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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RADE12 TAP-3.0      01/17  06:11    PAGE 1

            00010           OCTAL
                     *
     0 01 00000     ONE     OPD     0100000,1
     0 02 00000     TWO     OPD     0200000,1
     0 03 00000     THREE   OPD     0300000,1
     0 04 00000     FOUR    OPD     0400000,1
     0 05 00000     FIVE    OPD     0500000,1
     0 06 00000     SIX     OPD     0600000,1
     0 07 00000     SEVEN   OPD     0700000,1
     0 10 00000     EIGHT   OPD     01000000,1
                     *
        00000400    UAW     EQU     400
        00000401    STATUS  EQU     401
        00000402    SIZ     EQU     402
        00000403    RADSIZ  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    OVRFLO  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    OBJECT  EQU     430
        00000434    END     EQU     434
        00000440    RETURN  EQU     440
        00000450    DIVERT  EQU     450
        00000452    DONE    EQU     452
        00000454    REPORT  EQU     454
        00000456    FDONE   EQU     456
```

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        00000460    ERROR   EQU     460
                     *
     0 33 00000     PINN    OPD     03300000,1
     0 13 00000     POTT    OPD     01300000,1
     0 02 20002     EIRR    OPD     00220002,2
     0 02 20004     DIRR    OPD     00220004,2
        00000311    I64     EQU     311
        00000313    I65     EQU     313
     0 46 20005     ABC     OPD     4620005,2        FORCE 920 BITS
     0 46 10012     BAC     OPD     4610012,2        FORCE 920 BITS
     0 46 00014     XAB     OPD     4600014,2        FORCE 920 BITS
     0 06 00000     EOMM    OPD     600000,1
     0 40 00000     SKSS    OPD     04000000,1
     0 40 14000     CATC    OPD     4014000,2
     0 02 00000     DSCC    OPD     200000,2
     0 02 14000     TOPC    OPD     214000,2
     0 40 21000     BRTC    OPD     4021000,2
     0 40 11000     CETC    OPD     4011000,2
     0 40 20010     BETC    OPD     4020010,2
     0 02 10000     ALCC    OPD     210000,2
     0 40 12000     CZTC    OPD     4012000,2
     0 02 12000     ASCC    OPD     212000,2
     0 02 02045     DEOM    OPD     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
        70000000    RADWHO  EQU     70000000
00000      04000            BSS     04000
                    RADE12  IDENT                    26-66 RAD ON E CHANNEL,940
```

```
                    *
                    *
                    *       FUNCTION 1 • DACC TEST
                    *
                    *
04000  0 43 00420          BRM     UNIT            UNIT LINK
04001  0 20 20513          NOP     UPT             UNIT PARAMETER TAPLES
04002  0 43 13753          BRM     BRITYP          SET INTERRUPT RETURN BRANCH, BRI OR BRU•
04003  0 43 13766  FUNC1   BRM     RAD9K           TEST FOR RAD COUNT
04004  0 43 00424          BRM     FUNCTN          FUNCTION LINK
04005  0 20 20521          NOP     FPT1            FUNCTION PARAMETER TABLES
```



```
                    *
                    *
                    * F19801 NO BIT 13 ESR OR 14 2•C
                    * BIT 12 SELECT ARY INTRUPTS
                    *
                    *
04006  0 43 00430          BRM     OBJECT
04007  0 43 00440          BRM     RETURN          TO INTRUPT LINK
04010  0 20 04022          NOP     F1001A
04011  0 06 00000          EOMM    0               CLEAR CHANNEL
04012  0 06•10000          EOMM•   010000          ALERT INTERLACE
04013  0 13 24777          POTT    •0
04014  0 06 14200          EOMM    014200          BIT 12 ONLY
04015  0 71 25000          LDX     •077765115      10 MS DELAY TIME FOR POSSIBLE INTRUPT
04016  0 02 20002          EIR
04017  0 41 04017          BRX     •               COUNT OUT TIMER
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          SKN     •164            TEST FOR CORRECT INTRUPT
04027  0 01 04036          BRU     F1001B
04030  0 43 00460          BRM     ERRSR
04031  0 20 22656          NOP     M1001A          INTRUPT MESSAGE
04032  0 53 24505  F1001D   SKN     JMPTYP
04033  0 11 04035          BRI     •+2
04034  0 01•04035          BRU•    •+1
04035  0 20 04040          NOP     F1001C
04036  0 43 14371  F1001B   BRM     SPURI
04037  0 20 25003          NOP     •64
04040  0 06 00000  F1001C   EOMM    0
04041  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F18B02 BIT 13 EBR AND 14 ZWC
                    * BIT 12 SELECT ARM INTRUPTS
                    *
                    *
04042  0 43 00430          BRM     BBJECT
04043  0 43 00440          BRM     RETURN
04044  0 20 04056          NBP     F1002A
04045  0 06 00000          EBMM    0
04046  0 06•10000          EBMM•   010000          ALERT INTERLACE
04047  0 13 24777          PBTT    •0
04050  0 06 17200          EBMM    017200          BIT 12,13,14
04051  0 71 25000          LDX     •077765115      10 MS DELAY TIME FBR POSSIBLE INTRUPT
04052  0 02 20002          EIR
04053  0 41 04053          BRX     *               COUNT BUT TIMER
04054  0 02 20004          DIR
04055  0 01 04066          BRU     F1002D          NB INTRUPT BCCURED
04056  0 02 20004  F1002A DIR
04057  0 46 00001          CLA
04060  0 76 00450          LDA     DIVERT
04061  0 75 25001          LDB     •37777
04062  0 70 25003          SKM     •164
04063  0 01 04072          BRU     F1002B
04064  0 43 00460          BRM     ERRBR           INTRUPT ERRBR MESSAGE
04065  0 20 22656          NBP     M1001A
04066  0 53 24505  F1002D SKN     JMPTYP
04067  0 11 04071          BRI     *+2
04070  0 01•04071          BRU•    *+1
04071  0 20 04074          NBP     F1002C
04072  0 43 14371  F1002B BRM     SPURI
04073  0 20 25003          NBP     •64
04074  0 06 00000  F1002C EBMM    0
04075  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F18B03 CHANNEL SKS ACTIVE TEST
                    *
                    *
04076  0 43 00430          BRM     BBJECT
04077  0 43 00440          BRM     RETURN
04100  0 20 07150          NBP     XTRA1           SPURIBUS INTRUPT CONTRBL
04101  0 06 00000          EBMM    0
04102  0 40•14000          SKSS•   014000          CHANNEL ACTIVE TEST
04103  0 01 04107          BRU     F1003A          NBT ACTIVE ERRBR
04104  0 06 14000          EBMM    014000          SET ACTIVE WITH BIT 9
04105  0 40•14000          SKSS•   014000
04106  0 01 04112          BRU     F1003B          ACTIVE TEST BK
04107  0 43 00460  F1003A BRM     ERRBR
04110  0 20 22674          NBP     M1003A          ERRBR MESSAGE
04111  0 06 01000          EBMM    0
04112  0 43 00434  F1003B BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F19B04       TEST ZERO COUNT SKS
                    *
                    *
04113  0 43 00430          BRM     OBJECT
04114  0 43 00440          BRM     RETURN          INTRUPT LINK
04115  0 20 07150          NOP     XTRA1
04116  0 06 00000          EOMM    0
04117  0 06*10000          EOMM*   010000          ALERT CHANNEL
04120  0 06 14200          EOMM    014200
04121  0 13 24777          POTT    #0
04122  0 40*12000          SKSS*   012000          ZERO TEST
04123  0 43 00460          BRM     ERROR
04124  0 20 22704          NOP     M1004A          SKS OR COUNT FLIP=FLOP FAILURE
04125  0 43 00434          BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F19B05 TEST ADDRESS BIT ZA14 OR C23
                    *
                    *
04126  0 43 00430          BRM     OBJECT
04127  0 43 00440          BRM     RETURN
04130  0 20 07150          NOP     XTRA1
04131  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04132  0 06 12000          EOMM    012000          ALERT TO PIN CHANNEL
04133  0 33 24516          PINN    PIN=RD          GET LAST RESULT
04134  0 76 24516          LDA     PIN=RD          GET RESULT
04135  0 72 25004          SKA     #01             SKIP IF BIT RESET
04136  0 43 00460          BRM     ERROR
04137  0 20 22727          NOP     M1005A           BIT ERROR MESSAGE
04140  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04141  0 06 14200          EOMM    014200          CLEAR HI BITS
04142  0 13 25004          POTT    #01
04143  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04144  0 33 24516          PINN    PIN=RD          GET INTERLACE ADRS
04145  0 75 25004          LDB     #01             CORRECT TEST WORD
04146  0 71 00430          LDX     OBJECT          GET ADRS OF OBJECT TEST
04147  0 76 24516          LDA     PIN=RD
04150  0 70 25004          SKM     #01             TEST BIT IN ERROR
04151  0 43 00460          BRM     ERROR
04152  4 20 22727          NOP     M1005A,4        BIT ERROR MESSAGE
04153  2 20 22475          NOP     M20138,2        HEADING AND REGISTERS
04154  0 43 00434          BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F18B06 TEST ADDRESS BIT ZA13 OR C22
                    *
                    *
04155  0 43 00430        BRM     OBJECT
04156  0 43 00440        BRM     RETURN
04157  0 20 07150        XOP     XTRA1
04160  0 43 07143        BRM     CLRCHN          CLEAR CHANNEL
04161  0 06 12000        EOMM    012000          ALERT TO PIN CHANNEL
04162  0 33 24516        PINA    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     ERROR
04166  0 20 22736        XOP     M1006A           BIT ERROR MESSAGE
04167  0 06•10000        EOMM•   010000          ALERT CHANNEL TO POT
04170  0 06 14200        EOMM    014200          SET HI BITS
04171  0 13 25005        POTT    •02
04172  0 06 12000        EOMM    012000          ALERT CHANNEL TO PIN
04173  0 33 24516        PINA    PINWRD          GET INTERLACE ADRS
04174  0 75 25005        LDB     •02             CORRECT TEST WORD
04175  0 71 00430        LDX     OBJECT          GET ADRS OF OBJECT TEST
04176  0 76 24516        LDA     PINWRD
04177  0 70 25005        SKM     •02             TEST BIT IN ERROR
04200  0 43 00460        BRM     ERROR
04201  4 20 22736        XOP     M1006A,4        BIT ERROR MESSAGE
04202  2 20 23475        XOP     M20135,2        HEADING AND REGISTERS
04203  0 43 00434        BRM     END             EXIT TEST
```



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                    *
                    *
                    * F18B07 TEST ADDRESS BIT ZA12 OR C21
                    *
                    *
04204  0 43 00430        BRM     OBJECT
04205  0 43 00440        BRM     RETURN
04206  0 20 07150        XOP     XTRA1
04207  0 43 07143        BRM     CLRCHN          CLEAR CHANNEL
04210  0 06 12000        EOMM    012000          ALERT TO PIN CHANNEL
04211  0 33 24516        PINA    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     ERROR
04215  0 20 22745        XOP     M1007A           BIT ERROR MESSAGE
04216  0 06•10000        EOMM•   010000          ALERT CHANNEL TO POT
04217  0 06 14200        EOMM    014200          SET HI BITS
04220  0 13 25006        POTT    •04
04221  0 06 12000        EOMM    012000          ALERT CHANNEL TO PIN
04222  0 33 24516        PINA    PINWRD          GET INTERLACE ADRS
04223  0 75 25006        LDB     •04             CORRECT TEST WORD
04224  0 71 00430        LDX     OBJECT          GET ADRS OF OBJECT TEST
04225  0 76 24516        LDA     PINWRD
04226  0 70 25006        SKM     •04             TEST BIT IN ERROR
04227  0 43 00460        BRM     ERROR
04230  4 20 22745        XOP     M1007A,4        BIT ERROR MESSAGE
04231  2 20 23475        XOP     M20138,2        HEADING AND REGISTERS
04232  0 43 00434        BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F18B08 TEST ADDRESS BIT ZA11 OR C20
                    *
                    *
04233  0 43 00430          BRM     OBJECT
04234  0 43 00440          BRM     RETURN
04235  0 20 07150          NOP     XTRA1
04236  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04237  0 06 12000          EOMM    012000          ALERT TO PIN CHANNEL
04240  0 33 24516          PINN    PINWRD          GET LAST RESULT
04241  0 76 24516          LDA     PINWRD          GET RESULT
04242  0 72 25007          SKA     •010            SKIP IF BIT RESET
04243  0 43 00460          BRM     ERROR
04244  0 20 22754          NOP     ^1008A           BIT ERROR MESSAGE
04245  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
04246  0 06 14200          EOMM    014200          SET HI BITS
04247  0 13 25007          POTT    •010
04250  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04251  0 33 24516          PINN    PINWRD          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     PINWRD
04255  0 70 25007          SKM     •010            TEST BIT IN ERROR
04256  0 43 00460          BRM     ERROR
04257  4 20 22754          NOP     ^1008A,4        BIT ERROR MESSAGE
04260  2 20 23475          NOP     ^2013B,2        HEADING AND REGISTERS
04261  0 43 00434          BRM     END             EXIT TEST
```



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                    *
                    *
                    * 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          EOMM    012000          ALERT TO PIN CHANNEL
04265  0 33 24516          PINN    PINWRD          GET LAST RESULT
04266  0 76 24516          LDA     PINWRD          GET RESULT
04267  0 72 25010          SKA     •020            SKIP IF BIT RESET
04270  0 43 00460          BRM     ERROR
04271  0 20 22763          NOP     ^1009A           BIT ERROR MESSAGE
04272  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
04273  0 06 14200          EOMM    014200          SET HI BITS
04274  0 13 25010          POTT    •020
04275  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04276  0 33 24516          PINN    PINWRD          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     PINWRD
04302  0 70 25010          SKM     •020            TEST BIT IN ERROR
04303  0 43 00460          BRM     ERROR
04304  4 20 22763          NOP     ^1009A,4        BIT ERROR MESSAGE
04305  2 20 23475          NOP     ^2013B,2        HEADING AND REGISTERS
04306  0 43 00434          BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F10B10 TEST ADDRESS BIT ZA09 OR C18
                    *
                    *
04307  0 43 00430        BRM     OBJECT
04310  0 43 00440        BRM     RETURN
04311  0 20 07150        NOP     XTRA1
04312  0 43 07143        BRM     CLRCHN          CLEAR CHANNEL
04313  0 06 12000        EOMM    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     ERROR
04320  0 20 22772        NOP     M1010A           BIT ERROR MESSAGE
04321  0 06*10000        EOMM*   010000          ALERT CHANNEL TO POT
04322  0 06 14200        EOMM    014200          CLEAR HI BITS
04323  0 13 25011        POTT    =040
04324  0 06 12000        EOMM    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     ERROR
04333  4 20 22772        NOP     M1010A,4        BIT ERROR MESSAGE
04334  2 20 23475        NOP     M20138,2        HEADING AND REGISTERS
04335  0 43 00434        BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F10B11 TEST ADDRESS BIT ZA08 OR C17
                    *
                    *
04336  0 43 00430        BRM     OBJECT
04337  0 43 00440        BRM     RETURN
04340  0 20 07150        NOP     XTRA1
04341  0 43 07143        BRM     CLRCHN          CLEAR CHANNEL
04342  0 06 12000        EOMM    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     ERROR
04347  0 20 23001        NOP     M1011A           BIT ERROR MESSAGE
04350  0 06*10000        EOMM*   010000          ALERT CHANNEL TO POT
04351  0 06 14200        EOMM    014200          SET HI BITS
04352  0 13 25012        POTT    =0100
04353  0 06 12000        EOMM    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     ERROR
04362  4 20 23001        NOP     M1011A,4        BIT ERROR MESSAGE
04363  2 20 23475        NOP     M20138,2        HEADING AND REGISTERS
04364  0 43 00434        BRM     END             EXIT TEST
```

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                    *
                    *
                    * F19B12 TEST ADDRESS BIT ZA07 OR C16
                    *
                    *
04365  0 43 00430          BRM     OBJECT
04366  0 43 00440          BRM     RETURN
04367  0 20 07150          NOP     XTRA1
04370  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04371  0 06 12000          EOMM    012000          ALERT TO PIN CHANNEL
04372  0 33 24516          PINN    PINWRD          GET LAST RESULT
04373  0 76 24516          LDA     PINWRD          GET RESULT
04374  0 72 25013          SKA     =0200           SKIP IF BIT RESET
04375  0 43 00460          BRM     ERROR
04376  0 20 23010          NOP     M1012A           BIT ERROR MESSAGE
04377  0 06=10000          EOMM=   010000          ALERT CHANNEL TO POT
04400  0 06 14200          EOMM    014200          SET HI BITS
04401  0 13 25013          POTT    =0200
04402  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04403  0 33 24516          PINN    PINWRD          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     PINWRD
04407  0 70 25013          SKM     =0200           TEST BIT IN ERROR
04410  0 43 00460          BRM     ERROR
04411  4 20 23010          NOP     M1012A,4        BIT ERROR MESSAGE
04412  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04413  0 43 00434          BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F19B13 TEST ADDRESS BIT ZA06 OR C15
                    *
                    *
04414  0 43 00430          BRM     OBJECT
04415  0 43 00440          BRM     RETURN
04416  0 20 07150          NOP     XTRA1
04417  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04420  0 06 12000          EOMM    012000          ALERT TO PIN CHANNEL
04421  0 33 24516          PINN    PINWRD          GET LAST RESULT
04422  0 76 24516          LDA     PINWRD          GET RESULT
04423  0 72 25014          SKA     =0400           SKIP IF BIT RESET
04424  0 43 00460          BRM     ERROR
04425  0 20 23017          NOP     M1013A           BIT ERROR MESSAGE
04426  0 06=10000          EOMM=   010000          ALERT CHANNEL TO POT
04427  0 06 14200          EOMM    014200          SET HI BITS
04430  0 13 25014          POTT    =0400
04431  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04432  0 33 24516          PINN    PINWRD          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     PINWRD
04436  0 70 25014          SKM     =0400           TEST BIT IN ERROR
04437  0 43 00460          BRM     ERROR
04440  4 20 23017          NOP     M1013A,4        BIT ERROR MESSAGE
04441  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04442  0 43 00434          BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F19B14 TEST ADDRESS BIT ZA05 OR C14
                    *
                    *
04443  0 43 00430          BRM     OBJECT
04444  0 43 00440          BRM     RETURN
04445  0 20 07150          NOP     XTRA1
04446  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04447  0 06 12000          EOMM    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 25015          SKA     =01000          SKIP IF BIT RESET
04453  0 43 00460          BRM     ERROR
04454  0 20 23026          NOP     M1014A           BIT ERROR MESSAGE
04455  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04456  0 06 14200          EOMM    014200          SET HI BITS
04457  0 13 25015          POTT    =01000
04460  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04461  0 33 24516          PINN    PINWRD          GET INTERLACE ADRS
04462  0 75 25015          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 25015          SKM     =01000          TEST BIT IN ERROR
04466  0 43 00460          BRM     ERROR
04467  4 20 23026          NOP     M1014A,4        BIT ERROR MESSAGE
04470  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04471  0 43 00434          BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F19B15 TEST ADDRESS BIT ZA04 OR C13
                    *
                    *
04472  0 43 00430          BRM     OBJECT
04473  0 43 00440          BRM     RETURN
04474  0 20 07150          NOP     XTRA1
04475  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04476  0 06 12000          EOMM    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 25016          SKA     =02000          SKIP IF BIT RESET
04502  0 43 00460          BRM     ERROR
04503  0 20 23035          NOP     M1015A           BIT ERROR MESSAGE
04504  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04505  0 06 14200          EOMM    014200          SET HI BITS
04506  0 13 25016          POTT    =02000
04507  0 06 12000          EOMM    012000          ALERT CHANNEL TO PIN
04510  0 33 24516          PINN    PINWRD          GET INTERLACE ADRS
04511  0 75 25016          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 25016          SKM     =02000          TEST BIT IN ERROR
04515  0 43 00460          BRM     ERROR
04516  4 20 23035          NOP     M1015A,4        BIT ERROR MESSAGE
04517  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04520  0 43 00434          BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F18B16 TEST ADDRESS BIT ZA03 OR C12
                    *
                    *
04521  0 43 00430          BRM     OBJECT
04522  0 43 00440          BRM     RETURN
04523  0 20 07150          NOP     XTRA1
04524  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04525  0 06 12000          EOMM    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     ERROR
04532  0 20 23044          NOP     M1016A           BIT ERROR MESSAGE
04533  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
04534  0 06 14200          EOMM    014200          SET HI BITS
04535  0 13 25017          POTT    •04000
04536  0 06 12000          EOMM    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     ERROR
04545  4 20 23044          NOP     M1016A,4        BIT ERROR MESSAGE
04546  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04547  0 43 00434          BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F18B17 TEST ADDRESS BIT ZA02 OR C11
                    *
                    *
04550  0 43 00430          BRM     OBJECT
04551  0 43 00440          BRM     RETURN
04552  0 20 07150          NOP     XTRA1
04553  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04554  0 06 12000          EOMM    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     ERROR
04561  0 20 23054          NOP     M1017A           BIT ERROR MESSAGE
04562  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
04563  0 06 14200          EOMM    014200          SET HI BITS
04564  0 13 25020          POTT    •010000
04565  0 06 12000          EOMM    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     ERROR
04574  4 20 23054          NOP     M1017A,4        BIT ERROR MESSAGE
04575  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04576  0 43 00434          BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F18B18 TEST ADDRESS BIT ZA01 OR C10
                    *
                    *
04577  0 43 00430          BRM     OBJECT
04600  0 43 00440          BRM     RETURN
04601  0 20 07150          NOP     XTRA1
04602  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04603  0 06 12000          EOMM    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     ERROR
04610  0 20 23064          NOP     M1018A           BIT ERROR MESSAGE
04611  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04612  0 06 14200          EOMM    014200          SET HI BITS
04613  0 13 25021          POTT    *020000
04614  0 06 12000          EOMM    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     OBJECT          GET ADRS OF OBJECT TEST
04620  0 76 24516          LDA     PINWRD
04621  0 72 25021          SKM     *020000         TEST BIT IN ERROR
04622  0 43 00460          BRM     ERROR
04623  4 20 23064          NOP     M1018A,4        BIT ERROR MESSAGE
04624  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04625  0 43 00434          BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F18B19 TEST ADDRESS BIT ZA0 OR C18
                    *
                    *
04626  0 43 00430          BRM     OBJECT
04627  0 43 00440          BRM     RETURN
04630  0 20 07150          NOP     XTRA1
04631  0 43 07143          BRM     CLRCHN          CLEAR CHANNEL
04632  0 06 12000          EOMM    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     ERROR
04637  0 20 23074          NOP     M1019A           ERROR MESSAGE FOR BIT
04640  0 06*10000          EOMM*   010000          ALERT CHANNEL
04641  0 06 14240          EOMM    014240          C18
04642  0 13 24777          POTT    *0
04643  0 06 12000          EOMM    012000          ALERT TO PIN
04644  0 33 24516          PINN    PINWRD
04645  0 75 25022          LDB     *040000
04646  0 71 00430          LDX     OBJECT
04647  0 76 24516          LDA     PINWRD
04650  0 72 25022          SKM     *040000
04651  0 43 00460          BRM     ERROR
04652  4 20 23074          NOP     M1019A,4        BIT ERROR MESSAGE
04653  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
04654  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F10B20 TEST ADDRESS BIT ZA00 BR C17
                    *
                    *
04655  0 43 00430         BRM     BBJECT
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 TB 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 ERRBR MESSAGE
04667  0 06*10000         EBMM*   010000
04670  0 06 14300         EBMM    014300          C17
04671  0 13 24777         PBTT    *0
04672  0 06 12000         EBMM    012000          ALERT TB PIN
04673  0 33 24516         PINN    PINWRD
04674  0 75 25023         LDB     *0100000
04675  0 71 00430         LDX     BBJECT
04676  0 76 24516         LDA     PINWRD
04677  0 70 25023         SKM     *0100000
04700  0 43 00460         BRM     ERRBR
04701  4 20 23105         NBP     M1020A,4        BIT ERRBR MESSAGE
04702  2 20 23475         NBP     M2013B,2        HEADING AND REGISTERS
04703  0 43 00434         BRM     END
```



```
                    *
                    *
                    * F10B21 TEST WBRD CBUNT BIT ZC14 BR C09
                    *
                    *
04704  0 43 00430         BRM     BBJECT
04705  0 43 00440         BRM     RETURN          INTRUPT LINK
04706  0 20 07150         NBP     XTRA1
04707  0 06*10000         EBMM*   010000          ALERT CHANNEL TB PBT
04710  0 06 14200         EBMM    014200          SET HI BITS
04711  0 13 25022         PBTT    *040000
04712  0 40*12000         SKSS*   012000          TEST FBR ZERB CBUNT
04713  0 01 04716         BRU     F1021A
04714  0 43 00460         BRM     ERRBR
04715  0 20 23117         NBP     M1023A          BIT ERRBR MESSAGE
04716  0 43 00434 F1021A  BRM     END             EXIT TEST
                    *
                    *
                    * F10B22 TEST WBRD CBUNT BIT ZC13 BR C08
                    *
                    *
04717  0 43 00430         BRM     BBJECT
04720  0 43 00440         BRM     RETURN          INTRUPT LINK
04721  0 20 07150         NBP     XTRA1
04722  0 06*10000         EBMM*   010000          ALERT CHANNEL TB PBT
04723  0 06 14200         EBMM    014200          SET HI BITS
04724  0 13 25023         PBTT    *0100000
04725  0 40*12000         SKSS*   012000          TEST FBR ZERB CBUNT
04726  0 01 04731         BRU     F1022A
04727  0 43 00460         BRM     ERRBR
04730  0 20 23126         NBP     M1024A          BIT ERRBR 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          NOP     XTRA1
04735  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04736  0 06 14200          EOMM    014200          SET HI BITS
04737  0 13 25024          POTT    *0200000
04740  0 40*12000          SKSS*   012000          TEST FOR ZERO COUNT
04741  0 01 04744          BRU     F1023A
04742  0 43 00460          BRM     ERROR
04743  0 20 23135          NOP     M1025A          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          NOP     XTRA1
04750  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04751  0 06 14200          EOMM    014200          SET HI BITS
04752  0 13 25025          POTT    *0400000
04753  0 40*12000          SKSS*   012000          TEST FOR ZERO COUNT
04754  0 01 04757          BRU     F1024A
04755  0 43 00460          BRM     ERROR
04756  0 20 23144          NOP     M1026A          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          NOP     XTRA1
04763  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04764  0 06 14200          EOMM    014200          SET HI BITS
04765  0 13 25026          POTT    *01000000
04766  0 40*12000          SKSS*   012000          TEST FOR ZERO COUNT
04767  0 01 04772          BRU     F1025A
04770  0 43 00460          BRM     ERROR
04771  0 20 23153          NOP     M1027A          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          NOP     XTRA1
04776  0 06*10000          EOMM*   010000          ALERT CHANNEL TO POT
04777  0 06 14200          EOMM    014200          SET HI BITS
05000  0 13 25027          POTT    *02000000
05001  0 40*12000          SKSS*   012000          TEST FOR ZERO COUNT
05002  0 01 05005          BRU     F1026A
05003  0 43 00460          BRM     ERROR
05004  0 20 23162          NOP     M1028A          BIT ERROR MESSAGE
05005  0 43 00434  F1026A BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F18B27 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          NOP     XTRA1
05011  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
05012  0 06 14200          EOMM    014200          SET HI BITS
05013  0 13 25030          POTT    •040000000
05014  0 40•12000          SKSS•   012000          TEST FOR ZERO COUNT
05015  0 01 05020          BRU     F1027A
05016  0 43 00460          BRM     ERROR
05017  0 20 23171          NOP     M1029A          BIT ERROR MESSAGE
05020  0 43 00434  F1027A  BRM     END             EXIT TEST
                    *
                    *
                    * F18B28 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          NOP     XTRA1
05024  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
05025  0 06 14200          EOMM    014200          SET HI BITS
05026  0 13 25031          POTT    •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          NOP     M1030A          BIT ERROR MESSAGE
05033  0 43 00434  F1028A  BRM     END             EXIT TEST
```



```
                    *
                    *
                    * F18B29 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          NOP     XTRA1
05037  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
05040  0 06 14200          EOMM    014200          SET HI BITS
05041  0 13 25032          POTT    •020000000
05042  0 40•12000          SKSS•   012000          TEST FOR ZERO COUNT
05043  0 01 05046          BRU     F1029A
05044  0 43 00460          BRM     ERROR
05045  0 20 23207          NOP     M1031A          BIT ERROR MESSAGE
05046  0 43 00434  F1029A  BRM     END             EXIT TEST
                    *
                    *
                    * F18B30 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          NOP     XTRA1
05052  0 06•10000          EOMM•   010000          ALERT CHANNEL TO POT
05053  0 06 14200          EOMM    014200          SET HI BITS
05054  0 13 25033          POTT    •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          NOP     M1032A          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          NOP     XTRA1
05065  0 06*10000          EOMM*   010000          ALET CHANNEL
05066  0 06 10201          EOMM    010201          ZC04 OR C23
05067  0 13 24777          POTT    =0
05070  0 40*12000          SKSS*   012000
05071  0 01 05074          BRU     F1033A
05072  0 43 00460          BRM     ERROR
05073  0 20 23925          NOP     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          NOP     XTRA1
05100  0 06*10000          EOMM*   010000          ALET CHANNEL
05101  0 06 10202          EOMM    010202          ZC03 OR C22
05102  0 13 24777          POTT    =0
05103  0 40*12000          SKSS*   012000
05104  0 01 05107          BRU     F1034A
05105  0 43 00460          BRM     ERROR
05106  0 20 23935          NOP     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          NOP     XTRA1
05113  0 06*10000          EOMM*   010000          ALET CHANNEL
05114  0 06 10204          EOMM    010204          ZC02 OR C21
05115  0 13 24777          POTT    =0
05116  0 40*12000          SKSS*   012000
05117  0 01 05122          BRU     F1035A
05120  0 43 00460          BRM     ERROR
05121  0 20 23945          NOP     M1035A
05122  0 43 00434  F1035A BRM     END
                    *
                    *
                    * F10B36 TEST WORD COUNT BIT ZC01 OR C21
                    *
                    *
05123  0 43 00430          BRM     OBJECT
05124  0 43 00440          BRM     RETURN
05125  0 20 07150          NOP     XTRA1
05126  0 06*10000          EOMM*   010000          ALET CHANNEL
05127  0 06 10210          EOMM    010210          ZC01 OR C20
05130  0 13 24777          POTT    =0
05131  0 40*12000          SKSS*   012000
05132  0 01 05135          BRU     F1036A
05133  0 43 00460          BRM     ERROR
05134  0 20 23955          NOP     M1036A
05135  0 43 00434  F1036A BRM     END
```

```
                    *
                    *
                    * F10B37 TEST WORD COUNT BIT ZC0  OR C19
                    *
                    *
05136  0 43 00430         BRM     OBJECT
05137  0 43 00440         BRM     RETURN
05140  0 20 07150         NOP     XTRA1
05141  0 06*10000         EOMM*   010000          ALET CHANNEL
05142  0 06 10220         EOMM    010220          ZC0  OR C19
05143  0 13 24777         POTT    *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
                    *
                    *
                    * FUNCTION 01 OBJECT TEST 38
                    *
                    *
                    * 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
```



```
                    *
                    *
                    * 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         NOP     XTRA1
05174  0 76 25035         LDA     =07             ZA12
05175  0 43 05332         BRM     INKMNT
05176  0 43 00460         BRM     ERROR
05177  0 20 22745         NOP     M1007A          LOGIC IN ERROR
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         NOP     XTRA1
05204  0 76 25036         LDA     =017            ZA11
05205  0 43 05332         BRM     INKMNT
05206  0 43 00460         BRM     ERROR
05207  0 20 22754         NOP     M1008A          LOGIC IN ERROR
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         NOP     XTRA1
05214  0 76 25037         LDA     =037            ZA10
05215  0 43 05332         BRM     INKMNT
05216  0 43 00460         BRM     ERROR
05217  0 20 22763         NOP     M1009A          LOGIC IN ERROR
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         NOP     XTRA1
05224  0 76 25040         LDA     =077            ZA09
05225  0 43 05332         BRM     INKMNT
05226  0 43 00460         BRM     ERROR
05227  0 20 22772         NOP     M1010A          LOGIC IN ERROR
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
```

```
                    *
                    *
                    * F10B48 INTERLACE CARRY TEST ZA04 TO ZA03
                    *
                    *
05271  0 43 00430          BRM     OBJECT
05272  0 43 00440          BRM     RETURN
05273  0 20 07150          NOP     XTRA1
05274  0 76 25046          LDA     •03777          ZA04
05275  0 43 05332          BRM     INKMNT
05276  0 43 00460          BRM     ERROR
05277  0 20 23035          NOP     M1015A          LOGIC IN ERROR
05300  0 43 00434          BRM     END
                    *
                    *
                    * F10B49 INTERLACE CARRY TEST ZA03 TO ZA02
                    *
                    *
05301  0 43 00430          BRM     OBJECT
05302  0 43 00440          BRM     RETURN
05303  0 20 07150          NOP     XTRA1
05304  0 76 25046          LDA     •07777          ZA03
05305  0 43 05332          BRM     INKMNT
05306  0 43 00460          BRM     ERROR
05307  0 20 23044          NOP     M1016A          LOGIC IN ERROR
05310  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F10B50 INTERLACE CARRY TEST ZA02 TO ZA01
                    *
                    *
05311  0 43 00430          BRM     OBJECT
05312  0 43 00440          BRM     RETURN
05313  0 20 07150          NOP     XTRA1
05314  0 76 25047          LDA     •17777          ZA02
05315  0 43 05332          BRM     INKMNT
05316  0 43 00460          BRM     ERROR
05317  0 20 23054          NOP     M1017A          LOGIC IN ERROR
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 23064           NOP     M1018A          LOGIC IN ERROR
05330  0 43 00434           BRM     END
05331  0 01 05356           BRU     END1
05332  0 00 00000  INKMNT   ZRO     0
05333  0 16 25022           MRG     =040000
05334  0 35 24513           STA     PATWRD
05335  0 17 25022           EOR     =040000
05336  0 55 25004           ADD     =1
05337  0 06=10000           EOMM=   010000          ALERT CHANNEL
05340  0 06 14200  INKMN1   EOMM    14200           SET HI BITS
05341  0 13 24513           PAT     PATWRD
05342  0 06 02040           EOMM    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           EOMM    012000          ALERT TO PIN
05347  0 33 24513           PIN     PATWRD
05350  0 06 00000           EOMM    0               CLEAR CHANNEL
05351  0 17 24513           EOR     PATWRD
05352  0 72 24513           SKA     PATWRD
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 25050           LDA     =04001          ZMP3
05373  0 43 05441           BRM     INKMNT
05374  0 43 00460           BRM     ERROR
05375  0 20 23306           NOP     M1039A          LOGIC IN ERROR
05376  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F18855 DATA CHAIN TEST ZMP2
                    *
                    *
05377  0 43 00430           BRM     OBJECT
05400  0 43 00440           BRM     RETURN
05401  0 20 07150           NOP     XTRA1
05402  0 76 25051           LDA     •010002          ZMP2
05403  0 43 05441           BRM     INKMMT
05404  0 43 00460           BRM     ERROR
05405  0 20 23313           NOP     M1040A           LOGIC IN ERROR
05406  0 43 00434           BRM     END
                    *
                    *
                    * F18856 DATA CHAIN TEST ZMP1
                    *
                    *
05407  0 43 00430           BRM     OBJECT
05410  0 43 00440           BRM     RETURN
05411  0 20 07150           NOP     XTRA1
05412  0 76 25052           LDA     •020004          ZMP1
05413  0 43 05441           BRM     INKMMT
05414  0 43 00460           BRM     ERROR
05415  0 20 23320           NOP     M1041A           LOGIC IN ERROR
05416  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F18857 DATA CHAIN TEST ZMP0
                    *
                    *
05417  0 43 00430           BRM     OBJECT
05420  0 43 00440           BRM     RETURN
05421  0 20 07150           NOP     XTRA1
05422  0 76 25053           LDA     •040010          ZMP0
05423  0 43 05441           BRM     INKMMT
05424  0 43 00460           BRM     ERROR
05425  0 20 23325           NOP     M1042A           LOGIC IN ERROR
05426  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F18858 DATA CHAIN TEST ZMP00
                    *
                    *
05427  0 43 00430          BRM     OBJECT
05430  0 43 00440          BRM     RETURN
05431  0 20 07150          NOP     XTRA1
05432  0 76 25054          LDA     =0100020        ZMP00
05433  0 43 05441          BRM     INKMMT
05434  0 43 00460          BRM     ERROR
05435  0 20 23332          NOP     =1043A          LOGIC IN ERROR
05436  0 43 00434          BRM     END
05437  0 43 00456          BRM     FOONE
05440  0 01 05464          BRU     FUNC2
05441  0 00 00000  INKMMT  ZRO     0
05442  0 35 24513          STA     POTWRD
05443  0 06*10000          EOMM*   010000          ALERT CHANNEL
05444  0 06 14200          EOMM    14200           SET HI BITS
05445  0 13 25055          POT     =043777
05446  0 06 11000          EOMM    011000          ALERT DATA CHAIN
05447  0 13 24513          POT     POTWRD
05450  0 06 02040          EOMM    02040           OUTPUT WITHOUT LEADER, SET W5
05451  0 20 00000          NOP     0
05452  0 20 00000          NOP     0               DELAY TO ALLOW PIN
05453  0 20 00000          NOP     0
05454  0 06 12000          EOMM    012000          ALERT TO PIN
05455  0 33 24513          PIN     POTWRD
05456  0 06 00000          EOMM    0               CLEAR CHANNEL
05457  0 75 25056          LDB     =174000
05460  0 70 24513          SKM     POTWRD
05461  0 51 05441          BRR     INKMMT
05462  0 61 05441          MIN     INKMMT
05463  0 51 05441          BRR     INKMMT
```



```
                    *
                    *
                    * FUNCTION 02 RAD PRIMARY TESTS
                    *
                    *
                    *
05464  0 43 00424  FUNC2  BRM     FUNCTN          FUNCTION LINK
05465  0 20 20527         NOP     FPT2            FUNCTION TWO PARAMETERS
05466  0 76 05427         LDA     ZERO1           ALERT TO PIN FOR FIRST RAD
05467  0 43 07153         BRM     SETPIN
```

```
                        *
                        *
                        * F29801        RAD READY TEST
                        *
                        *
05470  0 43 00430              BRM     OBJECT
05471  0 43 00440              BRM     RETURN
05472  0 20 07150              NOP     XTRA1           SPURIOUS INTRUPT HANDLER
05473  0 06 00000              EOMM    0
05474  0 71 25022              LDX     =40000          WAIT CONSTANT
05475  0 20 00000              NOP     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 05460              BRM     ERROR           NOP READY ERROR
05502  0 20 03342              NOP     =2001A          MESSAGE NOT READY
05503  0 01 05527              BRU     F2001B
05504  0 02 00004              DIR
05505  0 06 10026              EOMM    010026          ALERT RAD
05506  0 13 24777              POTT    =0
05507  0 06=10000              EOMM=   010000          ALERT CHANNEL
05510  0 06 14200              EOMM    014200          SET HI BITS
05511  0 13 25257              POT     =4000000+RL0    SET INTERLACE
05512  0 06 02226              EOMM    02226           RAD SHOULD HANG UP
05513  0 40=10026              SKSS=   010026          READY TEST
05514  0 01 05517              BRU     F2001A
05515  0 43 00460              BRM     ERROR           READY ERROR
05516  0 20 03370              NOP     =2001B          NOT READY ERROR
05517  0 71 25022  F2001A LDX     =40000          WAIT CONSTANT
05520  0 20 00000              NOP     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     ERROR
05525  0 20 03342              NOP     =2001A
05526  0 06 00000              EOMM    0               CLEAR CHANNEL
```



```
05527  0 43 00434  F2001B BRM     END             EXIT TEST
```

```
                    *
                    *
                    * F20804 RAD PIN TEST
                    *
                    *
05530  0 43 00430          BRM     OBJECT
05531  0 43 00440          BRM     RETURN
05532  0 20 07150          NOP     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     ERROR
05536  4 20 23416          NOP     M2004A,4       ERROR MESSAGE FOR BIT
05537  0 20 23403          NOP     M20048
05540  0 43 00434          BRM     END            EXIT TEST
                    *
                    *
                    * F20805 RAD PIN TEST
                    *
                    *
05541  0 43 00430          BRM     OBJECT
05542  0 43 00440          BRM     RETURN
05543  0 20 07150          NOP     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     ERROR
05547  4 20 23424          NOP     M2005A,4       ERROR MESSAGE FOR BIT
05550  0 20 23403          NOP     M20048
05551  0 43 00434          BRM     END            EXIT TEST
```



```
                    *
                    *
                    * F20806 RAD PIN TEST
                    *
                    *
05552  0 43 00430          BRM     OBJECT
05553  0 43 00440          BRM     RETURN
05554  0 20 07150          NOP     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     ERROR
05560  4 20 23432          NOP     M2006A,4       ERROR MESSAGE FOR BIT
05561  0 20 23403          NOP     M20048
05562  0 43 00434          BRM     END            EXIT TEST
                    *
                    *
                    * F20807 RAD PIN TEST
                    *
                    *
05563  0 43 00430          BRM     OBJECT
05564  0 43 00440          BRM     RETURN
05565  0 20 07150          NOP     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     ERROR
05571  4 20 23440          NOP     M2007A,4       ERROR MESSAGE FOR BIT
05572  0 20 23403          NOP     M20048
05573  0 43 00434          BRM     END            EXIT TEST
```

```
                        *
                        *
                        * F29808 RAD PIN TEST
                        *
                        *
05574  0 43 00430              BRM     OBJECT
05575  0 43 00440              BRM     RETURN
05576  0 20 07150              NOP     XTRA1          SPURIOUS INTRUPT HANDLER
05577  0 76 25010              LDA     =000020
05600  0 43 07111              BRM     PINSET         PIN TRANSFER AND TEST ROUTINE
05601  0 43 00460              BRM     ERROR
05602  4 20 23446              NOP     M2008A,4       ERROR MESSAGE FOR BIT
05603  0 20 23403              NOP     M20048
05604  0 43 00434              BRM     END            EXIT TEST
                        *
                        *
                        * F29809 RAD PIN TEST
                        *
                        *
05605  0 43 00430              BRM     OBJECT
05606  0 43 00440              BRM     RETURN
05607  0 20 07150              NOP     XTRA1          SPURIOUS INTRUPT HANDLER
05610  0 76 25011              LDA     =000040
05611  0 43 07111              BRM     PINSET         PIN TRANSFER AND TEST ROUTINE
05612  0 43 00460              BRM     ERROR
05613  4 20 23454              NOP     M2009A,4       ERROR MESSAGE FOR BIT
05614  0 20 23403              NOP     M20048
05615  0 43 00434              BRM     END            EXIT TEST
05616  0 50 24506              SKN     JMPTYP
05617  0 11 05621              BRI     *+2
05620  0 01*05621              BRU*    *+1
05621  0 20 05622              NOP     *+1
05622  0 43 00434              BRM     END
```



```
                        *
                        *
                        * FUNCTION 02 TEST SECTOR COUNTER
                        *
                        *
05623  0 43 00430              BRM     OBJECT         FIND THE ZERO SECTOR
05624  0 43 00440              BRM     RETURN
05625  0 20 07150              NOP     XTRA1
05626  0 71 25022              LDX     =040000        TIME 40 MILLISECONDS
05627  0 66 10226  ZER01       EOMM    010226         ALERT TO PIN
05630  0 33 24516              PINN    PINNRD
05631  0 76 24516              LDA     PINNRD
05632  0 75 25001              LDB     =37777
05633  0 70 24777              SKM     =0
05634  0 41 05627              BRX     ZER01
05635  0 41 05643              BRX     ZER02
05636  0 75 24777              LDB     =0
05637  0 71 00430              LDX     OBJECT
05640  0 43 00460              BRM     ERROR
05641  4 20 23511              NOP     M2013C,4       NO ZERO
05642  2 20 23475              NOP     M2013B,2       HEADING AND REGISTERS
05643  0 43 00434  ZER02       BRM     END
```

```
                    *
                    *
                    * F28B14 TEST SECTOR ADRS 01
                    *
                    *
05644  0 43 00430         BRM     OBJECT
05645  0 43 00440         BRM     RETURN
05646  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
05653  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
05654  0 43 00434         BRM     END
                    *
                    *
                    * F28B15 TEST SECTOR ADRS 02
                    *
                    *
05655  0 43 00430         BRM     OBJECT
05656  0 43 00440         BRM     RETURN
05657  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
05664  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
05665  0 43 00434         BRM     END
```



```
                    *
                    *
                    * F28B16 TEST SECTOR ADRS 03
                    *
                    *
05666  0 43 00430         BRM     OBJECT
05667  0 43 00440         BRM     RETURN
05670  0 20 07150         NOP     XTRA1
05671  0 75 25034         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         NOP     M2013A,4        LOGIC ERROR MSG
05675  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
05676  0 43 00434         BRM     END
                    *
                    *
                    * F28B17 TEST SECTOR ADRS 04
                    *
                    *
05677  0 43 00430         BRM     OBJECT
05700  0 43 00440         BRM     RETURN
05701  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
05706  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
05707  0 43 00434         BRM     END
```

```
                    *
                    *
                    * F28B18 TEST SECTOR ADRS 05
                    *
                    *
05710  0 43 00430        BRM     OBJECT
05711  0 43 00440        BRM     RETURN
05712  0 20 07150        NOP     XTRA1
05713  0 75 25060        LDB     #005            SECTOR 05
05714  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
05715  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
05716  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
05717  2 20 23475        NOP     M2013B,2        HEADING AND REGISTERS
05720  0 43 00434        BRM     END
                    *
                    *
                    * F28B19 TEST SECTOR ADRS 06
                    *
                    *
05721  0 43 00430        BRM     OBJECT
05722  0 43 00440        BRM     RETURN
05723  0 20 07150        NOP     XTRA1
05724  0 75 25061        LDB     #006            SECTOR 06
05725  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
05726  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
05727  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
05730  2 20 23475        NOP     M2013B,2        HEADING AND REGISTERS
05731  0 43 00434        BRM     END
```



```
                    *
                    *
                    * F28B20 TEST SECTOR ADRS 07
                    *
                    *
05732  0 43 00430        BRM     OBJECT
05733  0 43 00440        BRM     RETURN
05734  0 20 07150        NOP     XTRA1
05735  0 75 25035        LDB     #007            SECTOR 07
05736  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
05737  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
05740  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
05741  2 20 23475        NOP     M2013B,2        HEADING AND REGISTER
05742  0 43 00434        BRM     END
                    *
                    *
                    * F28B21 TEST SECTOR ADRS 10
                    *
                    *
05743  0 43 00430        BRM     OBJECT
05744  0 43 00440        BRM     RETURN
05745  0 20 07150        NOP     XTRA1
05746  0 75 25007        LDB     #010            SECTOR 10
05747  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
05750  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
05751  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
05752  2 20 23475        NOP     M2013B,2        HEADING AND REGISTERS
05753  0 43 00434        BRM     END
```

```
                    *
                    *
                    * F28822 TEST SECTOR ADRS 11
                    *
                    *
05754  0 43 00430           BRM     OBJECT
05755  0 43 00440           BRM     RETURN
05756  0 20 07150           NOP     XTRA1
05757  0 75 25062           LDB     =011            SECTOR 11
05760  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
05761  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
05762  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
05763  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
05764  0 43 00434           BRM     END
                    *
                    *
                    * F28823 TEST SECTOR ADRS 12
                    *
                    *
05765  0 43 00430           BRM     OBJECT
05766  0 43 00440           BRM     RETURN
05767  0 20 07150           NOP     XTRA1
05770  0 75 25063           LDB     =012            SECTOR 12
05771  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
05772  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
05773  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
05774  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
05775  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F28824 TEST SECTOR ADRS 13
                    *
                    *
05776  0 43 00430           BRM     OBJECT
05777  0 43 00440           BRM     RETURN
06000  0 20 07150           NOP     XTRA1
06001  0 75 25064           LDB     =013            SECTOR 13
06002  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
06003  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
06004  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
06005  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
06006  0 43 00434           BRM     END
                    *
                    *
                    * F28825 TEST SECTOR ADRS 14
                    *
                    *
06007  0 43 00430           BRM     OBJECT
06010  0 43 00440           BRM     RETURN
06011  0 20 07150           NOP     XTRA1
06012  0 75 25065           LDB     =014            SECTOR 14
06013  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
06014  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
06015  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
06016  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
06017  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F28826 TEST SECTOR ADRS 15
                    *
                    *
06020  0 43 00430          BRM     OBJECT
06021  0 43 00440          BRM     RETURN
06022  0 20 07150          NOP     XTRA1
06023  0 75 25166          LDB     =015            SECTOR 15
06024  0 43 07156          BRM     PININ           TO PIN IN SECTOR ADRS
06025  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06026  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06027  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06030  0 43 00434          BRM     END
                    *
                    *
                    * F28827 TEST SECTOR ADRS 16
                    *
                    *
06031  0 43 00430          BRM     OBJECT
06032  0 43 00440          BRM     RETURN
06033  0 20 07150          NOP     XTRA1
06034  0 75 25167          LDB     =016            SECTOR 16
06035  0 43 07156          BRM     PININ           TO PIN IN SECTOR ADRS
06036  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06037  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06040  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06041  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F28828 TEST SECTOR ADRS 17
                    *
                    *
06042  0 43 00430          BRM     OBJECT
06043  0 43 00440          BRM     RETURN
06044  0 20 07150          NOP     XTRA1
06045  0 75 25170          LDB     =017            SECTOR 17
06046  0 43 07156          BRM     PININ           TO PIN IN SECTOR ADRS
06047  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06050  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06051  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06052  0 43 00434          BRM     END
                    *
                    *
                    * F28829 TEST SECTOR ADRS 20
                    *
                    *
06053  0 43 00430          BRM     OBJECT
06054  0 43 00440          BRM     RETURN
06055  0 20 07150          NOP     XTRA1
06056  0 75 25210          LDB     =020            SECTOR 20
06057  0 43 07156          BRM     PININ           TO PIN IN SECTOR ADRS
06060  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06061  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06062  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06063  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F29B30 TEST SECTOR ADRS 21
                    *
                    *
06064  0 43 00430          BRM     OBJECT
06065  0 43 00440          BRM     RETURN
06066  0 20 07150          NOP     XTRA1
06067  0 75 25070          LDB     =021            SECTOR 21
06070  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06071  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06072  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06073  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06074  0 43 00434          BRM     END
                    *
                    *
                    * F29B31 TEST SECTOR ADRS 22
                    *
                    *
06075  0 43 00430          BRM     OBJECT
06076  0 43 00440          BRM     RETURN
06077  0 20 07150          NOP     XTRA1
06100  0 75 25071          LDB     =022            SECTOR 22
06101  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06102  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06103  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06104  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06105  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F29B32 TEST SECTOR ADRS 23
                    *
                    *
06106  0 43 00430          BRM     OBJECT
06107  0 43 00440          BRM     RETURN
06110  0 20 07150          NOP     XTRA1
06111  0 75 25072          LDB     =023            SECTOR 23
06112  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06113  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06114  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06115  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06116  0 43 00434          BRM     END
                    *
                    *
                    * F29B33 TEST SECTOR ADRS 24
                    *
                    *
06117  0 43 00430          BRM     OBJECT
06120  0 43 00440          BRM     RETURN
06121  0 20 07150          NOP     XTRA1
06122  0 75 25073          LDB     =024            SECTOR 24
06123  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06124  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06125  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06126  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06127  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F29B34 TEST SECTOR ADRS 25
                    *
                    *
06130  0 43 00430          BRM     OBJECT
06131  0 43 00440          BRM     RETURN
06132  0 20 07150          NOP     XTRA1
06133  0 75 25074          LDB     =025            SECTOR 25
06134  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06135  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06136  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06137  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06140  0 43 00434          BRM     END
                    *
                    *
                    * F29B35 TEST SECTOR ADRS 26
                    *
                    *
06141  0 43 00430          BRM     OBJECT
06142  0 43 00440          BRM     RETURN
06143  0 20 07150          NOP     XTRA1
06144  0 75 25076          LDB     =026            SECTOR 26
06145  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06146  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06147  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06150  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06151  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F29B36 TEST SECTOR ADRS 27
                    *
                    *
06152  0 43 00430          BRM     OBJECT
06153  0 43 00440          BRM     RETURN
06154  0 20 07150          NOP     XTRA1
06155  0 75 25076          LDB     =027            SECTOR 27
06156  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06157  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06160  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06161  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06162  0 43 00434          BRM     END
                    *
                    *
                    * F29B37 TEST SECTOR ADRS 30
                    *
                    *
06163  0 43 00430          BRM     OBJECT
06164  0 43 00440          BRM     RETURN
06165  0 20 07150          NOP     XTRA1
06166  0 75 25077          LDB     =030            SECTOR 30
06167  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06170  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06171  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06172  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06173  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F29B38 TEST SECTOR ADRS 31
                    *
                    *
06174  0 43 00430          BRM     OBJECT
06175  0 43 00440          BRM     RETURN
06176  0 20 07150          NOP     XTRA1
06177  0 75 25100          LDB     =031            SECTOR 31
06200  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06201  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06202  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06203  2 20 23475          NOP     %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          NOP     XTRA1
06210  0 75 25101          LDB     =032            SECTOR 32
06211  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06212  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06213  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06214  2 20 23475          NOP     %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          NOP     XTRA1
06221  0 75 25103          LDB     =033            SECTOR 33
06222  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06223  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06224  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06225  2 20 23475          NOP     %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          NOP     XTRA1
06232  0 75 25103          LDB     =034            SECTOR 34
06233  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06234  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06235  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06236  2 20 23475          NOP     %2013B,2        HEADING AND REGISTERS
06237  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F28B42 TEST SECTOR ADRS 35
                    *
                    *
06240  0 43 02430          BRM     OBJECT
06241  0 43 02440          BRM     RETURN
06242  0 20 07150          XOP     XTRA1
06243  0 75 25134          LDB     #035            SECTOR 35
06244  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06245  0 43 02460          BRM     ERROR           RETURN IF ERROR OCCURED
06246  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06247  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06250  0 43 02434          BRM     END
                    *
                    *
                    * F28B43 TEST SECTOR ADRS 36
                    *
                    *
06251  0 43 02430          BRM     OBJECT
06252  0 43 02440          BRM     RETURN
06253  0 20 07150          XOP     XTRA1
06254  0 75 25135          LDB     #036            SECTOR 36
06255  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06256  0 43 02460          BRM     ERROR           RETURN IF ERROR OCCURED
06257  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06260  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06261  0 43 02434          BRM     END
```



```
                    *
                    *
                    * F28B44 TEST SECTOR ADRS 37
                    *
                    *
06262  0 43 02430          BRM     OBJECT
06263  0 43 02440          BRM     RETURN
06264  0 20 07150          XOP     XTRA1
06265  0 75 25137          LDB     #037            SECTOR 37
06266  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06267  0 43 02460          BRM     ERROR           RETURN IF ERROR OCCURED
06270  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06271  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06272  0 43 02434          BRM     END
                    *
                    *
                    * F28B45 TEST SECTOR ADRS 40
                    *
                    *
06273  0 43 02430          BRM     OBJECT
06274  0 43 02440          BRM     RETURN
06275  0 20 07150          XOP     XTRA1
06276  0 75 25111          LDB     #040            SECTOR 40
06277  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06300  0 43 02460          BRM     ERROR           RETURN IF ERROR OCCURED
06301  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06302  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06303  0 43 02434          BRM     END
```

```
                    *
                    *
                    * F29B46 TEST SECTOR ADRS 41
                    *
                    *
06304  0 43 00430          BRM     OBJECT
06305  0 43 00440          BRM     RETURN
06306  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06313  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06314  0 43 00434          BRM     END
                    *
                    *
                    * F29B47 TEST SECTOR ADRS 42
                    *
                    *
06315  0 43 00430          BRM     OBJECT
06316  0 43 00440          BRM     RETURN
06317  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06324  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06325  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F29B48 TEST SECTOR ADRS 43
                    *
                    *
06326  0 43 00430          BRM     OBJECT
06327  0 43 00440          BRM     RETURN
06330  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06335  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06336  0 43 00434          BRM     END
                    *
                    *
                    * F29B49 TEST SECTOR ADRS 44
                    *
                    *
06337  0 43 00430          BRM     OBJECT
06340  0 43 00440          BRM     RETURN
06341  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06346  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06347  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F29B50 TEST SECTOR ADRS 45
                    *
                    *
06350  0 43 00430          BRM     OBJECT
06351  0 43 00440          BRM     RETURN
06352  0 20 07150          NOP     XTRA1
06353  0 75 25113          LDB     •045            SECTOR 45
06354  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06355  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06356  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06357  2 60 23475          NOP     M2013B,2        HEADING AND REGISTERS
06360  0 43 00434          BRM     END
                    *
                    *
                    * F29B51 TEST SECTOR ADRS 46
                    *
                    *
06361  0 43 00430          BRM     OBJECT
06362  0 43 00440          BRM     RETURN
06363  0 20 07150          NOP     XTRA1
06364  0 75 25113          LDB     •046            SECTOR 46
06365  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06366  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06367  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06370  2 60 23475          NOP     M2013B,2        HEADING AND REGISTERS
06371  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F29B52 TEST SECTOR ADRS 47
                    *
                    *
06372  0 43 00430          BRM     OBJECT
06373  0 43 00440          BRM     RETURN
06374  0 20 07150          NOP     XTRA1
06375  0 75 25114          LDB     •047            SECTOR 47
06376  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06377  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06400  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06401  2 60 23475          NOP     M2013B,2        HEADING AND REGISTERS
06402  0 43 0 434          BRM     END
                    *
                    *
                    * F29B53 TEST SECTOR ADRS 50
                    *
                    *
06403  0 43 00430          BRM     OBJECT
06404  0 43 00440          BRM     RETURN
06405  0 20 07150          NOP     XTRA1
06406  0 75 25116          LDB     •050            SECTOR 50
06407  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06410  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06411  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06412  2 60 23475          NOP     M2013B,2        HEADING AND REGISTERS
06413  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F20854 TEST SECTOR ADRS 51
                    *
                    *
06414  0 43 00430          BRM     OBJECT
06415  0 43 00440          BRM     RETURN
06416  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06423  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06424  0 43 00434          BRM     END
                    *
                    *
                    * F20855 TEST SECTOR ADRS 52
                    *
                    *
06425  0 43 00430          BRM     OBJECT
06426  0 43 00440          BRM     RETURN
06427  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06434  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06435  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F20856 TEST SECTOR ADRS 53
                    *
                    *
06436  0 43 00430          BRM     OBJECT
06437  0 43 00440          BRM     RETURN
06440  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06445  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06446  0 43 00434          BRM     END
                    *
                    *
                    * F20857 TEST SECTOR ADRS 54
                    *
                    *
06447  0 43 00430          BRM     OBJECT
06450  0 43 00440          BRM     RETURN
06451  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
06456  2 20 23475          NOP     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            NOP     XTRA1
06463  0 75 25122            LDB     #055            SECTOR 55
06464  0 43 07256            BRM     PININ           TO PIN IN SECTOR ADRS
06465  0 43 00460            BRM     ERROR           RETURN IF ERROR OCCURED
06466  4 20 23462            NOP     M2013A,4        LOGIC ERROR MSG
06467  2 20 23475            NOP     M2013B,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            NOP     XTRA1
06474  0 75 25123            LDB     #056            SECTOR 56
06475  0 43 07256            BRM     PININ           TO PIN IN SECTOR ADRS
06476  0 43 00460            BRM     ERROR           RETURN IF ERROR OCCURED
06477  4 20 23462            NOP     M2013A,4        LOGIC ERROR MSG
06500  2 20 23475            NOP     M2013B,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            NOP     XTRA1
06505  0 75 25124            LDB     #057            SECTOR 57
06506  0 43 07256            BRM     PININ           TO PIN IN SECTOR ADRS
06507  0 43 00460            BRM     ERROR           RETURN IF ERROR OCCURED
06510  4 20 23462            NOP     M2013A,4        LOGIC ERROR MSG
06511  2 20 23475            NOP     M2013B,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            NOP     XTRA1
06516  0 75 25125            LDB     #060            SECTOR 60
06517  0 43 07256            BRM     PININ           TO PIN IN SECTOR ADRS
06520  0 43 00460            BRM     ERROR           RETURN IF ERROR OCCURED
06521  4 20 23462            NOP     M2013A,4        LOGIC ERROR MSG
06522  2 20 23475            NOP     M2013B,2        HEADING AND REGISTERS
06523  0 43 00434            BRM     END
```

```
                    *
                    *
                    * F28B62 TEST SECTOR ADRS 61
                    *
                    *
06524  0 43 00430          BRM     OBJECT
06525  0 43 00440          BRM     RETURN
06526  0 20 07150          NOP     XTRA1
06527  0 75 25126          LDB     =061            SECTOR 61
06530  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06531  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06532  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06533  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06534  0 43 00434          BRM     END
                    *
                    *
                    * F28B63 TEST SECTOR ADRS 62
                    *
                    *
06535  0 43 00430          BRM     OBJECT
06536  0 43 00440          BRM     RETURN
06537  0 20 07150          NOP     XTRA1
06540  0 75 25127          LDB     =062            SECTOR 62
06541  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06542  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06543  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06544  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06545  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F28B64 TEST SECTOR ADRS 63
                    *
                    *
06546  0 43 00430          BRM     OBJECT
06547  0 43 00440          BRM     RETURN
06550  0 20 07150          NOP     XTRA1
06551  0 75 25130          LDB     =063            SECTOR 63
06552  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06553  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06554  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06555  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06556  0 43 00434          BRM     END
                    *
                    *
                    * F28B65 TEST SECTOR ADRS 64
                    *
                    *
06557  0 43 00430          BRM     OBJECT
06560  0 43 00440          BRM     RETURN
06561  0 20 07150          NOP     XTRA1
06562  0 75 25003          LDB     =064            SECTOR 64
06563  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06564  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06565  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
06566  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
06567  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F29B66 TEST SECTOR ADRS 65
                    *
                    *
06570  0 43 00430          BRM     OBJECT
06571  0 43 00440          BRM     RETURN
06572  0 20 07150          NOP     XTRA1
06573  0 75 25131          LDB     #065            SECTOR 65
06574  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06575  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06576  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06577  2 20 23475          NOP     %2013B,2        HEADING AND REGISTERS
06600  0 43 00434          BRM     END
                    *
                    *
                    * F29B67 TEST SECTOR ADRS 66
                    *
                    *
06601  0 43 00430          BRM     OBJECT
06602  0 43 00440          BRM     RETURN
06603  0 20 07150          NOP     XTRA1
06604  0 75 25132          LDB     #066            SECTOR 66
06605  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06606  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06607  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06610  2 20 23475          NOP     %2013B,2        HEADING AND REGISTERS
06611  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F29B68 TEST SECTOR ADRS 67
                    *
                    *
06612  0 43 00430          BRM     OBJECT
06613  0 43 00440          BRM     RETURN
06614  0 20 07150          NOP     XTRA1
06615  0 75 25133          LDB     #067            SECTOR 67
06616  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06617  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06620  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06621  2 20 23475          NOP     %2013B,2        HEADING AND REGISTERS
06622  0 43 00434          BRM     END
                    *
                    *
                    * F29B69 TEST SECTOR ADRS 70
                    *
                    *
06623  0 43 00430          BRM     OBJECT
06624  0 43 00440          BRM     RETURN
06625  0 20 07150          NOP     XTRA1
06626  0 75 25134          LDB     #070            SECTOR 70
06627  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
06630  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06631  4 20 23462          NOP     %2013A,4        LOGIC ERROR MSG
06632  2 20 23475          NOP     %2013B,2        HEADING AND REGISTERS
06633  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F28B70 TEST SECTOR ADRS 71
                    *
                    *
06634  0 43 00430          BRM     8BJECT
06635  0 43 00440          BRM     RETURN
06636  0 20 07150          N8P     xTRA1
06637  0 75 25135          LDB     #071            SECTOR 71
06640  0 43 07056          BRM     PININ           T8 PIN IN SECTOR ADRS
06641  0 43 00460          BRM     ERR8R           RETURN IF ERR8R 8CCURED
06642  4 20 23462          N8P     M2013A,4        L8GIC ERR8R MSG
06643  2 20 23475          N8P     M2013B,2        HEADING AND REGISTERS
06644  0 43 00434          BRM     END
                    *
                    *
                    * F28B71 TEST SECTOR ADRS 72
                    *
                    *
06645  0 43 00430          BRM     8BJECT
06646  0 43 00440          BRM     RETURN
06647  0 20 07150          N8P     xTRA1
06650  0 75 25136          LDB     #072            SECTOR 72
06651  0 43 07056          BRM     PININ           T8 PIN IN SECTOR ADRS
06652  0 43 00460          BRM     ERR8R           RETURN IF ERR8R 8CCURED
06653  4 20 23462          N8P     M2013A,4        L8GIC ERR8R MSG
06654  2 20 23475          N8P     M2013B,2        HEADING AND REGISTERS
06655  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F28B72 TEST SECTOR ADRS 73
                    *
                    *
06656  0 43 00430          BRM     8BJECT
06657  0 43 00440          BRM     RETURN
06660  0 20 07150          N8P     xTRA1
06661  0 75 25137          LDB     #073            SECTOR 73
06662  0 43 07056          BRM     PININ           T8 PIN IN SECTOR ADRS
06663  0 43 00460          BRM     ERR8R           RETURN IF ERR8R 8CCURED
06664  4 20 23462          N8P     M2013A,4        L8GIC ERR8R MSG
06665  2 20 23475          N8P     M2013B,2        HEADING AND REGISTERS
06666  0 43 00434          BRM     END
                    *
                    *
                    * F28B73 TEST SECTOR ADRS 74
                    *
                    *
06667  0 43 00430          BRM     8BJECT
06670  0 43 00440          BRM     RETURN
06671  0 20 07150          N8P     xTRA1
06672  0 75 25140          LDB     #074            SECTOR 74
06673  0 43 07056          BRM     PININ           T8 PIN IN SECTOR ADRS
06674  0 43 00460          BRM     ERR8R           RETURN IF ERR8R 8CCURED
06675  4 20 23462          N8P     M2013A,4        L8GIC ERR8R MSG
06676  2 20 23475          N8P     M2013B,2        HEADING AND REGISTERS
06677  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F29874 TEST SECTOR ADRS 75
                    *
                    *
06700  0 43 00430          BRM     OBJECT
06701  0 43 00440          BRM     RETURN
06702  0 20 07150          XOP     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     ERROR           RETURN IF ERROR OCCURED
06706  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06707  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06710  0 43 00434          BRM     END
                    *
                    *
                    * F29875 TEST SECTOR ADRS 76
                    *
                    *
06711  0 43 00430          BRM     OBJECT
06712  0 43 00440          BRM     RETURN
06713  0 20 07150          XOP     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     ERROR           RETURN IF ERROR OCCURED
06717  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06720  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06721  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F29876 TEST SECTOR ADRS 77
                    *
                    *
06722  0 43 00430          BRM     OBJECT
06723  0 43 00440          BRM     RETURN
06724  0 20 07150          XOP     XTRA1
06725  0 75 25143          LDB     =077            SECTOR 77
06726  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
06727  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
06730  4 20 23462          XOP     M2013A,4        LOGIC ERROR MSG
06731  2 20 23475          XOP     M2013B,2        HEADING AND REGISTERS
06732  0 43 00434          BRM     END
                    *
                    * F29877 WRITE DISCONNECT TEST
                    *
06733  0 43 00430          BRM     OBJECT
06734  0 43 00440          BRM     RETURN
06735  0 20 07150          XOP     XTRA1           SPURIOUS INTRUPT RETURN
06736  0 76 00401          LDA     STATUS
06737  0 72 25017          SKA     =4000           BIT 12 SOFTWARE READ ONLY
06740  0 01 06753          BRU     F2977A          SKIP TEST
06741  0 76 25143          LDA     =-1
06742  0 43 15202          BRM     SPREAD          LOAD RLB BUFFER
06743  0 76 24777          LDA     =0
06744  0 43 17622          BRM     WAIT4           TEST RAD READY
06745  0 76 24751          LDA     RCODE1
06746  0 43 15147          BRM     XRYT3
06747  0 43 17622          BRM     XAIT4
06750  0 40 12026          SKSS*   10026           TEST READY CONDITION
06751  0 43 00460          BRM     ERROR
06752  0 20 23772          XOP     M2977A          DISCONNECT LOGIC
06753  0 43 00434  F2977A  BRM     END
```

```
                    *
                    * F28878 READ DISCONNECT TEST
                    *
06754  0 43 00430          BRM     OBJECT
06755  0 43 00440          BRM     RETURN
06756  0 20 07150          NOP     XTRA1
06757  0 43 17622          BRM     WAIT4
06760  0 76 24777          LDA     =0
06761  0 35 24513          STA     POTWRD
06762  0 76 24751          LDA     RCODE1
06763  0 35 24754          STA     CHANND          64 WORDS FROM RL0
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     ERROR
06770  0 20 23776          NOP     M28878A         DISCONNECT LOGIC
06771  0 43 00434          BRM     END
```



```
                    *
                    * F28879 RAD I1,I2 TEST
                    *
06772  0 43 00430          BRM     OBJECT
06773  0 43 00440          BRM     RETURN
06774  0 20 07015          NOP     F2879A
06775  0 43 17622          BRM     WAIT4           IS RAD READY
06776  0 06 10026          EOMM    10026           ALERT RAD
06777  0 13 24777          POT     =0
07000  0 06*10000          EOMM*   10000           ALERT CHANNEL
07001  4 06 17200          EOMM    17200,4         SET EARLY INTRUPT
07002  0 13 25057          POTT    =4000000+RL0    SEND ONE SECTOR
07003  0 06 02226          EOMM    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     ERROR
07012  4 20 23741          NOP     M2879A,4        CHANNEL LOGIC
07013  0 20 23747          NOP     M28879B         RAD LOGIC
07014  0 01 07025          BRU     F28879B
07015  0 02 20004  F2879A  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     ERROR
07023  2 20 23721          NOP     M10598,2        SPURIOUS ERROR
07024  0 53 24505          SKN     JMPTYP
07025  0 11 07027  F28879B BRI     *+2
07026  0 01*07027          BRU*    *+1
07027  0 20 07027          NOP     *
07030  0 43 00440          BRM     RETURN
07031  0 20 07046          NOP     F28879C
07032  0 71 25022          LDX     =40000
```

```
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          NOP     *
07043  0 43 00460          BRM     ERROR
07044  4 20 23754          NOP     M2879C,4        CHANNEL LOGIC
07045  0 20 23762          NOP     M2879D          RAD LOGIC
07046  0 02 20004  F2M79C DIR
07047  0 53 24505          SKN     JMPTYP
07050  0 11 07052          BRI     *+2
07051  0 01*07052          BRU*    *+1
07052  0 20 07052          NOP     *
07053  0 43 00434          BRM     END
07054  0 43 00456          BRM     FDONE
07055  0 01 07161          BRU     FUNC3
```



```
07056  0 00 00000  PININ   ZRO
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    010226          ALERT TO PIN
07064  0 33 24516          PINA    PINARD
07065  0 75 25001          LDB     #37777
07066  0 73 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 00460          BRM     ERROR
07072  0 60 24433          NOP     MSGPIN          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    010226          ALERT TO PIN RAD
07077  0 33 24516          PINA    PINARD
07100  0 75 25001          LDB     #37777
07101  0 73 24516          SKM     PINARD
07102  0 41 07076          BRX     PININ3
07103  0 41 07107          BRX     PININ4          EXIT ON SUCESS
07104  0 75 24516          LDB     PINARD          GET BAD WORD
07105  0 71 00430          LDX     OBJECT
07106  0 51 07056          BRR     PININ
07107  0 61 07056  PININ4  MIN     PININ
07110  0 51 07056          BRR     PININ
07111  0 00 00000  PINSET  ZRO
07112  0 75 25022          LDB     #40000          LOAD RAD REV TIME
07113  0 36 24422          STB     TIMOUT          SET SECTOR COUNT FOR 64 SECTORS
07114  0 00 00000  PINSE1  EOMM    0
07115  0 06 10226          EOMM    010226          ALERT TO PIN
07116  0 33 24516          PINA    PINARD
07117  0 72 24516          SKA     PINARD          TEST FOR ANY ONE BIT
07120  0 61 07126          BRU     PINSE2
07121  0 60 24422          SKR     TIMOUT          COUNT PASSES
```

```
07122  0 20 00000          NOP     0
07123  0 53 24422          SKN     TIMOUT
07124  0 01 07114          BRU     PINSE1          NOT COUNTED OUT
07125  0 51 07111          BRR     PINSET
07126  0 36 24422  PINSE2  STB     TIMOUT          SET COUNT TO TEST FOR ZEROS
07127  0 06 10226  PINSE3  EOMM    010226          ALERT TO PIN
07130  0 33 24516          PIN     PINWRD
07131  0 72 24516          SKA     PINWRD          TEST FOR ANY ZERO
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          BYPASS ERROR PRINTOUT
07142  0 51 07111          BRR     PINSET
07143  0 00 00000  CLRCHN  ZRO
07144  0 06*10000          EOMM*   010000          ALERT
07145  0 06 14200          EOMM    014200          SET HI ORDER BITS
07146  0 13 24777          POTT    *0              CLEAR LO BITS
07147  0 51 07143          BRR     CLRCHN
07150  0 43 14371  XTRA1   BRM     SPURI
07151  0 20 25003          NOP     *64
07152  0 01 00431          BRU     OBJECT+1
07153  0 00 00000  SETPIN  ZRO
07154  0 35 07263          STA     PININ1
07155  0 35 07276          STA     PININ3
07156  0 35 07115          STA     PINSE1+1
07157  0 35 07127          STA     PINSE3
07160  0 51 07153          BRR     SETPIN
```



```
                    *
                    *
                    * FUNCTION 03
                    *
                    *
07161  0 43 00424  FUNC3  BRM     FUNCTN
07162  0 20 20535          NOP     FPT3            FUNCTION THREE PARAMETERS
07163  0 43 00430          BRM     OBJECT
07164  0 43 13766          BRM     RADOK           TEST RAD THREE
07165  0 73 25026          SKG     *1000000        TEST FOR 4 ME RAD
07166  0 01 10370          BRU     FUNC4           SKIP FUNCTION
07167  0 76 07263          LDA     ZER31
07170  0 43 07153          BRM     SETPIN
```

```
                    *
                    *
                    * F38804 RAD PIN TEST
                    *
                    *
07171  0 43 00430        BRM     SUBJECT
07172  0 43 00440        BRM     RETURN
07173  0 20 07150        NOP     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     ERROR
07177  4 20 23416        NOP     M2004A,4       ERROR MESSAGE FOR BIT
07200  0 20 23403        NOP     M2004B
07201  0 43 00434        BRM     END            EXIT TEST
                    *
                    *
                    * F38805 RAD PIN TEST
                    *
                    *
07202  0 43 00430        BRM     SUBJECT
07203  0 43 00440        BRM     RETURN
07204  0 20 07150        NOP     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     ERROR
07210  4 20 23424        NOP     M2005A,4       ERROR MESSAGE FOR BIT
07211  0 20 23403        NOP     M2004B
07212  0 43 00434        BRM     END            EXIT TEST
```



```
                    *
                    *
                    * F38806 RAD PIN TEST
                    *
                    *
07213  0 43 00430        BRM     SUBJECT
07214  0 43 00440        BRM     RETURN
07215  0 20 07150        NOP     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     ERROR
07221  4 20 23432        NOP     M2006A,4       ERROR MESSAGE FOR BIT
07222  0 20 23403        NOP     M2004B
07223  0 43 00434        BRM     END            EXIT TEST
                    *
                    *
                    * F38807 RAD PIN TEST
                    *
                    *
07224  0 43 00430        BRM     SUBJECT
07225  0 43 00440        BRM     RETURN
07226  0 20 07150        NOP     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     ERROR
07232  4 20 23440        NOP     M2007A,4       ERROR MESSAGE FOR BIT
07233  0 20 23403        NOP     M2004B
07234  0 43 00434        BRM     END            EXIT TEST
```

```
                    *
                    *
                    * F38808 RAD PIN TEST
                    *
                    *
07235  0 43 00430         BRM     OBJECT
07236  0 43 00440         BRM     RETURN
07237  0 20 07150         NOP     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 23446         NOP     M2008A,4        ERROR MESSAGE FOR BIT
07244  0 20 23403         NOP     M2004B
07245  0 43 00434         BRM     END             EXIT TEST
                    *
                    *
                    * F38809 RAD PIN TEST
                    *
                    *
07246  0 43 00430         BRM     OBJECT
07247  0 43 00440         BRM     RETURN
07250  0 20 07150         NOP     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         NOP     M2009A,4        ERROR MESSAGE FOR BIT
07255  0 20 23403         NOP     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         NOP     XTRA1
07262  0 71 25022         LDX     =040000         TIME 40 MILLISECONDS
07263  0 06 12226  ZER31  EMM     12226           ALERT TO PIN
07264  0 33 24516         PINA    PINARD
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         NOP     M2013C,4        NO ZERO
07276  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07277  0 43 00434  ZER32  BRM     END
```

```
                    *
                    *
                    * F39B14 TEST SECTOR ADRS 01
                    *
                    *
07300  0 43 00430         BRM     SUBJECT
07301  0 43 00440         BRM     RETURN
07302  0 20 07150         NOP     XTRA1
07303  0 75 25024         LDB     #001            SECTOR 01
07304  0 43 07056         BRM     PININ           TO PIN IN SECTOR ADRS
07305  0 43 00460         BRM     ERROR           RETURN IF ERROR OCCURED
07306  4 20 23462         NOP     M2013A,4        LOGIC ERROR MSG
07307  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07310  0 43 00434         BRM     END
                    *
                    *
                    * F39B15 TEST SECTOR ADRS 02
                    *
                    *
07311  0 43 00430         BRM     SUBJECT
07312  0 43 00440         BRM     RETURN
07313  0 20 07150         NOP     XTRA1
07314  0 75 25025         LDB     #002            SECTOR 02
07315  0 43 07056         BRM     PININ           TO PIN IN SECTOR ADRS
07316  0 43 00460         BRM     ERROR           RETURN IF ERROR OCCURED
07317  4 20 23462         NOP     M2013A,4        LOGIC ERROR MSG
07320  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07321  0 43 00434         BRM     END
```



```
                    *
                    *
                    * F39B16 TEST SECTOR ADRS 03
                    *
                    *
07322  0 43 00430         BRM     SUBJECT
07323  0 43 00440         BRM     RETURN
07324  0 20 07150         NOP     XTRA1
07325  0 75 25026         LDB     #003            SECTOR 03
07326  0 43 07056         BRM     PININ           TO PIN IN SECTOR ADRS
07327  0 43 00460         BRM     ERROR           RETURN IF ERROR OCCURED
07330  4 20 23462         NOP     M2013A,4        LOGIC ERROR MSG
07331  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07332  0 43 00434         BRM     END
                    *
                    *
                    * F39B17 TEST SECTOR ADRS 04
                    *
                    *
07333  0 43 00430         BRM     SUBJECT
07334  0 43 00440         BRM     RETURN
07335  0 20 07150         NOP     XTRA1
07336  0 75 25006         LDB     #004            SECTOR 04
07337  0 43 07056         BRM     PININ           TO PIN IN SECTOR ADRS
07340  0 43 00460         BRM     ERROR           RETURN IF ERROR OCCURED
07341  4 20 23462         NOP     M2013A,4        LOGIC ERROR MSG
07342  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07343  0 43 00434         BRM     END
```

```
                    *
                    *
                    * F38B18 TEST SECTOR ADRS 05
                    *
                    *
07344  0 43 00430          BRM     OBJECT
07345  0 43 00440          BRM     RETURN
07346  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
07353  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07354  0 43 00434          BRM     END
                    *
                    *
                    * F38B19 TEST SECTOR ADRS 06
                    *
                    *
07355  0 43 00430          BRM     OBJECT
07356  0 43 00440          BRM     RETURN
07357  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
07364  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07365  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F38B20 TEST SECTOR ADRS 07
                    *
                    *
07366  0 43 00430          BRM     OBJECT
07367  0 43 00440          BRM     RETURN
07370  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
07375  2 20 23475          NOP     M2013B,2        HEADING AND REGISTER
07376  0 43 00434          BRM     END
                    *
                    *
                    * F38B21 TEST SECTOR ADRS 10
                    *
                    *
07377  0 43 00430          BRM     OBJECT
07400  0 43 00440          BRM     RETURN
07401  0 20 07150          NOP     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          NOP     M2013A,4        LOGIC ERROR MSG
07406  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07407  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F39822 TEST SECTOR ADRS 11
                    *
                    *
07410  0 43 00430          BRM     OBJECT
07411  0 43 00440          BRM     RETURN
07412  0 20 07150          NOP     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     ERROR           RETURN IF ERROR OCCURED
07416  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07417  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07420  0 43 00434          BRM     END
                    *
                    *
                    * F39823 TEST SECTOR ADRS 12
                    *
                    *
07421  0 43 00430          BRM     OBJECT
07422  0 43 00440          BRM     RETURN
07423  0 20 07150          NOP     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     ERROR           RETURN IF ERROR OCCURED
07427  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07430  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07431  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F39824 TEST SECTOR ADRS 13
                    *
                    *
07432  0 43 00430          BRM     OBJECT
07433  0 43 00440          BRM     RETURN
07434  0 20 07150          NOP     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     ERROR           RETURN IF ERROR OCCURED
07440  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07441  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07442  0 43 00434          BRM     END
                    *
                    *
                    * F39825 TEST SECTOR ADRS 14
                    *
                    *
07443  0 43 00430          BRM     OBJECT
07444  0 43 00440          BRM     RETURN
07445  0 20 07150          NOP     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     ERROR           RETURN IF ERROR OCCURED
07451  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07452  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07453  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F38B26 TEST SECTOR ADRS 15
                    *
                    *
07454  0 43 00430          BRM     OBJECT
07455  0 43 00440          BRM     RETURN
07456  0 20 07150          NOP     XTRA1
07457  0 75 25066          LDB     =015            SECTOR 15
07460  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
07461  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07462  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07463  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07464  0 43 00434          BRM     END
                    *
                    *
                    * F38B27 TEST SECTOR ADRS 16
                    *
                    *
07465  0 43 00430          BRM     OBJECT
07466  0 43 00440          BRM     RETURN
07467  0 20 07150          NOP     XTRA1
07470  0 75 25067          LDB     =016            SECTOR 16
07471  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
07472  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07473  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07474  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07475  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F38B28 TEST SECTOR ADRS 17
                    *
                    *
07476  0 43 00430          BRM     OBJECT
07477  0 43 00440          BRM     RETURN
07500  0 20 07150          NOP     XTRA1
07501  0 75 25036          LDB     =017            SECTOR 17
07502  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
07503  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07504  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07505  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07506  0 43 00434          BRM     END
                    *
                    *
                    * F38B29 TEST SECTOR ADRS 20
                    *
                    *
07507  0 43 00430          BRM     OBJECT
07510  0 43 00440          BRM     RETURN
07511  0 20 07150          NOP     XTRA1
07512  0 75 25010          LDB     =020            SECTOR 20
07513  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
07514  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07515  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07516  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07517  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F38B30 TEST SECT0R ADRS 21
                    *
                    *
07520  0 43 00430          BRM     0BJECT
07521  0 43 00440          BRM     RETURN
07522  0 20 07150          N0P     XTRA1
07523  0 75 25073          LDB     #021            SECT0R 21
07524  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07525  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07526  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MSG
07527  2 20 23475          N0P     M2013B,2        HEADING AND REGISTERS
07530  0 43 00434          BRM     END
                    *
                    *
                    * F38B31 TEST SECT0R ADRS 22
                    *
                    *
07531  0 43 00430          BRM     0BJECT
07532  0 43 00440          BRM     RETURN
07533  0 20 07150          N0P     XTRA1
07534  0 75 25071          LDB     #022            SECT0R 22
07535  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07536  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07537  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MSG
07540  2 20 23475          N0P     M2013B,2        HEADING AND REGISTERS
07541  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F38B32 TEST SECT0R ADRS 23
                    *
                    *
07542  0 43 00430          BRM     0BJECT
07543  0 43 00440          BRM     RETURN
07544  0 20 07150          N0P     XTRA1
07545  0 75 25072          LDB     #023            SECT0R 23
07546  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07547  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07550  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MSG
07551  2 20 23475          N0P     M2013B,2        HEADING AND REGISTERS
07552  0 43 00434          BRM     END
                    *
                    *
                    * F38B33 TEST SECT0R ADRS 24
                    *
                    *
07553  0 43 00430          BRM     0BJECT
07554  0 43 00440          BRM     RETURN
07555  0 20 07150          N0P     XTRA1
07556  0 75 25073          LDB     #24             SECT0R  24
07557  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07560  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07561  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MSG
07562  2 20 23 75          N0P     M2013B,2        HEADING AND REGISTERS
07563  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F30834 TEST SECTOR ADRS 25
                    *
                    *
07564  0 43 00430         BRM     OBJECT
07565  0 43 00440         BRM     RETURN
07566  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
07573  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07574  0 43 00434         BRM     END
                    *
                    *
                    * F30835 TEST SECTOR ADRS 26
                    *
                    *
07575  0 43 00430         BRM     OBJECT
07576  0 43 00440         BRM     RETURN
07577  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
07604  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07605  0 43 00434         BRM     END
```



```
                    *
                    *
                    * F30836 TEST SECTOR ADRS 27
                    *
                    *
07606  0 43 00430         BRM     OBJECT
07607  0 43 00440         BRM     RETURN
07610  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
07615  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07616  0 43 00434         BRM     END
                    *
                    *
                    * F30837 TEST SECTOR ADRS 30
                    *
                    *
07617  0 43 00430         BRM     OBJECT
07620  0 43 00440         BRM     RETURN
07621  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
07626  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
07627  0 43 00434         BRM     END
```

```
                    *
                    *
                    * F38838 TEST SECTOR ADRS 31
                    *
                    *
07630  0 43 00430          BRM     OBJECT
07631  0 43 00440          BRM     RETURN
07632  0 20 07150          NOP     XTRA1
07633  0 75 25100          LDB     =031            SECTOR 31
07634  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
07635  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07636  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07637  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07640  0 43 00434          BRM     END
                    *
                    *
                    * F38839 TEST SECTOR ADRS 32
                    *
                    *
07641  0 43 00430          BRM     OBJECT
07642  0 43 00440          BRM     RETURN
07643  0 20 07150          NOP     XTRA1
07644  0 75 25101          LDB     =032            SECTOR 32
07645  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
07646  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07647  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07650  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07651  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F38840 TEST SECTOR ADRS 33
                    *
                    *
07652  0 43 00430          BRM     OBJECT
07653  0 43 00440          BRM     RETURN
07654  0 20 07150          NOP     XTRA1
07655  0 75 25102          LDB     =033            SECTOR 33
07656  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
07657  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07660  4 20 23462          NOP     M2013A,4        LOGIC ERROR MS3
07661  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07662  0 43 00434          BRM     END
                    *
                    *
                    * F38841 TEST SECTOR ADRS 34
                    *
                    *
07663  0 43 00430          BRM     OBJECT
07664  0 43 00440          BRM     RETURN
07665  0 20 07150          NOP     XTRA1
07666  0 75 25103          LDB     =034            SECTOR 34
07667  0 43 07256          BRM     PININ           TO PIN IN SECTOR ADRS
07670  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
07671  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
07672  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
07673  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F30B42 TEST SI          (0R ADRS 35
                    *
                    *
07674  0 43 00430          BRM     0BJECT
07675  0 43 00440          BRM     RETURN
07676  0 20 07150          N0P     XTRA1
07677  0 75 25104          LDB     #035            SECT0R 35
07700  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07701  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07702  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MS0
07703  2 20 23475          N0P     M20138,2        HEADING AND REGISTERS
07704  0 43 00434          BRM     END
                    *
                    *
                    * F30B43 TEST SECT0R ADRS 36
                    *
                    *
07705  0 43 00430          BRM     0BJECT
07706  0 43 00440          BRM     RETURN
07707  0 20 07150          N0P     XTRA1
07710  0 75 25105          LDB     #036            SECT0R 36
07711  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07712  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07713  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MS0
07714  2 20 23475          N0P     M20138,2        HEADING AND REGISTERS
07715  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F30B44 TEST SECT0R ADRS 37
                    *
                    *
07716  0 43 00430          BRM     0BJECT
07717  0 43 00440          BRM     RETURN
07720  0 20 07150          N0P     XTRA1
07721  0 75 25037          LDB     #037            SECT0R 37
07722  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07723  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07724  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MS0
07725  2 20 23475          N0P     M20138,2        HEADING AND REGISTERS
07726  0 43 00434          BRM     END
                    *
                    *
                    * F30B45 TEST SECT0R ADRS 40
                    *
                    *
07727  0 43 00430          BRM     0BJECT
07730  0 43 00440          BRM     RETURN
07731  0 20 07150          N0P     XTRA1
07732  0 75 25011          LDB     #040            SECT0R 40
07733  0 43 07056          BRM     PININ           T0 PIN IN SECT0R ADRS
07734  0 43 00460          BRM     ERR0R           RETURN IF ERR0R 0CCURED
07735  4 20 23462          N0P     M2013A,4        L0GIC ERR0R MS0
07736  2 20 23475          N0P     M20138,2        HEADING AND REGISTERS
07737  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F38846 TEST SECTOR ADRS 41
                    *
                    *
07740  0 43 02430        BRM     OBJECT
07741  0 43 02440        BRM     RETURN
07742  0 20 07150        NOP     XTRA1
07743  0 75 25106        LDB     =041            SECTOR 41
07744  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
07745  0 43 02460        BRM     ERROR           RETURN IF ERROR OCCURED
07746  4 20 23462        NOP     *2013A,4        LOGIC ERROR MSG
07747  2 20 23475        NOP     *2013B,2        HEADING AND REGISTERS
07750  0 43 02434        BRM     END
                    *
                    *
                    * F38847 TEST SECTOR ADRS 42
                    *
                    *
07751  0 43 02430        BRM     OBJECT
07752  0 43 02440        BRM     RETURN
07753  0 20 07150        NOP     XTRA1
07754  0 75 25107        LDB     =042            SECTOR 42
07755  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
07756  0 43 02460        BRM     ERROR           RETURN IF ERROR OCCURED
07757  4 20 23462        NOP     *2013A,4        LOGIC ERROR MSG
07760  2 20 23475        NOP     *2013B,2        HEADING AND REGISTERS
07761  0 43 02434        BRM     END
```



```
                    *
                    *
                    * F38848 TEST SECTOR ADRS 43
                    *
                    *
07762  0 43 02430        BRM     OBJECT
07763  0 43 02440        BRM     RETURN
07764  0 20 07150        NOP     XTRA1
07765  0 75 25110        LDB     =043            SECTOR 43
07766  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
07767  0 43 02460        BRM     ERROR           RETURN IF ERROR OCCURED
07770  4 20 23462        NOP     *2013A,4        LOGIC ERROR MSG
07771  2 20 23475        NOP     *2013B,2        HEADING AND REGISTERS
07772  0 43 02434        BRM     END
                    *
                    *
                    * F38849 TEST SECTOR ADRS 44
                    *
                    *
07773  0 43 02430        BRM     OBJECT
07774  0 43 02440        BRM     RETURN
07775  0 20 07150        NOP     XTRA1
07776  0 75 25111        LDB     =044            SECTOR 44
07777  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
10000  0 43 02460        BRM     ERROR           RETURN IF ERROR OCCURED
10001  4 20 23462        NOP     *2013A,4        LOGIC ERROR MSG
10002  2 20 23475        NOP     *2013B,2        HEADING AND REGISTERS
10003  0 43 02434        BRM     END
```

```
                    *
                    *
                    * F38B50 TEST SECTOR ADRS 45
                    *
                    *
10004  0 43 00430           BRM     OBJECT
10005  0 43 00440           BRM     RETURN
10006  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10013  2 20 23475           NOP     M20138,2        HEADING AND REGISTERS
10014  0 43 00434           BRM     END
                    *
                    *
                    * F38B51 TEST SECTOR ADRS 46
                    *
                    *
10015  0 43 00430           BRM     OBJECT
10016  0 43 00440           BRM     RETURN
10017  0 20 07150           NOP     XTRA1
10020  0 75 25113           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           NOP     M2013A,4        LOGIC ERROR MSG
10024  2 20 23475           NOP     M20138,2        HEADING AND REGISTERS
10025  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F38B52 TEST SECTOR ADRS 47
                    *
                    *
10026  0 43 00430           BRM     OBJECT
10027  0 43 00440           BRM     RETURN
10030  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10035  2 20 23475           NOP     M20138,2        HEADING AND REGISTERS
10036  0 43 00434           BRM     END
                    *
                    *
                    * F38B53 TEST SECTOR ADRS 50
                    *
                    *
10037  0 43 00430           BRM     OBJECT
10040  0 43 00440           BRM     RETURN
10041  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10046  2 20 23475           NOP     M20138,2        HEADING AND REGISTERS
10047  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F38B54 TEST SECTOR ADRS 51
                    *
                    *
10050  0 43 00430           BRM     OBJECT
10051  0 43 00440           BRM     RETURN
10052  0 20 07150           NOP     XTRA1
10053  0 75 25116           LDB     =051            SECTOR 51
10054  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10055  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10056  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10057  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10060  0 43 00434           BRM     END
                    *
                    *
                    * F38B55 TEST SECTOR ADRS 52
                    *
                    *
10061  0 43 00430           BRM     OBJECT
10062  0 43 00440           BRM     RETURN
10063  0 20 07150           NOP     XTRA1
10064  0 75 25117           LDB     =052            SECTOR 52
10065  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10066  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10067  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10070  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10071  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F38B56 TEST SECTOR ADRS 53
                    *
                    *
10072  0 43 00430           BRM     OBJECT
10073  0 43 00440           BRM     RETURN
10074  0 20 07150           NOP     XTRA1
10075  0 75 25120           LDB     =053            SECTOR 53
10076  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10077  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10100  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10101  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10102  0 43 00434           BRM     END
                    *
                    *
                    * F38B57 TEST SECTOR ADRS 54
                    *
                    *
10103  0 43 00430           BRM     OBJECT
10104  0 43 00440           BRM     RETURN
10105  0 20 07150           NOP     XTRA1
10106  0 75 25121           LDB     =054            SECTOR 54
10107  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10110  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10111  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10112  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10113  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F38B58 TEST SECTOR ADRS 55
                    *
                    *
10114  0 43 00430           BRM     OBJECT
10115  0 43 00440           BRM     RETURN
10116  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10123  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10124  0 43 00434           BRM     END
                    *
                    *
                    * F38B59 TEST SECTOR ADRS 56
                    *
                    *
10125  0 43 00430           BRM     OBJECT
10126  0 43 00440           BRM     RETURN
10127  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10134  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10135  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F38B60 TEST SECTOR ADRS 57
                    *
                    *
10136  0 43 00430           BRM     OBJECT
10137  0 43 00440           BRM     RETURN
10140  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10145  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10146  0 43 00434           BRM     END
                    *
                    *
                    * F38B61 TEST SECTOR ADRS 60
                    *
                    *
10147  0 43 00430           BRM     OBJECT
10150  0 43 00440           BRM     RETURN
10151  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
10156  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10157  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F39B62 TEST SECTOR ADRS 61
                    *
                    *
10160  0 43 00430           BRM     OBJECT
10161  0 43 00440           BRM     RETURN
10162  0 20 07150           NOP     XTRA1
10163  0 75 25126           LDB     =061            SECTOR 61
10164  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10165  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10166  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10167  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10170  0 43 00434           BRM     END
                    *
                    *
                    * F39B63 TEST SECTOR ADRS 62
                    *
                    *
10171  0 43 00430           BRM     OBJECT
10172  0 43 00440           BRM     RETURN
10173  0 20 07150           NOP     XTRA1
10174  0 75 25127           LDB     =062            SECTOR 62
10175  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10176  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10177  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10200  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10201  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F39B64 TEST SECTOR ADRS 63
                    *
                    *
10202  0 43 00430           BRM     OBJECT
10203  0 43 00440           BRM     RETURN
10204  0 20 07150           NOP     XTRA1
10205  0 75 25130           LDB     =063            SECTOR 63
10206  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10207  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10210  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10211  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10212  0 43 00434           BRM     END
                    *
                    *
                    * F39B65 TEST SECTOR ADRS 64
                    *
                    *
10213  0 43 00430           BRM     OBJECT
10214  0 43 00440           BRM     RETURN
10215  0 20 07150           NOP     XTRA1
10216  0 75 25003           LDB     =064            SECTOR 64
10217  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10220  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10221  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10222  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10223  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F38B66 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     M2013A,4        LOGIC ERROR MSG
10233  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10234  0 43 00434           BRM     END
                    *
                    *
                    * F38B67 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     M2013A,4        LOGIC ERROR MSG
10244  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10245  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F38B68 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     M2013A,4        LOGIC ERROR MSG
10255  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10256  0 43 00434           BRM     END
                    *
                    *
                    * F38B69 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     M2013A,4        LOGIC ERROR MSG
10266  2 20 23475           NOP     M2013B,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          NOP     XTRA1
10273  0 75 25135          LDB     =071            SECTOR 71
10274  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10275  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10276  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10277  2 20 23475          NOP     M2013B,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          NOP     XTRA1
10304  0 75 25136          LDB     =072            SECTOR 72
10305  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10306  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10307  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10310  2 20 23475          NOP     M2013B,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          NOP     XTRA1
10315  0 75 25137          LDB     =073            SECTOR 73
10316  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10317  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10320  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10321  2 20 23475          NOP     M2013B,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          NOP     XTRA1
10326  0 75 25140          LDB     =074            SECTOR 74
10327  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10330  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10331  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10332  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
10333  0 43 00434          BRM     END
```

```
                    *
                    *
                    * F38B74 TEST SECTOR ADRS 75
                    *
                    *
10334  0 43 00430          BRM     OBJECT
10335  0 43 00440          BRM     RETURN
10336  0 20 07150          NOP     XTRA1
10337  0 75 25141          LDB     =075            SECTOR 75
10340  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10341  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10342  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10343  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
10344  0 43 00434          BRM     END
                    *
                    *
                    * F38B75 TEST SECTOR ADRS 76
                    *
                    *
10345  0 43 00430          BRM     OBJECT
10346  0 43 00440          BRM     RETURN
10347  0 20 07150          NOP     XTRA1
10350  0 75 25142          LDB     =076            SECTOR 76
10351  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10352  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10353  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10354  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
10355  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F38B76 TEST SECTOR ADRS 77
                    *
                    *
10356  0 43 00430          BRM     OBJECT
10357  0 43 00440          BRM     RETURN
10360  0 20 07150          NOP     XTRA1
10361  0 75 25040          LDB     =077            SECTOR 77
10362  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
10363  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
10364  4 20 23462          NOP     M2013A,4        LOGIC ERROR MSG
10365  2 20 23475          NOP     M2013B,2        HEADING AND REGISTERS
10366  0 43 00434          BRM     END
10367  0 43 00456          BRM     FDONE
```

```
                        *
                        *
                        * 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     RAD0K         TEST RAD FOUR
10374  0 73 25237         SKG     *2000000      TEST FOR 6 MEG RAD
10375  0 01 11877         BRU     FUNC5         SKIP FUNCTION
10376  0 74 10472         LDA     ZER41
10377  0 43 07153         BRM     SETPIN        SET CORRECT PIN FOM
```



```
                        *
                        *
                        * F48804 RAD PIN TEST
                        *
                        *
10400  0 43 00430         BRM     OBJECT
10401  0 43 00442         BRM     RETURN
10402  0 60 07150         NBP     XTRA1         SPURIOUS INTRUPT HANDLER
10403  0 76 25004         LDA     *000001
10404  0 43 07111         BRM     PINSET        PIN TRANSFER AND TEST ROUTINE
10405  0 43 00460         BRM     ERROR
10406  4 20 23414         NBP     M2004A,4      ERROR MESSAGE FOR BIT
10407  0 20 23403         NBP     M20048
10410  0 43 00434         BRM     END           EXIT TEST
                        *
                        *
                        * F48805 RAD PIN TEST
                        *
                        *
10411  0 43 00430         BRM     OBJECT
10412  0 43 00440         BRM     RETURN
10413  0 20 07150         NBP     XTRA1         SPURIOUS INTRUPT HANDLER
10414  0 76 25005         LDA     *000002
10415  0 43 07111         BRM     PINSET        PIN TRANSFER AND TEST ROUTINE
10416  0 43 00460         BRM     ERROR
10417  4 20 23424         NBP     M2005A,4      ERROR MESSAGE FOR BIT
10420  0 20 23403         NBP     M20048
10421  0 43 00434         BRM     END           EXIT TEST
```

```
                        *
                        *
                        * F40B06 RAD PIN TEST
                        *
                        *
10422  0 43 00430       BRM     0BJECT
10423  0 43 00440       BRM     RETURN
10424  0 20 07150       N0P     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     ERR0R
10430  4 20 23432       N0P     M2006A,4       ERROR MESSAGE FOR BIT
10431  0 20 23403       N0P     M2004B
10432  0 43 00434       BRM     END            EXIT TEST
                        *
                        *
                        * F40B07 RAD PIN TEST
                        *
                        *
10433  0 43 00430       BRM     0BJECT
10434  0 43 00440       BRM     RETURN
10435  0 20 07150       N0P     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     ERR0R
10441  4 20 23440       N0P     M2007A,4       ERROR MESSAGE FOR BIT
10442  0 20 23403       N0P     M2004B
10443  0 43 00434       BRM     END            EXIT TEST
```



```
                        *
                        *
                        * F40B08 RAD PIN TEST
                        *
                        *
10444  0 43 00430       BRM     0BJECT
10445  0 43 00440       BRM     RETURN
10446  0 20 07150       N0P     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     ERR0R
10452  4 20 23446       N0P     M2008A,4       ERROR MESSAGE FOR BIT
10453  0 20 23403       N0P     M2004B
10454  0 43 00434       BRM     END            EXIT TEST
                        *
                        *
                        * F40B09 RAD PIN TEST
                        *
                        *
10455  0 43 00430       BRM     0BJECT
10456  0 43 00440       BRM     RETURN
10457  0 20 07150       N0P     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     ERR0R
10463  4 20 23454       N0P     M2009A,4       ERROR MESSAGE FOR BIT
10464  0 20 23403       N0P     M2004B
10465  0 43 00434       BRM     END            EXIT TEST
```

```
                    *
                    *
                    * FUNCTION 04 TEST SECTOR COUNTER
                    *
                    *
10466  0 43 00430           BRM     OBJECT          FIND THE ZERO SECTOR
10467  0 43 00440           BRM     RETURN
10470  0 20 07150           NOP     XTRA1
10471  0 71 25000           LDX     =040000         TIME 40 MILLISECONDS
10472  0 06 14226  ZER41     EOM     14226           ALERT TO PIN
10473  0 35 24616           PIN     PINWRD
10474  0 76 24616           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     OBJECT
10503  0 43 00460           BRM     ERROR
10504  4 20 23511           NOP     M2013C,4        NO ZERO
10505  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10506  0 43 00434  ZER42    BRM     END
```



```
                    *
                    *
                    * F40814 TEST SECTOR ADRS 01
                    *
                    *
10507  0 43 00430           BRM     OBJECT
10510  0 43 00440           BRM     RETURN
10511  0 20 07150           NOP     XTRA1
10512  0 75 25004           LDB     =001            SECTOR 01
10513  0 43 07456           BRM     PININ           TO PIN IN SECTOR ADRS
10514  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10515  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10516  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10517  0 43 00434           BRM     END
                    *
                    *
                    * F40815 TEST SECTOR ADRS 02
                    *
                    *
10520  0 43 00430           BRM     OBJECT
10521  0 43 00440           BRM     RETURN
10522  0 20 07150           NOP     XTRA1
10523  0 75 25005           LDB     =002            SECTOR 02
10524  0 43 07456           BRM     PININ           TO PIN IN SECTOR ADRS
10525  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10526  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10527  2 20 23475           NOP     M2013B,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           NOP     XTRA1
10534  0 75 25034           LDB     =003            SECTOR 03
10535  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10536  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10537  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10540  2 20 23475           NOP     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           NOP     XTRA1
10545  0 75 25006           LDB     =004            SECTOR 04
10546  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10547  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10550  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10551  2 20 23475           NOP     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           NOP     XTRA1
10556  0 75 25060           LDB     =005            SECTOR 05
10557  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10560  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10561  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10562  2 20 23475           NOP     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           NOP     XTRA1
10567  0 75 25061           LDB     =006            SECTOR 06
10570  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
10571  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10572  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10573  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10574  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F48820 TEST SECTOR ADRS 07
                    *
                    *
10575  0 43 00430           BRM     OBJECT
10576  0 43 00440           BRM     RETURN
10577  0 20 07150           NOP     XTRA1
10600  0 75 25007           LDB     =007            SECTOR 07
10601  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
10602  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10603  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10604  2 20 23475           NOP     M2013B,2        HEADING AND REGISTER
10605  0 43 00434           BRM     END
                    *
                    *
                    * F48821 TEST SECTOR ADRS 10
                    *
                    *
10606  0 43 00430           BRM     OBJECT
10607  0 43 00440           BRM     RETURN
10610  0 20 07150           NOP     XTRA1
10611  0 75 25010           LDB     =010            SECTOR 10
10612  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
10613  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10614  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10615  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10616  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F48822 TEST SECTOR ADRS 11
                    *
                    *
10617  0 43 00430           BRM     OBJECT
10620  0 43 00440           BRM     RETURN
10621  0 20 07150           NOP     XTRA1
10622  0 75 25011           LDB     =011            SECTOR 11
10623  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
10624  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10625  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10626  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10627  0 43 00434           BRM     END
                    *
                    *
                    * F48823 TEST SECTOR ADRS 12
                    *
                    *
10630  0 43 00430           BRM     OBJECT
10631  0 43 00440           BRM     RETURN
10632  0 20 07150           NOP     XTRA1
10633  0 75 25012           LDB     =012            SECTOR 12
10634  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
10635  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
10636  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
10637  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
10640  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F40B24 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 25064         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     M2013A,4        LOGIC ERROR MSG
10650  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
10651  0 43 00434         BRM     END
                    *
                    *
                    * F40B25 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 25065         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     M2013A,4        LOGIC ERROR MSG
10661  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
10662  0 43 00434         BRM     END
```



```
                    *
                    *
                    * F40B26 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 25066         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     M2013A,4        LOGIC ERROR MSG
10672  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
10673  0 43 00434         BRM     END
                    *
                    *
                    * F40B27 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 25067         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     M2013A,4        LOGIC ERROR MSG
10703  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
10704  0 43 00434         BRM     END
```

```
                    *
                    *
                    * F48B28 TEST SECTOR ADRS 17
                    *
                    *
10705  0 43 0.430        BRM     OBJECT
10706  0 43 00440        BRM     RETURN
10707  0 20 07150        NOP     XTRA1
10710  0 75 25036        LDB     •017            SECTOR 17
10711  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
10712  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
10713  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
10714  2 20 23475        NOP     M2013B,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        NOP     XTRA1
10721  0 75 25 1.        LDB     •020            SECTOR 20
10722  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
10723  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
10724  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
10725  2 20 23475        NOP     M2013B,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        NOP     XTRA1
10732  0 75 25072        LDB     •021            SECTOR 21
10733  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
10734  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
10735  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
10736  2 20 23475        NOP     M2013B,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        NOP     XTRA1
10743  0 75 25071        LDB     •022            SECTOR 22
10744  0 43 07056        BRM     PININ           TO PIN IN SECTOR ADRS
10745  0 43 00460        BRM     ERROR           RETURN IF ERROR OCCURED
10746  4 20 23462        NOP     M2013A,4        LOGIC ERROR MSG
10747  2 20 23475        NOP     M2013B,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       NOP     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       NOP     M2013A,4        LOGIC ERROR MSG
10760  2 20 23475       NOP     M2013B,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       NOP     XTRA1
10765  0 75 25073       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       NOP     M2013A,4        LOGIC ERROR MSG
10771  2 20 23475       NOP     M2013B,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       NOP     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       NOP     M2013A,4        LOGIC ERROR MSG
11002  2 20 23475       NOP     M2013B,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       NOP     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       NOP     M2013A,4        LOGIC ERROR MSG
11013  2 20 23475       NOP     M2013B,2        HEADING AND REGISTERS
11014  0 43 00434       BRM     END
```

```
                    *
                    *
                    * F40836 TEST SECTOR ADRS 27
                    *
                    *
11015  0 43 00430          BRM     SBJECT
11016  0 43 00440          BRM     RETURN
11017  0 20 07150          XBP     XTRA1
11020  0 75 25026          LDB     #027            SECTOR 27
11021  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
11022  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
11023  4 20 23462          XBP     M2013A,4        LOGIC ERROR MSG
11024  2 20 23475          XBP     M2013B,2        HEADING AND REGISTERS
11025  0 43 00434          BRM     END
                    *
                    *
                    * F40837 TEST SECTOR ADRS 30
                    *
                    *
11026  0 43 00430          BRM     SBJECT
11027  0 43 00440          BRM     RETURN
11030  0 20 07150          XBP     XTRA1
11031  0 75 25036          LDB     #036            SECTOR 30
11032  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
11033  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
11034  4 20 23462          XBP     M2013A,4        LOGIC ERROR MSG
11035  2 20 23475          XBP     M2013B,2        HEADING AND REGISTERS
11036  0 43 00434          BRM     END
```



```
                    *
                    *
                    * F40838 TEST SECTOR ADRS 31
                    *
                    *
11037  0 43 00430          BRM     SBJECT
11040  0 43 00440          BRM     RETURN
11041  0 20 07150          XBP     XTRA1
11042  0 75 25130          LDB     #031            SECTOR 31
11043  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
11044  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
11045  4 20 23462          XBP     M2013A,4        LOGIC ERROR MSG
11046  2 20 23475          XBP     M2013B,2        HEADING AND REGISTERS
11047  0 43 00434          BRM     END
                    *
                    *
                    * F40839 TEST SECTOR ADRS 32
                    *
                    *
11050  0 43 00430          BRM     SBJECT
11051  0 43 00440          BRM     RETURN
11052  0 20 07150          XBP     XTRA1
11053  0 75 25101          LDB     #032            SECTOR 32
11054  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
11055  0 43 00460          BRM     ERROR           RETURN IF ERROR OCCURED
11056  4 20 23462          XBP     M2013A,4        LOGIC ERROR MSG
11057  2 20 23475          XBP     M2013B,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     ERROR           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     ERROR           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     ERROR           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     ERROR           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
```

```
                    *
                    *
                    * F40844 TEST SECTOR ADRS 37
                    *
                    *
11125  0 43 00430       BRM     SBJECT
11126  0 43 00440       BRM     RETURN
11127  0 20 07150       XBP     XTRA1
11130  0 75 25037       LDB     =037            SECTOR 37
11131  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
11132  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
11133  4 20 23462       XBP     M2013A,4        LOGIC ERROR MSG
11134  2 20 23475       XBP     M2013B,2        HEADING AND REGISTERS
11135  0 43 00434       BRM     END
                    *
                    *
                    * F40845 TEST SECTOR ADRS 40
                    *
                    *
11136  0 43 00430       BRM     SBJECT
11137  0 43 00440       BRM     RETURN
11140  0 20 07150       XBP     XTRA1
11141  0 75 25040       LDB     =040            SECTOR 40
11142  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
11143  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
11144  4 20 23462       XBP     M2013A,4        LOGIC ERROR MSG
11145  2 20 23475       XBP     M2013B,2        HEADING AND REGISTERS
11146  0 43 00434       BRM     END
```



```
                    *
                    *
                    * F40846 TEST SECTOR ADRS 41
                    *
                    *
11147  0 43 00430       BRM     SBJECT
11150  0 43 00440       BRM     RETURN
11151  0 20 07150       XBP     XTRA1
11152  0 75 25041       LDB     =041            SECTOR 41
11153  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
11154  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
11155  4 20 23462       XBP     M2013A,4        LOGIC ERROR MSG
11156  2 20 23475       XBP     M2013B,2        HEADING AND REGISTERS
11157  0 43 00434       BRM     END
                    *
                    *
                    * F40847 TEST SECTOR ADRS 42
                    *
                    *
11160  0 43 00430       BRM     SBJECT
11161  0 43 00440       BRM     RETURN
11162  0 20 07150       XBP     XTRA1
11163  0 75 25042       LDB     =042            SECTOR 42
11164  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
11165  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
11166  4 20 23462       XBP     M2013A,4        LOGIC ERROR MSG
11167  2 20 23475       XBP     M2013B,2        HEADING AND REGISTERS
11170  0 43 00434       BRM     END
```

```
                    *
                    *
                    * F40848 TEST SECTOR ADRS 43
                    *
                    *
11171  0 43 00430         BRM     OBJECT
11172  0 43 00440         BRM     RETURN
11173  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
11200  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
11201  0 43 00434         BRM     END
                    *
                    *
                    * F40849 TEST SECTOR ADRS 44
                    *
                    *
11202  0 43 00430         BRM     OBJECT
11203  0 43 00440         BRM     RETURN
11204  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
11211  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
11212  0 43 00434         BRM     END
```



```
                    *
                    *
                    * F40850 TEST SECTOR ADRS 45
                    *
                    *
11213  0 43 00430         BRM     OBJECT
11214  0 43 00440         BRM     RETURN
11215  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
11222  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
11223  0 43 00434         BRM     END
                    *
                    *
                    * F40851 TEST SECTOR ADRS 46
                    *
                    *
11224  0 43 00430         BRM     OBJECT
11225  0 43 00440         BRM     RETURN
11226  0 20 07150         NOP     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         NOP     M2013A,4        LOGIC ERROR MSG
11233  2 20 23475         NOP     M2013B,2        HEADING AND REGISTERS
11234  0 43 00434         BRM     END
```

```
                    *
                    *
                    * F49852 TEST SECTOR ADRS 47
                    *
                    *
11235  0 43 00430           BRM     SBJECT
11236  0 43 00440           BRM     RETURN
11237  0 20 07150           NOP     XTRA1
11240  0 75 25114           LDB     •047            SECTOR 47
11241  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
11242  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11243  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11244  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11245  0 43 00434           BRM     END
                    *
                    *
                    * F49853 TEST SECTOR ADRS 50
                    *
                    *
11246  0 43 00430           BRM     SBJECT
11247  0 43 00440           BRM     RETURN
11250  0 20 07150           NOP     XTRA1
11251  0 75 25116           LDB     •050            SECTOR 50
11252  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
11253  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11254  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11255  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11256  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F49854 TEST SECTOR ADRS 51
                    *
                    *
11257  0 43 00430           BRM     SBJECT
11260  0 43 00440           BRM     RETURN
11261  0 20 07150           NOP     XTRA1
11262  0 75 25116           LDB     •051            SECTOR 51
11263  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
11264  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11265  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11266  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11267  0 43 00434           BRM     END
                    *
                    *
                    * F49855 TEST SECTOR ADRS 52
                    *
                    *
11270  0 43 00430           BRM     SBJECT
11271  0 43 00440           BRM     RETURN
11272  0 20 07150           NOP     XTRA1
11273  0 75 25117           LDB     •052            SECTOR 52
11274  0 43 07756           BRM     PININ           TO PIN IN SECTOR ADRS
11275  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11276  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11277  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11300  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F40856 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
                    *
                    *
                    * F40857 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
```



```
                    *
                    *
                    * F40858 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
                    *
                    *
                    * F40859 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           NOP     XTRA1
11350  0 75 25124           LDB     •057            SECTOR 57
11351  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11352  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11353  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11354  2 20 23475           NOP     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           NOP     XTRA1
11361  0 75 25125           LDB     •060            SECTOR 60
11362  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11363  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11364  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11365  2 20 23475           NOP     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           NOP     XTRA1
11372  0 75 25126           LDB     •061            SECTOR 61
11373  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11374  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11375  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11376  2 20 23475           NOP     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           NOP     XTRA1
11403  0 75 25127           LDB     •062            SECTOR 62
11404  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11405  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11406  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11407  2 20 23475           NOP     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  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11464  2 20 23475           NOP     M2013B,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  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11475  2 20 23475           NOP     M2013B,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  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11506  2 20 23475           NOP     M2013B,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  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11517  2 20 23475           NOP     M2013B,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     XTRA1
11524  0 75 25137           LDB     =073            SECTOR 73
11525  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11526  0 43 00460           BRM     ERROR           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     XTRA1
11535  0 75 25140           LDB     =074            SECTOR 74
11536  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11537  0 43 00460           BRM     ERROR           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     XTRA1
11546  0 75 25141           LDB     =075            SECTOR 75
11547  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11550  0 43 00460           BRM     ERROR           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     XTRA1
11557  0 75 25142           LDB     =076            SECTOR 76
11560  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11561  0 43 00460           BRM     ERROR           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           NOP     XTRA1
11570  0 75 25040           LDB     =077            SECTOR 77
11571  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
11572  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
11573  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11574  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11575  0 43 00434           BRM     END
11576  0 43 00456           BRM     FDONE
```



```
                    *
                    *
                    * FUNCTION 05
                    *
                    *
11577  0 43 00424   FUNC5   BRM     FUNCTN
11600  0 20 07551           NOP     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
```

```
                    *
                    *
                    * F50804 RAD PIN TEST
                    *
                    *
11607  0 43 00430           BRM     OBJECT
11610  0 43 00440           BRM     RETURN
11611  0 20 07150           NOP     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     ERROR
11615  4 20 23416           NOP     M20004A,4      ERROR MESSAGE FOR BIT
11616  0 20 23403           NOP     M20004B
11617  0 43 00434           BRM     END            EXIT TEST
                    *
                    *
                    * F50805 RAD PIN TEST
                    *
                    *
11620  0 43 00430           BRM     OBJECT
11621  0 43 00440           BRM     RETURN
11622  0 20 07150           NOP     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     ERROR
11626  4 20 23424           NOP     M20005A,4      ERROR MESSAGE FOR BIT
11627  0 20 23403           NOP     M20004B
11630  0 43 00434           BRM     END            EXIT TEST
```



```
                    *
                    *
                    * F50806 RAD PIN TEST
                    *
                    *
11631  0 43 00430           BRM     OBJECT
11632  0 43 00440           BRM     RETURN
11633  0 20 07150           NOP     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     ERROR
11637  4 20 23432           NOP     M20006A,4      ERROR MESSAGE FOR BIT
11640  0 20 23403           NOP     M20004B
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           NOP     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     ERROR
11650  4 20 23440           NOP     M20007A,4      ERROR MESSAGE FOR BIT
11651  0 20 23403           NOP     M20004B
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           NOP     XTRA1          SPURIOUS INTRUPT HANDLER
11656  0 76 25010           LDA     =000020
11657  0 43 07111           BRM     PINSET         PIN TRANSFER AND TEST ROUTINE
11660  0 43 00460           BRM     ERROR
11661  4 20 23446           NOP     M2008A,4       ERROR MESSAGE FOR BIT
11662  0 20 23403           NOP     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           NOP     XTRA1          SPURIOUS INTRUPT HANDLER
11667  0 76 25011           LDA     =000040
11670  0 43 07111           BRM     PINSET         PIN TRANSFER AND TEST ROUTINE
11671  0 43 00460           BRM     ERROR
11672  4 20 23454           NOP     M2009A,4       ERROR MESSAGE FOR BIT
11673  0 20 23403           NOP     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           NOP     XTRA1
11700  0 71 25022           LDX     =040000        TIME 40 MILLISECONDS
11701  0 06 16226  ZER51    EOMM    16226          ALERT TO PIN
11702  0 33 24516           PINN    PINWRD
11703  0 76 24516           LDA     PINWRD
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     ERROR
11713  4 20 23511           NOP     M2013C,4       NO ZERO
11714  2 20 23475           NOP     M2013B,2       HEADING AND REGISTERS
11715  0 43 00434  ZER52    BRM     END
```

```
                    *
                    *
                    * F58B14 TEST SECTOR ADRS 01
                    *
                    *
11716  0 43 00430           BRM     OBJECT
11717  0 43 00440           BRM     RETURN
11720  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
11724  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11725  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11726  0 43 00434           BRM     END
                    *
                    *
                    * F58B15 TEST SECTOR ADRS 02
                    *
                    *
11727  0 43 00430           BRM     OBJECT
11730  0 43 00440           BRM     RETURN
11731  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
11735  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11736  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11737  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F58B16 TEST SECTOR ADRS 03
                    *
                    *
11740  0 43 00430           BRM     OBJECT
11741  0 43 00440           BRM     RETURN
11742  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
11746  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11747  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11750  0 43 00434           BRM     END
                    *
                    *
                    * F58B17 TEST SECTOR ADRS 04
                    *
                    *
11751  0 43 00430           BRM     OBJECT
11752  0 43 00440           BRM     RETURN
11753  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
11757  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
11760  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
11761  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F50818 TEST SECTOR ADR$ 05
                    *
                    *
11762  0 43 00430           BRM     @BJECT
11763  0 43 00440           BRM     RETURN
11764  0 20 07150           N@P     XTRA1
11765  0 75 25060           LDB     #005            SECTOR 05
11766  0 43 07056           BRM     PININ           T@ PIN IN SECTOR ADRS
11767  0 43 00460           BRM     ERR@R           RETURN IF ERR@R @CCURED
11770  4 20 23462           N@P     M2013A,4        L@GIC ERR@R M$G
11771  2 20 23475           N@P     M20138,2        HEADING AND REGISTERS
11772  0 43 00434           BRM     END
                    *
                    *
                    * F50819 TEST SECTOR ADR$ 06
                    *
                    *
11773  0 43 00430           BRM     @BJECT
11774  0 43 00440           BRM     RETURN
11775  0 20 07150           N@P     XTRA1
11776  0 75 25061           LDB     #006            SECTOR 06
11777  0 43 07056           BRM     PININ           T@ PIN IN SECTOR ADRS
12000  0 43 00460           BRM     ERR@R           RETURN IF ERR@R @CCURED
12001  4 20 23462           N@P     M2013A,4        L@GIC ERR@R M$G
12002  2 20 23475           N@P     M20138,2        HEADING AND REGISTERS
12003  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F50820 TEST SECTOR ADR$ 07
                    *
                    *
12004  0 43 00430           BRM     @BJECT
12005  0 43 00440           BRM     RETURN
12006  0 20 07150           N@P     XTRA1
12007  0 75 25035           LDB     #007            SECTOR 07
12010  0 43 07056           BRM     PININ           T@ PIN IN SECTOR ADRS
12011  0 43 00460           BRM     ERR@R           RETURN IF ERR@R @CCURED
12012  4 20 23462           N@P     M2013A,4        L@GIC ERR@R M$G
12013  2 20 23475           N@P     M20138,2        HEADING AND REGISTER
12014  0 43 00434           BRM     END
                    *
                    *
                    * F50821 TEST SECTOR ADRS 10
                    *
                    *
12015  0 43 00430           BRM     @BJECT
12016  0 43 00440           BRM     RETURN
12017  0 20 07150           N@P     XTRA1
12020  0 75 25007           LDB     #010            SECTOR 10
12021  0 43 07056           BRM     PININ           T@ PIN IN SECTOR ADRS
12022  0 43 00460           BRM     ERR@R           RETURN IF ERR@R @CCURED
12023  4 20 23462           N@P     M2013A,4        L@GIC ERR@R M$G
12024  2 20 23475           N@P     M20138,2        HEADING AND REGISTERS
12025  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F59B22 TEST SECTOR ADRS 11
                    *
                    *
12026  0 43 00430           BRM     OBJECT
12027  0 43 00440           BRM     RETURN
12030  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12034  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12035  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12036  0 43 00434           BRM     END
                    *
                    *
                    * F59B23 TEST SECTOR ADRS 12
                    *
                    *
12037  0 43 00430           BRM     OBJECT
12040  0 43 00440           BRM     RETURN
12041  0 20 07150           NOP     XTRA1
12042  0 75 25063           LDB     =012            SECTOR 12
12043  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12044  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12045  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12046  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12047  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F59B24 TEST SECTOR ADRS 13
                    *
                    *
12050  0 43 00430           BRM     OBJECT
12051  0 43 00440           BRM     RETURN
12052  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12056  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12057  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12060  0 43 00434           BRM     END
                    *
                    *
                    * F59B25 TEST SECTOR ADRS 14
                    *
                    *
12061  0 43 00430           BRM     OBJECT
12062  0 43 00440           BRM     RETURN
12063  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12067  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12070  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12071  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F50826 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 25766        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
                    *
                    *
                    * F50827 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 25767        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
```



```
                    *
                    *
                    * F50828 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 25036        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
                    *
                    *
                    * F50829 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 25010        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
```

```
                    *
                    *
                    * F58B30 TEST SECTOR ADRS 21
                    *
                    *
12136  0 43 00430           BRM     OBJECT
12137  0 43 00440           BRM     RETURN
12140  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12145  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12146  0 43 00434           BRM     END
                    *
                    *
                    * F58B31 TEST SECTOR ADRS 22
                    *
                    *
12147  0 43 00430           BRM     OBJECT
12150  0 43 00440           BRM     RETURN
12151  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12156  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12157  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F58B32 TEST SECTOR ADRS 23
                    *
                    *
12160  0 43 00430           BRM     OBJECT
12161  0 43 00440           BRM     RETURN
12162  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12167  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12170  0 43 00434           BRM     END
                    *
                    *
                    * F58B33 TEST SECTOR ADRS 24
                    *
                    *
12171  0 43 00430           BRM     OBJECT
12172  0 43 00440           BRM     RETURN
12173  0 20 07150           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12200  2 20 23475           NOP     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           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12211  2 20 23475           NOP     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           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12222  2 20 23475           NOP     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           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12233  2 20 23475           NOP     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           NOP     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           NOP     M2013A,4        LOGIC ERROR MSG
12244  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12245  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F58838 TEST SECTOR ADRS 31
                    *
                    *
12246  0 43 00430           BRM     OBJECT
12247  0 43 00440           BRM     RETURN
12250  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12254  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12255  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12256  0 43 00434           BRM     END
                    *
                    *
                    * F58839 TEST SECTOR ADRS 32
                    *
                    *
12257  0 43 00430           BRM     OBJECT
12260  0 43 00440           BRM     RETURN
12261  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12265  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12266  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12267  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F58840 TEST SECTOR ADRS 33
                    *
                    *
12270  0 43 00430           BRM     OBJECT
12271  0 43 00440           BRM     RETURN
12272  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12276  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12277  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12300  0 43 00434           BRM     END
                    *
                    *
                    * F58841 TEST SECTOR ADRS 34
                    *
                    *
12301  0 43 00430           BRM     OBJECT
12302  0 43 00440           BRM     RETURN
12303  0 20 07150           NOP     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     ERROR           RETURN IF ERROR OCCURED
12307  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12310  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12311  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F50842 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 07056          BRM     PININ           TO PIN IN SECTOR ADRS
12317  0 43 00460          BRM     ERROR           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
                    *
                    *
                    * F50843 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 07056          BRM     PININ           TO PIN IN SECTOR ADRS
12330  0 43 00460          BRM     ERROR           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
```



```
                    *
                    *
                    * F50844 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 25037          LDB     #037            SECTOR 37
12340  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
12341  0 43 00460          BRM     ERROR           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
                    *
                    *
                    * F50845 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 25011          LDB     #040            SECTOR 40
12351  0 43 07056          BRM     PININ           TO PIN IN SECTOR ADRS
12352  0 43 00460          BRM     ERROR           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     OBJECT
12357  0 43 00440           BRM     RETURN
12360  0 20 07150           NOP     XTRA1
12361  0 75 25106           LDB     =041            SECTOR 41
12362  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12363  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12364  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12365  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12366  0 43 00434           BRM     END
                    *
                    *
                    * F50847 TEST SECTOR ADRS 42
                    *
                    *
12367  0 43 00430           BRM     OBJECT
12370  0 43 00440           BRM     RETURN
12371  0 20 07150           NOP     XTRA1
12372  0 75 25107           LDB     =042            SECTOR 42
12373  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12374  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12375  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12376  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12377  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F50848 TEST SECTOR ADRS 43
                    *
                    *
12400  0 43 00430           BRM     OBJECT
12401  0 43 00440           BRM     RETURN
12402  0 20 07150           NOP     XTRA1
12403  0 75 25110           LDB     =043            SECTOR 43
12404  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12405  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12406  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12407  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12410  0 43 00434           BRM     END
                    *
                    *
                    * F50849 TEST SECTOR ADRS 44
                    *
                    *
12411  0 43 00430           BRM     OBJECT
12412  0 43 00440           BRM     RETURN
12413  0 20 07150           NOP     XTRA1
12414  0 75 25111           LDB     =044            SECTOR 44
12415  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12416  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12417  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12420  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12421  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F50850 TEST SECTOR ADRS 45
                    *
                    *
12422  0 43 00430        BRM     OBJECT
12423  0 43 00440        BRM     RETURN
12424  0 20 07150        NOP     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        NOP     M2013A,4        LOGIC ERROR MSG
12431  2 20 23475        NOP     M2013B,2        HEADING AND REGISTERS
12432  0 43 00434        BRM     END
                    *
                    *
                    * F50851 TEST SECTOR ADRS 46
                    *
                    *
12433  0 43 00430        BRM     OBJECT
12434  0 43 00440        BRM     RETURN
12435  0 20 07150        NOP     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        NOP     M2013A,4        LOGIC ERROR MSG
12442  2 20 23475        NOP     M2013B,2        HEADING AND REGISTERS
12443  0 43 00434        BRM     END
```



```
                    *
                    *
                    * F50852 TEST SECTOR ADRS 47
                    *
                    *
12444  0 43 00430        BRM     OBJECT
12445  0 43 00440        BRM     RETURN
12446  0 20 07150        NOP     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        NOP     M2013A,4        LOGIC ERROR MSG
12453  2 20 23475        NOP     M2013B,2        HEADING AND REGISTERS
12454  0 43 00434        BRM     END
                    *
                    *
                    * F50853 TEST SECTOR ADRS 50
                    *
                    *
12455  0 43 00430        BRM     OBJECT
12456  0 43 00440        BRM     RETURN
12457  0 20 07150        NOP     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        NOP     M2013A,4        LOGIC ERROR MSG
12464  2 20 23475        NOP     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     M2013A,4        LOGIC ERROR MSG
12475  2 20 23475           NOP     M2013B,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     M2013A,4        LOGIC ERROR MSG
12506  2 20 23475           NOP     M2013B,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     M2013A,4        LOGIC ERROR MSG
12517  2 20 23475           NOP     M2013B,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     M2013A,4        LOGIC ERROR MSG
12530  2 20 23475           NOP     M2013B,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
```

```
                    *
                    *
                    * F58B62 TEST SECTOR ADRS 61
                    *
                    *
12576  0 43 00430           BRM     OBJECT
12577  0 43 00440           BRM     RETURN
12600  0 20 07150           NOP     XTRA1
12601  0 75 25126           LDB     •061            SECTOR 61
12602  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12603  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12604  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12605  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12606  0 43 00434           BRM     END
                    *
                    *
                    * F58B63 TEST SECTOR ADRS 62
                    *
                    *
12607  0 43 00430           BRM     OBJECT
12610  0 43 00440           BRM     RETURN
12611  0 20 07150           NOP     XTRA1
12612  0 75 25127           LDB     •062            SECTOR 62
12613  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12614  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12615  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12616  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12617  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F58B64 TEST SECTOR ADRS 63
                    *
                    *
12620  0 43 00430           BRM     OBJECT
12621  0 43 00440           BRM     RETURN
12622  0 20 07150           NOP     XTRA1
12623  0 75 25130           LDB     •063            SECTOR 63
12624  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12625  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12626  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12627  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12630  0 43 00434           BRM     END
                    *
                    *
                    * F58B65 TEST SECTOR ADRS 64
                    *
                    *
12631  0 43 00430           BRM     OBJECT
12632  0 43 00440           BRM     RETURN
12633  0 20 07150           NOP     XTRA1
12634  0 75 25003           LDB     •064            SECTOR 64
12635  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12636  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12637  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12640  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12641  0 43 00434           BRM     END
```

```
                        *
                        *
                        * F50866 TEST SECTOR ADRS 65
                        *
                        *
12642  0 43 00430       BRM     OBJECT
12643  0 43 00440       BRM     RETURN
12644  0 20 07150       NOP     XTRA1
12645  0 75 25131       LDB     .065            SECTOR 65
12646  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
12647  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
12650  4 20 23462       NOP     M2013A,4        LOGIC ERROR MSG
12651  2 20 23475       NOP     M2013B,2        HEADING AND REGISTERS
12652  0 43 00434       BRM     END
                        *
                        *
                        * F50867 TEST SECTOR ADRS 66
                        *
                        *
12653  0 43 00430       BRM     OBJECT
12654  0 43 00440       BRM     RETURN
12655  0 20 07150       NOP     XTRA1
12656  0 75 25132       LDB     .066            SECTOR 66
12657  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
12660  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
12661  4 20 23462       NOP     M2013A,4        LOGIC ERROR MSG
12662  2 20 23475       NOP     M2013B,2        HEADING AND REGISTERS
12663  0 43 00434       BRM     END
```



```
                        *
                        *
                        * F50868 TEST SECTOR ADRS 67
                        *
                        *
12664  0 43 00430       BRM     OBJECT
12665  0 43 00440       BRM     RETURN
12666  0 20 07150       NOP     XTRA1
12667  0 75 25133       LDB     .067            SECTOR 67
12670  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
12671  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
12672  4 20 23462       NOP     M2013A,4        LOGIC ERROR MSG
12673  2 20 23475       NOP     M2013B,2        HEADING AND REGISTERS
12674  0 43 00434       BRM     END
                        *
                        *
                        * F50869 TEST SECTOR ADRS 70
                        *
                        *
12675  0 43 00430       BRM     OBJECT
12676  0 43 00440       BRM     RETURN
12677  0 20 07150       NOP     XTRA1
12700  0 75 25134       LDB     .070            SECTOR 70
12701  0 43 07056       BRM     PININ           TO PIN IN SECTOR ADRS
12702  0 43 00460       BRM     ERROR           RETURN IF ERROR OCCURED
12703  4 20 23462       NOP     M2013A,4        LOGIC ERROR MSG
12704  2 20 23475       NOP     M2013B,2        HEADING AND REGISTERS
12705  0 43 00434       BRM     END
```

```
                    *
                    *
                    * F58B70 TEST SECTOR ADRS 71
                    *
                    *
12706  0 43 00430           BRM     OBJECT
12707  0 43 00440           BRM     RETURN
12710  0 20 07150           XOP     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     ERROR           RETURN IF ERROR OCCURED
12714  4 20 23462           XOP     =2013A,4        LOGIC ERROR MSG
12715  2 20 23475           XOP     =2013B,2        HEADING AND REGISTERS
12716  0 43 00434           BRM     END
                    *
                    *
                    * F58B71 TEST SECTOR ADRS 72
                    *
                    *
12717  0 43 00430           BRM     OBJECT
12720  0 43 00440           BRM     RETURN
12721  0 20 07150           XOP     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     ERROR           RETURN IF ERROR OCCURED
12725  4 20 23462           XOP     =2013A,4        LOGIC ERROR MSG
12726  2 20 23475           XOP     =2013B,2        HEADING AND REGISTERS
12727  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F58B72 TEST SECTOR ADRS 73
                    *
                    *
12730  0 43 00430           BRM     OBJECT
12731  0 43 00440           BRM     RETURN
12732  0 20 07150           XOP     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     ERROR           RETURN IF ERROR OCCURED
12736  4 20 23462           XOP     =2013A,4        LOGIC ERROR MSG
12737  2 20 23475           XOP     =2013B,2        HEADING AND REGISTERS
12740  0 43 00434           BRM     END
                    *
                    *
                    * F58B73 TEST SECTOR ADRS 74
                    *
                    *
12741  0 43 00430           BRM     OBJECT
12742  0 43 00440           BRM     RETURN
12743  0 20 07150           XOP     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     ERROR           RETURN IF ERROR OCCURED
12747  4 20 23462           XOP     =2013A,4        LOGIC ERROR MSG
12750  2 20 23475           XOP     =2013B,2        HEADING AND REGISTERS
12751  0 43 00434           BRM     END
```

```
                    *
                    *
                    * F50874 TEST SECTOR ADRS 75
                    *
                    *
12752  0 43 00430           BRM     OBJECT
12753  0 43 00440           BRM     RETURN
12754  0 20 07150           NOP     XTRA1
12755  0 75 25141           LDB     #075            SECTOR 75
12756  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12757  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12760  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12761  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12762  0 43 00434           BRM     END
                    *
                    *
                    * F50875 TEST SECTOR ADRS 76
                    *
                    *
12763  0 43 00430           BRM     OBJECT
12764  0 43 00440           BRM     RETURN
12765  0 20 07150           NOP     XTRA1
12766  0 75 25142           LDB     #076            SECTOR 76
12767  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
12770  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
12771  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
12772  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
12773  0 43 00434           BRM     END
```



```
                    *
                    *
                    * F50876 TEST SECTOR ADRS 77
                    *
                    *
12774  0 43 00430           BRM     OBJECT
12775  0 43 00440           BRM     RETURN
12776  0 20 07150           NOP     XTRA1
12777  0 75 25040           LDB     #077            SECTOR 77
13000  0 43 07056           BRM     PININ           TO PIN IN SECTOR ADRS
13001  0 43 00460           BRM     ERROR           RETURN IF ERROR OCCURED
13002  4 20 23462           NOP     M2013A,4        LOGIC ERROR MSG
13003  2 20 23475           NOP     M2013B,2        HEADING AND REGISTERS
13004  0 43 00434           BRM     END
13005  0 43 00456           BRM     FDONE
```

```
13006  0 43 00424  FUNC6  BRM     FUNCTN          CONTROL LINK
13007  0 20 23457         NOP     FPT6            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     RADOK
```



```
                   *
                   *
                   * FUNCTION 06 OBJECT TEST 01
                   *
                   *
13016  0 43 00430         BRM     OBJECT
13017  0 76 25445         LDA     =07C007000      DATA FOR HEAD
13020  0 43 15502         BRM     SPREAD          FILL OUTPUT BUFFER
13021  0 76 24777         LDA     =00000          STARTING ADRS.
13022  0 43 15424         BRM     YMSG            YDRIVER CONTROL
13023  4 20 23561         NOP     *SG020,4        WRITE LOGIC MESSAGE
13024  0 20 23525         NOP     *SG036
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 CONTROL
13031  4 20 23563         NOP     *SG021,4        WRITE LOGIC MESSAGE
13032  0 20 23534         NOP     *SG037
13033  0 43 00434         BRM     END             8 HEADS
                   *
                   *
                   * FUNCTION 06 OBJECT TEST 03
                   *
                   *
13034  0 43 00430         BRM     OBJECT
13035  0 76 25013         LDA     =00200          STARTING ADRS.
13036  0 43 15424         BRM     YMSG            YDRIVER CONTROL
13037  4 20 23565         NOP     *SG022,4        WRITE LOGIC MESSAGE
13040  0 20 23543         NOP     *SG038
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 CONTROL
13045  4 20 23567           NOP     MSG023,4        WRITE LOGIC MESSAGE
13046  0 20 23552           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         READ 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     DECRI1
13057  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 06
                    *
                    *
13060  0 43 00430           BRM     OBJECT
13061  0 75 25147           LDB     =MSG01A         READ 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     DECRI1
13067  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 07
                    *
                    *
13070  0 43 00430           BRM     OBJECT
13071  0 75 25147           LDB     =MSG01A         READ LOGIC MESSAGE
13072  0 76 25113           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     DECRI1
13077  0 43 00434           BRM     END
```

```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 08
                    *
                    *
13100  0 43 00430           BRM     OBJECT
13101  0 75 25147           LDB     =MSG01A          READ 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 25212           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 25213           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 23552           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         READ 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     DECRI1
13057  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 06
                    *
                    *
13060  0 43 00430           BRM     OBJECT
13061  0 75 25147           LDB     #MSG01A         READ 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     DECRI1
13067  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 07
                    *
                    *
13070  0 43 00430           BRM     OBJECT
13071  0 75 25147           LDB     #MSG01A         READ 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     DECRI1
13077  0 43 00434           BRM     END
```

```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 08
                    *
                    *
13100  0 43 00430           BRM     OBJECT
13101  0 75 25147           LDB     =MSG01A          READ LOGIC MESSAGE
13102  0 76 25146           LDA     =300             STARTING SECTOR
13103  0 71 25145           LDX     =070007000       DATA FOR HEAD SETS
13104  0 43 15937           BRM     SETWRD           INITIALIZE READ CONTROL
13105  0 76 25153           LDA     =40103           SIDE AND TB STRIP
13106  0 43 15964           BRM     DECRII
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 15902           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 25012           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 25013           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  0 43 00430           BRM     OBJECT
13143  0 75 25155           LDB     =MSG01B          READ LOGIC MESSAGE
13144  0 76 24777           LDA     =0               STARTING SECTOR
13145  0 71 25154           LDX     =007000700       DATA FOR HEAD SETS
13146  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13147  0 76 25156           LDA     =30002
13150  0 43 15354           BRM     INCRI1
13151  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 14
                    *
                    *
13152  0 43 00430           BRM     OBJECT
13153  0 75 25155           LDB     =MSG01B          READ LOGIC MESSAGE
13154  0 76 25012           LDA     =0100            STARTING SECTOR
13155  0 71 25154           LDX     =007000700       DATA FOR HEAD SETS
13156  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13157  0 76 25157           LDA     =20006           SIDE AND TB STRIP
13160  0 43 15354           BRM     INCRI1
13161  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 15
                    *
                    *
13162  0 43 00430           BRM     OBJECT
13163  0 75 25155           LDB     =MSG01B          READ LOGIC MESSAGE
13164  0 76 25013           LDA     =200             STARTING SECTOR
13165  0 71 25154           LDX     =007000700       DATA FOR HEAD SETS
13166  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13167  0 76 25160           LDA     =10100           SIDE AND TB STRIP
13170  0 43 15354           BRM     INCRI1
13171  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 16
                    *
                    *
13172  0 43 00430           BRM     OBJECT
13173  0 75 25155           LDB     =MSG01B          READ LOGIC MESSAGE
13174  0 76 25146           LDA     =300             STARTING SECTOR
13175  0 71 25154           LDX     =007000700       DATA FOR HEAD SETS
13176  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13177  0 76 25161           LDA     =40104           SIDE AND TB STRIP
13200  0 43 15354           BRM     INCRI1
13201  0 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 23543           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     DECRI1
13243  0 43 00434           BRM     END
```

```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 22
                    *
                    *
13244  0 43 00430           BRM     OBJECT
13245  0 75 25163           LDB     =MSG01C          READ 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          READ 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          READ LOGIC MESSAGE
13266  0 76 25146           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           NOP     MSG032,4         WRITE LOGIC MESSAGE
13302  0 20 23525           NOP     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           NOP     MSG033,4        WRITE LOGIC MESSAGE
13310  0 20 23634           NOP     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           NOP     MSG034,4        WRITE LOGIC MESSAGE
13316  0 20 23643           NOP     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           NOP     MSG035,4        WRITE LOGIC MESSAGE
13324  0 20 23652           NOP     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         READ 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     INCRII
13335  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 30
                    *
                    *
13336  0 43 00430           BRM     OBJECT
13337  0 75 25171           LDB     #MSG01D         READ 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     INCRII
13345  0 43 00434           BRM     END
```

```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 22
                    *
                    *
13244  0 43 00430           BRM     OBJECT
13245  0 75 25163           LDB     #MSG01C          READ LOGIC MESSAGE
13246  0 76 25012           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     DECRI1
13253  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 23
                    *
                    *
13254  0 43 00430           BRM     OBJECT
13255  0 75 25163           LDB     #MSG01C          READ LOGIC MESSAGE
13256  0 76 25013           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     DECRI1
13263  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 24
                    *
                    *
13264  0 43 00430           BRM     OBJECT
13265  0 75 25163           LDB     #MSG01C          READ LOGIC MESSAGE
13266  0 76 25146           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     DECRI1
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 23611           NOP     MSG032,4         WRITE LOGIC MESSAGE
13302  0 20 23525           NOP     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           NOP     MSG033,4        WRITE LOGIC MESSAGE
13310  0 20 23534           NOP     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           NOP     MSG034,4        WRITE LOGIC MESSAGE
13316  0 20 23543           NOP     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           NOP     MSG035,4        WRITE LOGIC MESSAGE
13324  0 20 23552           NOP     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         READ 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         READ 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          READ LOGIC MESSAGE
13350  0 76 25013           LDA     =200             STARTING SECTOR
13351  0 71 25170           LDX     =000070007       DATA FOR HEAD SETS
13352  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13353  0 76 25173           LDA     =40102           SIDE AND TB STRIP
13354  0 43 15354           BRM     INCRI1
13355  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 06 OBJECT TEST 32
                    *
                    *
13356  0 43 00430           BRM     OBJECT
13357  0 75 25171           LDB     =MSG01D          READ LOGIC MESSAGE
13360  0 76 25146           LDA     =0300            STARTING SECTOR
13361  0 71 25170           LDX     =000070007       DATA FOR HEAD SETS
13362  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13363  0 76 25174           LDA     =30106           SIDE AND TB STRIP
13364  0 43 15354           BRM     INCRI1
13365  0 43 00434           BRM     END
13366  0 43 00456           BRM     FDONE
```



```
13367  0 43 00424  FUNC7    BRM     FUNCTN           CONTROL LINK
13370  0 20 20565           NOP     FPT7             PARAMETER FOR THIS FUNCTION
13371  0 43 00440           BRM     RETURN
13372  0 20 07150           NOP     XTRA1
13373  0 43 13766           BRM     RAD0K
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 25017           LDA     =4000           STARTING ADRS,
13405  0 43 15441           BRM     YMSG7           YDRIVER CONTROL
13406  4 20 23561           NOP     MSG020,4        WRITE LOGIC MESSAGE
13407  0 20 23525           NOP     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           NOP     MSG021,4        WRITE LOGIC MESSAGE
13415  0 20 23534           NOP     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           NOP     MSG022,4        WRITE LOGIC MESSAGE
13423  0 20 23543           NOP     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           NOP     MSG023,4        WRITE LOGIC MESSAGE
13431  0 20 23552           NOP     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         READ LOGIC MESSAGE
13435  0 76 25017           LDA     =4000           STARTING SECTOR
13436  0 71 25145           LDX     =070007000      DATA FOR HEAD SETS
13437  0 43 15237           BRM     SETARD          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          READ 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     DECRI2
13452  0 43 00434               BRM     END
                        *
                        *
                        * FUNCTION 07 OBJECT TEST 07
                        *
                        *
13453  0 43 00430               BRM     OBJECT
13454  0 75 25147               LDB     =MSG01A          READ 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     DECRI2
13462  0 43 00434               BRM     END
```



```
                        *
                        *
                        * FUNCTION 07 OBJECT TEST 08
                        *
                        *
13463  0 43 00430               BRM     OBJECT
13464  0 75 25147               LDB     =MSG01A          READ 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     DECRI2
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               NOP     MSG024,4         WRITE LOGIC MESSAGE
13501  0 20 23525               NOP     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     *SG025,4        WRITE LOGIC MESSAGE
13507  0 20 23534           NOP     *SG037
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     *SG026,4        WRITE LOGIC MESSAGE
13515  0 20 23543           NOP     *SG038
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     *SG027,4        WRITE LOGIC MESSAGE
13523  0 20 23552           NOP     *SG039
13524  0 43 00434           BRM     END             8 HEADS
```



```
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 13
                    *
                    *
13525  0 43 00430           BRM     OBJECT
13526  0 75 25155           LDB     =MSG01B         READ LOGIC MESSAGE
13527  0 76 25017           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     =MSG01B         READ 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          READ LOGIC MESSAGE
13547  0 76 25176           LDA     =4200            STARTING SECTOR
13550  0 71 25154           LDX     =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     INCRI2
13554  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 16
                    *
                    *
13555  0 43 00430           BRM     OBJECT
13556  0 75 25155           LDB     =MSG01B          READ LOGIC MESSAGE
13557  0 76 25177           LDA     =4300            STARTING SECTOR
13560  0 71 25154           LDX     =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     INCRI2
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 15302           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     MSG028,4         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            TARTING 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 23543           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 ADRS.
13613  0 43 15441           BRM     YMSG7           YDRIVER CONTROL
13614  4 20 23607           NOP     MSG031,4        WRITE LOGIC MESSAGE
13615  0 20 23552           NOP     MSG039
13616  0 43 00434           BRM     END             8 HEADS
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 21
                    *
                    *
13617  0 43 00430           BRM     OBJECT
13620  0 75 25163           LDB     #MSG01C         READ 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 CONTROL
13624  0 76 25164           LDA     #00020003       SIDE AND TB STRIP
13625  0 43 15404           BRM     DECRI2
13626  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 22
                    *
                    *
13627  0 43 00430           BRM     OBJECT
13630  0 75 25163           LDB     #MSG01C         READ 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 CONTROL
13634  0 76 25165           LDA     #10007          SIDE AND TB STRIP
13635  0 43 15404           BRM     DECRI2
13636  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 23
                    *
                    *
13637  0 43 00430           BRM     OBJECT
13640  0 75 25163           LDB     #MSG01C         READ 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 CONTROL
13644  0 76 25166           LDA     #40101          SIDE AND TB STRIP
13645  0 43 15404           BRM     DECRI2
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 15302           BRM     SPREAD           FILL OUTPUT BUFFER
13662  0 76 25017           LDA     #4000            STARTING ADRS.
13663  0 43 15441           BRM     YMSG7            YDRIVER CONTROL
13664  4 20 23611           NOP     MSG032,4         WRITE LOGIC MESSAGE
13665  0 20 23625           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 23613           NOP     MSG033,4         WRITE LOGIC MESSAGE
13673  0 20 23634           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 23615           NOP     MSG034,4         WRITE LOGIC MESSAGE
13701  0 20 23643           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 23617           NOP     MSG035,4         WRITE LOGIC MESSAGE
13707  0 20 23652           NOP     MSG039
13710  0 43 00434           BRM     END              8 HEADS
```

```
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 29
                    *
                    *
13711  0 43 00430           BRM     OBJECT
13712  0 75 25171           LDB     =MSG01D          READ LOGIC MESSAGE
13713  0 76 25017           LDA     =4000            STARTING SECTOR
13714  0 71 25170           LDX     =000070007       DATA FOR HEAD SETS
13715  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13716  0 76 25052           LDA     =20004           SIDE AND TB STRIP
13717  0 43 15374           BRM     INCR12
13720  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 30
                    *
                    *
13721  0 43 00430           BRM     OBJECT
13722  0 75 25171           LDB     =MSG01D          READ LOGIC MESSAGE
13723  0 76 25175           LDA     =4100            STARTING SECTOR
13724  0 71 25170           LDX     =000070007       DATA FOR HEAD SETS
13725  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13726  0 76 25172           LDA     =10010           SIDE AND TB STRIP 8
13727  0 43 15374           BRM     INCR12
13730  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 31
                    *
                    *
13731  0 43 00430           BRM     OBJECT
13732  0 75 25171           LDB     =MSG01D          READ LOGIC MESSAGE
13733  0 76 25176           LDA     =4200            STARTING SECTOR
13734  0 71 25170           LDX     =000070007       DATA FOR HEAD SETS
13735  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13736  0 76 25173           LDA     =40102           SIDE AND TB STRIP
13737  0 43 15374           BRM     INCR12
13740  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 07 OBJECT TEST 32
                    *
                    *
13741  0 43 00430           BRM     OBJECT
13742  0 75 25171           LDB     =MSG01D          READ LOGIC MESSAGE
13743  0 76 25177           LDA     =4300            STARTING SECTOR
13744  0 71 25170           LDX     =000070007       DATA FOR HEAD SETS
13745  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
13746  0 76 25174           LDA     =30106           SIDE AND TB STRIP
13747  0 43 15374           BRM     INCR12
13750  0 43 00434           BRM     END
13751  0 43 00456           BRM     FDONE
13752  0 01 14005           BRU     FUNC8
                    *
13753  0 00 00000  BRITYP   ZRB
13754  0 36 24503           STB     HOLD3
13755  0 35 24502           STA     HOLD2
13756  0 75 25143           LDB     =•1
13757  0 76 00401           LDA     STATUS
13760  0 72 25006           SKA     =4               TEST FOR 940
13761  0 75 24777           LDB     =0               YES
```

```
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  RADOK   ZRO
13767  0 43 00430          BRM     OBJECT          BREAKPOINT TEST
13770  0 76 00403          LDA     RADSIZ
13771  0 72 25200          SKA     *RADWHO         ANY RADS ON THIS CHANNEL
13772  0 01 13774          BRU     *+2
13773  0 43 00456          BRM     FDONE           NO
13774  0 14 25200          ETR     *RADWHO
13775  0 46 20005          ABC
13776  0 76 25200          LDA     *RADWHO
13777  0 66 00003          RSH     3
14000  0 14 25201          ETR     *7000000
14001  0 67 10054          NOD     54
14002  0 66 00002          RSH     2
14003  0 46 10012          BAC
14004  0 51 13766          BRR     RADOK
```



```
14005  0 43 00424  FUNC8   BRM     FUNCTN          CONTROL LINK
14006  0 20 20573          NOP     FPT8            PARAMETER FOR THIS FUNCTION
14007  0 43 00440          BRM     RETURN
14010  0 20 07150          NOP     XTRA1
14011  0 43 00430          BRM     OBJECT
14012  0 43 13766          BRM     RADOK
14013  0 73 25027          SKG     *2000000        TEST FOR THREE RADS
14014  0 01 15510          BRU     FUNC10          LAST RAD
14015  0 76 00401          LDA     STATUS
14016  0 72 25017          SKA     *4000           SOFTWARE RAD READ ONLY
14017  0 01 15510          BRU     FUNC10
```

```
                    *
                    *
                    * 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 25220           LDA     =10000          STARTING ADRS.
14024  0 43 15456           BRM     YMSG8           YDRIVER CONTROL
14025  4 20 23561           NOP     *SG020,4        WRITE LOGIC MESSAGE
14026  0 20 23525           NOP     *SG036
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     *SG021,4        WRITE LOGIC MESSAGE
14034  0 20 23534           NOP     *SG037
14035  0 43 00434           BRM     END             8 HEADS
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 03
                    *
                    *
14036  0 43 00430           BRM     OBJECT
14037  0 76 25202           LDA     =10200          STARTING ADRS.
14040  0 43 15456           BRM     YMSG8           YDRIVER CONTROL
14041  4 20 23565           NOP     *SG022,4        WRITE LOGIC MESSAGE
14042  0 20 23543           NOP     *SG038
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     *SG023,4        WRITE LOGIC MESSAGE
14050  0 20 23552           NOP     *SG039
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         READ LOGIC MESSAGE
14054  0 76 25220           LDA     =10000          STARTING SECTOR
14055  0 71 25145           LDX     =070007000      DATA FOR HEAD SETS
14056  0 43 15337           BRM     SETWRD          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          READ 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          READ 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          READ 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 ADRS.
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 25202           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         READ LOGIC MESSAGE
14146  0 76 25020           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         READ 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     =MSG01B          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     INCRI2
14173  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 16
                    *
                    *
14174  0 43 00430           BRM     OBJECT
14175  0 75 25155           LDB     =MSG01B          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     =40300           IDE AND TB STRIP
14202  0 43 15374           BRM     INCRI2
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           NOP     MSG028,4         WRITE LOGIC MESSAGE
14212  0 20 23525           NOP     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           NOP     MSG029,4         WRITE LOGIC MESSAGE
14220  0 20 23534           NOP     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           NOP     MSG030,4         WRITE LOGIC MESSAGE
14226  0 20 23543           NOP     MSG038
14227  0 43 00434           BRM     END              8 HEADS
```

```
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 20
                    *
                    *
14230  0 43 00430           BRM     OBJECT
14231  0 76 25203           LDA     =10300          STARTING ADRS=
14232  0 43 15456           BRM     YMSG8           YDRIVER CONTROL
14233  4 20 23407           XOP     *SG031,4        WRITE LOGIC MESSAGE
14234  0 20 23552           XOP     *SG039
14235  0 43 00434           BRM     END             8 HEADS
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 21
                    *
                    *
14236  0 43 00430           BRM     OBJECT
14237  0 75 25163           LDB     =MSG01C         READ LOGIC MESSAGE
14240  0 76 25220           LDA     =10000          STARTING SECTOR
14241  0 71 25162           LDX     =000700070      DATA FOR HEAD SETS
14242  0 43 15337           BRM     SETWRD          INITIALIZE READ CONTROL
14243  0 76 25214           LDA     =10111          SIDE AND TB STRIP
14244  0 43 15404           BRM     DECRI2
14245  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 22
                    *
                    *
14246  0 43 00430           BRM     OBJECT
14247  0 75 25163           LDB     =MSG01C         READ LOGIC MESSAGE
14250  0 76 25160           LDA     =10100          STARTING SECTOR
14251  0 71 25162           LDX     =000700070      DATA FOR HEAD SETS
14252  0 43 15337           BRM     SETWRD          INITIALIZE READ CONTROL
14253  0 76 25215           LDA     =10203          SIDE AND TB STRIP
14254  0 43 15404           BRM     DECRI2
14255  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 23
                    *
                    *
14256  0 43 00430           BRM     OBJECT
14257  0 75 25163           LDB     =MSG01C         READ LOGIC MESSAGE
14260  0 76 25202           LDA     =10200          STARTING SECTOR
14261  0 71 25162           LDX     =000700070      DATA FOR HEAD SETS
14262  0 43 15337           BRM     SETWRD          INITIALIZE READ CONTROL
14263  0 76 25216           LDA     =40207          SIDE AND TB STRIP
14264  0 43 15404           BRM     DECRI2
14265  0 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           NOP     MSG032,4         WRITE LOGIC MESSAGE
14304  0 20 23525           NOP     MSG036
14305  0 43 00434           BRM     END              8 HEADS
```



```
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 26
                    *
                    *
14306  0 43 00430           BRM     OBJECT
14307  0 76 25160           LDA     #10100           STARTING ADRS.
14310  0 43 15456           BRM     YMSG8            YDRIVER CONTROL
14311  4 20 23613           NOP     MSG033,4         WRITE LOGIC MESSAGE
14312  0 20 23534           NOP     MSG037
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           NOP     MSG034,4         WRITE LOGIC MESSAGE
14320  0 20 23543           NOP     MSG038
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           NOP     MSG035,4         WRITE LOGIC MESSAGE
14326  0 20 23552           NOP     MSG039
14327  0 43 00434           BRM     END              8 HEADS
```

```
                    *
                    *
                    * FUNCTION 08 OBJECT TEST 29
                    *
                    *
14330  0 43 00430           BRM     OBJECT
14331  0 75 25171           LDB     =MSG01D          READ 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     =MSG01D          READ 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     =MSG01D          READ 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     =MSG01D          READ 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 25040         SKG     •77             WAS SPIT LEGAL
14374  0 01 14405         BRU     IEXT            NO
14375  0 73 25041         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 I30 • T44
14402  0 01 14421         BRU     I30T44          YES
14403  0 73 25042         SKG     •377            WAS IT I56 • I74
14404  0 01 14420         BRU     I56I74          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 I56 THROUGH I74
                        *
14420  0 55 25010  I56I74 ADD     •20
                        *
                        *       PROCESS I30 THROUGH T44
                        *
14421  0 54 25226  I30T44 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           XIN     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 14511           NOP     IMSG,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     ' UNDEFINED ILLEGAL OR EXTERNAL INTERRUPT!!
14464    24252631
14465    45252412
14466    31434325
14467    27214312
14470    46511225
14471    67632551
14472    48214312
14473    31456325
14474    51516447
14475    63371212
14476    52624764   POPED   BCD     ' SPURIOUS POP!!
14477    51314664
14500    62124746
14501    47371212
14502    52624764   SPRINT BCD     ' SPURIOUS INTERRUPT OR TRAP!!
14503    51314664
14504    62123145
```

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



```
14523  0 43 00424  FUNC9   BRM     FUNCTN          CONTROL LINK
14524  0 20 20601          NOP     FPT9            PARAMETER FOR THIS FUNCTION
14525  0 43 00440          BRM     RETURN
14526  0 20 07150          NOP     XTRA1
14527  0 43 00430          BRM     OBJECT
14530  0 43 13766          BRM     RADBK
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     =14000          STARTING ADRS.
14542  0 43 15473           BRM     YMSG9           YDRIVER CONTROL
14543  4 20 23561           NOP     *SG020,4        WRITE LOGIC MESSAGE
14544  0 20 23525           NOP     *SG036
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     *SG021,4        WRITE LOGIC MESSAGE
14552  0 20 23534           NOP     *SG037
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     *SG022,4        WRITE LOGIC MESSAGE
14560  0 20 23543           NOP     *SG038
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     *SG023,4        WRITE LOGIC MESSAGE
14566  0 20 23552           NOP     *SG039
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         READ LOGIC MESSAGE
14572  0 76 25227           LDA     =14000          STARTING SECTOR
14573  0 71 25145           LDX     =070007000      DATA FOR HEAD SETS
14574  0 43 15937           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 ADRS.
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           NOP     *SG025,4        WRITE LOGIC MESSAGE
14644  0 20 23534           NOP     *SG037
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           NOP     *SG026,4        WRITE LOGIC MESSAGE
14652  0 20 23543           NOP     *SG038
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           NOP     *SG027,4        WRITE LOGIC MESSAGE
14660  0 20 23552           NOP     *SG039
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         READ 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     SETWRD          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         READ 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     SETWRD          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     #MSG018          READ LOGIC MESSAGE
14704  0 76 25231           LDA     #14200           STARTING SECTOR
14705  0 71 25154           LDX     #007000700       DATA FOR HEAD SETS
14706  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
14707  0 76 25212           LDA     #10206           SIDE AND TB STRIP
14710  0 43 15374           BRM     INCR12
14711  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 16
                    *
                    *
14712  0 43 00430           BRM     OBJECT
14713  0 75 25155           LDB     #MSG018          READ LOGIC MESSAGE
14714  0 76 25232           LDA     #14300           STARTING SECTOR
14715  0 71 25154           LDX     #007000700       DATA FOR HEAD SETS
14716  0 43 15337           BRM     SETWRD           INITIALIZE READ CONTROL
14717  0 76 25213           LDA     #40300           IDE AND TB STRIP
14720  0 43 15374           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 15302           BRM     SPREAD           FILL OUTPUT BUFFER
14725  0 76 25227           LDA     #14000           STARTING ADRS,
14726  0 43 15473           BRM     YMSG9            YDRIVER CONTROL
14727  4 20 23601           NOP     MSG028,4         WRITE LOGIC MESSAGE
14730  0 20 23525           NOP     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           TARTING ADRS,
14734  0 43 15473           BRM     YMSG9            YDRIVER CONTROL
14735  4 20 23603           NOP     MSG029,4         WRITE LOGIC MESSAGE
14736  0 20 23534           NOP     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 CONTROL
14743  4 20 23605           NOP     MSG030,4         WRITE LOGIC MESSAGE
14744  0 20 23543           NOP     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           NOP     MSG031,4        WRITE LOGIC MESSAGE
14752  0 20 23552           NOP     MSG039
14753  0 43 00434           BRM     END             8 HEADS
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 21
                    *
                    *
14754  0 43 00430           BRM     OBJECT
14755  0 75 25163           LDB     =MSG01C         READ LOGIC MESSAGE
14756  0 76 25227           LDA     =14000          STARTING SECTOR
14757  0 71 25162           LDX     =000700070      DATA FOR HEAD SETS
14760  0 43 15337           BRM     SETWRD          INITIALIZE READ CONTROL
14761  0 76 25214           LDA     =10111          SIDE AND TB STRIP
14762  0 43 15404           BRM     DECRI2
14763  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 22
                    *
                    *
14764  0 43 00430           BRM     OBJECT
14765  0 75 25163           LDB     =MSG01C         READ LOGIC MESSAGE
14766  0 76 25230           LDA     =14100          STARTING SECTOR
14767  0 71 25162           LDX     =000700070      DATA FOR HEAD SETS
14770  0 43 15337           BRM     SETWRD          INITIALIZE READ CONTROL
14771  0 76 25215           LDA     =10203          SIDE AND TB STRIP
14772  0 43 15404           BRM     DECRI2
14773  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 23
                    *
                    *
14774  0 43 00430           BRM     OBJECT
14775  0 75 25163           LDB     =MSG01C         READ LOGIC MESSAGE
14776  0 76 25231           LDA     =14200          STARTING SECTOR
14777  0 71 25162           LDX     =000700070      DATA FOR HEAD SETS
15000  0 43 15337           BRM     SETWRD          INITIALIZE READ CONTROL
15001  0 76 25216           LDA     =40207          SIDE AND TB STRIP
15002  0 43 15404           BRM     DECRI2
15003  0 43 00434           BRM     END
```

```
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 24
                    *
                    *
15004  0 43 00430        BRM     OBJECT
15005  0 75 25163        LDB     #MSG01C         READ 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     DECR12
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 23525        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 23534        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 23543        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 23552        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     =MSG01D          READ 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     INCRI2
15055  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 30
                    *
                    *
15056  0 43 00430           BRM     OBJECT
15057  0 75 25171           LDB     =MSG01D          READ 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     INCRI2
15065  0 43 00434           BRM     END
```



```
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 31
                    *
                    *
15066  0 43 00430           BRM     OBJECT
15067  0 75 25171           LDB     =MSG01D          READ 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     INCRI2
15075  0 43 00434           BRM     END
                    *
                    *
                    * FUNCTION 09 OBJECT TEST 32
                    *
                    *
15076  0 43 00430           BRM     OBJECT
15077  0 75 25171           LDB     =MSG01D          READ 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     INCRI2
15105  0 43 00434           BRM     END
15106  0 43 00456           BRM     FDONE
15107  0 01 15510           BRU     FUNC10
                    *
                    *
                    * SECTOR WRITE AND MESSAGE GENERATOR
                    *
                    *
15110  0 00 00000  WRYT    ZRO
15111  0 61 15110           MIN     WRYT             SET ADRS TO MESSAGE
15112  0 71 25233           LDX     =-4              SET CYCLE COUNTER FOR FOUR CYCLES
```

```
15113  0 37 24756        STX     INCR1           CLEAR COUNTER
15114  2 46 00000 WRYT1  CLX
15115  0 37 24750        STX     ERRIR
15116  0 75 25040        LDB     •077            COUNT FOR 64 SECTORS
15117  0 76 24513 WRYT9  LDA     P0TWRD
15120  0 70 25040        SKM     •077
15121  0 01 15152        BRU     WRYT5
15122  0 43 17422        BRM     WAIT4
15123  0 76 25057        LDA     •4000000•RL0
15124  0 43 15167        BRM     WRYT3           WRITE LAST SECTOR
15125  0 76 24513        LDA     P0TWRD
15126  0 14 25034        ETR     •077777700      RESET SECTOR TO ZERO
15127  0 55 25014        ADD     •400            UPDATE Y ADRS
15130  0 35 24513        STA     P0TWRD
15131  0 76 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 24756 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        LDB     •0
15144  0 35 24750        STB     ERRIR
15145  0 43 00460        BRM     ERR0R
15146  0 20 15146 WRYT6  NOP     *               Y DRIVE MESSAGE
15147  0 20 15147 WRYT7  NOP     *               WRITER MESSAGE
15150  0 20 15150 WRYT8  NOP     *               SELECT LOGIC MESSAGE
15151  0 01 15135        BRU     WRYT10
15152  0 76 25057 WRYT5  LDA     •4000000•RL0    64 WORDS FROM RL0
15153  0 71 25022 WRYT2  LDX     •40000          ONE SECTOR TIME DELAY
15154  0 40•10026        SKSS•   10026           RAD READY TEST
15155  0 41 15154        BRX     *•1
15156  0 41 15162        BRX     *•4
```



```
15157  0 43 00460        BRM     ERR0R
15160  0 20 24773        NOP     SKSERR          NOT READY ERROR
15161  0 51 15110        BRR     WRYT
15162  0 43 15167        BRM     WRYT3           SEND DATA
15163  0 76 24513        LDA     P0TWRD
15164  0 55 25004        ADD     •1              UPDATE SECTOR
15165  0 35 24513        STA     P0TWRD
15166  0 01 15117        BRU     WRYT9
15167  0 00 00000 WRYT3  ZR0
15170  0 35 24754        STA     CHANWD          SAVE CHANNEL POT WORD
15171  0 40•11026        SKSS•   11026           RAD ERROR TEST
15172  0 61 24750        MIN     ERRIR
15173  0 06 10026        E0MM    010026          ALERT RAD
15174  0 13 24513        P0TT    P0TWRD
15175  0 06•10000        E0MM•   10000           ALERT CHANNEL
15176  0 06 14200        E0MM    14200           IOSD WITH NO INTRUPTS
15177  0 13 24754        P0T     CHANWD          CHANNEL COUNT AND ADRS
15200  0 06 02266        E0MM    02266           RAD 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 24440        STA     RL0•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   ZRB
15210  0 35 23627          STA    HD
15211  0 36 24472          STB    COUNT1
15212  0 46 20005   READ0  ABC
15213  0 35 24750          STA    ERRIR
15214  0 35 24540          STA    RLB                 DISTURB READ BUFFER
15215  0 35 24400          STA    RLB+40
15216  0 35 24435          STA    RLB+75
15217  0 43 15316          BRM    READ7               READ FIRST SECTOR
15220  0 75 25040   READ1  LDB    =077
15221  0 76 24513          LDA    POTWRD
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    POTWRD              UPDATE Y ADRS
15227  0 76 25235          LDA    =27600166+RLB       TEST LAST SECTOR
15230  0 35 15310          STA    READ6
15231  0 43 17422          BRM    WAIT4               DELAY TO GET LAST BLOCK
15232  0 43 15306          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 15310          LDA    READ6
15237  0 54 25132          SUB    =66
15240  0 14 25001          ETR    =37777              GET BUFFER ADRS
15241  0 46 20000          ABC
15242  0 76 24750          LDA    ERRIR
15243  0 71 24513          LDX    POTWRD
15244  0 43 00460          BRM    ERRBR
15245  4 20 23621          NOP    MSG00A,4            PRINT SIDE TO STRIP HEAD LOCATION
```



```
15246  0 20 23431   READ3  NOP    MSG01A              HEAD LOGIC AND REGISTERS
15247  2 20 24406          NOP    HEDER,2             REGISTER HEADING
15250  0 61 24472   READ2  MIN    COUNT1
15251  0 53 24472          SKN    COUNT1              COUNT EIGHT CYCLES
15252  0 51 15307          BRR    READ
15253  0 53 24757          SKN    INCRSW
15254  0 01 15260          BRU    **4
15255  0 60 23627          SKR    HD
15256  0 20 00000          NOP    0
15257  0 01 15212          BRU    READ0
15260  0 61 23627          MIN    HD
15261  0 01 15212          BRU    READ0
15262  0 55 25004   READ4  ADD    =1
15263  0 35 24513          STA    POTWRD
15264  0 76 24753          LDA    FLAG1               TOGGLE FLAG
15265  0 75 24751          LDB    RCODE1              FIRST BUFFER
15266  0 73 24777          SKG    =0                  TEST TOGGLE FLAG
15267  0 75 24752          LDB    RCODE2              SECOND BUFFER
15270  0 36 24754          STB    CHANAD              SET CHANNEL COUNT AND ADRS
15271  0 71 24754          LDX    CHANAD
15272  0 75 25235          LDB    =27600166+RLB
15273  0 73 24777          SKG    =0
15274  0 75 25236          LDB    =027600066+RLB
15275  0 36 15310          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    40,2
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  ZRB
15307  0 71 25237          LDX    =-066               SET TO TEST 50 WORDS
15310  0 76 25240   READ6  LDA    =RLB +166,2         BUFFER BEING TESTED
15311  0 75 25143          LDB    =-1
```

```
15312  0 70 24755          SKM     TSTWRD
15313  0 61 24750          MIN     ERRIR
15314  0 41 15316          BRX     READ6
15315  0 51 15306          BRR     READ5
15316  0 00 00000  READ7    ZRB
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     ERR8R
15326  0 20 24773          NOP     SKSERR          READY ERROR MESSAGE
15327  0 51 15207          BRR     READ            RESTART OBJECT TEST
15330  0 06 10026  READ8    EBMM    010026          ALERT RAD
15331  0 13 24513          PBTT    PBT*RD
15332  0 06*10000          EBMM*   10000           ALERT CHANNEL
15333  0 06 14200          EBMM    14200           IBSD WITH NO INTRUPTS
15334  0 13 24754  READ9    PBT     CHAN*D          64 *8RDS TO RL8
15335  0 06 02226          EBMM    02226           RAD DRIVE CODE
15336  0 51 15316          BRR     READ7
15337  0 00 00000  SET*RD   ZRB
15340  0 35 24513          STA     PBT*RD          ADDRESS FOR RAD
15341  0 46 10012          BAC
15342  0 16 25241          YRG     *42000000       SET LINK
15343  0 35 15246          STA     READ3           SET ERROR MESSAGE
15344  0 37 24755          STX     TST*RD          HEAD DATA
15345  0 46 00001          CLA
15346  0 35 24753          STA     FLAG1
15347  0 76 24751          LDA     RC8DE1          FIRST READ BUFFER
15350  0 35 24754          STA     CHAN*D          SET CHANNEL COUNT AND ADRS
15351  0 76 25236          LDA     *27600066*RL8   TEST BUFFER ONE
15352  0 35 15316          STA     READ6
15353  0 51 15337          BRR     SET*RD
```



```
                    *
                    *
                    * COUNTUP AND COUNTDN ROUTINES
                    *
                    *
15354  0 00 00000  INCRI1  ZRB
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            READ 64 SECTORS
15363  0 51 15354          BRR     INCRI1
15364  0 00 00000  DECRI1  ZRB
15365  0 43 15414          BRM     SSIDE           SET PARAMETERS
15366  0 76 25143          LDA     **1
15367  0 35 24757          STA     INCRSW          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            READ DATA
15373  0 51 15364          BRR     DECRI1
15374  0 00 00000  INCRI2  ZRB
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            READ 64 SECTORS
15403  0 51 15374          BRR     INCRI2
15404  0 00 00000  DECRI2  ZRB
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 25007          LDA     *10             STARTING ADRS AT HEAD 8
15411  0 75 25242          LDB     **10
15412  0 43 15207          BRM     READ            READ DATA
```

```
15413  0 51 15404          BRR     DECR12
15414  0 00 00000  SSIDE   ZR0
15415  0 46 20005          ABC
15416  0 67 00014          LSH     14              SPLIT SIDE FROM TB STRIP
15417  0 35 23423          STA     SIDE
15420  0 46 10012          BAC
15421  0 66 00014          RSH     14
15422  0 35 23625          STA     TB
15423  0 51 15414          BRR     SSIDE
```



```
                    *
                    *
                    * Y MESSAGE ERROR DRIVER
                    *
                    *
15424  0 00 00000  YMSG    ZR0
15425  0 35 24513          STA     P0TWRD
15426  0 61 15424          MIN     YMSG            GET REST OF MESSAGES
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            TEST FOUR HEADS
15435  4 20 23671          N0P     MSG05A,4        Y DRIVE MESSAGE
15436  0 43 15110          BRM     WRYT
15437  4 20 23674          N0P     MSG05B,4
15440  0 51 15424          BRR     YMSG
                    *
                    *
                    * Y MESSAGE ERROR DRIVER
                    *
                    *
15441  0 00 00000  YMSG7   ZR0
15442  0 35 24513          STA     P0TWRD
15443  0 61 15441          MIN     YMSG7           GET REST OF MESSAGES
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            TEST FOUR HEADS
15452  4 20 23677          N0P     MSG05C,4        Y DRIVE MESSAGE
15453  0 43 15110          BRM     WRYT
15454  4 20 23702          N0P     MSG05D,4
15455  0 51 15441          BRR     YMSG7
```

```
                        *
                        *
                        * Y MESSAGE ERROR DRIVER
                        *
                        *
15456  0 00 00000  YMSG8   ZRO
15457  0 35 24513          STA     POTWRD
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
15466  0 43 15110          BRM     WRYT            TEST FOUR HEADS
15467  4 20 23705          NOP     MSG05E,4        Y DRIVE MESSAGE
15470  0 43 15110          BRM     WRYT
15471  4 20 23710          NOP     MSG05F,4
15472  0 51 15456          BRR     YMSG8
                        *
                        *
                        * Y MESSAGE ERROR DRIVER
                        *
                        *
15473  0 00 00000  YMSG9   ZRO
15474  0 35 24513          STA     POTWRD
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
15503  0 43 15110          BRM     WRYT            TEST FOUR HEADS
15504  4 20 23713          NOP     MSG05G,4        Y DRIVE MESSAGE
15505  0 43 15110          BRM     WRYT
15506  4 20 23716          NOP     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     RADBK
15515  0 73 24777          SKG     =0
15516  0 01 20353          BRU     ALLDUN
15517  0 75 25247          LDB     =177777         ONE RAD
15520  0 73 25226          SKG     =1000000
15521  0 01 15531          BRU     FUN10A
15522  0 75 25201          LDB     =37777          TWO RADS
15523  0 73 25227          SKG     =2000000
15524  0 01 15531          BRU     FUN10A
15525  0 75 25246          LDB     =57777          THREE RADS
15526  0 73 25144          SKG     =3000000
15527  0 01 15531          BRU     FUN10A
15530  0 75 25247          LDB     =77777          FOUR RADS
15531  0 36 24431  FUN10A  STB     RADHI
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     =4
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 25201          LDB     =37777          16K
15547  0 36 24427  FUN10B  STB     CORHI
15550  0 76 00401          LDA     STATUS
15551  0 75 24777          LDB     =0
15552  0 72 25006          SKA     =4              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     KEYSW
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     OBJECT
15576  0 76 25027          LDA     =2000000        NOP 0
15577  0 35 17351          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     CORLO
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     CORHI           HIGHEST INPUT CORE ADRS
15614  0 54 24426          SUB     CORLO
15615  0 35 24470          STA     CORMAX
15616  0 73 25260          SKG     =067776         TEST FOR MORE THAN 28K
15617  0 01 15621          BRU     INIT1
```

```
RADE12 TAP=3.0     01/17  06111   PAGE 276

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     HEADSW          SET TO PRINT HEADING
15626  0 70 24777          SKM     =0
15627  0 01 15631          BRU     INIT3
15630  0 76 25005          LDA     =02             SMALLEST BUFFER INCREMENT
15631  0 35 24454  INIT3   STA     BLKMAX
15632  0 76 24431          LDA     RADHI           HIGHEST INPUT RAD ADRS
15633  0 54 24430          SUB     RADLO
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     RADOK
15656  0 75 25143          LDB     =-1
15657  0 36 24514          STB     PRNTED          SET PRINT SWITCH AND HEADING SW
15660  0 36 24762          STB     SEKSTT          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
```

```
15664  0 14 25201          ETR     •7000000        GET MAX RAD AVAILABLE
15665  0 46 20005          ABC
15666  0 66 00005          RSW     5
15667  0 46 10212          BAC
15670  0 54 25220          SUB     •010000         RADSIZ IS IN MULTIPLES OF TWO
15671  0 16 25246          MRG     •07777          SET HIGHEST ADRS
15672  0 55 25204          ADD     •1              FORCE GREATER WHEN ACTUAL EQUALITY
15673  0 73 24431          SKG     RADHI           ASSURE RAD ADRS IN LIMITS OF RADSIZ
15674  0 01 15734          BRU     INIT8
15675  0 54 25204          SUB     •1
15676  0 17 24431          EOR     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 24433          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     ERROR
15724  0 20 24306          NOP     FIXBIG
15725  0 01 15510          BRU     FUNC10
15726  0 43 00460  INIT6   BRM     ERROR
15727  0 20 24264          NOP     NORAD
```



```
15730  0 01 15510          BRU     FUNC10
15731  0 43 00460  INIT7   BRM     ERROR
15732  0 20 24353          NOP     CORERR
15733  0 01 15510          BRU     FUNC10
15734  0 43 00460  INIT8   BRM     ERROR
15735  0 20 24330          NOP     RADBIG
15736  0 01 15510          BRU     FUNC10
15737  0 43 00460  INIT9   BRM     ERROR
15740  0 20 24272          NOP     NOBUFR
15741  0 01 15510          BRU     FUNC10
15742  0 43 00460  INIT10  BRM     ERROR
15743  0 20 24322          NOP     FIXZRO
15744  0 01 15510          BRU     FUNC10
15745  0 76 25140  INIT11  LDA     •60D            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         READ ONLY
15752  0 35 24425          STA     MODES
15753  0 76 25143          LDA     ••1
15754  0 35 24507          STA     KEYSW
15755  0 01 16036          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        LDB     ••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     MODE           MODE TEMP FOR PROCESS GENERATOR
16007  0 46 20005        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 25204        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 16555        BRU     RADADF
```

```
                    *
                    *
                    * PROCESS GENERATOR
                    *
                    * THE GENERATOR CONTROLS THE METHOD OF USE DETERMINED BY THE
                    * MODE WORD.
                    *
                    *
16036  0 76 24425 PROGEN 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 00406        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 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 25122        MRG     *40000           FIX FINAL MODE
16067  0 35 24446 GENER1 STA     MODE             PREPARE FOR POSSIBLE RANDOM MODES
16070  0 02 30002 ERMKEY EIR
16071  0 72 25266        SKA     *03000           IS BUFFER ONE IN
```



```
16072  0 01 16102        BRU     PROGE1
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     PROGE5
16077  0 43 00460        BRM     ERROR            NO BUFFERS SELECTED
16100  0 20 24272        NOP     NOBUFR
16101  0 01 15510        BRU     FUNC10
16102  0 71 24777 PROGE1 LDX     *0
16103  0 43 16427        BRM     RADADR
16104  0 72 25146        SKA     *0300            IS TWO IN
16105  0 01 16215        BRU     PROGE8
16106  0 75 25143        LDB     **1
16107  0 36 24464        STB     BUFSKP           FORCE   SINGLE BUFFER CONTROL
16110  0 43 16215 PROGE2 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     PROG4A
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 PROGE3 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     PROGE5
16132  0 53 24507 PROGE4 SKN     KEYSW
16133  0 01 16011        BRU     KEYRA1
16134  0 53 24473        SKN     CYCLE1
16135  0 01 16137        BRU     **2
```

```
16136  0 01 16036          BRU     PRØGEN
16137  0 60 24473          SKR     CYCLE1
16140  0 20 00000          NØP     0
16141  0 53 24473          SKN     CYCLE1
16142  0 01 16036          BRU     PRØGEN
16143  0 43 17622          BRM     ^AIT4           LET RAD FINISH
16144  0 43 00456          BRM     FØØNE
16145  0 01 20154          BRU     FUNC11
16146  0 76 24446  PRØGE5  LDA     ^ØDE
16147  0 71 25004          LDX     =1
16150  0 43 16300          BRM     STATST
16151  0 43 16427          BRM     RADADR
16152  0 43 16315          BRM     CØRADR
16153  0 43 16655          BRM     SETUP
16154  0 75 25276          LDB     =0700           ^ASK DRIVE CØDE FØR TWØ
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     PRØGE7
16161  0 43 17622          BRM     ^AIT4
16162  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16163  0 76 25077          LDA     =+*1
16164  0 01 17603          BRU     ^AIT2           ^Ø INTRUPT SEND BUFFER
16165  0 43 17622  PRØGE6  BRM     ^AIT4
16166  0 43 16271          BRM     ERRTST
16167  0 71 25004          LDX     =1
16170  0 43 17407          BRM     CHFCK
16171  0 43 00434          BRM     END
16172  0 01 16132          BRU     PRØGE4
16173  0 43 17622  PRØGE7  BRM     ^AIT4
16174  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16175  0 72 25011          SKA     =040            DATA CHAIN SELECTED
16176  0 43 17527          BRM     CHAIN2          ^ES
16177  0 76 17337          LDA     INTRE4          ^Ø SEND VIA INTRUPT
16200  0 43 17273          BRM     TRANS2
16201  0 53 24505          SKN     JMPTYP
```



```
16202  0 11 16204          BRI     =+2
16203  0 01=16204          BRU=    =+1
16204  0 20 16205          NØP     =+1             RESET INTRUPT
16205  0 01 16165          BRU     PRØGE6
16206  0 43 17622  PRØG4A  BRM     ^AIT4
16207  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16210  0 72 25011          SKA     =040            IS DATA CHAIN ØN
16211  0 43 17455          BRM     CHAIN1
16212  0 76 17336          LDA     INTRE3
16213  0 43 17236          BRM     TRANS1
16214  0 01 16123          BRU     PRØGE3
16215  0 75 24777  PRØGE8  LDB     =0
16216  0 36 24464          STB     BUFSKP
16217  0 72 25021          SKA     =020000         IS EARLY SELECTED
16220  0 01 16222          BRU     =+2             ^ES
16221  0 01 16110          BRU     PRØGE2          ^Ø
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     CØRADR
16227  0 43 16455          BRM     SETUP
16230  0 75 25274          LDB     =07000          ^ASK FØR DRIVE CØDE ØNE
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           ^ASK FØR DRIVE CØDE TWØ
16236  0 43 16614          BRM     RADDRV
16237  0 43 16722          BRM     DATA
16240  0 72 25020          SKA     =010000         IS INTRUPT ØN
16241  0 01 16254          BRU     PRØGE9          ^ES
16242  0 43 17622          BRM     ^AIT4
16243  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16244  0 76 25300          LDA     =+*1            SET RETURN FØR TRANS1
16245  0 01 17564          BRU     ^AIT1
```

```
                    *
                    *
                    * 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
16043  0 76 00406        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 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 30002 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     PRGE5
16077  0 43 00460        BRM     ERROR           NO BUFFERS SELECTED
16100  0 20 24272        NOP     NOBUFR
16101  0 01 15510        BRU     FUNC10
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     PRGG4A
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     PRGE5
16132  0 53 24507 PRGE4  SKN     KEYSW
16133  0 01 16011        BRU     KEYRA1
16134  0 53 24473        SKN     CYCLE1
16135  0 01 16137        BRU     ••2
```

```
16136  0 01 16036          BRU     PRØGEN
16137  0 60 24473          SKR     CYCLE1
16140  0 20 00000          NØP     0
16141  0 53 24473          SKN     CYCLE1
16142  0 01 16036          BRU     PRØGEN
16143  0 43 17622          BRM     ^AIT4           LET RAD FINISH
16144  0 43 00456          BRM     FDØNE
16145  0 01 20154          BRU     FUNC11
16146  0 76 24446  PRØGE5  LDA     MØDE
16147  0 71 25004          LDX     #1
16150  0 43 16300          BRM     STATST
16151  0 43 16427          BRM     RADADR
16152  0 43 16315          BRM     CØRADR
16153  0 43 16655          BRM     SETUP
16154  0 75 25276          LDB     #0700           MASK DRIVE CODE FØR TWØ
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     PRØGE7
16161  0 43 17622          BRM     ^AIT4
16162  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16163  0 76 25277          LDA     #**1
16164  0 01 17603          BRU     ^AIT2           NØ INTRUPT SEND BUFFFR
16165  0 43 17622  PRØGE6  BRM     ^AIT4
16166  0 43 16271          BRM     ERRTST
16167  0 71 25004          LDX     #1
16170  0 43 17107          BRM     CHFCK
16171  0 43 00434          BRM     END
16172  0 01 16132          BRU     PRØGE4
16173  0 43 17622  PRØGE7  BRM     ^AIT4
16174  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16175  0 72 25011          SKA     #040            DATA CHAIN SELECTED
16176  0 43 17627          BRM     CHAIN2          YES
16177  0 76 17337          LDA     INTRE4          NØ SEND VIA INTRUPT
16200  0 43 17273          BRM     TRA^S2
16201  0 53 24505          SKN     JMPTYP
```



```
16202  0 11 16204          BRI     #*2
16203  0 01*16204          BRU*    #*1
16204  0 20 16205          NØP     #*1             RESET INTRUPT
16205  0 01 16165          BRU     PRØGE6
16206  0 43 17622  PRØG4A  BRM     ^AIT4
16207  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16210  0 72 25011          SKA     #040            IS DATA CHAIN ØN
16211  0 43 17455          BRM     CHAIN1
16212  0 76 17336          LDA     INTRE3
16213  0 43 17236          BRM     TRA^S1
16214  0 01 16123          BRU     PRØGE3
16215  0 75 24777  PRØGE8  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     PRØGE2          NØ
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     CØRADR
16227  0 43 16455          BRM     SETUP
16230  0 75 25274          LDB     #07000          MASK FØR DRIVE CØDE ØNE
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 FØR DRIVE CØDE TWØ
16236  0 43 16614          BRM     RADDRV
16237  0 43 16722          BRM     DATA
16240  0 72 25020          SKA     #010000         IS INTRUPT ØN
16241  0 01 16254          BRU     PRØGE9          YES
16242  0 43 17622          BRM     ^AIT4
16243  0 43 00430          BRM     ØBJECT          ALLØ^ RAD TØ FINISH BEFØRE CØNTRØL
16244  0 76 25300          LDA     #**1            SET RETURN FØR TRANS1
16245  0 01 17564          BRU     ^AIT1
```

```
16246  0 43 16271          BRM     ERRTST
16247  0 76 25701  PR0G11  LDA     *+1             SET RETURN FOR TRANS2
16250  0 01 17603          BRU     WAIT2
16251  0 71 24777  PR0G12  LDX     =0
16252  0 43 17107          BRM     CHECK
16253  0 01 16165          BRU     PR0GE6
16254  0 43 17622  PR0GE9  BRM     WAIT4
16255  0 43 00430          BRM     0BJECT          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 24505          SKN     JMPTYP
16263  0 11 16265          BRI     *+2
16264  0 01*16265          BRU*    *+1
16265  0 20 16265          N0P     *               CLEAR RECOGNIZED INTRUPT
16266  0 71 24777          LDX     =0
16267  0 43 17107          BRM     CHECK
16270  0 01 16165          BRU     PR0GE6
                    *
16271  0 00 00000  ERRTST ZR0
16272  0 40*11026          SKSS*   11026           RAD ERROR TEST
16273  0 43 00454          BRM     REP0RT
16274  0 20 24131          N0P     RADER
16275  0 40*11000          SKSS*   11000           CHANNEL ERROR TEST
16276  0 43 17470          BRM     CHANER
16277  0 51 16271          BRR     ERRTST
                    *
16300  0 00 00000  STATST ZR0
16301  0 35 24765          STA     STAHLD
16302  0 76 00401          LDA     STATUS
16303  0 72 25017          SKA     =4000           RAD READ LOCK IN BIT
16304  0 01 16307          BRU     *+3
16305  0 76 24765  STATS1  LDA     STAHLD
16306  0 51 16300          BRR     STATST
16307  0 76 24462          LDA     BUF1RA
```



```
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 ZRO
16316  0 37 24451          STX     BUFSAV
16317  0 76 24446          LDA     MODE            RANDOM 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     ERROR
16327  0 20 24301          NOP     *-CORE
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 24304          STA     HOLD3B
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     RANDOM
16343  0 14 24761          ETR     SAVARD
16344  0 73 24504          SKG     HOLD3B
16345  0 01 16347          BRU     *+2
16346  0 54 24504          SUB     HOLD3B
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 16363          BRU     *+2
16362  0 01 16366          BRU     CORAD9
16363  0 43 00460          BRM     ERROR           DISALLOW EARLY ON FIXED CORE ADR
16364  0 20 24371          NOP     BADBIT
16365  0 01 15510          BRU     FUNC10
16366  0 76 24426  CORAD9 LDA     CORL0           CORLO 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
16377  0 35 24467          STA     CORINK          RESET IF ABOVE CORHI
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
```

```
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          SET SECOND CORE ADRS
16424  0 76 24446  CORADA LDA     MODE
16425  0 71 24451          LDX     BUFSAV
16426  0 51 16315          BRR     CORADR          RESET AND RETURN
```



```
                    *
                    *
                    * RANDOM RAD STARTING ADDRESS AND BLOCK LENGTH GENERATOR.
                    *
                    * BLKMAX IS THE SMALLER OF 14K, WHICH IS THE GREATEST
                    * RELABEL COUNT OR CORMAX/2, WHICH IS THE GREATEST
                    * CORE SIZE SPECIFIED, OR RADMAX/2 WHICH IS THE RAD SIZE SPECIFIED.
                    *
16427  0 00 00000  RADADR ZRO
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     NORAD
16441  0 01 15510          BRU     FUNC10
16442  0 76 00406  RADAD1 LDA     SEED
16443  0 43 16603          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     RADL0
16451  0 35 24743          STA     SAVADR
16452  0 75 24454          LDB     BLKMAX
16453  0 53 24507          SKN     KEYSW
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 LENTGH
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          RSH     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     BLKMAX
16525  0 53 24507          SKN     KEYSW           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 16567          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 VALUE
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     RADADF
16551  0 76 24430          LDA     RADL0
16552  0 35 24521          STA     RADINK
16553  0 53 24507          SKN     KEYSW
16554  0 01 16013          BRU     KEYEND
16555  0 76 24446  RADADF 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 16567          BRM     GETBLK
16565  0 76 24430          LDA     RADL0
16566  0 01 16464          BRU     RADAD5
```

```
                    *
                    *
                    * RANDOM BLOCK LENGTH GENERATOR
                    *
                    *
16567  0 00 00000  GETBLK ZRO
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 25212          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 ZRO     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 ZRO
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          EOR     =*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*    TREGM,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*    TREGM,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*    TREGM,2
16652  0 76 24446  RADDR1 LDA     MODE
```

```
16653  0 71 24451          LDX     BUFSAV
16654  0 51 16414          BRR     RADDRV
```



```
                           *
                           *
                           * CALCULATE AND PLACE NEW EOM AND POT VALUES FOR THE TRANSMIT TABLE
                           *
                           *
16655  0 00 00000  SETUP   ZRO     0
16656  0 37 24451          STX     BUFSAV
16657  0 46 20005          ABC                     CLEAR AREG
16660  2 75 24452          LDB     BUF1BL,2        GET BLOCK LENGTH
16661  0 67 00016          LSH     016             ISOLATE 5 HI ORDER BITS FOR EOM
16662  0 16 24477          MRG     EOMBIT          EOM = 0617200
16663  0 35 24502          STA     HOLD2           SAVE EOM FOR HI ADRS
16664  0 36 24503          STB     HOLD3           SAVE LO WORD COUNT FOR ADRS BITS
16665  0 46 10012          BAC                     CLEAR BREG
16666  2 76 24460          LDA     BUF1CA,2        GESS ADRS WORD
16667  0 14 25306          ETR     =0140000        ISOLATE HI BITS
16670  0 66 00011          RSH     011             ALIGN HI BITS FOR EOM WORD
16671  0 16 24502          MRG     HOLD2           FINAL EOM
16672  0 35 24502          STA     HOLD2
16673  0 76 24446          LDA     MODE
16674  0 72 25020  SETUP4   SKA     =010000         IS IT INTRUPT
16675  0 01 16477          BRU     *+2
16676  0 01 16706          BRU     SETU3B          NO
16677  0 72 25021          SKA     =20000          TEST FOR EARLY BIT
16700  0 01 16702          BRU     *+2
16701  0 01 16711          BRU     SETU3A
16702  0 76 24502  SETUP8  LDA     HOLD2           YES
16703  0 16 25033          MRG     =40000000       EARLY INTERRUPT BIT
16704  0 35 24502          STA     HOLD2
16705  0 01 16711          BRU     SETU3A          YES
16706  0 76 24502  SETU3B  LDA     HOLD2
16707  0 14 25307          ETR     =37774777       REMOVE I1,I2 ARMING+ EARLY BIT
16710  0 35 24502          STA     HOLD2
16711  0 75 24502  SETU3A  LDB     HOLD2           FINAL EOM TO BREG
16712  2 76 24460          LDA     BUF1CA,2        GET ADRS WORD
16713  0 14 25001          ETR     =037777         ISOLATE LO ORDER ADRS BITS
```

```
16714  0 16 24503        MRG     H@LD3           CHANNEL P@T W@RD
16715  2 35 24456        $TA     BUF1KA,2
16716  2 36*24766        $TB*    TCE@M,2         SET CHANNEL E@M
16717  0 76 24446        LDA     M@DE
16720  0 71 24451        LDX     BUFSAV
16721  0 51 16455        BRR     SETUP           RETURN
```



```
                  *
                  *
                  * DATA GENERAT@R
                  *
                  * EITHER RAND@M FIXED @R SEQUENTIAL DATA IS SPREAD
                  *
                  *
16722  0 00 00000 DATA   ZR@
16723  0 37 24451        STX     BUFSAV
16724  2 76*24770        LDA*    TRE@M,2         GET RAD E@M W@RD
16725  0 72 25011        SKA     *040            TEST WRITE
16726  0 01 16730        BRU     **2
16727  0 01 16773        BRU     DATA15
16730  2 76 24462        LDA     BUF1RA,2
16731  0 35 24504        STA     H@LD3B
16732  2 76 24460        LDA     BUF1CA,2
16733  2 75 24452        LDB     BUF1BL,2
16734  0 43 17013        BRM     RELABL          T@ SET RELABELLING REGISTERS
16735  0 55 24525        ADD     RELBL           CREATE HI C@RE ADRS
16736  0 16 24774        MRG     *RDSTA
16737  0 46 20005        ABC
16740  0 54 24525        $UB     RELBL           GET C@RRECT BL@CK LENGTH
16741  0 35 24501        STA     H@LD
16742  0 71 24501        LDX     H@LD            NEGATIVE BL@CK LENGTH T@ XREG
16743  0 76 24446        LDA     M@DE
16744  0 72 25023        SKA     *0100000        RAND@M
16745  0 01 16755        BRU     DATA9
16746  0 72 25024        SKA     *0200000        SEQUENTIAL
16747  0 01 17003        BRU     DATA13
16750  0 72 25025        SKA     *0400000        FIXED DATA
16751  0 01 16776        BRU     DATA12
16752  0 43 00460        BRM     ERR@R
16753  0 20 24257        N@P     N@DATA
16754  0 01 15510        BRU     FUNC10
16755  0 46 10012 DATA9  BAC
16756  0 35 16766        STA     DATA10          RAND@M *RITE SECTI@N
```

```
16757  0 17 25310          EOR     =06000000       GENERATE AN ADD, 035 EOR 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     MODE
16774  0 71 24451          LDX     BUFSAV
16775  0 51 16722          BRR     DATA
16776  0 76 24432  DATA12  LDA     PATERN          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 75 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 ZRO
17014  0 35 24526          STA     RELCA           CORE ADRS
17015  0 36 24525          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              GET BITS 8,9,10,11,12 FROM HI ADRS
17022  0 46 10012          BAC
17023  0 35 24537          STA     RHIADR
17024  0 46 10012          BAC                     CLEAR BREG
17025  0 75 24526          LDB     RELCA
17026  0 66 00013          RSH     13              ISOLATE LO ADRS BITS
17027  0 46 10012          BAC
17030  0 35 24740          STA     RLOADR
17031  0 36 24501          STB     HOLD
17032  0 46 10012          BAC                     CLEAR AREG, BREG, HOLD
17033  0 71 25242          LDX     *-10            SET FOR 8 RL LOOPS
17034  0 76 24740  RELAB4  LDA     RLOADR          LOW RAD ADRS BITS FOR RELABL
17035  0 17 24537          EOR     RHIADR
17036  0 72 25143          SKA     *-1
17037  0 01 17075          BRU     RELAB6
17040  0 76 24740          LDA     RLOADR
17041  0 16 25011          MRG     =4000000040     ADD INTRUPT AN FORCE NEGATIVE BIT
17042  2 35 24537          STA     RFIELD+10,2
17043  0 76 24501          LDA     HOLD
17044  0 67 20006          LCY     6
17045  0 16 24740          MRG     RLOADR
17046  0 41 17050          BRX     *+2
17047  0 01 17057          BRU     RELAB7
17050  0 35 24501          STA     HOLD
```

```
17051  0 76 24777          LDA     •0
17052  2 35 24537          STA     RFIELD•10,2     END CHAIN FIELD
17053  0 76 24501          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          EOM     020400
17064  0 13 00415          POT     RL1
17065  0 02 21000          EOM     021000
17066  0 13 00416          POT     RL2
17067  0 76 24526  RELAB5  LDA     RELCA
17070  0 53 24763          SKN     SKP940
17071  0 01 17073          BRU     •+2
17072  0 14 25045          ETR     •03777
17073  0 75 24525          LDB     RELBL
17074  0 51 17013          BRR     RELABL
17075  0 76 24740  RELAB6  LDA     RLOADR
17076  0 16 25011          MRG     •400000040      ADD INTRUPT AND FORCE NEGATIVE BIT
17077  2 35 24537          STA     RFIELD•10,2     LOAD DATA CHAIN TABLE
17100  0 76 24501          LDA     HOLD
17101  0 67 20006          LCY     6
17102  0 16 24740          MRG     RLOADR
17103  0 35 24501          STA     HOLD            LOAD RL POT WRDS IN AREG, BREG
17104  0 61 24740          MIN     RLOADR
17105  0 41 17034          BRX     RELAB4
17106  0 01 17057          BRU     RELAB7
```



```
                    *
                    *
                    * DATA CHECKING ROUTINE
                    *
                    *
17107  0 00 00000  CHECK   ZRO
17110  0 37 24451          STX     BUFSAV
17111  2 76•24770          LDA•    TREOM,2         GET RAD EOM WORD
17112  0 72 25011          SKA     •040
17113  0 01 17205          BRU     CHECK8
17114  2 76 24462          LDA     BUF1RA,2
17115  0 35 24504          STA     HOLD3B
17116  0 76 00401          LDA     STATUS
17117  2 75 24452          LDB     BUF1BL,2
17120  0 72 25017          SKA     •4000           SOFTWARE RAD READ ONLY
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 24525          ADD     RELBL
17125  0 16 24775          MRG     •RDSKM          TEST WORD
17126  0 46 20005          ABC
17127  0 54 24525          SUB     RELBL
17130  0 35 24501          STA     HOLD
17131  0 71 24501          LDX     HOLD            PUT NEGATIVE BLK IN XREG
17132  0 76 24446          LDA     MODE
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     CHEC12
17137  0 72 25025          SKA     •0400000        FIXED
17140  0 01 17177          BRU     CHECK4
17141  0 43 00460          BRM     ERROR
17142  0 20 24257          NOP     NODATA
17143  0 01 15510          BRU     FUNC10
17144  0 36 17151  CHEC12  STB     CHEC13
17145  0 75 24504          LDB     HOLD3B          SEQUENTIAL DATA TEST LOOP
```

```
17146  0 67 00006          LSH     6
17147  0 46 12012          BAC
17150  0 75 25143          LDB     =-1
17151  6 70 00000  CHEC13  SKM     0,6
17152  0 43 17721          BRM     ERROUT
17153  0 55 25004          ADD     =1
17154  0 41 17151          BRX     CHEC13
17155  0 01 17705          BRU     CHECK8
17156  0 36 17174  CHECK7  STB     CHEC22
17157  0 46 12012          BAC
17160  0 17 25311          EOR     =500000         MAKE A LDB, 70 EOR 05 = 75
17161  0 35 17165          STA     CHEC21
17162  0 17 25127          EOR     =2000000        MAKE AN ADD, 75 EOR 20 = 55
17163  0 35 17170          STA     CHEC71
17164  0 46 20005  CHEC72  ABC
17165  6 75 00000  CHEC21  LDB     0,6
17166  0 67 00013          LSH     13
17167  0 75 25143          LDB     =-1
17170  6 55 00000  CHEC71  ADD     0,6
17171  0 55 25302          ADD     =53577045       RANDOM CONSTANT
17172  0 41 17174          BRX     *-2
17173  0 01 17705          BRU     CHECK8
17174  6 70 00000  CHEC22  SKM     0,6             RANDOM DATA TEST LOOP
17175  0 43 17721          BRM     ERROUT
17176  0 01 17164          BRU     CHEC72
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     ERROUT
17204  0 41 17202          BRX     CHECK6
17205  0 71 24451  CHECK8  LDX     BUFSAV
17206  0 76 24446          LDA     MODE
17207  0 51 17107          BRR     CHECK
17210  0 43 17622  CHECK9  BRM     WAIT4
17211  0 76 24452          LDA     BUF1BL
```



```
17212  0 55 24453          ADD     BUF2BL          GET BOTH SECTOR COUNTS
17213  0 46 20005          ABC
17214  0 76 24460          LDA     BUF1CA
17215  0 43 17713          BRM     RELABL
17216  0 55 24452          ADD     BUF1BL          SET LDA FOR FIRST BUFFER
17217  0 16 25312          MRG     =67600000
17220  0 35 17231          STA     CHECK3
17221  0 55 24453          ADD     BUF2BL          SET SECOND BUFFER
17222  0 17 25313          EOR     =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     HOLD
17227  0 71 24501          LDX     HOLD
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     ERROUT
17234  0 41 17231          BRX     CHECK3
17235  0 01 17705          BRU     CHECK8
```

```
                    *
                    *
                    * TRANSMIT TABLE BYE
                    *
                    * CALCULATED ADDRESSES AND BLOCK LENGTH CODES ARE INSERTED IN
                    * TABLE FOR TRANSMISSION TO THE RAD CONTROLLER
                    *
                    *
17236  0 00 00000  TRANS1 ZRO     0
17237  0 35 17334          STA     INTRE1          CUE TRANS1, BRU TRAN12
17240  0 47*14000          SKSS*   14000           CHANNEL ACTIVE TEST
17241  0 01 17550          BRU     RADTIM          TIME OUT FOR RAD INTRUPT WAIT
17242  0 06 10026  TRAN12 LOMM    0010026         ALERT RAD, ERRORS ARE NOT CLEARED
17243  0 13 24462          POT      BUF1RA          STARTING RAD ADDRESS
17244  0 47*11000          SKSS*   011000          TEST CHANNEL ERROR
17245  0 43 17673          BRM     CHANER          ANALYZE CHANNEL ERROR
17246  0 06*10000          LOMM*   010000          ALERT CHANNEL
17247  0 06 17200  TCEOM1 LOMM    0017200         ARM I1, I2, IOSD, AND HI BITS
17250  0 13 24456          POT      BUF1KA          CHANNEL LO BITS
17251  0 20 00000  TRAN14 NOP     0               LINK TO DATA CHAIN
17252  0 47*11026  TRAN11 SKSS*   011026          RAD ERROR TEST
17253  0 43 17710          BRM     POTERR          ONLY A POT ERROR CAN OCCUR HERE
17254  0 06 00000  TREAM1 LOMM    0000000         RAD DRIVE CODE INSERTED HERE
17255  0 06 12000          LOMM    012000          ALERT TO PIN INTERLACE
17256  0 33 24516          FIX      PINARD
17257  0 76 17335          LDA     INTRE2
17260  0 35 17334          STA     INTRE1          RESET FOR FAST RETURN
17261  0 75 24777          LDB     •0
17262  0 36 24515          STB     LODABL
17263  0 43 17644          BRM     PINTST
17264  0 53 17654          SKN     TREOM1
17265  0 01 17272          BRU     TRAN13          TEST FOR EARLY INTRUPT
17266  0 47*10026          SKSS*   010026          TEST RAD READY
17267  0 01 17271          BRU     •+2
17270  0 43 00460          BRM     ERROR
17271  0 20 24763          NOP     ERIERR
```



```
17272  0 51 17236  TRAN13 BRR     TRANS1          RETURN TO MAIN LOOP
```

```
                    *
                    * TRANSMIT TABLE TAB
                    *
                    * CALCULATED ADDRESSES AND BLOCK LENGTH CODES ARE INSERTED IN
                    * TABLE FOR TRANSMISSION TO THE RAD CONTROLLER
                    *
17273  0 00 00000  TRANS2 ZRO     0
17274  0 35 17334          STA     INTRE1          CUE TRANS2, BRU TRAN12
17275  0 40*14000          SKSS*   14000           CHANNEL ACTIVE TEST
17276  0 01 17550          BRU     RADTIM          TIME OUT FOR RAD INTRUPT WAIT
17277  0 06 10026  TRAN22 EOMM    0010026         ALERT RAD.  ERRORS ARE NOT CLEARED
17300  0 13 24463          POT     BUF2RA          STARTING RAD ADDRESS
17301  0 40*11000          SKSS*   011000          TEST CHANNEL ERROR
17302  0 43 17670          BRM     CHANER          ANALYZE CHANNEL ERROR
17303  0 06*10000          EOMM*   010000          ALERT CHANNEL
17304  0 06 17200  TCEOM2 EOMM    0017200         ARM I1, I2, IOSD, AND HI BITS
17305  0 13 24457          POT     BUF2KA          CHANNEL LO BITS
17306  0 20 00000  TRAN24 NOP     0               LINK TO DATA CHAIN
17307  0 40*11026  TRAN21 SKSS*   011026          RAD ERROR TEST
17310  0 43 17710          BRM     POTERR          ONLY A POT ERROR CAN OCCUR HERE
17311  0 06 00000  TREOM2 EOMM    0000000         RAD DRIVE CODE INSERTED HERE
17312  0 06 12000          EOMM    012000          ALERT TO PIN INTERLACE
17313  0 33 24516          PIN     PINWRD
17314  0 75 25004          LDB     =1
17315  0 36 24515          STB     LODABL
17316  0 43 17644          BRM     PINTST          CHECK FOR CORRECT PIN WORD
17317  0 76 17335  TRAN25 LDA     INTRE2
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     TREOM2
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     ERR*R
17327  0 20 24063          NOP     ERIERR
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 ZRO
17334  0 11 17333  INTRE1 BRI     INTR1E
17335  0 11 17333  INTRE2 BRI     INTR1E          BUFFER NOT SET YET RETURN
17336  0 11 17347  INTRE3 BRI     INTRE6          LINK TO FIRST BUFFER
17337  0 01 17341  INTRE4 BRU     WAIT5           LINK TO SECOND BUFFER
17340  0 01 17477  INTRE5 BRU     DCHAIN          LINK TO DATA CHAIN CONTROL
17341  0 40*10026  WAIT5  SKSS*   10026
17342  0 41 17341         BRX     *-1
17343  0 41 17377         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  INTRE6 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 75 25001         LDB     =37777          MASK
17357  0 70 25314         SKM     =165            TEST FOR REAL I2
17360  0 01 17362         BRU     *+2
```



```
17361  0 01 17365         BRU     INTR22
17362  0 43 14371         BRM     SPURI
17363  0 20 25131         NOP     =65             SPRUIOUS 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             I65 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             I65 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         EOMM    010026          ALERT RAD TO POT ADRESS
17402  2 13 24462         POT     BUF1RA,2
17403  0 76 25022         LDA     =040000         DELAY FOR POT
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     WRTPRO
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     OBJECT
17422  0 43 00460         BRM     ERROR
17423  4 20 24214         NOP     ADRERR,4        ADRS OVERFLO ERROR
17424  0 03 00410         THREE   AREG            DUMP REGISTERS
```

```
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*17436          BRU*    *+1
17435  0 20 17436          NOP     *+1
17436  0 43 00460          BRM     ERROR
17437  4 20 24107          NOP     FILPR0,4        FILE PROTECT MESSAGE
17440  0 03 00410          THREE   AREG            DUMP REGISTERS
17441  0 43 17450  WRTPR1  BRM     RESTOR
17442  0 01 00426          BRU     FUNCTN+1
17443  0 00 00000  RESREG  ZRO
17444  0 35 24742          STA     SAVA4I
17445  0 36 24745          STB     SAVB4I
17446  0 37 24760          STX     SAVX4I
17447  0 51 17443          BRR     RESREG
17450  0 00 00000  RESTOR  ZRO
17451  0 76 24742          LDA     SAVA4I
17452  0 75 24745          LDB     SAVB4I
17453  0 71 24760          LDX     SAVX4I
17454  0 51 17450          BRR     RESTOR
```



```
                    *
                    *
                    * DATA CHAIN CONTROL ROUTINE
                    *
                    *
17455  0 00 00000  CHAIN1 ZRO
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     INTRE5
17463  0 43 17336          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           ALERT CHAIN REG
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          BACK TO TRANSMIT BLOCK
17474  0 76 17340  DCHA1   LDA     INTRE5          FORCE INTRUPT RETURN
17475  0 35 17334          STA     INTRE1
17476  0 01 17550          BRU     RADTIM          WAIT FOR THE INTRUPT
17477  0 71 24466  DCHAIN  LDX     CHAINC          RETURN ON INTRUPT
17500  2 53 24537          SKN     RFIELD+10,2     TEST FOR LAST SET
17501  0 01 17515          BRU     DCHA2
17502  0 06 11000          EBMM    011000          ALERT DATA CHAIN
17503  2 13 24537          PBT     RFIELD+10,2     GET NEXT CHAIN SET
17504  0 76 17340          LDA     INTRE5
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     *
```

```
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 17306          STA     TRAN24          RESET CHAIN LINK
17522  0 53 24505          SKN     JMPTYP
17523  0 11 17525          BRI     *+2
17524  0 01•17525          BRU•    *+1
17525  0 20 17525          NOP     *
17526  0 51 17455          BRR     CHAIN1
17527  0 00 00000  CHAIN2  ZRO     0               RETURN FOR ALL INTRUPTS
17530  0 71 25016          LDX     =•7
17531  0 37 24466          STX     CHAINC
17532  0 76 25017          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     INTRE5
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 02 11000          EOM     11000           ALERT CHAIN REG
17544  2 13 24537          POT     RFIELD•10,2
17545  2 77 00001          EAX     1,2
17546  0 37 24466          STX     CHAINC
17547  0 01 17307          BRU     TRAN21
```



```
                    *
                    *
                    * RAD TIME OUT CALCULATOR
                    *
                    *
17550  0 71 25320  RADTIM LDX     =77752014       170 MS TIME OUT
17551  0 20 00000  RADTI1 NOP     0
17552  0 20 00000          NOP     0               SINGLE CYCLE TIME OUT 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     RADTI1
17561  0 43 00460          BRM     ERROR
17562  0 20 24123          NOP     TIMERR
17563  0 01 00431          BRU     OBJECT•1
17564  0 35 17236  WAIT1   STA     TRANS1          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     WAIT13
17570  0 40•10026  WAIT12  SKSS•   10026           RAD READY TEST
17571  0 41 17566          BRX     WAIT11
17572  0 01 17576          BRU     WAIT14
17573  0 40•14000  WAIT13  SKSS•   14000
17574  0 41 17566          BRX     WAIT11
17575  0 01 17570          BRU     WAIT12
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     OBJECT•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     WAIT23
```

```
17607  0 40*10026 %AIT22 SKSS*  10026          RAD READY TEST
17610  0 41 17605         BRX    %AIT21
17611  0 01 17615         BRU    %AIT24
17612  0 40*14000 %AIT23 SKSS*  14000
17613  0 41 17605         BRX    %AIT21
17614  0 01 17607         BRU    %AIT22
17615  0 02 20004 %AIT24 DIR
17616  0 41 17777         BRX    TRAN22
17617  0 43 00460         BRM    ERR0R
17620  0 20 24073         N0P    SKSERR
17621  0 01 00431         BRU    0BJECT+1
17622  0 00 00000 %AIT4   ZR0
17623  0 37 24776         STX    %SAVE
17624  0 71 25721         LDX    =77740000       SET DELAY
17625  0 40*14000 %AIT41 SKSS*  14000            CHANNEL ACTIVE TEST
17626  0 01 17632         BRU    %AIT43
17627  0 40*10026 %AIT42 SKSS*  10026          RAD READY TEST
17630  0 41 17625         BRX    %AIT41
17631  0 01 17635         BRU    %AIT44
17632  0 40*14000 %AIT43 SKSS*  14000
17633  0 41 17625         BRX    %AIT41
17634  0 01 17627         BRU    %AIT42
17635  0 76 24446 %AIT44 LDA    %0DE
17636  0 41 17642         BRX    %AIT45
17637  0 43 00460         BRM    ERR0R
17640  0 20 24073         N0P    SKSERR
17641  0 01 00431         BRU    0BJECT+1
17642  0 71 24776 %AIT45 LDX    %SAVE
17643  0 51 17622         BRR    %AIT4
17644  0 00 00000 PINTST ZR0
17645  0 71 24515         LDX    L0DABL
17646  0 76 25322         LDA    =-6             COUNT DOWN CONSTANT
17647  0 35 24472         STA    C0UNT1
17650  0 76 24516         LDA    PINWRD
17651  0 75 25143         LDB    =-1
17652  2 70 24460 PINTS1 SKM    BUF1CA,2        TEST FOR ADDRESS ACCURACY
```



```
17653  0 01 17655         BRU    *+2
17654  0 51 17644         BRR    PINTST
17655  0 54 25004         SUB    =1
17656  0 61 24472         MIN    C0UNT1
17657  0 53 24472         SKN    C0UNT1
17660  0 01 17662         BRU    *+2
17661  0 01 17652         BRU    PINTS1
17662  0 76 24516         LDA    PINWRD
17663  2 75 24460         LDB    BUF1CA,2
17664  0 71 00430         LDX    0BJECT
17665  0 43 00460         BRM    ERR0R
17666  2 20 24047         N0P    PINERR,2
17667  0 51 17644         BRR    PINTST
```

```
                        *
                        *
                        * CHANNEL ERROR REPORT ROUTINE
                        *
                        *
17670  0 00 00000  CHANER ZRO
17671  0 71 24515         LDX     L0DABL
17672  2 75 24462         LDB     BUF1RA,2
17673  2 76*24770         LDA*    TREGM,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         READ PARITY
17702  0 51 17670         BRR     CHANER
17703  0 76 24515  CHANE1 LDA     L0DABL
17704  0 71 00430         LDX     0BJECT
17705  0 43 00460         BRM     ERR0R
17706  2 20 24157         N0P     RITEP,2
17707  0 51 17470         BRR     CHANER
                        *
                        *
                        * P0T ERR0R R0UTINE
                        *
                        *
17710  0 00 00000  P0TERR PZE
17711  0 40*10026         SKSS*   010026          RAD READY SKS
17712  0 01 17716         BRU     P0TER1
17713  0 43 00460         BRM     ERR0R
17714  0 20 24227         N0P     XTRAPT          SPURIOUS P0T ERR0R
17715  0 51 17710         BRR     P0TERR
17716  0 43 00460  P0TER1 BRM     ERR0R
17717  0 20 24177         N0P     BADP0T          P0T ERR AND P0SSIBLE READY CKT ERR0R
17720  0 51 17710         BRR     P0TERR          RETRY
```



```
                        *
                        *
                        * C0MPARE ERR0R REPORT R0UTINE
                        *
                        *
17721  0 00 00000  ERR0UT ZR0
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 BL0CK SIZE
17732  0 55 24747         ADD     ERRSVX          BLK LGNTH + WDS BUT + ERR0R W0RD C0UNT
17733  0 14 25323         ETR     =37777777       RID 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         LSM     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 SECT0R
17745  0 01 17756         BRU     ERR0U8
17746  0 53 24514  ERR0U2 SKN     PRNTED
17747  0 43 20072         BRM     ERR0U6          PRINT 0LD RESULT
17750  0 76 24501         LDA     H0LD
17751  0 35 24444         STA     ADDRES
17752  0 35 24762         STA     SEKSTT          PRINTED
17753  0 76 24447         LDA     ERRCNT
17754  0 14 25200         ETR     =70000000       SAVE BUFFER C0DE
17755  0 35 24447         STA     ERRCNT          ZER0 ERR0R C0UNT
17756  0 61 24447  ERR0U8 MIN     ERRCNT
17757  0 76 24447         LDA     ERRCNT
```

```
17760  0 14 25325          ETR     •7777777        CLIP OFF BUFFER CODE
17761  0 73 25034          SKG     •3
17762  0 01 17771          BRU     ERR8U9          SKIP ALL ERRORS AFTER THREE
17763  0 76 24446          LDA     MODE
17764  0 72 25006          SKA     •4              TEST TO PRINT ALL
17765  0 01 17771          BRU     ERR8U9
17766  0 76 24777          LDA     •0
17767  0 35 24514          STA     PRNTED          SET PRNTED TO GO AT SECTOR CHANGE
17770  0 01 20040          BRU     ERR8U4
17771  0 76 24502  ERR8U9   LDA     HOLD2
17772  0 35 24443          STA     RADSTT          INITIAL RAD ADDRESS
17773  0 76 17721          LDA     ERR8UT
17774  0 54 25004          SUB     •1
17775  0 35 24501          STA     HOLD
17776  0 71 24747          LDX     ERRSVX          GET DATA BLOCK POINTER
17777  0 76•24501          LDA•    HOLD
20000  0 17 25313          EOR     •600000         MAKE A LDA, 70 EOR 06 • 76
20001  0 35 20002          STA     ••1             GET ERROR WORD
20002  6 76 00000          LDA     0,6
20003  0 35 24442          STA     BADWRD
20004  0 76 24741          LDA     ERRSVA
20005  0 35 24441          STA     GDWRD
20006  0 76 24447          LDA     ERRCNT
20007  0 14 25325          ETR     •07777777       CLR BUFFER CODE
20010  0 35 24447          STA     ERRCNT
20011  0 76 24451          LDA     BUFSAV
20012  0 71 24451          LDX     BUFSAV          RESTORE BUFFER POINTER
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          SET BUFFER CODE IN ERR COUNT WORD
20020  2 76 24452          LDA     BUF1BL,2
20021  0 35 24450          STA     BLKSIZ          TO ERROR TABLE
20022  0 76 24503          LDA     HOLD3           WORDS TESTED
20023  0 75 24777          LDB     •0              CLEAR BREG
```



```
20024  2 55 24460          ADD     BUF1CA,2        GENERATE CORE ADRS
20025  0 35 24445          STA     KORADR
20026  0 76 24446          LDA     MODE
20027  0 72 25023          SKA     •0100000        RANDOM MODE
20030  0 01 20120          BRU     ERR837
20031  0 72 25024          SKA     •200000         SEQUENCE MODE
20032  0 01 20061          BRU     ERR842
20033  0 72 25025          SKA     •400000         FIXED MODE
20034  0 01 20044          BRU     ERR8U1
20035  0 43 00460          BRM     ERROR
20036  0 20 24257          NOP     NODATA
20037  0 01 15510          BRU     FUNC10
20040  0 71 24747  ERR8U4   LDX     ERRSVX
20041  0 75 24744          LDB     ERRSVB
20042  0 76 24441          LDA     GDWRD
20043  0 51 17721          BRR     ERR8UT          RESET AND GO BACK TO TEST
20044  0 76 24441  ERR8U1   LDA     GDWRD
20045  0 75 25046          LDB     •00007777       TEST FOR HALF WRD SHIFT
20046  0 70 24442          SKM     BADWRD
20047  0 01 20055          BRU     ERR832
20050  0 75 24442  ERR833   LDB     BADWRD
20051  0 43 00454          BRM     REPORT
20052  0 20 24337          NOP     SYNC
20053  0 43 20072          BRM     ERR8U6
20054  0 01 20040          BRU     ERR8U4
20055  0 75 25326  ERR832   LDB     •77770000       CHECK HALF WORD
20056  0 70 24442          SKM     BADWRD
20057  0 01 20111          BRU     ERR836
20060  0 01 20050          BRU     ERR833
20061  0 76 24441  ERR842   LDA     GDWRD
20062  0 75 25327          LDB     •07777700
20063  0 70 24442          SKM     BADWRD
20064  0 01 20066          BRU     ERR841
20065  0 01 20115          BRU     ERR843
20066  0 75 25330  ERR841   LDB     •07770000       TEST FOR CORRECT RAD UNIT
20067  0 70 24442          SKM     BADWRD
```

```
20070  0 01 20111          BRU     ERR036
20071  0 01 20115          BRU     ERR043
20072  0 00 00000 ERR0U6    ZR0
20073  0 43 17622          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     ERR0U6
20111  0 76 24764 ERR036   LDA     SVSEED
20112  0 35 00406          STA     SEED            REPLACE SEED
20113  0 43 20072          BRM     ERR0U6
20114  0 01 20040          BRU     ERR0U4
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  2 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
```



```
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     ERR0UT          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
```

```
20154  0 43 00424  FUNC11  BRM     FUNCTN
20155  0 20 20615          NOP     FPT11
20156  0 43 00440          BRM     RETURN
20157  0 20 07150          NOP     XTRA1
20160  0 43 13766          BRM     RADBK
20161  0 76 00401          LDA     STATUS
20162  0 72 25017          SKA     =4000          SOFTWARE RAD READ ONLY
20163  0 01 20352          BRU     ALLDUN=1
```



```
                    *
                    * F110=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 RL0 BUFFER
20171  0 76 25040          LDA     =77
20172  0 35 24513          STA     PUTWRD         SET RAD ADRS
20173  0 43 17422          BRM     WAIT4
20174  0 76 24751          LDA     RCODE1         64 WORDS FROM RL0
20175  0 43 15167          BRM     WRYT3
20176  0 76 24777          LDA     =0
20177  0 35 24513          STA     PUTWRD
20200  0 43 17622          BRM     WAIT4
20201  0 76 24751          LDA     RCODE1
20202  0 43 15167          BRM     WRYT3          CLEAR ADRS 77 AND 00
20203  0 76 25012          LDA     =100
20204  0 35 24513          STA     PUTWRD
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  0 35 24740          STA     RL0=200,2      CLEAR SECOND BUFFER
20214  0 41 20213          BRX     ==1
20215  0 76 25040          LDA     =77
20216  0 35 24513          STA     PUTWRD
20217  0 43 17422          BRM     WAIT4
20220  0 06 11026          EOMM    11026          INHIBIT INCREMENT
20221  0 13 24513          PUT     PUTWRD
20222  0 06=10000          EOMM=   10000
20223  0 06 14200          EOMM    14200          IOSD WITH NO INTRUPTS
20224  0 13 25331          PUT     =10000000+RL0  SEND TWO SECTORS
```

```
20225  0 06 02266          EQMM    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     PBTWRD
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     PBTWRD
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     PBTWRD
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          NOP     M1101A          INHIBIT LOGIC
20267  0 43 00434  F1101B BRM     END
                   *
```



```
                   * F110B02 PARTIAL SECTOR WRITE
                   *
20270  0 43 00430          BRM     OBJECT
20271  0 43 00440          BRM     RETURN
20272  0 20 07150          NOP     XTRA1
20273  0 76 24440          LDA     PATTRN
20274  0 43 15202          BRM     SPREAD          LOAD RLB WITH PATTRN
20275  0 76 24435          LDA     RADRS
20276  0 35 24513          STA     PBTWRD          SET ADDRESS
20277  0 75 24436          LDB     WDKBWN          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     WRYT3           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          NOP     RITEP,2         BUFFER  RAD ADRS  OBJECT TEST OVRFLB 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          NOP     XTRA1
20325  0 76 24435          LDA     RADRS
20326  0 35 24513          STA     PBTWRD
```

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20327  0 76 24751          LDA     RC0DE1          64 W0RDS
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 F0R 64 W0RDS
20334  0 76 24440          LDA     PATTRN
20335  0 75 25143          LDB     *=1
20336  2 70 24440  F1103A  SKM     RL0+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     RL0+100,2
20343  0 01 20346          BRU     F1103C          TEST F0R ZER0S
20344  0 41 20342          BRX     F1103B
20345  0 01 20351          BRU     F1103D
20346  2 75 24440  F1103C  LDB     RL0+100,2
20347  0 43 00460          BRM     ERR0R
20350  2 20 24712          N0P     ZR0BAD,2        G00D WD BAD WD INDEX 0VRFL0 ERR0RS
20351  0 43 00434  F1103D  BRM     END
20352  0 43 00456          BRM     FD0NE
20353  0 43 00452  ALLDUN  BRM     D0NE
                    *
                    * F12 SINGLE SECTOR READ WITH PRINT 0PTI0N
                    *
20354  0 43 00424  FUNC12  BRM     FUNCTN
20355  0 20 20420          N0P     FPT12
20356  0 43 00440          BRM     RETURN
20357  0 20 07150          N0P     XTRA1
20360  0 43 00460          BRM     ERR0R
20361  0 20 20400          N0P     MS12
20362  0 76 24435          LDA     RADRS
20363  0 35 24513          STA     P0TWRD
20364  0 76 24751          LDA     RC0DE1          64 W0RDS
20365  0 35 24754          STA     CHANWD
20366  0 43 15316          BRM     READ7
20367  0 43 17622          BRM     WAIT4
```

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RADE12 TAP=3.C      01/17  0611   PAGE 328

20370  0 43 00454          BRM     REP0RT
20371  4 20 20412          N0P     MS12A,4
20372  4 01 20415          0NE     PLACE,4
20373  0 20 20416          N0P     MS12B
20374  0 43 00460          BRM     ERR0R
20375  0 20 24212          N0P     ENDIT
20376  0 43 00456          BRM     FD0NE
20377  0 01 20354          BRU     FUNC12
20400     52464525  MS12    BCD     ' 0NE SECT0R READ 0NLY. TYPE =FV 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     RL0
20416     64622512  MS12B   BCD     'USE =P!!
20417     40473712
20420  0 20 20426  FPT12   N0P     FIM12
20421  0 20 20445          N0P     FAM12           ABSTRACT
20422  0 20 20510          N0P     FVM12           VARIABLE HEADING
20423  0 01 24435          0NE     RADRS           VARIABLE
20424  0 00 20353          ZR0     ALLDUN          LAST FUNCTION
20425     00004000          DATA    4000            IDENTIFIER BIT 12
20426     52122612  FIM12   BCD     '  F 12 = READ ANY SECT0R 0N THE RAD. TYPE =FV F0R VARIABLE.!!
20427     01021240
20430     12512521
20431     24122145
20432     70126225
20433     23634451
```

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20434    12464512
20435    63302512
20436    51212433
20437    12637047
20440    25124026
20441    65122646
20442    51126521
20443    51312122
20444    43253337
20445    52126330  FAM12  BCD     ' THE SECTOR READ IS FORCED BY SETTING THE VARIABLE.  PRINTING THE '
20446    25126225
20447    23634651
20450    12512521
20451    24123162
20452    12264651
20453    23252412
20454    22701262
20455    25636331
20456    45271263
20457    30251265
20460    21513121
20461    22432533
20462    12124751
20463    31456331
20464    45271263
20465    30251212
20466    52632523          BCD     ' SECTOR IS DONE BY USING THE PRINT FUNCTION FROM THE ADDRESS OUTPUTTED.'
20467    63465112
20470    31621224
20471    46452512
20472    22701264
20473    62314527
20474    12633025
20475    12475131
20476    45631226
20477    64452263
```



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20500    31464512
20501    26514644
20502    12633025
20503    12212424
20504    51256262
20505    12466463
20506    47646363
20507    25243337
20510    52512124  PVM12  BCD     ' RAD ADRS '
20511    12212451
20512    62523712
```

```
                        *
                        *
                        * 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 20520         ONE     UVT             UNIT VARIABLE COUNT
20517     00004000        DATA    4000            UNIT TWELVE ID WORD BIT 12
20520     37030000  UVT   DATA    37030000        F1,2,3,4,5,6,7,8,9,10,11 ACESS WORD
20521  0 20 21113  FPT1    NOP     FIM1            IDENTIFIER MESSAGE
20522  0 20 21130         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     20000000  FVT1  DATA    020000000       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     10000000  FVT2  DATA    010000000       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 HEADINT
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    2000000
20551  0 20 21313  FPT5    NOP     FIM5
```



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20552  0 20 21327         NOP     FAM5
20553  0 20 21310         NOP     FVM5
20554  0 01 20556         ONE     FVT5
20555  0 00 13006         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 HEADINGS
20562  0 01 20564         ONE     FVT6            AMOUNT OF VARIABLES
20563  0 00 13967         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 14005         ZRO     FUNC8           LINK TO NEXT FUNCTION
20572     00200000  FVT7  DATA    200000          BIT 7 FOR FUNCTION 7
20573  0 20 21621  FPT8    NOP     FIM8            IDENT MSG
20574  0 20 21636         NOP     FAM8            ABSTRACT MSG
20575  0 20 21650         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 21653  FPT9    NOP     FIM9            IDENT MSG
20602  0 20 21670         NOP     FAM9            ABSTRACT MSG
20603  0 20 21702         NOP     FVM9            VARIABLE HEADING
20604  0 01 20606         ONE     FVT9            VARIABLE COUNT
20605  0 00 15510         ZRO     FUNC10           LINK TO NEXT FUNCTION
20606     00040000  FVT9  DATA    40000           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 24425         EIGHT   •9DES
20613  0 00 20154         ZRO     FUNC11          NEXT FUNCTION
20614     00020000        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          ZRO     FUNC12          NEXT FUNCTION
20622    00010000          DATA    10000           FUNCTION IDENTIFIER BIT 11
20623    52121212  UVM     BCD     !    FAM !!
20624    26216452
20625    37121212
20626    52641201  UIM     BCD     ! U 12 • E CHANNEL AND 9367 (26•66) RAD TESTS 3.0!!
20627    02124212
20630    25122330
20631    21454525
20632    43122145
20633    24121103
20634    06071274
20635    02064206
20636    06341251
20637    21241263
20640    25624362
20641    12033300
20642    37121212
20643    52322464  UAM     BCD     !  FUNC1! CHANNEL LOGIC TESTS. NO I/O REQUIRED.!
20644    45232115
20645    12233221
20646    45452543
20647    12434627
20650    31231263
20651    25626362
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    21517212
20666    63512145
20667    62262551
20670    12632562
20671    63623312
20672    52266445          BCD     ! FUNC3! RAD TWO PIN TESTS.!
20673    23031512
20674    51212412
20675    63664412
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    63305125
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    62633312
20753    52266445          BCD     ! FUNC10! RANDOM RAD EXERCISER.!
20754    23010215
20755    12512145
20756    24464412
20757    51212412
20760    25672551
20761    23316225
20762    51331212
20763    52266445          BCD     ! FUNC11! PARTIAL BLOCK AND INHIBIT INCREMENT TEST.!
20764    23011215
20765    12472151
20766    63312143
20767    12224346
20770    23421221
20771    45241231
```



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20772    45303122
20773    31631231
20774    45235125
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    73333712
21010    52121212  FV=1    BCD     !     FAW !!
21011    12262166
21012    52371212
21013    52122412  FI=1    BCD     !  F 01 = CHANNEL ACESS TEST FOR 9367 RAD CHANNEL!!
21014    00011240
21015    12233221
21016    45452543
21017    12212725
21020    62621263
21021    25626312
21022    26465112
21023    11036607
21024    12512124
21025    12233221
21026    45452543
21027    37121212
21030    52322664  FA=1    BCD     !  FUNCTION ONE DIAGNOSES FAULTS IN THE 940 CHANNEL CONNECTED TO THE RAD.!
21031    45236331
21032    46451246
21033    45251224
21034    31212745
21035    46622562
```

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21036    12262164
21037    43636212
21040    31451263
21041    30251211
21042    04001223
21043    30214545
21044    25431223
21045    46454525
21046    23630524
21047    12634612
21050    63302512
21051    51212433
21052    52214343          BCD     ! ALL 940 DIAGNOSTICS MUST RUN CORRECTLY.  IF AN ERROR HALT OCCURS!!
21053    12110400
21054    12243121
21055    27454462
21056    63312362
21057    12446462
21060    63125164
21061    45122346
21062    51512523
21063    63437233
21064    12123126
21065    12214512
21066    25515146
21067    51123321
21070    43631246
21071    23236451
21072    62151212
21073    52215125          BCD     ! AREG = ERROR WORD  BREG = TEST WORD  XREG = OBJECT TEST.!
21074    27121212
21075    25515146
21076    51124446
21077    51241212
21100    22512527
21101    12131263
```



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21102    25626212
21103    66465124
21104    12126751
21105    25271213
21106    12462241
21107    25236212
21110    63256263
21111    33121212
21112    52633225          BCD     ! THE ACCOMPANYING PRINTOUT DEFINES SIGNAL NAMES AND MODULES RELATED TO THE FAILURE.
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    51251212
21137    52255151          BCD     ! ERROR RESULTS ARE CONCERNED WITH CHANNEL LOGIC ONLY.!!
21140    46511251
21141    25626443
21142    63621321
21143    51251223
21144    46452325
21145    51452524
```

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21146    12663163
21147    30122330
21150    21454525
21151    43124346
21152    27312312
21153    46454370
21154    33371212
21155    52121212  FVM2   BCD      !    FAW !!
21156    26216652
21157    37121212
21160    52322664  FAM2   BCD      !  FUNC2 DIAGNOSES THE 9367 RAD CONTROLLER.!!
21161    45230312
21162    24312127
21163    45466225
21164    62126330
21165    25121103
21166    06071251
21167    21241223
21170    46456351
21171    46434325
21172    51333712
21173    52122612  FIM2   BCD      !  F 02 • RAD ACCESS TEST FOR THE 9367 RAD!!
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 !!
21207    26216652
21210    37121212
21211    52122612  FIM3   BCD      !  F 03 • SECTOR COUNTER TEST FOR 9367 RAD 02!!
```



```
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 02, ADDRESSES 20000 TO 3777?!!
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 !!
21250    26216652
21251    37121212
21252    52122612  FIM4   BCD      !  F 04 • SECTOR COUNTER TEST FOR 9367 RAD 03!!
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 !!
21311    36216652
21312    37121212
21313    52122412  FIM5   BCD     '  F 05 • SECTOR COUNTER TEST FOR 9367 RAD 04!!
21314    00051240
21315    12622523
21316    63455112
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    62120600
21345    00000012
21346    63461207
21347    07070707
21350    37121212
21351    52122412  FIM6   BCD     '  F 06 • SELECTOR UNIT 01 HEAD CHECK FOR 9367 RAD!!
21352    00061240
21353    12622543
21354    25236346
21355    51126445
21356    31631200
21357    01123025
21360    21241223
21361    30252342
21362    12264451
21363    12110306
21364    07125121
21365    24371212
```

```
21366    52322664  FAM6   BCD     ' FUNCTION 6 TESTS ALL HEADS FROM ADDRESS 0000 TO 17777 FOR CORRECT OPERATION!
21367    45236731
21370    46451206
21371    12632762
21372    63621221
21373    43431230
21374    45213462
21375    12265146
21376    44122124
21377    24512762
21400    62120000
21401    00001263
21402    46120107
21403    17077712
21404    26465112
21405    23465151
21406    25236312
21407    46472551
21410    21633146
21411    45121212
21412    52314512          BCD     ' IN BOTH READ AND WRITE MODES.  DATA USED IS ALL ONES.  EACH HEAD!
21413    22466230
21414    12512521
21415    24122145
21416    24126451
21417    31632512
21420    44462425
21421    62331212
21422    24216321
21423    12644225
21424    24123162
21425    12214343
21426    12464525
21427    62331212
21430    65210330
21431    12300521
```



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21432    24121212
21433    52316212          BCD     ' IS CHECKED ON ALL SECTORS OF ITS BAND ADRESS.  THE READ ERROR MESSAGE!
21434    23302523
21435    42252412
21436    46451221
21437    43431262
21440    25236346
21441    51621246
21442    26123163
21443    62122221
21444    45241221
21445    24512543
21446    62331212
21447    63302312
21450    51252124
21451    12255151
21452    46511244
21453    25626221
21454    27251212
21455    52475131          BCD     ' PRINTS!  SIDExxxx TB#xxxX HD#xxxx#  THESE ARE THE SIDE OF THE RAD!
21456    45636215
21457    12126231
21460    24256747
21461    67671263
21462    22406767
21463    67671230
21464    24406767
21465    67673312
21466    12633025
21467    62251221
21470    51251263
21471    30251262
21472    31242512
21473    46261263
21474    30251251
21475    21241212
```

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21476    52663031          BCD     ' WHICH IS OPENED TO ACESS THE HEAD, THE TB STRIP CONCERNED AND THE '
21477    23301231
21500    62124647
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    52456444          BCD     ' NUMBER OF THE JACK WHERE THE HEAD WOULD BE NORMALLY PLUGGED.  SIDE'
21520    22255112
21521    46261263
21522    30231241
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
```



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21542    63302512
21543    51212412
21544    64453163
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    52234346          BCD     ' CLOCKWISE.''
21562    23426631
21563    62253337
21564    52121212  FVM6    BCD     '    FAM ''
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    63122612
21610    06122122
21611    62635121
21612    23631226
21613    46511224
21614    25632131
21615    43623712
21616    52121212  FVM7   BCD      !     FAW !!
21617    12262166
21620    52371212
21621    52122612  FIM8   BCD      !  F 08 = SELECTOR UNIT 03 HEAD CHECK FOR 9367 RAD!!
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      !  FUNC8 PRINT F 6 ABSTRACT FOR DETAILS!!
21637    45231212
21640    47513145
21641    63122612
21642    06122122
21643    62635121
21644    23631226
21645    46511224
21646    25632131
21647    43623712
21650    52121212  FVM8   BCD      !     FAW !!
21651    12262166
```



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21652    52371212
21653    52122612  FIM9   BCD      !  F 09 = SELECTOR UNIT 04 HEAD CHECK FOR 9367 RAD!!
21654    00111240
21655    12622543
21656    25236346
21657    51126445
21660    31631200
21661    04123025
21662    21241223
21663    30252342
21664    12264451
21665    12110306
21666    07125121
21667    24371212
21670    52322664  FAM9   BCD      !  FUNC9 PRINT F 6 ABSTRACT FOR DETAILS!!
21671    45231112
21672    47513145
21673    63122612
21674    06122122
21675    62635121
21676    23631226
21677    46511224
21700    25632131
21701    43623712
21702    52121212  FVM9   BCD      !     FAW !!
21703    12262166
21704    52371212
21705    52122612  FIM10  BCD      !  F 10 = 9367 RAD EXERCISER FOR E CHANNEL!!
21706    01001240
21707    12110306
21710    07125121
21711    24122567
21712    25512731
21713    62255112
21714    26465112
21715    25122330
```

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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    12637047
21725    25621246
21726    26122346
21727    45635146
21730    43433145
21731    27124446
21732    63312462
21733    12264651
21734    12633025
21735    12512124
21736    12215125
21737    12622563
21740    12227012
21741    23302145
21742    27314527
21743    12633025
21744    52266445          BCD     ! FUNCTION VARIABLE  MODES  ACCORDING TO THE CHART BELOW.!
21745    23633146
21746    45126521
21747    51312122
21750    43251212
21751    44462425
21752    62121721
21753    23234451
21754    24314527
21755    12634412
21756    63302512
21757    23302151
21760    63122225
21761    43466633
```



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21762    52525454          BCD     !  **IF A ONE BIT IS IN!!** !
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
22005    52223163          BCD     ! BIT 3 FIX, 4 SEQUENCE, 5 RANDOM, CORE ADDRESSES.!
22006    12031226
22007    31677312
22010    04126225
22011    50642545
22012    23257312
22013    05125121
22014    45244644
22015    73122346
22016    51251221
22017    24245125
22020    62622562
22021    33121212
22022    52223163          BCD     ! BIT 6 FIX, 7 SEQUENCE, 8 RANDOM, DATA.!
22023    12061226
22024    31677312
22025    07126225
```

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22026    50642545
22027    23257312
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    73120101
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    12010312
22055    66513163
22056    25731201
22057    07125125
22060    21247312
22061    26465112
22062    22642426
22063    25511246
22064    45253312
22065    52223163          BCD     ' BIT 15 FIX, 16 WRITE, 17 READ, FOR BUFFER TWO.'
22066    12010512
22067    26316773
22070    12010612
22071    66513163
```



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22072    25731201
22073    07125125
22074    21247312
22075    26465112
22076    22642426
22077    25511263
22100    66463312
22101    52223163          BCD     ' BIT 18 SET DATA CHAINING MODE.'
22102    12011012
22103    62256312
22104    24216321
22105    12233021
22106    31453145
22107    27134446
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    46632524
22132    33121313
22133    52312612          BCD     ' IF THE MODE IS FIX=ZERO FOR TRANSMISSION MODE AND BUFFER'
22134    63302512
22135    44462425
```

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22136    12316712
22137    26316713
22140    71255146
22141    12264651
22142    12635121
22143    45624431
22144    626231+6
22145    45124446
22146    24251221
22147    45241222
22150    64262425
22151    51121212
22152    52444424          BCD     ' MODE, A RANDOM SELECTION IS MADE FOR THE PARAMETER.  WHEN NO'
22153    25731221
22154    12512145
22155    24464412
22156    62254325
22157    23633146
22160    45123162
22161    12442124
22162    25122446
22163    51126330
22164    25124721
22165    51214425
22166    63255133
22167    12126630
22170    25451245
22171    46121212
22172    52512621          BCD     ' READ OR WRITE IS SET FOR A BUFFER, THE BUFFER IS NOT USED.'
22173    24124651
22174    12665131
22175    63251231
22176    62126225
22177    63122446
22200    51122112
22201    22642626
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22202    25517312
22203    63302512
22204    22642626
22205    25511231
22206    62124546
22207    63126462
22210    25243312
22211    52312612          BCD     ' IF DATA CHAIN FIX.ONE IS MADE, CHAINING WILL BE ALLOWED WHEN'
22212    24216321
22213    12233021
22214    31451226
22215    31671346
22216    45251231
22217    62124421
22220    24257312
22221    23302131
22222    45314527
22223    12663143
22224    43122225
22225    12214343
22226    46662524
22227    12663025
22230    45121212
22231    52633025          BCD     ' THE INTRUPT MODE IS NOT EARLY WORD.'
22232    12314563
22233    51644763
22234    12444624
22235    25123162
22236    12454463
22237    12252151
22240    43701266
22241    46512433
22242    52256721          BCD     ' EXAMPLE: MODES, 14263600 SELECTS RANDOM RAD AND FIXED CORE ADDRESSES,'
22243    44474325
22244    15124446
22245    24256213
```

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22246    12010402
22247    06030600
22250    00126225
22251    43252363
22252    62125121
22253    45244644
22254    12512124
22255    12214424
22256    12263167
22257    25241223
22260    46512512
22261    21242451
22262    25624225
22263    62731212
22264    52622550          BCD     ' SEQUENTIAL DATA, EARLY LATENCY WITHOUT INTRUPT.'
22265    64254563
22266    31214312
22267    24216721
22270    73122521
22271    51437012
22272    43216325
22273    45237212
22274    66316330
22275    46646312
22276    31456351
22277    64476373
22300    52512145          BCD     ' RANDOM READ OR WRITE FOR BUFFER ONE,, FIXED WRITE ONLY FOR'
22301    24464412
22302    51252124
22303    12465112
22304    66513163
22305    25122646
22306    51122264
22307    26262551
22310    12464525
22311    73731226
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22312    31672524
22313    12665131
22314    63251246
22315    45437212
22316    26465112
22317    52226426          BCD     ' BUFFER TWO, AND NO DATA CHAINING.'
22320    26255112
22321    63664473
22322    12214424
22323    12454612
22324    24216721
22325    12233221
22326    31453145
22327    27331212
22330    52633231          BCD     ' THIS MODE WOULD RUN FOR THE REPETITIONS DEFINED IN CYCLES.  IF CYCLES'
22331    62124446
22332    24251266
22333    46644324
22334    12516445
22335    12264651
22336    12633225
22337    12512547
22340    25633163
22341    31464562
22342    12242526
22343    31452524
22344    12314512
22345    23702343
22346    25623312
22347    12312612
22350    23702343
22351    25621212
22352    52234445          BCD     ' CONTAINS A NEGATIVE NUMBER THE MODE WILL RUN INDEFINITELY.'
22353    63213145
22354    62122112
22355    45252721
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22356    63316585
22357    12456444
22360    22255112
22361    63302512
22362    44462425
22363    12663163
22364    43125164
22365    45123145
22366    24252631
22367    45316385
22370    43703312
22371    52633025          BCD     ! THE RAD AREA SELECTED WILL BE KEYED WITH THE SELECTED DATA BEFORE!
22372    12512124
22373    12215125
22374    21126225
22375    43252363
22376    25241266
22377    31434312
22400    22251242
22401    25702524
22402    12663163
22403    30126330
22404    25126225
22405    43252363
22406    25241224
22407    21632112
22410    22252646
22411    51251212
22412    52633025          BCD     ! THE MODE CONTROL IS INTERPRETED.  SEQUENTIAL DATA CONTAINS THE !
22413    12444624
22414    25122346
22415    45635146
22416    43123162
22417    12314563
22420    25514751
22421    25632524
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22422    33121262
22423    25506425
22424    45633121
22425    43122421
22426    63211223
22427    46456321
22430    31456212
22431    63302512
22432    52512124          BCD     ! RAD UNIT (X), THE RAD ADDRESS (YYYY), AND THE SECTOR WORD (ZZ)!
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
```

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22452    52216212          BCD     ! AS OXYYYYZZ.  IF FIXBLK IS A MINUS ONE OR ALL SEVENS, A RANDOM!
22453    00677070
22454    70707171
22455    33121231
22456    26122631
22457    67224342
22460    12316212
22461    21124431
22462    45646212
22463    46452512
22464    46511221
22465    43431262
22466    25652545
22467    62731221
22470    12512145
22471    24464412
22472    52224346          BCD     ! BLOCK LENGTH IS GENERATED.  IF NOT, THE COUNT IS CONSIDERED!
22473    23421243
22474    25452763
22475    30123162
22476    12272545
22477    25512163
22500    25243312
22501    12312612
22502    45466373
22503    12633025
22504    12234464
22505    45631231
22506    62122346
22507    45623124
22510    25512524
22511    52634612          BCD     ! TO BE IN SECTORS!  FIXBLK.30 IS 3000 WORDS LONG.!!
22512    22251231
22513    45126225
22514    23634651
22515    62151212
```



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22516    26316722
22517    43421303
22520    00123162
22521    12030000
22522    00126646
22523    51246212
22524    43464527
22525    33371212
22526    52121244  FVM10   BCD     !   MODES    CORLO    CORHI    RADLO    RADHI    PATERN   FIXBLK   CYCLES !!
22527    46242562
22530    12121212
22531    23465143
22532    46121212
22533    12234651
22534    30311212
22535    12125121
22536    24434612
22537    12121251
22540    21243031
22541    12121247
22542    21632551
22543    45121212
22544    26316722
22545    43421212
22546    12237023
22547    43256252
22550    37121212
22551    52122612  FIM11   BCD     ! F 11 . PARTIAL SECTOR READ AND WRITE, TYPE .FV FOR VARIABLES!!
22552    01011240
22553    12472151
22554    63312143
22555    12622523
22556    63465112
22557    51252124
22560    12214524
22561    12665131
```

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22562    63253312
22563    63704725
22564    12402665
22565    12264651
22566    12652151
22567    31212243
22570    25623712
22571    52323145  FAM11  BCD     ! IN FUNC11 PARTIAL BLOCK TRANSFERS CAN BE SET WHICH ARE LESS THAN ONE SECTOR.!
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          BCD     ! TYPE F 11T, FV FOR VARIABLES CONCERNING THE TRANSFERS.  INHIBIT !
22616    25122612
22617    01016373
22620    12266512
22621    26465112
22622    65215131
22623    21224325
22624    62122346
22625    45232551
```



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22626    45314527
22627    12633025
22630    12635121
22631    45622625
22632    51623312
22633    12314530
22634    31223163
22635    12121212
22636    52314523          BCD     ! INCREMENT TESTS ON BAND ZERO!!
22637    51254425
22640    45631263
22641    25626362
22642    12464512
22643    22214524
22644    12712551
22645    46371212
22646    52512124  FVM11  BCD     ! RAD ADRS WD COUNT  PATTERN !!
22647    12212451
22650    62126624
22651    12234664
22652    45631212
22653    47216363
22654    25514552
22655    37121212
```

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                    *
                    * ERROR MESSAGES
                    *
                    *
22656    52310171   M1001A BCD      ' I1Z,I22=21B,15B,27D IZK=15B IZJ=20B IZC=8T=15B EIE=26D''
22657    73310271
22660    40020122
22661    73010522
22662    73020724
22663    12317142
22664    40010522
22665    12317141
22666    40020022
22667    12317123
22670    20626340
22671    01052212
22672    25312540
22673    02062437
22674    52715125   M1003A BCD      ' ZREG=25B,22B,24C,18B $KRX=22E''
22675    27400205
22676    22730202
22677    22730204
22700    23730110
22701    22126242
22702    51674002
22703    02253712
22704    52624251   M1004A BCD      ' SKRZ=22E,28F C13=27E IZ=16B IZC=ST=15B IZMC=26C ZCD=28B ZC=9B,10B,11B,12B''
22705    71400202
22706    25730210
22707    26122301
22710    03400207
22711    25123171
22712    40010622
22713    12317123
22714    20626340
22715    01052212
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22716    31714423
22717    40020623
22720    12712324
22721    40021022
22722    12712342
22723    11227301
22724    00227301
22725    01227301
22726    02223712
22727    52230203   M1005A BCD      ' C23=32E ZA14=9B IZP=16B''
22730    40030225
22731    12712101
22732    04401122
22733    12317147
22734    40010622
22735    37121212
22736    52230202   M1006A BCD      ' C22=32E ZA13=9B IZP=16B''
22737    40030225
22740    12712101
22741    03401122
22742    12317147
22743    40010622
22744    37121212
22745    52230201   M1007A BCD      ' C21=32E ZA12=8B IZP=16B''
22746    40030225
22747    12712101
22750    02401022
22751    12317147
22752    40010622
22753    37121212
22754    52230200   M1008A 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      ! C19-32E 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    37121212
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 ZA0=4B ZR0=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 ZR00=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=12B IZP=16B!!
23210    40030125
23211    12712300
23212    06400102
23213    22123171
23214    47400106
23215    22371212
23216    52230000  M1032A BCD      ! C00=31E ZC05=12B IZP=16B!!
23217    40030125
23220    12712300
23221    05400102
23222    22123171
23223    47400106
23224    22371212
23225    52230203  M1033A BCD      ! C23=32E ZC4=13B IZE=17B,24B!!
23226    40030225
23227    12712304
23230    40010322
23231    12317125
23232    40010722
23233    73020422
23234    37121212
23235    52230202  M1034A BCD      ! C22=32E ZC3=13B IZE=17B,24B!!
23236    40030225
23237    12712303
23240    40010322
23241    12317125
23242    40010722
23243    73020422
23244    37121212
23245    52230201  M1035A BCD      ! C21=32E ZC2=13B IZE=17B,24B!!
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23246    40030225
23247    12712302
23250    40010322
23251    12317125
23252    40010722
23253    73020422
23254    37121212
23255    52230200  M1036A BCD      ! C20=32E ZC1=14B IZE=17B,24B!!
23256    40030225
23257    12712301
23260    40010422
23261    12317125
23262    40010722
23263    73020422
23264    37121212
23265    52230111  M1037A BCD      ! C19=32E ZC0=14B IZE=17B,24B!!
23266    40030225
23267    12712300
23270    40010422
23271    12317125
23272    40010722
23273    73020422
23274    37121212
23275    52712561  M1038A BCD      ! ZERO ERROR ZMP=19E,20E IZM=28D,27D!!
23276    46122561
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
```

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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    07243712
23337    52011125  M1044A BCD      ' 19E24,P30''
23340    02047247
23341    03003712
23342    52454412  M2001A BCD      ' NO RAD CONNECTED BR''
23343    51213412
23344    23464545
23345    25236325
23346    24134451
23347    15121212
23350    52476426          BCD    ' PUF•39C PWR•39B,40C S10•29A,31D,37A C13•33B C14•34B X03•C37''
23351    40031123
23352    12476451
23353    40031122
23354    73040023
23355    12623146
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23356    40031121
23357    73030124
23360    73030721
23361    12230103
23362    40030322
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    66400310
23400    22122264
23401    23400303
23402    22371212
23403    52240240  M2004B BCD      ' D0•23C,28A G0•35C G64•28B,30B IDN•32D,31D''
23404    02032373
23405    02102112
23406    27004203
23407    05231227
23410    62044002
23411    10227303
23412    00221231
23413    24454003
23414    02247303
23415    01243712
23416    52622243  M2004A BCD      ' SEL UNIT D06•A03,A04''
23417    12644531
23420    63122400
23421    06402100
```

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23422    03732100
23423    04371212
23424    52622543  M2005A BCD      ! SEL UNIT D08=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    S/B    SBJ TEST OVRFLO   ERRORS !!
23476    24126651
23477    24121212
23500    12626122
23501    12121212
23502    46224112
23503    63256263
23504    12466551
23505    26434612
23506    12122551
23507    51465162
23510    52371212
23511    52454612  M2013C BCD      ! NO SECTOR ZERO IDX=A10,B03,B02 D0=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  MSG036 BCD      ! WDE=31A WD1=278,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    73220403
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    12660001  MSG020 BCD     ! WC1=04B!
23562    40000422
23563    12660101  MSG021 BCD     ! W11=05B!
23564    40000522
23565    12660201  MSG022 BCD     ! W21=06B!
23566    40000422
23567    12660301  MSG023 BCD     ! W31=07B!
23570    40000722
23571    12660003  MSG024 BCD     ! WO3=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     ! WO5=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     ! WO7=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  MSG88A BCD     !   SIDE!
23622    31242512
23623    00000004  SIDE   BCD     !0004 TB=!
23624    12632240
23625    00020101  TB     BCD     !0211 HD=!
23626    12302440
23627    00010100  HD     BCD     !0110!!
23630    37121212
23631    52512421  MSG01A BCD     ! RDA=22B RCL=21B RCC=20A,21A!!
23632    40020222
23633    12512343
23634    40020122
23635    12512323
23636    40020021
23637    73020121
23640    37121212
23641    52512421  MSG01B BCD     ! RDA=23B RCL=24B RCC=23A,24A!!
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23642    400205B2
23643    12512343
23644    40020422
23645    12512323
23646    40020321
23647    73020421
23650    37121212
23651    52512421  MSG01C BCD     ! RDA=28B RCL=27B 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    52624764  M10598 BCD     ! SPURIOUS INTRUPT  DIVERT    MASK      S/B    SVRFLO  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  M2879A BCD     ! EIE=27D IIZ=21B,15B !
23742    40020724
23743    12310171
23744    40020122
23745    73010522
23746    12121212
23747    52103145  M2879B BCD     ! SINTA=B28,B29,B30!!
23750    63214022
23751    02107322
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23752    02117322
23753    03003712
23754    52252462  M2879C BCD      ' EDS.18D I2Z.158,218''
23755    40011224
23756    12310271
23757    40010522
23760    73020122
23761    37121212
23762    11252462  M2879D BCD      '9EDS..D33 1X03.C37 9WH$A.A29''
23763    66402403
23764    03121167
23765    00034023
23766    03071211
23767    66306221
23770    40210211
23771    37121212
23772    52116430  M2877A BCD      ' 9WH$A.A29,830''
23773    62214021
23774    02117322
23775    03003712
23776    52116430  M2878A BCD      ' 9WH$A.A29,830''
23777    62214021
24000    02117322
24001    03003712
24002    52016746  M1101A BCD      ' 1X85.A45 6AFCA.C42 6TNIA.A37''
24003    05402104
24004    05120421
24005    26232140
24006    23040212
24007    06634531
24010    21402103
24011    07371212
24012    52472151  ZR8BAD BCD      ' PARTIAL SECTOR ERROR  GOOD WD  BAD WD    XREG    OVRFLO   ERRORS ''
24013    63312143
24014    12622523
24015    63465112
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24016    25515146
24017    51531227
24020    46462412
24021    66241212
24022    22212412
24023    66241212
24024    12126751
24025    25271212
24026    12124665
24027    51264346
24030    12121225
24031    51514451
24032    62523712
24033    52622543  MSGPIN BCD      ' SEL UNIT YSC.0A02 SEC.A01,B02,B03 WCK.A02,B01''
24034    12644431
24035    63127062
24036    23400021
24037    00021262
24040    25234021
24041    00017322
24042    00027322
24043    00031266
24044    23424021
24045    00027322
24046    00013712
24047    52122221  PINERR BCD      '  BAD PIN   S/B    OBJ TEST  OVRFLO   ERRORS  ''
24050    24124731
24051    45121212
24052    62612212
24053    12121246
24054    22411263
24055    25624212
24056    12466551
24057    26434612
24060    12122551
24061    51465162
```

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?4062    12523712
?4063    52252151  ERIERR BCD     ! EARLY INTRUPT NOT PROCESSED !!
?4064    43701231
?4065    45635164
?4066    47631245
?4067    46631247
?4070    51462925
?4071    62622524
?4072    52371212
?4073    52512124  SKSERR BCD     ! RAD NOT READY IN 170 MS.!!
?4074    12454663
?4075    12512521
?4076    24701231
?4077    45120107
?4100    00124462
?4101    33371212
?4102    52233021  ERCHAN BCD     ! CHANNEL RATE ERROR!!
?4103    45452543
?4104    12512163
?4105    25122551
?4106    51465137
?4107    52263143  FILPRS BCD     ! FILE PROTECT ON   BAND   NOTHING  OBJ TEST !!
?4110    25124751
?4111    46632523
?4112    63124445
?4113    52121222
?4114    21452412
?4115    12124546
?4116    63303145
?4117    27121246
?4120    22411263
?4121    25626352
?4122    37121212
?4123    52454412  TIMERR BCD     ! NO INTRUPT IN 170 MS.!!
?4124    31456351
?4125    64476312
```



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?4126    31451201
?4127    07001244
?4130    62333712
?4131    52512124  RADER  BCD     ! RAD ERROR, SKS MODE!!
?4132    12255151
?4133    46517312
?4134    62426212
?4135    44462425
?4136    37121212
?4137    52512521  READP  BCD     ! READ PARITY ERROR  BUFFER  RAD ADRS OBJ TEST OVRFLO IGNORE !!
?4140    24124721
?4141    51316370
?4142    12255151
?4143    46515212
?4144    22642626
?4145    25511212
?4146    51212412
?4147    21245162
?4150    12462241
?4151    12632562
?4152    63124665
?4153    51264346
?4154    12312745
?4155    46512552
?4156    37121212
?4157    52665131  RITEP  BCD     ! WRITE PARITY ERROR  BUFFER  RAD ADRS OBJ TEST OVRFLO  IGNORE !!
?4160    63251247
?4161    21513163
?4162    70122551
?4163    51465152
?4164    12226426
?4165    26255112
?4166    12512124
?4167    12212451
?4170    62124622
?4171    41126325
```

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14172    62631246
14173    65512443
14174    46121231
14175    27454451
14176    25523712
14177    52644531  RADPST BCD     ! UNIT READY BUT PST ERROR DURING PROCESS!!
14200    63125125
14201    21247212
14202    22646312
14203    47466312
14204    25515446
14205    51122464
14206    51314527
14207    12475446
14210    23256242
14211    37121212
14212    52371212  ENDIT  BCD     ! !!            END MESSAGE CONTROL
14213    37121212  NDIT   BCD     !!!
14214    52212451  ADRERR BCD     ! ADRS OVERFLO   ADRS   NOTHING  OBJ TEST !!
14215    62124465
14216    25512443
14217    46521212
14220    21245162
14221    12121246
14222    46622231
14223    45271212
14224    46224112
14225    63256263
14226    52371212
14227    52624764  XTRAPT BCD     ! SPURIOUS PST ERROR!!
14230    51314464
14231    62124746
14232    63122451
14233    51465137
14234    52274446  TITLE  BCD     ! GOOD WRD BAD WORD RAD STT  RADRS/WD COR ADRS   MODE   BUF/ERRS  BLKSIZE !!
14235    24126451
```



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14236    24122221
14237    24126646
14240    51241251
14241    21241262
14242    63631212
14243    51212451
14244    62614424
14245    12234451
14246    12212451
14247    62121212
14250    44462462
14251    12121222
14252    64266125
14253    51516212
14254    12224342
14255    62317125
14256    52371212
14257    52454612  NODATA BCD     ! NO DATA SELECTED!!
14260    24216321
14261    12622543
14262    25234325
14263    24371212
14264    52454612  NORAD  BCD     ! NO RAD ADRS SELECTED!!
14265    51212412
14266    21245162
14267    12622543
14270    25234325
14271    24371212
14272    52224463  NOBUFR BCD     ! BOTH BUFFERS LOCKED OUT!!
14273    30122264
14274    26262551
14275    62124346
14276    23422424
14277    12464463
14300    37121212
14301    52454612  NOCORE 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    31712537
 14322    52263167  FIXZRO BCD      ! FIXBLK CAN NOT BE ZERO!!
 14323    22434212
 14324    23214512
 14325    45466312
 14326    22251271
 14327    25514637
 14330    52512124  RADBIG BCD      ! RADHI TOO BIG FOR RAD SIZE!!
 14331    30311263
 14332    46461222
 14333    31271226
 14334    46511251
 14335    21241262
 14336    31712537
 14337    52244664  SYNC   BCD      ! DOUBLE ECW OR MISSING ECW, 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      ! CORLO 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    21456312
 14403    23465125
 14404    12212451
 14405    62333712
 14406    52662412  HEDER  BCD      ! WD ERRS  BUF ADR  RAD ADRS  OVRFLO   IGNORE !!
 14407    25515162
 14410    12122264
 14411    26122124
```

```
24412    51121251
24413    61241221
24414    24516212
24415    1246AA51
24416    2643AA12
24417    12123127
24420    45465125
24421    52371212
```



```
                         *
                         *
                         * CONSTANTS
                         *
                         *
24422  0 00 00000 TIMOUT ZRO
24423  0 06 14200 EOMMA  EOMM    014200          RESTORING EOM
24424  0 06 14220 EOMMB  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  ZRO
24431    00077777 RADHI  DATA    77777
24432    12345670 PATERN DATA    12345670
24433    77777777 FIXBLK DATA    -1
24434    00000200 CYCLE  DATA    200
24435  0 00 00000 RADRS  ZRO
24436    00000040 WDCOWN DATA    40              40 WORDS PER SECTOR
24437  0 00 00000 PADERN ZRO
24440    12345670 PATTRN DATA    12345670
24441  0 00 00000 GDWRD  ZRO
24442  0 00 00000 RADWRD ZRO
24443  0 00 00000 RADSTT ZRO
24444  0 00 00000 ADDRES ZRO
24445  0 00 00000 KORADR ZRO
24446  0 00 00000 MODE   ZRO
24447  0 00 00000 ERRCNT ZRO
24450  0 00 00000 BLKSIZ ZRO
24451  0 00 00000 BUFSAV ZRO
24452  0 00 00000 BUF1BL ZRO
24453  0 00 00000 BUF2BL ZRO
24454  0 00 00000 BLKMAX ZRO
24455  0 00 00000 BLKMSK ZRO
24456  0 00 00000 BUF1KA ZRO
24457  0 00 00000 BUF2KA ZRO
24460  0 00 00000 BUF1CA ZRO
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24461  0 00 00000  BUF2CA  ZRO
24462  0 00 00000  BUF1RA  ZRO
24463  0 00 00000  BUF2RA  ZRO
24464  0 00 00000  BUFSKP  ZRO
24465    77777777  CHAIN   DATA    -1
24466  0 00 00000  CHAINC  ZRO
24467  0 00 00000  CORINK  ZRO
24470  0 00 00000  CORMAX  ZRO
24471  0 00 00000  COUNT   ZRO
24472  0 00 00000  COUNT1  ZRO
24473  0 00 00000  CYCLE1  ZRO
24474  0 00 00000  DATBL   ZRO
24475  0 00 00000  DATSAV  ZRO
24476  0 43 00450  DPLUG   BRM     DIVERT
24477  0 06 17200  EOMBIT  EOMM    017200
24500  0 00 00000  HEADSW  ZRO
24501  0 00 00000  HOLD    ZRO
24502  0 00 00000  HOLD2   ZRO
24503  0 00 00000  HOLD3   ZRO
24504  0 00 00000  HOLD3B  ZRO
24505  0 00 00000  JMPTYP  ZRO
24506  0 00 00000  KEYFIX  ZRO
24507  0 00 00000  KEYSW   ZRO
24510  0 00 00000  KEYADR  ZRO
24511  0 00 00000  KEYSAV  ZRO
24512    00026777  LAST    DATA    26777
24513  0 00 00000  POTWRD  ZRO
24514  0 00 00000  PRNTED  ZRO
24515  0 00 00000  LODABL  ZRO
24516  0 00 00000  PINWRD  ZRO
24517  0 00 00000  RADMAX  ZRO
24520  0 00 00000  RADMSK  ZRO
24521  0 00 00000  RADINK  ZRO
24522  0 00 00000  RADTOP  ZRO
24523  0 00 00000  RAN4X   ZRO
24524  0 06 02226  READA   EOMM    02226
```



```
24525  0 00 00000  RELBL   ZRO
24526  0 00 00000  RELCA   ZRO
24527       00010  RFIELD  BSS     010
24537  0 00 00000  RHIADR  ZRO
24540       00200  RLO     BSS     200
24740  0 00 00000  RLOADR  ZRO
24741  0 00 00000  ERRSVA  ZRO
24742  0 00 00000  SAVA4I  ZRO
24743  0 00 00000  SAVADR  ZRO
24744  0 00 00000  ERRSVB  ZRO
24745  0 00 00000  SAVB4I  ZRO
24746  0 00 00000  SAVBLK  ZRO
24747  0 00 00000  ERRSVX  ZRO
24750  0 00 00000  ERRIR   ZRO
24751    04024440  RCODE1  DATA    4000000+RLO
24752    04024640  RCODE2  DATA    4000100+RLO
24753  0 00 00000  FLAG1   ZRO
24754  0 00 00000  CHANWD  ZRO
24755  0 00 00000  TSTWRD  ZRO
24756  0 00 00000  INCR1   ZRO
24757  0 00 00000  INCRSW  ZRO
24760  0 00 00000  SAVX4I  ZRO
24761  0 00 00000  SAVWRD  ZRO
24762  0 00 00000  SEKSTT  ZRO
24763  0 00 00000  SKP940  ZRO
24764  0 00 00000  SVSEED  ZRO
24765  0 00 00000  STAHLD  ZRO
24766  0 00 17247  TCEOM   ZRO     TCEOM1
24767  0 00 17304          ZRO     TCEOM2
24770  0 00 17254  TREOM   ZRO     TREOM1
24771  0 00 17311          ZRO     TREOM2
24772  0 00 00000  TEMP1   ZRO
24773  0 06 02266  WRITE   EOMM    02266
24774  6 35 00000  WRDSTA  STA     0,6
24775  6 70 00000  WRDSKM  SKM     0,6
24776  0 00 00000  WSAVE   ZRO
```

END

LITERALS USED:

```
24777    00000000
25000    77765115
25001    00037777
25002    00000311
25003    00001064
25004    00001001
25005    00001002
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    00043777
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
```

```
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
```



```
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
```

```
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    01117347
25256    00157347
25257    04317333
25260    00067776
```



```
25261    00003300
25262    77700077
25263    00475500
25264    00700000
25265    22066600
25266    00003000
25267    00070000
25270    77707777
25271    00030000
25272    00060000
25273    77757777
25274    00007000
25275    00016122
25276    00000700
25277    00016164
25300    00016245
25301    00016250
25302    53577345
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    77753014
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•	ADDRES	24444•	ADRERR		24214•
ALLDUN	20353•	AREG	410	BADBIT		24371•
BADPBT	24177•	BADWRD	24442•	BLKMBK		24455•
BLKMAX	24454•	BLKSIZ	24450•	BREG	N	411
BRITYP	13753•	BUF1RA	24462•	BUF1BL		24482•
BUF1CA	24460•	BUF1KA	24456•	BUF2RA		24463•
BUF2BL	24453•	BUF2CA	24461•	BUF2KA		24457•
BUFBAV	24451•	BUFBKP	24464•	CHAIN	N	24465•
CHAIN1	17455•	CHAIN2	17527•	CHAINC		24466•
CHANWD	24754•	CHANE1	17703•	CHANER		17670•
CHEC12	17144•	CHEC13	17151•	CHEC21		17165•
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•	COMMBN	14431•	CORAD1		16331•
CORAD3	16357•	CORAD4	16371•	CORAD5		16401•
CORAD6	16352•	CORAD7	16421•	CORAD8		16355•
CORAD9	16366•	CORADA	16426•	CORADR		16315•
CORERR	24353•	CORHI	24427•	CORINK		24467•
CORLB	24426•	CORMAX	24470•	COUNT	N	24471•
COUNT1	24472•	CYCLE	24434•	CYCLE1		24473•

DATA	16722•	DATA10	16766•	DATA11		16771•
DATA12	16776•	DATA13	17003•	DATA14	N	16777•
DATA15	16773•	DATA16	17007•	DATA19		17000•
DATA9	16755•	DATA9A	16765•	DATBL	N	24474•
DATSAV	N 24475•	DCHA1	17474•	DCHA2		17515•
DCHA3	17465•	DCHA4	17541•	DCHAIN		17477•
DECRI1	15364•	DECRI2	15404•	DIVERT		450
DONE	452	DPLUG	N 24476•	DSCBIZ	N	404
END	434	END1	5356•	ENDIT		24212•
EOMBIT	24477•	EOMMA	N 24423•	EOMMB	N	24424•
ERCHAN	24102•	ERIERR	24063•	ERRCNT		24447•
ERRIR	24750•	ERROR	460	ERRORS	N	414
ERROU1	20044•	ERROU2	17746•	ERROU4		20040•
ERROU6	20072•	ERROU8	17756•	ERROU9		17771•
ERROUT	17721•	ERRO32	20055•	ERRO33		20050•
ERRO36	20111•	ERRO37	20120•	ERRO38		20133•
ERRO41	20066•	ERRO42	20061•	ERRO43		20115•
ERRO60	20104•	ERROVA	24741•	ERROVB		24744•
ERRSVX	24747•	ERRTST	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	7016•	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	456	FILPRS		24107•

FIM1	21013•	FIM10	21705•	FIM11	22551•
FIM12	20426•	FIM2	21173•	FIM3	21211•
FIM4	21252•	FIM5	21313•	FIM6	21351•
FIM7	21567•	FIM8	21621•	FIM9	21653•
FIXBIG	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	20565•	FPT8	20573•
FPT9	20601•	FRMKEY	16070•	FUN10A	15531•
FUN10B	15547•	FUNCTN	424	FUNC1 N	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•
FVM10	22526•	FVM11	22646•	FVM12	20510•
FVM2	21155•	FVM3	21206•	FVM4	21247•
FVM5	21310•	FVM6	21564•	FVM7	21616•
FVM8	21652•	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•
HEADSV	24500•	HEDER	24406•	HOLD	24501•
HOLD2	24502•	HOLD3	24503•	HOLD3B	24504•
I30T44	14421•	I31	243	I33	247
I56I74	14420•	I64	311	I65	313
IEXT	14435•	ILLEXT	14463•	IMSG	14511•
INCRSV	24757•	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•	INKMN1 N	5340•	INKMNT	5332•
INT31	242	INT33	246	INTR1E	17333•

INTR2	17350•	INTR21 N	17355•	INTR22	17365•
INTR2A	17371•	INTR2B	17377•	INTR2C	17405•
INTRE1	17334•	INTRE2	17335•	INTRE3	17336•
INTRE4	17337•	INTRE5	17340•	INTRE6	17347•
ITABLE	14457•	IX1 N	243	IX2 N	247
JMPTYP	24505•	KEYADR	24510•	KEYEN1	16033•
KEYEND	16013•	KEYFIX N	24506•	KEYRA1	16011•
KEYRA2	15776•	KEYRAD	15756•	KEYSW	24507•
KEYSAV	24511•	KORADR	24445•	LAST	24512•
LODABL	24515•	M1001A	22656•	M1003A	22674•
M1004A	22704•	M1005A	22727•	M1006A	22736•
M1007A	22745•	M1008A	22754•	M1009A	22763•
M1010A	22772•	M1011A	23001•	M1012A	23010•
M1013A	23017•	M1014A	23026•	M1015A	23035•
M1016A	23044•	M1017A	23054•	M1018A	23064•
M1019A	23074•	M1020A	23105•	M1023A	23117•
M1024A	23126•	M1025A	23135•	M1026A	23144•
M1027A	23153•	M1028A	23162•	M1029A	23171•
M1030A	23200•	M1031A	23207•	M1032A	23216•
M1033A	23225•	M1034A	23235•	M1035A	23245•
M1036A	23255•	M1037A	23265•	M1038A	23275•
M1039A	23306•	M1040A	23313•	M1041A	23320•
M1042A	23325•	M1043A	23332•	M1044A N	23337•
M1101A	24002•	M1859B	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•	M2877A	23772•
M2878A	23776•	M2879A	23741•	M2879B	23747•
M2879C	23754•	M2879D	23762•	MASKER	20143•
MODES	24425•	MODE	24446•	MS12	20400•
MS12A	20412•	MS12B	20416•	MSG01A	23631•
MSG01B	23641•	MSG01C	23651•	MSG01D	23661•
MSG020	23561•	MSG021	23563•	MSG022	23565•
MSG023	23567•	MSG024	23571•	MSG025	23573•
MSG026	23575•	MSG027	23577•	MSG028	23601•

MSG029		23603*	MSG030		23605*	MSG031	23607*
MSG032		23611*	MSG033		23613*	MSG034	23615*
MSG035		23617*	MSG036		23525*	MSG037	23353*
MSG038		23543*	MSG039		23552*	MSG05A	23671*
MSG05B		23674*	MSG05C		23677*	MSG05D	23702*
MSG05E		23705*	MSG05F		23710*	MSG05G	23713*
MSG05H		23716*	MSG00A		23621*	MSGPIN	24033*
NDIT		24213*	N0BUFR		24272*	N0CORE	24301*
N0DATA		24257*	N0RAD		24264*	0BJECT	430
0VRFL0	N	413	PADERN		24437*	PATERN	24432*
PATTRN		24440*	PINERR		24047*	PININ	7086*
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*	P0P	14413*
P0PED		14476*	P0TER1		17716*	P0TERR	17710*
P0TWRD		24513*	PRNTED		24514*	PR0G11	N 16247*
PR0G12	N	16251*	PR0G4A		16206*	PR0GE1	16102*
PR0GE2		16110*	PR0GE3		16123*	PR0GE4	16132*
PR0GE5		16146*	PR0GE6		16165*	PR0GE7	16173*
PR0GER		14215*	PR0GE9		16254*	PR0GEN	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		16614*	RADER		24131*	RADHI	24431*
RADINK		24521*	RADL0		24430*	RADMSK	24520*
RADMAX		24517*	RAD0K		13766*	RADRS	24435*
RADSTT		24443*	RADSIZ		403	RADTI1	17551*
RADTIM		17550*	RADT0P	N	24522*	RADWH0	70000000
RAM4X		24523*	RAND0M		16603*	RC0DE1	24751*
RC0DE2		24752*	READ		15207*	READ0	15212*
READ1		15220*	READ2		15250*	READ3	15246*

READ4		15262*	READ5		15306*	READ6	15310*
READ7		15316*	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*	REP0RT		454	RESREG	17443*
RESTOR		17450*	RETURN		440	RFIELD	24527*
RHIADR		24537*	RITEP		24157*	RL1	415
RL2		416	RL4	N	417	RL0	24540*
RL0ADR		24740*	SAVA4I		24742*	SAVADR	24743*
SAVB4I		24745*	SAVBLK		24746*	SAVWRD	24761*
SAVX4I		24760*	SEED		406	SEKSTT	24762*
SETPIN		7153*	SETU3A		16711*	SETU3B	16706*
SETUP		16655*	SETUP4	N	16674*	SETUP8	N 16702*
SETWRD		15337*	SIDE		23623*	SIW	N 402
SKP940		24763*	SKSERR		24073*	SPREAD	15202*
SPRINT		14502*	SPURI		14371*	SSIDE	15414*
STAHLD		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	N	407	TIM0UT	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*	UAW	N 400
UIN		20626*	UNIT		420	UPT	20513*
UVM		20623*	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*	WDK0WN		24436*	WRDSTA	24774*

WRDSKY		24775+	WRITE		24773+	WRTPR1		17441+
WRTPR8		17426+	WRYT		15110+	WRYT1		15114+
WRYT10		15135+	WRYT2	N	15153+	WRYT3		15167+
WRYT4		15141+	WRYT5		15152+	WRYT6		15146+
WRYT7		15147+	WRYT8		15150+	WRYT9		15117+
WSAVE		24776+	XREG	N	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+	ZER81		5627+
ZER82		5643+	ZR8BAD		24012+	INTX1	N	242
INTX2	N	246						