X1210

1

```
                IDENT    DISCT4                                                  'ASM 02
        *
        *       THIS PROGRAM WRITES AND READS A CERTAIN PATTERN ON A TRACK.
        *
        * USE OF REGISTERS:
        *       A1 : GENERAL PURPOSE.
        *       A2 : ADDRESS POINTER.
        *       A3 : NUMBER OF WORDS                FILL IN!
        *       A4 : "0" = WRITE; "1" = READ.       FILL IN!
        *       A5 : SECTOR NUMBER.
        *       A6 : DATA PATTERN THAT HAS TO BE WRITTEN.    FILL IN!
        *       A7 : DATA PATTERN THAT IS READ.
        *       A8 : STATUS PATTERN SUPPRESS ERROR.  FILL IN : /02IF
        *
        * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
        *
        *               STATUS CONFIGURATION:
        *
        *       BIT 15 : NOT OPERABLE.
        *       BIT 14 : THROUGHPUT ERROR.
        *       BIT 13 : DATA FAULT.
        *       BIT 12 : INCORRECT LENGTH.
        *       BIT 11 : PROGRAM ERROR.
        *       BIT  9 : DEVICE NUMBER.
        *       BIT  6 : SEEK ERROR.
        *       BIT  5 : ON CYLINDER.
        *       BIT  1 : HAS BEEN UNREADY.
        *
        * * * * * * * * * * * * * * * * * * * * * * * * * * * * * *
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00029                          EJECT
00030  0000            BUF     RES     210
00031  01A4            BUFEND  RES     1
00032                  *
00033                  *
00034                  *
00035  01A6  200F      START   INH                     START
00036  01A8  0500              LDK     A5,0            CLEAR SECTOR NUMBER.
00037  01AA  0100      FILLMC  LDK     A1,0            FILL FIRST M.C.W.
00038  01AC  990C              SUR     A1,A3
00039  01AE  3941              SLL     A1,1
00040  01B0  A120              ANKL    A1,/0FFE
       01B2  0FFE
00041  01B4  8410              LDR     A4,A4           READ OR WRITE?
00042  01B6  5004              RF(0)   *+6
00043  01B8  A920              ORKL    A1,/4000
       01BA  4000
00044  01BC  8141              ST      A1,/88
       01BE  0088
00045  01C0  8120              LDKL    A1,BUF-2        FILL SECOND M.C.W.
       01C2  FFFE  R
00046  01C4  820C              LDR     A2,A3
00047  01C6  3A41              SLL     A2,1
00048  01C8  9108              ADR     A1,A2
00049  01CA  8141              ST      A1,/8A
       01CC  008A
00050  01CE  0100              LDK     A1,0            FILL BUFFER.
00051  01D0  8220              LDKL    A2,BUF          CLEAR BUFFER IF READ.
       01D2  0000  R
00052  01D4  8410              LDR     A4,A4           READ OR WRITE?
00053  01D6  5102              RF(1)   *+4
00054  01D8  8118              LDR     A1,A6
00055  01DA  8129      LOAD    STR     A1,A2
00056  01DC  1202              ADK     A2,2
00057  01DF  EA20              CWK     A2,BUFEND
       01E0  01A4  R
00058  01E2  5A0A              RB(2)   LOAD
00059  01E4  8114              LDR     A1,A5           GENERATE CIO COMMAND.
00060  01E6  3942              SLL     A1,2
00061  01E8  8410              LDR     A4,A4           READ OR WRITE?
00062  01EA  5102              RF(1)   *+4
00063  01EC  2901              ORK     A1,1
00064  01EE  41C2              CIO     A1,1,/02        CIO START.
00065  01F0  5002              RF(0)   *+4
00066  01F2  207F              HLT                     CIO NOT ACCEPTED.
00067  01F4  49C2      STATUS  SST     A1,/02
00068  01F6  5C04              RB(4)   *-2
00069  01F8  A103              TM      A1,A8           CHECK THE STATUSWORD.
00070  01FA  5002              RF(0)   *+4
00071  01FC  207F              HLT                     ERROR IN STATUSWORD.
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00072  01FE  810C      CHECK   LDR     A1,A3           CHECK BUFFER.
00073  0200  3941              SLL     A1,1
00074  0202  9120              ADKL    A1,BUF-2
       0204  FFFE  R
00075  0206  8220              LDKL    A2,BUF
       0208  0000  R
00076  020A  FE28      COMP    CWR*    A6,A2
00077  020C  5004              RF(0)   *+6
00078  020E  8728              LDR*    A7,A2
00079  0210  207F              HLT                     READ ERROR.
00080  0212  1202              ADK     A2,2
00081  0214  EA04              CWR     A2,A1
00082  0216  500F              RB(5)   COMP
00083  0218  1502      UPDATE  ADK     A5,2            UPDATE THE SECTOR NUMBER.
00084  021A  ED20              CWK     A5,31
       021C  001F
00085  021E  5202              RF(2)   *+4
00086  0220  1D1F              SUK     A5,31
00087  0222  8F20              ABL     FILLMC
       0224  01AA  R
00088                  *
00089                  *
00090                  *
00091                  *       SOME MORE NOTES:
00092                  *       THE DATA PATTERN THAT IS WRITTEN, IS COMING FROM A BUFFER.
00093                  *       THE DATA IN THE BUFFER IS EQUAL TO THE DATA IN A6.
00094                  *       WITH READING THE BUFFER IS FILLED WITH ZEROES,
00095                  *       BEFORE THE CIOST/RT IS GIVEN,
00096                  *       AFTER READING THE DATA IN THE BUFFER IS COMPARED WITH A6.
00097                  *       IF AN ERROR IS DETECTED, THE WRONG DATA IS DISPLAYED IN A7.
00098                  *       THE PROGRAM WORKS WITHOUT INTERRUPTS.
00099                  *
00100                          END
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