZC3=138 IZE=17B,24B''
23236	40030225		
23237	12712303		
23240	40010322		
23241	12317125		
23242	40010722		
23243	73020422		
23244	37121212		
23245	52230201	M1035A BCD	' C21=32E ZC2=138 IZE=17B,24B''

RADE12 TAP=3.0 01/17 06111 PAGE 370

23246	40030225		
23247	12712302		
23250	40010322		
23251	12317125		
23252	40010722		
23253	73020422		
23254	37121212		
23255	52230200	M1036A BCD	' C20=32E ZC1=148 IZE=17B,24B''
23256	40030225		
23257	12712301		
23260	40010422		
23261	12317125		
23262	40010722		
23263	73020422		
23264	37121212		
23265	52230111	M1037A BCD	' C19=32E ZC0=148 IZE=17B,24B''
23266	40030225		
23267	12712300		
23270	40010422		
23271	12317125		
23272	40010722		
23273	73020422		
23274	37121212		
23275	52712551	M1038A BCD	' ZERO ERROR ZMP=19E,20E IZM=28D,27D''
23276	46122551		
23277	51465112		
23300	71444740		
23301	01112573		
23302	02002512		
23303	31714440		
23304	02102473		
23305	02072437		
23306	52714447	M1039A BCD	' ZMP3=20E ZMR=27D''
23307	03400200		
23310	25127144		
23311	51400207		

RADE12 TAP=3.0 01/17 06111 PAGE 371

23312	24371212		
23313	52714447	M1040A BCD	' ZMP2=20E ZMR=27D''
23314	02400200		
23315	25127144		
23316	51400207		
23317	24371212		
23320	52714447	M1041A BCD	' ZMP1=20E ZMR=27D''
23321	01400200		
23322	25127144		
23323	51400207		
23324	24371212		
23325	52714447	M1042A BCD	' ZMP0=19E ZMR=27D''
23326	00400111		
23327	25127144		
23330	51400207		
23331	24371212		
23332	52714447	M1043A BCD	' ZMP00=19E ZMR=27D''
23333	00004001		
23334	11251271		
23335	44514002		
23336	07242712		
23337	52011125	M1044A BCD	' 19E24,P30''
23340	12047347		
23341	03003712		
23342	52444412	M2001A BCD	' NB RAD CONNECTED BR!!
23343	51212412		
23344	23444545		
23345	15236325		
23346	24124451		
23347	15121212		
23350	52476126	BCD	' PUF=39C PWR=39B,40C S10=29A,31D,37A C13=33B C14=34B X03=C37''
23351	40031123		
23352	12476451		
23353	40031122		
23354	73040223		
23355	12623146		

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23356	40031121		
23357	73030124		
23360	73030721		
23361	12230103		
23362	40030222		
23363	12230104		
23364	40030422		
23365	12670003		
23366	40230307		
23367	37121212		
23370	52671003	M2001B BCD	' X03=37C DMA=33D JX83=D37 00F=38B BUC=33B''
23371	40030723		
23372	12244421		
23373	40030324		
23374	12416746		
23375	03402403		
23376	07120000		
23377	26400310		
23400	22122264		
23401	23400203		
23402	22371212		
23403	52240040	M2004B BCD	' D0=23C,28A G0=35C 664=28B,30B 1DN=32D,31D''
23404	02032373		
23405	02102112		
23406	27034003		
23407	05231227		
23410	62244002		
23411	10227303		
23412	00221231		
23413	24454003		
23414	02247303		
23415	01243712	M2004A BCD	' SEL UNIT D06=A03,A04''
23416	52622443		
23417	12644531		
23420	63122400		
23421	04402100		

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23422	03732100		
23423	04371212		
23424	52622543	M2005A BCD	' SEL UNIT D05=A03,A04''
23425	12644531		
23426	63122400		
23427	05402100		
23430	03732100		
23431	04371212		
23432	52622543	M2006A BCD	' SEL UNIT D04=A03,A04''
23433	12644531		
23434	63122400		
23435	04402100		
23436	03732100		
23437	04371212		
23440	52622543	M2007A BCD	' SEL UNIT D03=A02,A04''
23441	12644531		
23442	63122400		
23443	03402100		
23444	02732100		
23445	04371212		
23446	52622543	M2008A BCD	' SEL UNIT D02=A02,A04''
23447	12644531		
23450	63122400		
23451	02402100		
23452	02732100		
23453	04371212		
23454	52622543	M2009A BCD	' SEL UNIT D01=A02,A04''
23455	12644531		
23456	63122400		
23457	01402100		
23460	02732100		
23461	04371212		
23462	52622543	M2013A BCD	' SEL UNIT D06,D04=A03,A04 D03,D01=A02,A04''
23463	12644531		
23464	63122400		
23465	06732400		

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23466	04402100		
23467	03732100		
23470	04122400		
23471	03732400		
23472	01402100		
23473	02732100		
23474	04523712		
23475	52122221	M2013B BCD	' BAD WRD 8/8 88J TEST 8VRFLC ERRORS 11
23476	24126651		
23477	24121212		
23500	12626122		
23501	12121212		
23502	46224112		
23503	63256263		
23504	12466851		
23505	26434612		
23506	12122551		
23507	51465162		
23510	52371212		
23511	52454612	M2013C BCD	' NO SECTOR ZERO IDX=A10,B03,B02 DO=A03,A02,A04''
23512	62252363		
23513	46511271		
23514	25514612		
23515	31246740		
23516	21010073		
23517	22000373		
23520	22000212		
23521	24004021		
23522	00037321		
23523	00027321		
23524	00043712		
23525	12662425	MS0036 BCD	' WDE=31A WD1=27B,C48,B41''
23526	40030121		
23527	12662401		
23530	40020722		
23531	73230402		

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23532	73220401			
23533	37121212			
23534	12662425	MSG037	BCD	' WDE=31A WD2=27B,C42,B42!'
23535	40030121			
23536	12662402			
23537	40020722			
23540	73230402			
23541	73220402			
23542	37121212			
23543	12662425	MSG038	BCD	' WDE=31A WD3=27B,C42,B43!'
23544	40030121			
23545	12662403			
23546	40020722			
23547	73230402			
23550	73220403			
23551	37121212			
23552	12662425	MSG039	BCD	' WDE=31A WD4=27B,C42,B42!'
23553	40030121			
23554	12662404			
23555	40020722			
23556	73230402			
23557	73220402			
23560	37121212			
23561	12662001	MSG020	BCD	' WC1=04B!'
23562	40000422			
23563	12661101	MSG021	BCD	' W11=05B!'
23564	40000522			
23565	12662001	MSG022	BCD	' W21=06B!'
23566	40000422			
23567	12661301	MSG023	BCD	' W31=07B!'
23570	40000722			
23571	12662003	MSG024	BCD	' W03=08B!'
23572	40001022			
23573	12660103	MSG025	BCD	' W13=09B!'
23574	40001122			
23575	12660203	MSG026	BCD	' W23=10B!'

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23576	40010022			
23577	12660303	MSG027	BCD	' W33=11B!'
23600	40010122			
23601	12660005	MSG028	BCD	' W05=14A!'
23602	40010421			
23603	12660105	MSG029	BCD	' W15=15A!'
23604	40010521			
23605	12660205	MSG030	BCD	' W25=16A!'
23606	40010421			
23607	12660305	MSG031	BCD	' W35=17A!'
23610	40010721			
23611	12660007	MSG032	BCD	' W07=18A!'
23612	40011021			
23613	12660107	MSG033	BCD	' W17=19A!'
23614	40011121			
23615	12660207	MSG034	BCD	' W27=22A!'
23616	40020221			
23617	12660307	MSG035	BCD	' W37=25A!'
23620	40020421			
23621	52121262	MSG00A	BCD	' SIDE!'
23622	31242512			
23623	00000004	SIDE	BCD	'0004 TB=!
23624	12632240			
23625	00020101	TB	BCD	'0211 WD=!
23626	12302440			
23627	00010100	WD	BCD	'0110!'
23630	37121212			
23631	52512421	MSG01A	BCD	' RDA=22B RCL=21B RCC=20A,21A!'
23632	40020222			
23633	12512343			
23634	40020122			
23635	12512323			
23636	40020221			
23637	73020121			
23640	37121212			
23641	52512421	MSG01B	BCD	' RDA=25B RCL=24B RCC=23A,24A!'

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23642	40020322		
23643	12512343		
23644	40020422		
23645	12512323		
23646	40020321		
23647	73020421		
23650	37121212		
23651	52512421	MSG01C BCD	' RDA=285 RCL=275 RCC=26A,27A''
23652	40021022		
23653	12512343		
23654	40020722		
23655	12512323		
23656	40020621		
23657	73020721		
23660	37121212		
23661	52512421	MSG01D BCD	' RDA=31B RCL=30B RCC=28A,29A''
23662	40030122		
23663	12512343		
23664	40030022		
23665	12512323		
23666	40021021		
23667	73021121		
23670	37121212		
23671	52702124	MSG05A BCD	' YADR=12B''
23672	51400102		
23673	22371212		
23674	52702124	MSG05B BCD	' YADR=13B''
23675	51400103		
23676	22371212		
23677	52702124	MSG05C BCD	' YADR=14B''
23700	51400104		
23701	22371212		
23702	52702124	MSG05D BCD	' YADR=15B''
23703	51400105		
23704	22371212		
23705	52702124	MSG05E BCD	' YADR=16B''

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23706	51400106		
23707	22371212		
23710	52702124	MSG05F BCD	' YADR=17B''
23711	51400107		
23712	22371212		
23713	52702124	MSG05G BCD	' YADR=18B''
23714	51400110		
23715	22371212		
23716	52702124	MSG05H BCD	' YADR=19B''
23717	51400111		
23720	22371212		
23721	52624744	M10598 BCD	' SPURIOUS INTRUPT DIVERT MASK S/B OVRFLD ERRORS ''
23722	51314664		
23723	62123145		
23724	63516447		
23725	63521224		
23726	31652551		
23727	63121212		
23730	12442162		
23731	42121212		
23732	12121262		
23733	61221212		
23734	12124665		
23735	51264346		
23736	12122551		
23737	51465162		
23740	52371212		
23741	52253125	M2079A BCD	' EIE=27D IIZ=21B,15B ''
23742	40020724		
23743	12310171		
23744	40020122		
23745	73010522		
23746	12121212		
23747	52103145	M2079B BCD	' B[NTA=828,829,830''
23750	63214022		
23751	02107322		

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14062	12523712		
14063	52252151	ER1ERR BCD	' EARLY INTRUPT NOT PROCESSED !!
14064	43701231		
14065	45635144		
14066	47631245		
14067	46631247		
14070	51462925		
14071	62622524		
14072	52371212		
14073	52512124	SKERR BCD	' RAD NOT READY IN 170 MS.!!
14074	12454663		
14075	12512521		
14076	24701231		
14077	45120107		
14100	00124462		
14101	33371212		
14102	52233721	ERCHAN BCD	' CHANNEL RATE ERROR!!
14103	45452943		
14104	12512163		
14105	25122551		
14106	51465137		
14107	52263143	FILPRO BCD	' FILE PROTECT ON BAND NOTHING OBJ TEST !!
14110	25124751		
14111	46632523		
14112	63124445		
14113	52121222		
14114	21452412		
14115	12124546		
14116	63303145		
14117	27121246		
14120	22411263		
14121	25626352		
14122	37121212		
14123	52454412	TIMERR BCD	' NO INTRUPT IN 170 MS.!!
14124	31456351		
14125	64476312		

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14126	31451201		
14127	07001244		
14130	62333712		
14131	52512124	RADER BCD	' RAD ERROR, SKS MODE!!
14132	12255151		
14133	46517312		
14134	62426212		
14135	44462425		
14136	37121212		
14137	52512521	READP BCD	' READ PARITY ERROR BUFFER RAD ADRS OBJ TEST OVRFLD IGNORE !!
14140	24124721		
14141	51316370		
14142	12255151		
14143	46515212		
14144	22642626		
14145	25511212		
14146	51212412		
14147	21245162		
14150	12462241		
14151	12632562		
14152	63124665		
14153	51264346		
14154	12312745		
14155	46512552		
14156	37121212		
14157	52665131	RITEP BCD	' WRITE PARITY ERROR BUFFER RAD ADRS OBJ TEST OVRFLD IGNORE !!
14160	63251247		
14161	21513163		
14162	70122551		
14163	51465152		
14164	12226426		
14165	26255112		
14166	12512124		
14167	12212451		
14170	62124622		
14171	41126325		

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14172 62691244
14173 65512443
14174 46121231
14175 27454451
14176 25523712
14177 52644531 RADPBT BCD | UNIT READY BUT PBT ERROR DURING PROCESS!!
14200 63125125
14201 21247012
14202 22444312
14203 47446312
14204 25515144
14205 51122464
14206 51314527
14207 12475146
14210 23256242
14211 37121212
14212 52371212 ENDIT BCD | | | END MESSAGE CONTROL
14213 37121212 ADIT BCD | | |
14214 52212451 ADRERR BCD | ADRS OVERFLD ADWS NOTHING OBJ TEST !!
14215 62124445
14216 25512443
14217 46521212
14220 21245162
14221 12121244
14222 46522031
14223 46271212
14224 46224112
14225 63256263
14226 52371212
14227 52624764 XTRAPT BCD | SPURIOUS PBT ERROR!!
14230 51314464
14231 62124746
14232 63122551
14233 51445137
14234 52274446 TITLE BCD | 0000 WRD BAD WORD RAD STT RADRS/WD CDR ADRS MODE BUF/ERRS BLKSIZE !!
14235 24126451

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14236 24122221
14237 24126446
14240 51241251
14241 21241262
14242 63631212
14243 51212451
14244 62614424
14245 12234451
14246 12212451
14247 62121212
14250 44462428
14251 12121222
14252 64266125
14253 51516212
14254 12224342
14255 62317125
14256 52371212
14257 52454612 NBDATA BCD | NO DATA SELECTED!!
14260 24216321
14261 12622543
14262 25224225
14263 24371212
14264 52454612 NBRAD BCD | NO RAD ADRS SELECTED!!
14265 51212412
14266 21245162
14267 12622543
14270 25224225
14271 24371212
14272 52224463 NBBUFR BCD | BOTH BUFFERS LOCKED OUT!!
14273 30122264
14274 26262551
14275 62124346
14276 23422424
14277 12464463
14300 37121212
14301 52454612 NCCORE BCD | NO CORE SPECIFIED!!

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14302	23465125		
14303	12624725		
14304	23312631		
14305	25243712		
14306	52263167	FIXBIG BCD	' FIXED BLOCK, IN SECTORS, TOO BIG FOR CORE SIZE!!
14307	25241222		
14310	43462342		
14311	73123145		
14312	12622523		
14313	63465162		
14314	73126346		
14315	46122231		
14316	27122646		
14317	51122346		
14320	51251262		
14321	31712437		
14322	52263167	FIXZRO BCD	' FIXBLK CAN NOT BE ZERO!!
14323	22434212		
14324	23214512		
14325	45466312		
14326	22251271		
14327	25514637		
14330	52512124	RADBIG BCD	' RADW! TOO BIG FOR RAD SIZE!!
14331	30311263		
14332	46461222		
14333	31271226		
14334	46511251		
14335	21241262		
14336	31712437		
14337	52244664	SYNC BCD	' DOUBLE ECH OR MISSING ECH, HALF WORD CHECKS!!
14340	22432512		
14341	25236612		
14342	46511244		
14343	31626231		
14344	45271225		
14345	23667312		

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14346	30214326		
14347	12664651		
14350	24122330		
14351	25234262		
14352	37121212		
14353	52234651	CORERR BCD	' CORLS LESS THAN 24000 OCTAL!!
14354	43461243		
14355	25626212		
14356	63302145		
14357	12020400		
14360	00001246		
14361	23632143		
14362	37121212		
14363	52512124	ADALRT BCD	' RAD ADDRESS CONFLICT !!
14364	12212424		
14365	51256262		
14366	12234445		
14367	26433123		
14370	63523712		
14371	52252151	BADBIT BCD	' EARLY BIT CAN NOT BE SET WITH CONSTANT CORE ADRS.!!
14372	43701222		
14373	31631223		
14374	21451245		
14375	46631222		
14376	25126225		
14377	63126631		
14400	63301223		
14401	46456263		
14402	21456412		
14403	23465125		
14404	12212451		
14405	62333712		
14406	52662412	HEDER BCD	' NO ERRS BUF ADR RAD ADRS OVRFLD IGNRE !!
14407	25515162		
14410	12122264		
14411	26122124		

24412 51121251
 24413 21241221
 24414 24516212
 24415 12466651
 24416 26434412
 24417 12123127
 24420 45465125
 24421 52371212

*
 *
 * CONSTANTS
 *

24422	0 00 00000	TIMOUT ZRB		
24423	0 06 14200	FORMA EOMM	014200	RESTORING EOM
24424	0 06 14220	FORMB EOMM	014220	FORCING EOM
24425	11103300	MODES DATA	11103300	RANDOM CODE WORD
24426	00027000	CORLO DATA	27000	
24427	00137777	CORHI DATA	137777	
24430	0 00 00000	RADLO ZRB		
24431	00077777	RADHI DATA	77777	
24432	12345670	PATERN DATA	12345670	
24433	77777777	FIXBLK DATA	*1	
24434	00002000	CYCLE DATA	200	
24435	0 00 00000	RADRS ZRB		
24436	00007000	MDK94N DATA	40	40 WORDS PER SECTOR
24437	0 00 00000	PADERN ZRB		
24440	12345670	PATTRN DATA	12345670	
24441	0 00 00000	GDWRD ZRB		
24442	0 00 00000	RADWRD ZRB		
24443	0 00 00000	RADSTY ZRB		
24444	0 00 00000	ADDRS ZRB		
24445	0 00 00000	KBRADR ZRB		
24446	0 00 00000	MSOE ZRB		
24447	0 00 00000	ERRCNT ZRB		
24450	0 00 00000	BLKSIZ ZRB		
24451	0 00 00000	BUFSAV ZRB		
24452	0 00 00000	BUF1BL ZRB		
24453	0 00 00000	BUF2BL ZRB		
24454	0 00 00000	BLKMAX ZRB		
24455	0 00 00000	BLKMSK ZRB		
24456	0 00 00000	BUF1KA ZRB		
24457	0 00 00000	BUF2KA ZRB		
24460	0 00 00000	BUF1CA ZRB		

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24461	0	00	00000	BUF2CA	ZR0	
24462	0	00	00000	BUF1RA	ZR0	
24463	0	00	00000	BUF2RA	ZR0	
24464	0	00	00000	BUF8KP	ZR0	
24465	7	7777777		CHAIN	DATA	=1
24466	0	00	00000	CHAINC	ZR0	
24467	0	00	00000	CBRINK	ZR0	
24470	0	00	00000	CBRMAX	ZR0	
24471	0	00	00000	CBUNT	ZR0	
24472	0	00	00000	CBUNT1	ZR0	
24473	0	00	00000	CYCLE1	ZR0	
24474	0	00	00000	DATBL	ZR0	
24475	0	00	00000	DATSAV	ZR0	
24476	0	43	00460	DPLUG	BRM	DIVERT
24477	0	06	17200	EBMBIT	EBMM	017200
24500	0	00	00000	HEADSW	ZR0	
24501	0	00	00000	HOLD	ZR0	
24502	0	00	00000	HOLD2	ZR0	
24503	0	00	00000	HOLD3	ZR0	
24504	0	00	00000	HOLD3B	ZR0	
24505	0	00	00000	JMPTY	ZR0	
24506	0	00	00000	KEYFIX	ZR0	
24507	0	00	00000	KEYSH	ZR0	
24510	0	00	00000	KEYADR	ZR0	
24511	0	00	00000	KEYSAV	ZR0	
24512	0	00	00000	LAST	DATA	26777
24513	0	00	00000	POTWRD	ZR0	
24514	0	00	00000	PRNTED	ZR0	
24515	0	00	00000	LODABL	ZR0	
24516	0	00	00000	PINWRD	ZR0	
24517	0	00	00000	RADMAX	ZR0	
24520	0	00	00000	RADMSK	ZR0	
24521	0	00	00000	RADINK	ZR0	
24522	0	00	00000	RADTOP	ZR0	
24523	0	00	00000	RAN4X	ZR0	
24524	0	06	02226	READA	EBMM	02226

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24525	0	00	00000	RELBL	ZR0	
24526	0	00	00000	RELCA	ZR0	
24527	0	00	00010	RFIELD	BSS	010
24537	0	00	00000	RHIADR	ZR0	
24540	0	00	00200	RL0	BSS	200
24740	0	00	00000	RLBADR	ZR0	
24741	0	00	00000	ERRSVA	ZR0	
24742	0	00	00000	SAVA4I	ZR0	
24743	0	00	00000	SAVADR	ZR0	
24744	0	00	00000	ERRBVB	ZR0	
24745	0	00	00000	SAVB4I	ZR0	
24746	0	00	00000	SAVBK	ZR0	
24747	0	00	00000	ERRBVX	ZR0	
24750	0	00	00000	ERRIR	ZR0	
24751	0	00	04024540	RCODE1	DATA	4000000*RL0
24752	0	00	04024640	RCODE2	DATA	4000100*RL0
24753	0	00	00000	PLAG1	ZR0	
24754	0	00	00000	CHANWD	ZR0	
24755	0	00	00000	TSTWRD	ZR0	
24756	0	00	00000	INCR1	ZR0	
24757	0	00	00000	INCRSH	ZR0	
24760	0	00	00000	SAVX4I	ZR0	
24761	0	00	00000	SAVWRD	ZR0	
24762	0	00	00000	SEKSTY	ZR0	
24763	0	00	00000	SKP940	ZR0	
24764	0	00	00000	SVSEED	ZR0	
24765	0	00	00000	STAMLD	ZR0	
24766	0	00	17247	TCE0M	ZR0	TCE0M1
24767	0	00	17304	TCE0M	ZR0	TCE0M2
24770	0	00	17254	TRE0M	ZR0	TRE0M1
24771	0	00	17311	TRE0M	ZR0	TRE0M2
24772	0	00	00000	TEMP1	ZR0	
24773	0	06	02266	WRITE	EBMM	02266
24774	6	35	00000	WRDSTA	STA	0,6
24775	6	70	00000	WRDSKH	SKH	0,6
24776	0	00	00000	WBAVE	ZR0	

END

LITERALS USED:
24777 00000000
25000 77765115
25001 00037777
25002 00000311
25003 00000064
25004 00000001
25005 00000002
25006 00000004
25007 00000010
25010 00000020
25011 00000040
25012 00000100
25013 00000200
25014 00000400
25015 00001000
25016 00002000
25017 00004000
25020 00010000
25021 00020000
25022 00040000
25023 00100000
25024 00200000
25025 00400000
25026 01000000
25027 02000000
25030 04000000
25031 10000000
25032 20000000
25033 40000000
25034 00000003
25035 00000007
25036 00000017
25037 00000037
25040 00000077

25041 00000177
25042 00000377
25043 00000777
25044 00001777
25045 00003777
25046 00007777
25047 00017777
25050 00004001
25051 00010002
25052 00020004
25053 00040010
25054 00100020
25055 00040377
25056 00174000
25057 04024540
25060 00000005
25061 00000006
25062 00000011
25063 00000012
25064 00000013
25065 00000014
25066 00000015
25067 00000016
25070 00000021
25071 00000022
25072 00000023
25073 00000024
25074 00000025
25075 00000026
25076 00000027
25077 00000030
25100 00000031
25101 00000032
25102 00000033
25103 00000034
25104 00000035

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25105 00000036
25106 00000041
25107 00000042
25110 00000043
25111 00000044
25112 00000045
25113 00000046
25114 00000047
25115 00000050
25116 00000051
25117 00000052
25120 00000053
25121 00000054
25122 00000055
25123 00000056
25124 00000057
25125 00000060
25126 00000061
25127 00000062
25130 00000063
25131 00000065
25132 00000066
25133 00000067
25134 00000070
25135 00000071
25136 00000072
25137 00000073
25140 00000074
25141 00000075
25142 00000076
25143 77777777
25144 03000000
25145 70007000
25146 00000300
25147 00023631
25150 00030001

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25151 00020005
25152 00010011
25153 00040103
25154 07000700
25155 00023641
25156 00030002
25157 00020006
25160 00010100
25161 00040104
25162 00700070
25163 00023651
25164 00020003
25165 00010007
25166 00040101
25167 00030105
25170 00070007
25171 00023661
25172 00010010
25173 00040102
25174 00030106
25175 00004100
25176 00004200
25177 00004300
25200 70000000
25201 07000000
25202 00010200
25203 00010300
25204 00030107
25205 00020201
25206 00010205
25207 00040201
25210 00030110
25211 00020202
25212 00010206
25213 00040300
25214 00010111

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25215 00010203
25216 00040207
25217 00030301
25220 00020200
25221 00010204
25222 00040210
25223 00030302
25224 00000237
25225 00000273
25226 00000161
25227 00014000
25230 00014100
25231 00014200
25232 00014300
25233 77777774
25234 77777700
25235 27624726
25236 27624426
25237 77777712
25240 00024540
25241 42000000
25242 77777770
25243 00000110
25244 00000101
25245 11103300
25246 00057777
25247 00077777
25250 77773377
25251 00177777
25252 00137777
25253 01117333
25254 00157333
25255 01117447
25256 00157447
25257 04317333
25260 00057776

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25261 00003300
25262 77000077
25263 00475500
25264 00700000
25265 22066600
25266 00003000
25267 00075000
25270 77707777
25271 00030000
25272 00040000
25273 77757777
25274 00007000
25275 00016122
25276 00000700
25277 00016164
25300 00016245
25301 00016250
25302 53577045
25303 00004400
25304 00002200
25305 00001100
25306 00140000
25307 37774777
25310 06000000
25311 00500000
25312 67600000
25313 00600000
25314 00000313
25315 00117465
25316 77777771
25317 00117541
25320 77752014
25321 77740000
25322 77777772
25323 37777777
25324 00007700

25325 07777777
 25326 77770000
 25327 07777700
 25330 07770000
 25331 10024440

25332 CELLS USED BY PROGRAM

LOCAL SYMBOLS USED -

ADALRT	24363*	ADDRS	24444*	ADRERR	24214*
ALLDUN	20383*	AREG	410	BADBIT	24371*
BADPBT	24177*	BADWRD	24442*	BLKMSK	24458*
BLKMAX	24454*	BLKSIZ	24480*	BREG	N 411
BRITYP	13753*	BUF1RA	24462*	BUF1BL	24452*
BUF1CA	24460*	BUF1KA	24456*	BUF2RA	24463*
BUF2BL	24453*	BUF2CA	24441*	BUF2KA	24457*
BUFBV	24451*	BUFBKP	24464*	CHAIN	N 24466*
CHAIN1	17455*	CHAIN2	17527*	CHAINC	24466*
CHANWD	24754*	CHANE1	17703*	CHANER	17670*
CHEC12	17144*	CHEC13	17151*	CHEC21	17166*
CHEC22	17174*	CHEC71	17170*	CHEC72	17164*
CHECK	17107*	CHECK3	17231*	CHECK4	17177*
CHECK5	17232*	CHECK6	17202*	CHECK7	17156*
CHECK8	17205*	CHECK9	17210*	CLEAR	14447*
CLRCHN	7143*	COMMON	14431*	CORAD1	14331*
CORAD3	16357*	CORAD4	16371*	CORAD5	16401*
CORAD6	16352*	CORAD7	16421*	CORAD8	16355*
CORAD9	16366*	CORADA	16424*	CORADR	16315*
CORERR	24353*	CORH1	24427*	CORJNK	24467*
CORL8	24426*	CORMAX	24470*	CBUNT	N 24471*
COUNT1	24472*	CYCLE	24436*	CYCLE1	24473*

DATA	16722*	DATA10	16766*	DATA11	16771*
DATA12	16776*	DATA13	17003*	DATA14	N 16777*
DATA15	16773*	DATA16	17007*	DATA19	17000*
DATA9	16755*	DATABA	16768*	DATBL	N 24474*
DATSAV	N 24475*	DCHA1	17474*	DCHA2	17515*
DCHAS	17465*	DCHA4	17541*	DCHAIN	17477*
DECR11	15364*	DECR12	15404*	DIVERT	450
DENE	482	DPLUG	N 24476*	DSCBIZ	N 404
END	434	END1	5356*	ENDIT	24212*
ESMBIT	24477*	ESMMA	N 24423*	ESMMS	N 24424*
ERCHAN	24102*	ERIERR	24063*	ERRCNT	24447*
ERRIR	24750*	ERRR	460	ERRR8	N 414
ERRR01	20044*	ERRR02	17746*	ERRR04	20040*
ERRR06	20072*	ERRR08	17756*	ERRR09	17771*
ERRR0T	17721*	ERRR32	20055*	ERRR33	20050*
ERRR36	20111*	ERRR37	20120*	ERRR38	20133*
ERRR41	20066*	ERRR42	20061*	ERRR43	20115*
ERRR60	20104*	ERRRVA	24741*	ERRRVB	24744*
ERRSVX	24747*	ERRRST	16271*	F1001A	4022*
F1001B	4036*	F1001C	4040*	F1001D	4032*
F1002A	4056*	F1002B	4072*	F1002C	4074*
F1002D	4066*	F1003A	4107*	F1003B	4112*
F1021A	4716*	F1022A	4731*	F1023A	4744*
F1024A	4757*	F1025A	4772*	F1026A	5005*
F1027A	5020*	F1028A	5033*	F1029A	5046*
F1030A	5061*	F1033A	5074*	F1034A	5107*
F1035A	5122*	F1036A	5135*	F1037A	5150*
F1101A	20265*	F1101B	20267*	F1102A	20321*
F1103A	20336*	F1103B	20342*	F1103C	20346*
F1103D	20351*	F2001A	5517*	F2001B	5527*
F2077A	6753*	F2079A	7015*	F2079B	7025*
F2079C	7046*	FAM1	21030*	FAM10	21720*
FAM11	22571*	FAM12	20445*	FAM2	21160*
FAM3	21225*	FAM4	21266*	FAM5	21327*
FAM6	21366*	FAM7	21604*	FAM8	21636*
FAM9	21670*	FDONE	454	FILPR8	24107*

FIM1	21013+	FIM10	21705+	FIM11	22551+
FIM12	21026+	FIM2	21173+	FIM3	21211+
FIM4	21252+	FIM5	21313+	FIM6	21351+
FIM7	21567+	FIM8	21621+	FIM9	21653+
FIXR13	24306+	FIXBLK	24433+	FIXZRB	24322+
FLAG1	24753+	FPT1	20521+	FPT10	20607+
FPT11	20615+	FPT12	20420+	FPT2	20527+
FPT3	20535+	FPT4	20543+	FPT5	20551+
FPT6	20557+	FPT7	20545+	FPT8	20573+
FPT9	20601+	FRMKEY	16070+	FUN10A	15531+
FUN10B	15547+	FUNCTN	424	FUNC1	4003+
FUNC10	15510+	FUNC11	20154+	FUNC12	20354+
FUNC2	5464+	FUNC3	7161+	FUNC4	10370+
FUNC5	11577+	FUNC6	13006+	FUNC7	13367+
FUNC8	14005+	FUNC9	14523+	FVM1	21010+
FV10	22526+	FVM11	22646+	FVM12	20510+
FVM2	21155+	FVM3	21206+	FVM4	21247+
FVM5	21310+	FVM6	21564+	FVM7	21616+
FVM8	21650+	FVM9	21702+	FVT1	20526+
FVT2	20534+	FVT3	20542+	FVT4	20550+
FVT5	20556+	FVT6	20564+	FVT7	20572+
FVT8	20600+	FVT9	20606+	GDWRD	24441+
GENER1	16067+	GENER2	16054+	GENER3	16037+
GENER4	16064+	GETBLK	16567+	HD	23627+
HEADS1	24500+	HEDEF	24406+	HOLD	24501+
HOLD2	24502+	HOLD3	24503+	HOLD3B	24504+
I3CT4+	14421+	I31	243	I33	247
I6617+	14420+	I64	311	I65	313
IEXT	14465+	ILLEX	14463+	IMSG	14511+
INCR5	21757+	INCR1	24756+	INCR11	15354+
INCR12	15374+	INIT1	15621+	INIT10	15742+
INIT11	15745+	INIT2	15643+	INIT3	15631+
INIT4	15723+	INIT5	15704+	INIT6	15726+
INIT7	15731+	INIT8	15734+	INIT9	15737+
INKMNT	5441+	INKMNT1	5340+	INKMNT	5332+
INTR1	242	INTR33	246	INTR1E	17333+

INTR2	17350+	INTR21	17355+	INTR22	17365+
INTR2A	17371+	INTR25	17377+	INTR2C	17405+
INTR21	17334+	INTR22	17335+	INTR23	17336+
INTR24	17337+	INTR25	17340+	INTR26	17347+
ITABLE	14457+	IX1	243	IX2	247
JMPTYP	24505+	KEYADR	24510+	KEYEN1	16033+
KEYEND	14013+	KEYFIX	24506+	KEYRA1	16011+
KEYRAD	15776+	KEYRAD	15756+	KEYSW	24507+
KEYSAV	24511+	KORADR	24445+	LAST	24512+
LOGABL	24515+	*1001A	22656+	*1003A	22674+
*1004A	22704+	*1005A	22727+	*1006A	22736+
*1007A	22745+	*1008A	22754+	*1009A	22763+
*1010A	22772+	*1011A	23001+	*1012A	23010+
*1013A	23017+	*1014A	23026+	*1015A	23035+
*1016A	23044+	*1017A	23054+	*1018A	23064+
*1019A	23074+	*1020A	23105+	*1023A	23117+
*1024A	23126+	*1025A	23135+	*1026A	23144+
*1027A	23153+	*1028A	23162+	*1029A	23171+
*1030A	23200+	*1031A	23207+	*1032A	23216+
*1033A	23225+	*1034A	23235+	*1035A	23245+
*1036A	23255+	*1037A	23265+	*1038A	23275+
*1039A	23306+	*1040A	23313+	*1041A	23320+
*1042A	23325+	*1043A	23332+	*1044A	23337+
*1101A	24002+	*1059B	23721+	*M2001A	23342+
*M2001B	23370+	*M2004A	23416+	*M2004B	23403+
*M2005A	23424+	*M2006A	23432+	*M2007A	23440+
*M2008A	23446+	*M2009A	23454+	*M2013A	23462+
*M2013B	23475+	*M2013C	23511+	*M2077A	23772+
*M2078A	23776+	*M2079A	23741+	*M2079B	23747+
*M2079C	23754+	*M2079D	23762+	MAKER	20143+
MADES	24425+	*BDE	24446+	MS12	20400+
MS12A	20412+	*S12B	20416+	MSG01A	23631+
MSG01B	23641+	*MSG01C	23651+	MSG01D	23661+
MSG02C	23561+	*SG021	23563+	MSG022	23565+
MSG023	23567+	*SG024	23571+	MSG025	23573+
MSG026	23575+	*SG027	23577+	MSG028	23601+

MSG029	23603+	MSG030	23605+	MSG031	23607+
MSG032	23611+	MSG033	23613+	MSG034	23615+
MSG035	23617+	MSG036	23525+	MSG037	2353+
MSG038	23543+	MSG039	23552+	MSG03A	23671+
MSG05B	23674+	MSG05C	23677+	MSG05D	23702+
MSG05E	23705+	MSG05F	23710+	MSG05G	23713+
MSG05H	23716+	MSG06A	23621+	MSGPIN	24033+
NCIT	24213+	NBUFR	24272+	NOCORE	24301+
NSDATA	24257+	NBRAD	24264+	OBJECT	430
SVRFL8	N 413	PADERN	24437+	PATERN	24432+
PATRN	24440+	PINERR	24047+	PININ	7056+
PININ1	7063+	PININ2	7074+	PININ3	7076+
PININ4	7107+	PINSE1	7114+	PINSE2	7126+
PINSE3	7127+	PINSE4	7134+	PINSE5	7141+
PINSET	7111+	PINTS1	17652+	PINTST	17644+
PINWRD	24516+	PLACE	20415+	POP	14413+
PEPED	14476+	POTER1	17716+	POTERR	17710+
PBTWRD	24513+	PRNTEO	24514+	PROG11	N 16247+
PRGG12	N 14251+	PRGG4A	16206+	PROGE1	16102+
PRGGE2	14110+	PRGGE3	16123+	PROGE4	16132+
PRGGE5	14146+	PRGGE6	16165+	PROGE7	16173+
PRGGER	14215+	PRGGE9	16254+	PROGEN	16036+
RADAD1	14442+	RADAD2	16524+	RADAD3	16560+
RADAD4	14463+	RADAD5	16464+	RADAD9	16461+
RADADA	14473+	RADADC	16522+	RADADD	16514+
RADADF	14555+	RADADG	16535+	RADADH	16533+
RADADR	14427+	RADBIG	24330+	RADDR1	N 16652+
RADDR2	14644+	RADDR3	16635+	RADDR4	16642+
RADDRV	14614+	RADER	24131+	RADHI	24431+
RADINK	24521+	RADLE	24430+	RADMSK	24520+
RADMAX	24517+	RADBK	13766+	RADRS	24435+
RADSTT	24443+	RADSIZ	403	RADTI1	17551+
RADTIM	17550+	RADTOP	N 24522+	RADWH0	70000000
RAN4X	24523+	RANDOM	16603+	RCODE1	24751+
RCODE2	24752+	READ	15207+	READO	15212+
READ1	15220+	READ2	15250+	READ3	15246+

READ4	15262+	READ5	15306+	READ6	15310+
READ7	14316+	READ8	15330+	READ9	N 15334+
READA	24524+	READP	24137+	RELAB4	17034+
RELAB5	17067+	RELAB6	17075+	RELAB7	17057+
RELAB8	17054+	RELABL	17013+	RELBL	24525+
RELCA	24526+	REPORT	454	RESREG	17443+
RESTOR	17450+	RETURN	440	RFIELD	24527+
RHIADR	24537+	RITEP	24157+	RL1	415
RL2	416	RL4	N 417	RL9	24540+
RLBADR	24740+	SAVA4J	24742+	SAVADR	24743+
SAVB4J	24745+	SAVBLK	24746+	SAVWRD	24761+
SAVX4J	24760+	SEED	406	SEKSTY	24762+
SETPIN	7153+	SETU3A	16711+	SETU3B	16706+
SETUP	14655+	SETUP4	N 16674+	SETUP8	N 16702+
SETWRD	15337+	SIDE	23623+	SIN	N 402
SKP940	24763+	SKSERR	24073+	SPREAD	15202+
SPRINT	14502+	SPURI	14371+	SSIDE	15414+
STAHL0	24765+	STATS1	16305+	STATST	16300+
STATUS	401	SVSEED	24764+	SYNC	24337+
SYSIZE	405	TB	23625+	TCE0M	24766+
TCE0M1	17247+	TCE0M2	17304+	TEMP1	N 24772+
TIMERR	24123+	TIME	407	TIMOUT	24422+
TITLE	24234+	TRANS1	17236+	TRANS2	17273+
TRAN11	17252+	TRAN12	17242+	TRAN13	17272+
TRAN14	17281+	TRAN21	17307+	TRAN22	17277+
TRAN23	17330+	TRAN24	17306+	TRAN25	17317+
TRE0M	24770+	TRE0M1	17254+	TRE0M2	17311+
TSTWRD	24755+	UAM	20643+	UAM	N 400
UIN	24626+	UNIT	420	UPT	20513+
UVM	24623+	UVT	20520+	WAIT1	17564+
WAIT11	17566+	WAIT12	17570+	WAIT13	17573+
WAIT14	17576+	WAIT2	17603+	WAIT21	17605+
WAIT22	17607+	WAIT23	17612+	WAIT24	17615+
WAIT4	17622+	WAIT41	17625+	WAIT42	17627+
WAIT43	17632+	WAIT44	17635+	WAIT45	17642+
WAIT5	17341+	WOK6HN	24436+	WRDSTA	24774+

WRDSKY	24775*	WRITE	24773*	WRTPR1	17441*
WRTPR5	17426*	WRYT	15110*	WKYT1	15114*
WRYT10	15135*	WRYT2	15153*	WKYT3	15167*
WRYT4	15141*	WRYT5	15152*	WKYT6	15146*
WRYT7	15147*	WRYT8	15150*	WKYT9	15117*
WSAVE	24776*	XREG	412	XTRA1	7150*
XTRAPT	24227*	YMSG	15424*	YMSG7	15441*
YMSG8	15456*	YMSG9	15473*	ZER31	7263*
ZER32	7277*	ZER41	10472*	ZER42	10506*
ZER51	11701*	ZER52	11715*	ZER01	5627*
ZER52	5643*	ZRBBAD	24012*	INTX1	242
INTX2	246				