```
*       OPT     l       *
*       OPT     cre     *
*       NAM     EXBUG   *
*       HJS     2026
        PAGE    60
```

```
       TITL    "*** MC6800 EXORCISER EXBUG MONITOR ***"
*************************************************************************
*                                                                       *
*              *** EXBUG Program Control Commands ***                   *
*                                                                       *
* CMD                        DESCIPTION                                 *
* LOAD   Initiates memory loader function.                              *
* VERF   Compares contents of memory with tape data. Where unequal, prints *
*        location in hexadecimal.                                       *
* PNCH   Instructs EXORciser to punch an absolute formatted binary obj tape. *
*        An 'X' will exit the punch routine.                            *
* PRNT   Causes terminal to print the contents of memory in hexadecimal  *
*        followed by the literal ASCII characters.                      *
*        An 'X' will exit the print routine.                            *
* SRCH   Searches tape for header record. Stops reader at first record   *
*        encountered and prints that record.                            *
* MAID   Enter the Motorola Assembler Interpreter Debugger.             *
* S10,   Inserts nulls for proper printing during terminal operation at 110, *
* S30 &  300, and 1200 BPS: 0, or 0, or 3 nulls, respectively, inserted after *
* S120   standard ASCII characters; 0, or 4, or 23, respectively, inserted *
*        following carriage return character.                           *
*                                                                       *
*************************************************************************
*                                                                       *
*               *** MAID Program Control Commands ***                   *
*                                                                       *
* CMD                        DESCIPTION                                 *
* n/     Print the contents of memory location n and enable the         *
*        EXORciser to change the contents of this memory location.      *
* n;O    Calculate the address offset (for relative addr mode instructions). *
* (LF)   Print the contents of the next sequential memory location and enable *
*        thw EXORciser to change the contents of this memory location.  *
*        (LF-Line Feed)                                                 *
* ^      Print the contents of the previous sequential memory location and *
*        enable the EXORciser to change the contents of this memory location. *
*        (^-up arrow character or SHIFT key and N character).           *
* (CR)   Return the displayed contents to memory and accept next command. *
*        (CR - Carriage Return).                                        *
* n;V    Enter a breakpoint at memory location n.                       *
* $V     Display the memory location of each breakpoint.                *
* n;U    Remove the breakpoint at memory location n.                    *
* ;U     Remove all the breakpoint.                                     *
* n;G    Execute user's program starting at memory location n.          *
* ;G     Execute the user's program starting at the auto restart memory loc. *
* $R     Display/change the user's program registers.                   *
* $M     Display the search mask.                                       *
* n;P    Continue executing from the selected breakpoint until this     *
*        breakpoint is encountered n times.                             *
* ;P     Continue executing from the current program counter setting.   *
* n;N    Trace n instructions.                                          *
* ;N     Trace one instruction.                                         *
* N      Trace one instruction.                                         *
* $S     Display and set the stop-on-address compare-Scope trigger pulse. *
* ;S     Reset the stop-on-address compare-Scope trigger pulse.         *
* $T     Set the trace mode.                                            *
* ;T     Reset the trace mode.                                          *
* n,W    Search for the n bit pattern.                                  *
* X      Exit MAID and return to EXBUG 1.1                              *
* #n=    Convert the decimal number n to its hexadecimal equivalent.    *
* #$n=   Convert the hexadecimal number n to its decimal equivalent.    *
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

                        * #@n=   Convert the octal number n to its hexadecimal equivalent.            *
                        *                                                                            *
                        ******************************************************************************
                        *
                        * EXBUG Monitor Entry Points for user program
                        *
   F000                         ORG    $F000    ;
   F000   7E F5 58      PWRUP   JMP    LBF558   ; Entry after powerup or restart
   F003   7E F7 89              JMP    MBUGE    ; MBUGE  (Alt) Alternative exit vector to the monitor
   F006   7E FA A7              JMP    CBCDHX   ; CBCDHX Convert a hexadec ASCII char to a binary value
   F009   7E F9 C0              JMP    LBF9C0   ; XCHEXL CONVERT LEFT (HI) NIBBLE TO HEX ASCII
   F00C   7E F9 C4              JMP    LBF9C4   ; XCHEXR CONVERT RIGHT (LO) NIBBLE TO HEX ASCII
   F00F   7E FA 65              JMP    LBFA65   ; XINADD Input a hexadecimal char
   F012   7E FA 8B              JMP    INCH     ; Read single char
   F015   7E FA A0              JMP    INCHNP   ; Read a single char with no parity
   F018   7E F9 DC              JMP    OUTCH    ; Output a single char to the terminal
   F01B   7E FA 24              JMP    OUT2H    ; Output two hexadec char (one byte) to the terminal
   F01E   7E FA 22              JMP    OUT4HS   ; Output four hexadec char (two bytes/address)
   F021   7E FA 41              JMP    PCRLF    ; Output a CR and LF to the terminal
   F024   7E FA 33              JMP    PDATA    ; Output a complete ASCII string (term EOF char)
   F027   7E FA 35              JMP    PDAT1    ; Output an ASCII string at the curr pos (w/o a CRLF)
   F02A   7E FA 26              JMP    PSPAC    ; Print a space

   F02D   27 10         LBF02D  FCB    $27,$10  ;TABLE FOR HEX TO DEC CONVERTION
   F02F   03 E8                 FCB    $03,$E8  ;
   F031   00 64                 FCB    $00,$64  ;
   F033   00 0A                 FCB    $00,$0A  ;
   F035   00 01                 FCB    $00,$01  ;

   F037   BD FA A7      LBF037  JSR    CBCDHX   ;CONV BCD TO HEX
   F03A   2B 6C                 BMI    LBF0A8   ;
   F03C   68 01                 ASL    1,X      ;
   F03E   69 00                 ROL    0,X      ;
   F040   8D 3C                 BSR    LBF07E   ;SHIFT 4 BITS LEFT
   F042   AB 01                 ADDA   1,X      ;
   F044   A7 01                 STAA   1,X      ;
                        *
                        * HEX -> DEC CONV
   F046   BD FA A0      LBF046  JSR    INCHNP   ;
   F049   81 3D                 CMPA   #$3D     ;'=' ?
   F04B   26 EA                 BNE    LBF037   ;LOOP...
   F04D   86 20                 LDAA   #$20     ;SPACE
   F04F   BD F9 DC              JSR    OUTCH    ;PRINT IT
                        * CONVERT LOC $FF08/09 TO DECIMAL ASCII CHAR
   F052   CE F0 2D      CHXBCD  LDX    #LBF02D  ;GET HEX-DEC CONV TBL @
   F055   B6 FF 08              LDAA   LBFF08   ;
   F058   F6 FF 09              LDAB   LBFF08+1 ;
   F05B   7F FF 5A      LBF05B  CLR    LBFF5A   ;CLR COUNTER
   F05E   7C FF 5A      LBF05E  INC    LBFF5A   ;
   F061   E0 01                 SUBB   1,X      ;
   F063   A2 00                 SBCA   0,X      ;
   F065   24 F7                 BCC    LBF05E   ;LOOP...
   F067   EB 01                 ADDB   1,X      ;
   F069   A9 00                 ADCA   0,X      ;
   F06B   36                    PSHA            ;SAVE A
   F06C   B6 FF 5A              LDAA   LBFF5A   ;PRINT CNTR
   F06F   8B 2F                 ADDA   #$2F     ;MAKE IT ASCII
   F071   BD F9 DC              JSR    OUTCH    ;PRINT IT
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   F074   32                  PULA            ;RESTORE A
   F075   08                  INX             ;NEXT ENTRY CONV TBL
   F076   08                  INX             ;
   F077   8C F0 37            CPX    #LBF037  ;CONV DONE ?
   F07A   26 DF               BNE    LBF05B   ;NO, LOOP...
   F07C   20 7B               BRA    LBF0F9   ;PRT '*' PROMPT
                     *
                     * SHIFT WORD POINTED BY X-REG 3 BITS LEFT
   F07E   68 01      LBF07E ASL    1,X      ;SHIFT WORD
   F080   69 00             ROL    0,X      ;
   F082   68 01             ASL    1,X      ;  3 BITS
   F084   69 00             ROL    0,X      ;
   F086   68 01             ASL    1,X      ;    TO THE LEFT.
   F088   69 00             ROL    0,X      ;
   F08A   39                RTS             ;RETURN TO CALLER
                     *
                     * CONVERT OCTAL/HEX/DEC
   F08B   CE FF 08   LBF08B LDX    #LBFF08  ;
   F08E   7F FF 07          CLR    LBFF07   ;
   F091   6F 00             CLR    0,X      ;
   F093   6F 01             CLR    1,X      ;
   F095   BD FA A0          JSR    INCHNP   ;
   F098   81 24             CMPA   #$24     ;'$' ?
   F09A   27 AA             BEQ    LBF046   ;HEX -> DEC CONV
   F09C   81 40             CMPA   #$40     ;'@' ?
   F09E   27 4A             BEQ    LBF0EA   ;OCTAL -> HEX CONV
                     *DEC -> HEX CONV
                     * INPUT DECIMAL NUMBER
   F0A0   81 30      LBF0A0 CMPA   #$30     ; <0 ?
   F0A2   2B 04             BMI    LBF0A8   ;INVALID DEC ?
   F0A4   81 39             CMPA   #$39     ; >9 ?
   F0A6   2F 03             BLE    LBF0AB   ;YES
   F0A8   7E F1 28   LBF0A8 JMP    LBF128   ;PRINT ' ?'

   F0AB   84 0F      LBF0AB ANDA   #$0F     ;ADD DEC VALUE
   F0AD   B7 FF 5A          STAA   LBFF5A   ;SAVE LAST ENTER DECIMAL
   F0B0   A6 00             LDAA   0,X      ;SHIFT WORD 1 BITS LEFT
   F0B2   E6 01             LDAB   1,X      ;
   F0B4   58                ASLB            ;
   F0B5   49                ROLA            ;
   F0B6   BD F0 7E          JSR    LBF07E   ;SHIFT WORD 3 BITS LEFT
   F0B9   EB 01             ADDB   1,X      ;
   F0BB   A9 00             ADCA   0,X      ;
   F0BD   FB FF 5A          ADDB   LBFF5A   ;
   F0C0   89 00             ADCA   #$00     ;CARRY
   F0C2   A7 00             STAA   0,X      ;SAVE RESULT
   F0C4   E7 01             STAB   1,X      ; IN LBFF08
   F0C6   BD FA A0          JSR    INCHNP   ;
   F0C9   81 3D             CMPA   #$3D     ;'=' ?
   F0CB   26 D3             BNE    LBF0A0   ;LOOP...
                     *
                     * PRINT RESULT IN HEX
   F0CD   86 20      LBF0CD LDAA   #$20     ;SPACE
   F0CF   BD F9 DC          JSR    OUTCH    ;PRINT IT
   F0D2   CE FF 08          LDX    #LBFF08  ;PRINT RESULT
   F0D5   BD FA 22          JSR    OUT4HS   ; IN HEX
   F0D8   20 1F             BRA    LBF0F9   ;PRT '*' PROMPT
   F0DA   81 30      LBF0DA CMPA   #$30     ; <0 ?
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   F0DC   2B CA                BMI    LBF0A8   ;INVALID HEX
   F0DE   81 38                CMPA   #$38     ; >8 ?
   F0E0   2A C6                BPL    LBF0A8   ;INVALID HEX
   F0E2   8D 9A                BSR    LBF07E   ;SHIFT WORD 3 BITS LEFT
   F0E4   84 07                ANDA   #$07     ;
   F0E6   AB 01                ADDA   1,X      ;
   F0E8   A7 01                STAA   1,X      ;
                       *
                       * OCTAL -> HEX CONV
   F0EA   BD FA A0      LBF0EA JSR    INCHNP   ;
   F0ED   81 3D                CMPA   #$3D     ;'=' ?
   F0EF   26 E9                BNE    LBF0DA   ;PRINT ' ?'
   F0F1   20 DA                BRA    LBF0CD   ;

   F0F3                MAID    EQU    *        ;
   F0F3   7F FF 60             CLR    LBFF60   ;
   F0F6   7F FF 54             CLR    LBFF54   ;CLEAR ??? FLAG
   F0F9   8E FF 8A      LBF0F9 LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F0FC   CE FB C2             LDX    #LBFBC2  ;'*' MAID PROMPT
   F0FF   BD FA 33             JSR    PDATA    ;PRINT IT
   F102   BD FA 62             JSR    LBFA62   ;READ 4 HEX
   F105   5D                   TSTB            ;HEX INPUT OK ?
   F106   26 28                BNE    LBF130   ;YES, BRANCH
   F108   81 58                CMPA   #$58     ;'X' EXIT ?
   F10A   26 03                BNE    LBF10F   ;NO, CONTINUE
   F10C   7E F5 DC             JMP    RSTART   ;RESTART EXBUG

   F10F   81 24         LBF10F CMPA   #$24     ;'$' ?
   F111   26 03                BNE    LBF116   ;NO, CONTINUE
   F113   7E F3 3D             JMP    LBF33D   ;
   F116   81 3B         LBF116 CMPA   #$3B     ;';' ?
   F118   26 03                BNE    LBF11D   ;NO, CONTINUE
   F11A   7E F2 7F             JMP    LBF27F   ;
   F11D   81 4E         LBF11D CMPA   #$4E     ;'N' ?
   F11F   27 34                BEQ    LBF155   ;YES, BRANCH
   F121   81 23                CMPA   #$23     ;'#' ?
   F123   26 03                BNE    LBF128   ;PRINT ' ?'
   F125   7E F0 8B             JMP    LBF08B   ;CONVERT CMD

   F128   CE FB BE      LBF128 LDX    #LBFBBE  ;PRINT ' ?' W/O CRLF
   F12B   BD FA 35             JSR    PDAT1    ; FOLLOWED WITH
   F12E   20 C9         LBF12E BRA    LBF0F9   ;  A '*' PROMPT

   F130   81 3B         LBF130 CMPA   #$3B     ;';' ?
   F132   27 6F                BEQ    LBF1A3   ;YES, BRANCH
   F134   FE FF 08             LDX    LBFF08   ;
   F137   81 2F                CMPA   #$2F     ;'/' ?
   F139   26 ED                BNE    LBF128   ;NO, PRINT ' ?'
   F13B   7E F1 D6             JMP    LBF1D6   ;
                               PAGE   60
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*** MC6800 EXORCISER EXBUG MONITOR ***
                        *
                        * PROCESS 'NNNN;N' TRACE NNNN INSTRUCTIONS
   F13E   FE FF 08      LBF13E LDX    LBFF08   ;'N' TRACE
   F141   27 01                BEQ    LBF144   ;
   F143   09                   DEX             ;
   F144   FF FF 51      LBF144 STX    LBFF51   ;SET TRACE STEP CNTR
   F147   86 FF                LDAA   #$FF     ;
   F149   B7 FF 60             STAA   LBFF60   ;SET ??? FLAG
   F14C   B7 FF 50             STAA   LBFF50   ;.
   F14F   B7 FF 54             STAA   LBFF54   ;.
   F152   7E F4 31             JMP    LBF431   ;

   F155   CE 00 00      LBF155 LDX    #$0000   ;'N' TRACE 1 INSTR
   F158   20 EA                BRA    LBF144   ;CONTINUE
                        *
                        * PROCESS 'NNNN;V' ENTER A BP
   F15A   B6 FF 08      LBF15A LDAA   LBFF08   ;
   F15D   F6 FF 09             LDAB   LBFF08+1 ;
   F160   BD F2 BA             JSR    LBF2BA   ;FIND BP IN TABLE
   F163   27 94                BEQ    LBF0F9   ;PRT '*' PROMPT
   F165   CE FF 1F             LDX    #BRKPTS  ;
   F168   A6 00         LBF168 LDAA   0,X      ;BP = $0000 ?
   F16A   AB 01                ADDA   1,X      ;.
   F16C   26 0B                BNE    LBF179   ;NO, BRANCH
   F16E   BE FF 08             LDS    LBFF08   ;LOAD BP ADDR
   F171   AF 00                STS    0,X      ;INSERT BP IT TABLE
   F173   6F 20                CLR    32,X     ;CLR BP HIT CNTR
   F175   6F 21                CLR    33,X     ;.
   F177   20 B5                BRA    LBF12E   ;PRT '*' PROMPT
   F179   08            LBF179 INX              ;NEXT ENTRY
   F17A   08                   INX             ;.
   F17B   8C FF 2F             CPX    #LBFF2F  ;END OF BP TABLE ?
   F17E   26 E8                BNE    LBF168   ;
   F180   7E F1 28      LBF180 JMP    LBF128   ;PRINT ' ?'
                        *
                        * PROCESS 'NNNN;U' CLEAR BREAKPOINT
   F183   CE FF 1F      LBF183 LDX    #BRKPTS  ;'U' REMOVE BP
   F186   A6 00         LBF186 LDAA   0,X      ;
   F188   B1 FF 08             CMPA   LBFF08   ;FOUND ?
   F18B   26 0D                BNE    LBF19A   ;NO, BRANCH
   F18D   A6 01                LDAA   1,X      ;
   F18F   B1 FF 09             CMPA   LBFF08+1 ;FOUND ?
   F192   26 06                BNE    LBF19A   ;NO, CONTINUE
   F194   6F 00                CLR    0,X      ;CLEAR BP
   F196   6F 01                CLR    1,X      ;
   F198   20 94         LBF198 BRA    LBF12E   ;PRT '*' PROMPT
   F19A   08            LBF19A INX              ;NEXT BP IN TABLE
   F19B   08                   INX             ;
   F19C   8C FF 2F             CPX    #LBFF2F  ;END OF BP TABLE ?
   F19F   26 E5                BNE    LBF186   ;LOOP...
                        * BP NOT FOUND IN TABLE
   F1A1   20 DD                BRA    LBF180   ;YES, PRINT ' ?'
                        *
                        * PROCESS 'NNNN;. R, V, M, T OR S' COMMAND
   F1A3   BD FA A0      LBF1A3 JSR    INCHNP   ;
   F1A6   81 47                CMPA   #$47     ;'G' EXECUTE
   F1A8   26 03                BNE    LBF1AD   ;
   F1AA   7E F4 1C             JMP    LBF41C   ;
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*** MC6800 EXORCISER EXBUG MONITOR ***

   F1AD   81 4E         LBF1AD CMPA   #$4E     ;'N' TRACE
   F1AF   27 8D                BEQ    LBF13E   ;
   F1B1   81 50                CMPA   #$50     ;'P' CONTINUE
   F1B3   26 03                BNE    LBF1B8   ;
   F1B5   7E F3 FC             JMP    LBF3FC   ;
   F1B8   81 55         LBF1B8 CMPA   #$55     ;'U' REMOVE BP
   F1BA   27 C7                BEQ    LBF183   ;
   F1BC   81 56                CMPA   #$56     ;'V' ENTER A BP
   F1BE   27 9A                BEQ    LBF15A   ;
   F1C0   81 57                CMPA   #$57     ;'W' SEARCH
   F1C2   26 BC                BNE    LBF180   ;NO, PRINT ' ?'
   F1C4   20 77                BRA    LBF23D   ;

   F1C6   08            LBF1C6 INX              ;
   F1C7   BD FA 45             JSR    PCR      ;PRINT CR
   F1CA   FF FF 56      LBF1CA STX    LBFF56   ;SAVE NNNN ADDR
   F1CD   CE FF 56      LBF1CD LDX    #LBFF56  ;
   F1D0   BD FA 2B             JSR    LBFA2B   ;PRINT NNNN/
   F1D3   FE FF 56             LDX    LBFF56   ;
                       * PROCESS 'NNNN/' DISPLAY LOC NNNN CONTENT
   F1D6   BD F9 71      LBF1D6 JSR    LBF971   ;READ 2 HEX CHAR
   F1D9   2B 0E                BMI    LBF1E9   ;
   F1DB   81 0D                CMPA   #$0D     ;CR ?
   F1DD   27 B9                BEQ    LBF198   ;
   F1DF   81 0A                CMPA   #$0A     ;LF ?
   F1E1   27 E3                BEQ    LBF1C6   ;
   F1E3   09                   DEX              ;
   F1E4   BD FA 41             JSR    PCRLF    ;
   F1E7   20 E1                BRA    LBF1CA   ;LOOP...
   F1E9   81 3B         LBF1E9 CMPA   #$3B     ;';' ?
   F1EB   26 93                BNE    LBF180   ;
   F1ED   BD FA A0             JSR    INCHNP   ;
   F1F0   81 4F                CMPA   #$4F     ;'O' ?
   F1F2   26 8C                BNE    LBF180   ;NO, PRINT ' ?'
                       *
                       * PROCESS 'NNNN;O' CALCULATE ADDRESS OFFSET
   F1F4   FE FF 56             LDX    LBFF56   ;'O' CALC OFFSET
   F1F7   08                   INX              ;
   F1F8   FF FF 5A             STX    LBFF5A   ;
   F1FB   B6 FF 5A             LDAA   LBFF5A   ;ADDR
   F1FE   F6 FF 5B             LDAB   LBFF5A+1 ; .
   F201   F0 FF 09             SUBB   LBFF08+1 ; COMPARE
   F204   B2 FF 08             SBCA   LBFF08   ;  .
   F207   25 20                BCS    LBF229   ;
   F209   26 16                BNE    LBF221   ; > 128 ?
   F20B   C1 81                CMPB   #$81     ;
   F20D   24 12                BCC    LBF221   ;
   F20F   50                   NEGB             ;
   F210   F7 FF 07      LBF210 STAB   LBFF07   ;
   F213   BD FA 26             JSR    PSPAC    ;
   F216   CE FF 07             LDX    #LBFF07  ;
   F219   BD FA 24             JSR    OUT2H    ;PRINT RESULT
   F21C   BD FA 41      LBF21C JSR    PCRLF    ;
   F21F   20 AC                BRA    LBF1CD   ;
   F221   CE FB 79      LBF221 LDX    #LBFB79  ;' INVL'
   F224   BD FA 35             JSR    PDAT1    ;PRINT W/O CRLF
   F227   20 F3                BRA    LBF21C   ;LOOP...
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*** MC6800 EXORCISER EXBUG MONITOR ***

   F229   B6 FF 08      LBF229 LDAA   LBFF08   ;END
   F22C   F6 FF 09             LDAB   LBFF08+1 ; ADDR <
   F22F   F0 FF 5B             SUBB   LBFF5A+1 ;  BEG
   F232   B2 FF 5A             SBCA   LBFF5A   ;   ADDR ?
   F235   26 EA                BNE    LBF221   ;NO, ERROR
   F237   58                   ASLB            ;
   F238   25 E7                BCS    LBF221   ;NO, ERROR
   F23A   54                   LSRB            ;
   F23B   20 D3                BRA    LBF210   ;LOOP...
                       *
                       * PROCESS 'NNNN;W' SEARCH FOR N BIT PATTERN
   F23D   B6 FF 08      LBF23D LDAA   LBFF08   ;'W' SEARCH
   F240   26 61                BNE    LBF2A3   ;
   F242   B6 FF 09             LDAA   LBFF08+1 ;
   F245   B7 FF 13             STAA   LBFF13   ;
   F248   FE FF 0E             LDX    LBFF0E   ;BEG ADDR
   F24B   FF FF 56      LBF24B STX    LBFF56   ;UPDATE NNNN
   F24E   A6 00                LDAA   0,X      ;
   F250   B8 FF 13             EORA   LBFF13   ;
   F253   B4 FF 12             ANDA   LBFF12   ;
   F256   26 0F                BNE    LBF267   ;PATTERN FOUND ?
   F258   BD FA 41             JSR    PCRLF    ;
   F25B   CE FF 56             LDX    #LBFF56  ;GET NNNN ADDR
   F25E   BD FA 22             JSR    OUT4HS   ;PRINT 4 HEX + SPACE
   F261   FE FF 56             LDX    LBFF56   ;
   F264   BD FA 24             JSR    OUT2H    ;
   F267   FE FF 56      LBF267 LDX    LBFF56   ;
   F26A   BC FF 10             CPX    LBFF10   ;END ADDR ?
   F26D   27 42                BEQ    LBF2B1   ;
   F26F   08                   INX             ;NEXT MEM LOC
   F270   20 D9                BRA    LBF24B   ;LOOP...
   F272   7F FF 60      LBF272 CLR    LBFF60   ;
   F275   7F FF 54             CLR    LBFF54   ;CLR ??? FLAG
   F278   20 37                BRA    LBF2B1   ;
   F27A   7F FF 5D      LBF27A CLR    LBFF5D   ;CLR ??? FLAG
   F27D   20 32                BRA    LBF2B1   ;
                       *
                       * PROCESS ';' + G/N/P/S/T/U
   F27F   BD FA A0      LBF27F JSR    INCHNP   ;
   F282   81 47                CMPA   #$47     ;'G' EXEC USER PGM ?
   F284   26 03                BNE    LBF289   ;
   F286   7E F4 14             JMP    LBF414   ;
   F289   81 4E         LBF289 CMPA   #$4E     ;'N' TRACE ?
   F28B   26 03                BNE    LBF290   ;
   F28D   7E F1 55             JMP    LBF155   ;
   F290   81 50         LBF290 CMPA   #$50     ;'P' CONT EXEC USER PGM ?
   F292   26 03                BNE    LBF297   ;
   F294   7E F3 F0             JMP    LBF3F0   ;
                       *
   F297   81 53         LBF297 CMPA   #$53     ;'S' DISP STOP-ON-ADDR ?
   F299   27 DF                BEQ    LBF27A   ;
   F29B   81 54                CMPA   #$54     ;'T' RESET TRACE ?
   F29D   27 D3                BEQ    LBF272   ;
   F29F   81 55                CMPA   #$55     ;'U' REMOVE ALL BP'S ?
   F2A1   27 03                BEQ    LBF2A6   ;
   F2A3   7E F1 28      LBF2A3 JMP    LBF128   ;PRINT ' ?'
                       *
                       * CLEAR $FF1F -> $FF4F
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

   F2A6   CE FF 1F      LBF2A6 LDX    #BRKPTS  ;INIT X
   F2A9   6F 00         LBF2A9 CLR    0,X      ;CLEAR LOC
   F2AB   08                   INX             ;NEXT
   F2AC   8C FF 4F             CPX    #LBFF4F  ;END REACHED ?
   F2AF   26 F8                BNE    LBF2A9   ;NO
   F2B1   7E F0 F9      LBF2B1 JMP    LBF0F9   ;PRT '*' PROMPT
                        *
                        * FIND BP IN TABLE
   F2B4   B6 FF 16      LBF2B4 LDAA   LBFF16   ;GET USER
   F2B7   F6 FF 17             LDAB   LBFF17   ; PGM PC
   F2BA   CE FF 1F      LBF2BA LDX    #BRKPTS  ;GET BP TABLE ADDR
   F2BD   A1 00         LBF2BD CMPA   0,X      ;HI EQUAL ?
   F2BF   26 05                BNE    LBF2C6   ;NO, NEXT ENTRY
   F2C1   E1 01                CMPB   1,X      ;LO EQUAL ?
   F2C3   26 01                BNE    LBF2C6   ;NO, NEXT ENTRY
   F2C5   39                   RTS             ;RETURN TO CALLER
                        *
   F2C6   08            LBF2C6 INX             ;NEXT ENTRY
   F2C7   08                   INX             ;.
   F2C8   8C FF 2F             CPX    #LBFF2F  ;END OF BP TABLE ?
   F2CB   26 F0                BNE    LBF2BD   ;NO, LOOP...
   F2CD   86 FF                LDAA   #$FF     ;MARK NOT FOUND
   F2CF   39                   RTS             ;RETURN TO CALLER
                        *
   F2D0   BD FA C0      LBF2D0 JSR    LBFAC0   ;4 HEX ???
   F2D3   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F2D6   08                   INX             ;
   F2D7   20 06                BRA    LBF2DF   ;
   F2D9   BD FA C0      LBF2D9 JSR    LBFAC0   ;2 HEX ???
   F2DC   BD F9 71             JSR    LBF971   ;READ 2 HEX CHAR
   F2DF   81 0D         LBF2DF CMPA   #$0D     ;CR ?
   F2E1   27 57                BEQ    LBF33A   ;
   F2E3   08                   INX             ;
   F2E4   81 0A                CMPA   #$0A     ;LF ?
   F2E6   27 04                BEQ    LBF2EC   ;
   F2E8   BD FA 41             JSR    PCRLF    ;PRINT CRLF
   F2EB   39                   RTS             ;RETURN TO CALLER
                        *
   F2EC   BD FA 45      LBF2EC JSR    PCR      ;PRINT CR
   F2EF   39                   RTS             ;RETURN TO CALLER
                        *
                        * PROCESS '$R' DISPLAY/MODIFY USER PGM REGS
   F2F0   BD FA C9      LBF2F0 JSR    LBFAC9   ;'R' DISPLAY USER PGM REGS
   F2F3   BD FA 41             JSR    PCRLF    ;PRINT CRLF
   F2F6   CE FF 16             LDX    #LBFF16  ;GET USER REGS ADDR
   F2F9   86 50                LDAA   #$50     ;'P' PC REG ?
   F2FB   8D D3                BSR    LBF2D0   ;NEW XXXX VALUE ?
   F2FD   86 58                LDAA   #$58     ;'X' X REG ?
   F2FF   8D CF                BSR    LBF2D0   ;NEW XXXX VALUE ?
   F301   86 41                LDAA   #$41     ;'A'
   F303   8D D4                BSR    LBF2D9   ;NEW XX VALUE ?
   F305   86 42                LDAA   #$42     ;'B'
   F307   8D D0                BSR    LBF2D9   ;NEW XX VALUE ?
   F309   86 43                LDAA   #$43     ;'C' CC REG ?
   F30B   8D CC                BSR    LBF2D9   ;NEW XX VALUE ?
   F30D   86 53                LDAA   #$53     ;'S' SP REG ?
   F30F   8D BF                BSR    LBF2D0   ;NEW XXXX VALUE ?
   F311   20 27                BRA    LBF33A   ;PRT '*' PROMPT
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

                        *
                        * PROCESS '$M' DISPLAY SEARCH MASK
   F313   BD FA 26      LBF313 JSR    PSPAC    ;'M' DISPL SEARCH MASK
   F316   CE FF 12             LDX    #LBFF12  ;
   F319   BD F9 71             JSR    LBF971   ;READ 2 HEX CHAR
   F31C   2B 37                BMI    LBF355   ;
   F31E   CE FB 36      LBF31E LDX    #LBFB36  ;'BEG ADDR '
   F321   BD FA 33             JSR    PDATA    ;PRINT IT
   F324   CE FF 0E             LDX    #LBFF0E  ;
   F327   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F32A   2B F2                BMI    LBF31E   ;
   F32C   CE FB 40      LBF32C LDX    #LBFB40  ;'END ADDR '
   F32F   BD FA 33             JSR    PDATA    ;PRINT IT
   F332   CE FF 10             LDX    #LBFF10  ;
   F335   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F338   2B F2                BMI    LBF32C   ;
   F33A   7E F0 F9      LBF33A JMP    LBF0F9   ;PRT '*' PROMPT
                        *
                        * PROCESS '$R, $V, $M, $T OR $S'
   F33D   BD FA A0      LBF33D JSR    INCHNP   ;
   F340   16                   TAB             ;
   F341   C1 52                CMPB   #$52     ;'R' USER REGS
   F343   27 AB                BEQ    LBF2F0   ;
   F345   C1 56                CMPB   #$56     ;'V' ALL BP'S
   F347   27 0F                BEQ    LBF358   ;
   F349   C1 4D                CMPB   #$4D     ;'M' SEARCH MASK
   F34B   27 C6                BEQ    LBF313   ;
   F34D   C1 54                CMPB   #$54     ;'T' TRACE
   F34F   27 2C                BEQ    LBF37D   ;
   F351   C1 53                CMPB   #$53     ;'S' STOP-ON-ADDRESS COMPARE
   F353   27 13                BEQ    LBF368   ;
   F355   7E F1 28      LBF355 JMP    LBF128   ;PRINT ' ?'
                        *
                        * PROCESS '$V' DISPLAY ALL BREAK POINTS
   F358   BD FA 41      LBF358 JSR    PCRLF    ;'V' DISPL ALL BP'S
   F35B   CE FF 1F             LDX    #BRKPTS  ;
   F35E   C6 08                LDAB   #8       ;8 BREAK POINTS
   F360   BD FA 22      LBF360 JSR    OUT4HS   ;PRINT
   F363   5A                   DECB            ; THEM ALL HEX
   F364   26 FA                BNE    LBF360   ;  WITH SPACES
   F366   20 D2                BRA    LBF33A   ;PRT '*' PROMPT
                        *
                        * PROCESS '$S' DISPLAY & SET STOP-ON-ADDR
   F368                 LBF368 EQU    *        ;'S' SET STOP-ON-ADDR
   F368   CE FB A0             LDX    #LBFBA0  ;'STOP ADDR '
   F36B   BD FA 33             JSR    PDATA    ;PRINT IT
   F36E   CE FF 5E             LDX    #LBFF5E  ;
   F371   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F374   2B DF                BMI    LBF355   ;
   F376   86 FF                LDAA   #$FF     ;
   F378   B7 FF 5D             STAA   LBFF5D   ;SET ??? FLAG
   F37B   20 BD                BRA    LBF33A   ;PRT '*' PROMPT
                        *
                        * PROCESS '$T' SET TRACE MODE
   F37D                 LBF37D EQU    *        ;'T' SET TRACE MODE
   F37D   CE FB 40             LDX    #LBFB40  ;'END ADDR '
   F380   BD FA 33             JSR    PDATA    ;PRINT IT
   F383   CE FF 14             LDX    #LBFF14  ;
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*** MC6800 EXORCISER EXBUG MONITOR ***

   F386   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F389   2B CA                BMI    LBF355   ;
   F38B   86 FF                LDAA   #$FF     ;
   F38D   B7 FF 60             STAA   LBFF60   ;SET ??? FLAG
   F390   7F FF 50             CLR    LBFF50   ;
   F393   20 A5                BRA    LBF33A   ;PRT '*' PROMPT
                       *
                       * ACTIVATE ALL BREAK POINT IN TABLE IN MEMORY
                       *
   F395   7D FF 4F      LBF395 TST    LBFF4F   ;TST ??? FLAG
   F398   26 2E                BNE    LBF3C8   ;
   F39A   CE FF 1F             LDX    #BRKPTS  ;GET @ BP SAVE AREA
   F39D   FF FF 56      LBF39D STX    LBFF56   ;SAVE IT
   F3A0   A6 00                LDAA   0,X      ;BREAK
   F3A2   26 04                BNE    LBF3A8   ; POINT
   F3A4   A6 01                LDAA   1,X      ;  SET ?
   F3A6   27 14                BEQ    LBF3BC   ;NO, BRANCH
   F3A8   EE 00         LBF3A8 LDX    0,X      ;LOAD BP ADDR
   F3AA   A6 00                LDAA   0,X      ;SAVE USER PGM OPCODE
   F3AC   C6 3F                LDAB   #$3F     ;STORE SWI OPCODE
   F3AE   E7 00                STAB   0,X      ;.
   F3B0   E1 00                CMPB   0,X      ;VERIFY STORE
   F3B2   27 03                BEQ    LBF3B7   ;OK, CONTINUE
   F3B4   7E F9 A4             JMP    LBF9A4   ;ERROR, NO CHANGE

   F3B7   FE FF 56      LBF3B7 LDX    LBFF56   ;GET BP SAVE AREA @
   F3BA   A7 10                STAA   16,X     ;SAVE ORIG OPCODE
   F3BC   08            LBF3BC INX             ;NEXT BREAK POINT
   F3BD   08                   INX             ;.
   F3BE   8C FF 2F             CPX    #LBFF2F  ;END OF BP TABLE ?
   F3C1   26 DA                BNE    LBF39D   ;LOOP...
   F3C3   86 FF                LDAA   #$FF     ;SET ??? FLAG
   F3C5   B7 FF 4F             STAA   LBFF4F   ;.
   F3C8   39            LBF3C8 RTS             ;RETURN TO CALLER
                       *
                       * RESTORE ORIG USER PGM  BP IN MEMORY
   F3C9   7D FF 4F      LBF3C9 TST    LBFF4F   ;TST ??? FLAG
   F3CC   27 1E                BEQ    LBF3EC   ;
   F3CE   CE FF 1F             LDX    #BRKPTS  ;GET ADDR BP TABLE
   F3D1   FF FF 56      LBF3D1 STX    LBFF56   ;SAVE BP ENTRY POINTER
   F3D4   A6 00                LDAA   0,X      ;BREAK
   F3D6   26 04                BNE    LBF3DC   ; POINT
   F3D8   E6 01                LDAB   1,X      ;  IN USE ?
   F3DA   27 06                BEQ    LBF3E2   ;NO, BRANCH
   F3DC   A6 10         LBF3DC LDAA   16,X     ;RESTORE
   F3DE   EE 00                LDX    0,X      ; USER PGM
   F3E0   A7 00                STAA   0,X      ;  OPCODE
   F3E2   FE FF 56      LBF3E2 LDX    LBFF56   ;NEXT BP ENTRY
   F3E5   08                   INX             ;.
   F3E6   08                   INX             ;.
   F3E7   8C FF 2F             CPX    #LBFF2F  ;END OF BP TABLE ?
   F3EA   26 E5                BNE    LBF3D1   ;NO, LOOP...
   F3EC   7F FF 4F      LBF3EC CLR    LBFF4F   ;CLR ??? FLAG
   F3EF   39                   RTS             ;RETURN TO CALLER
                       *
                       * PROCESS ';P' CONTINUE USER PGM AT CURRENT PC
   F3F0   7D FF 60      LBF3F0 TST    LBFF60   ;';P'
   F3F3   26 37                BNE    LBF42C   ;
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*** MC6800 EXORCISER EXBUG MONITOR ***

   F3F5   BD F2 B4             JSR    LBF2B4   ;FIND BP IN TABLE
   F3F8   27 32                BEQ    LBF42C   ;
   F3FA   20 2B                BRA    LBF427   ;
                        *
                        * PROCESS 'NNNN;P' CONTINUE TILL NNNN BP HITS
   F3FC   7D FF 60      LBF3FC TST    LBFF60   ;TST ??? FLAG
   F3FF   26 05                BNE    LBF406   ;
   F401   BD F2 B4             JSR    LBF2B4   ;FIND BP IN TABLE
   F404   27 03                BEQ    LBF409   ;
   F406   7E F1 28      LBF406 JMP    LBF128   ;PRINT ' ?'

   F409   BE FF 08      LBF409 LDS    LBFF08   ;DECR
   F40C   34                   DES             ; BP HIT
   F40D   AF 20                STS    32,X     ;  CNTR
   F40F   8E FF 8A             LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F412   20 18                BRA    LBF42C   ;
                        *
                        * PROCESS ';G' EXECUTE
   F414   FE FF 00      LBF414 LDX    LBFF00   ;';G'
   F417   09                   DEX             ;
   F418   EE 00                LDX    0,X      ;
   F41A   20 03                BRA    LBF41F   ;
                        *
                        * PROCESS 'NNNN;G' EXECUTE USER PGM AT LOC NNNN
   F41C   FE FF 08      LBF41C LDX    LBFF08   ;';G' EXECUTE
   F41F   FF FF 16      LBF41F STX    LBFF16   ;
   F422   7D FF 60             TST    LBFF60   ;
   F425   2B 05                BMI    LBF42C   ;
   F427   BD F3 95      LBF427 JSR    LBF395   ;
   F42A   20 05                BRA    LBF431   ;
                        *
                        * PREPARE FOR TRACE INSTRUCTION USER PGM
   F42C   86 FF         LBF42C LDAA   #$FF     ;
   F42E   B7 FF 54             STAA   LBFF54   ;SET ??? FLAG
   F431   C6 07         LBF431 LDAB   #7        ;SET LOOP CNTR
   F433   BE FF 1D             LDS    LBFF1D   ;
   F436   CE FF 16             LDX    #LBFF16  ;GET ADDR USER REG'S
                        * FILL TOP OF STACK WITH USER PC,X,A,B,CC.
                        * WILL THEN BE 'RESTORED' WITH A RTI.
   F439   A6 00         LBF439 LDAA   0,X      ;GET USER REG
   F43B   36                   PSHA            ;PUSH ON USER STACK
   F43C   08                   INX             ;NEXT
   F43D   5A                   DECB            ;DONE ?
   F43E   26 F9                BNE    LBF439   ;NO, LOOP...
   F440   30                   TSX             ;SP -> X REG
   F441   A6 03                LDAA   3,X      ;SWAP H/L PC
   F443   E6 04                LDAB   4,X      ;.
   F445   A7 04                STAA   4,X      ;.
   F447   E7 03                STAB   3,X      ;.
   F449   A6 05                LDAA   5,X      ;SWAP H/L X
   F44B   E6 06                LDAB   6,X      ;.
   F44D   A7 06                STAA   6,X      ;.
   F44F   E7 05                STAB   5,X      ;.
   F451   7D FF 5D             TST    LBFF5D   ;TST ??? FLAG
   F454   27 11                BEQ    LBF467   ;
                        * UPDATE ADDRESS COMPARE
   F456   B6 FF 5F             LDAA   LBFF5E+1 ;
   F459   B7 FC F8             STAA   LBFCF8   ;PIA DP-A
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   F45C   B6 FF 5E             LDAA   LBFF5E   ;
   F45F   B7 FC FA             STAA   LBFCFA   ;PIA DP-B
   F462   86 34                LDAA   #$34     ;'00110100'
   F464   B7 FC F9             STAA   LBFCF9   ;UPDATE PIA CR-A
   F467   7D FF 54      LBF467 TST    LBFF54   ;TST ??? FLAG
   F46A   27 0A                BEQ    LBF476   ;RETURN
                       * PREPARE HW FOR A IRQ AFTER 1 INSTR EXECUTED ???
   F46C   86 34                LDAA   #$34     ;'00110100'
   F46E   B7 FC FB             STAA   LBFCFB   ;UPDATE PIA CR-B
   F471   86 3C                LDAA   #$3C     ;'00111100'
   F473   B7 FC FB             STAA   LBFCFB   ;UPDATE PIA CR-B
   F476   3B            LBF476 RTI             ;RETURN FOR INTERRUPT

   F477                 SWI    EQU    *        ;
   F477   C6 07                LDAB   #7       ;SET LOOP CNTR
   F479   CE FF 1C             LDX    #LBFF1C  ;LOAD ADDR USER REGS
   F47C   32            LBF47C PULA            ;SAVE USER REGS ON
   F47D   A7 00                STAA   0,X      ; USER STACK IN MEMORY
   F47F   09                   DEX             ;NEXT
   F480   5A                   DECB            ;ALL DONE ?
   F481   26 F9                BNE    LBF47C   ;NO, LOOP...

   F483   BF FF 1D             STS    LBFF1D   ;
   F486   8E FF 8A             LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F489   8D 34                BSR    LBF4BF   ;SWAP H/L OF PC & X
   F48B   FE FF 16             LDX    LBFF16   ;DECREMENT
   F48E   09                   DEX             ; USER PGM
   F48F   FF FF 16             STX    LBFF16   ;  PC.
```

```
   F492   7D FF 4F             TST    LBFF4F   ;
   F495   27 14                BEQ    LBF4AB   ;
   F497   BD F3 C9             JSR    LBF3C9   ;RESTORE ORIG BP IN MEM
   F49A   BD F2 B4             JSR    LBF2B4   ;FIND BP IN TABLE
   F49D   26 0C                BNE    LBF4AB   ;FOUND ?, NO BRANCH
   F49F   AE 20                LDS    32,X     ;NR OF BP = 0 ?
   F4A1   27 14                BEQ    LBF4B7   ;YES ?
   F4A3   34                   DES             ;DECR BP HIT CNTR
   F4A4   AF 20                STS    32,X     ;SAVE IT
   F4A6   8E FF 8A             LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F4A9   20 81                BRA    LBF42C   ;

   F4AB   CE FB C4      LBF4AB LDX    #LBFBC4  ;'BKPT ERROR '
   F4AE   BD FA 33             JSR    PDATA    ;PRINT IT
   F4B1   7F FF 60             CLR    LBFF60   ;
   F4B4   7F FF 54             CLR    LBFF54   ;CLR ??? FLAG
   F4B7   8E FF 8A      LBF4B7 LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F4BA   BD FA C9             JSR    LBFAC9   ;DISPLAY USER PGM REGS
   F4BD   20 77                BRA    LBF536   ;PRT '*' PROMPT
                       * SWAP H/L OF PC & X
   F4BF   CE FF 16      LBF4BF LDX    #LBFF16  ;GET USER PGM REGS ADDR
   F4C2   A6 00                LDAA   0,X      ;SWAP PCH & PCL
   F4C4   E6 01                LDAB   1,X      ;.
   F4C6   A7 01                STAA   1,X      ;.
   F4C8   E7 00                STAB   0,X      ;.
   F4CA   A6 02                LDAA   2,X      ;SWAP XH & XL
   F4CC   E6 03                LDAB   3,X      ;.
   F4CE   A7 03                STAA   3,X      ;.
   F4D0   E7 02                STAB   2,X      ;.
   F4D2   39                   RTS             ;RETURN TO CALLER
```

```
   F4D3   BF FF 1D      LBF4D3 STS    LBFF1D   ;
   F4D6   20 FE         LBF4D6 BRA    LBF4D6   ;LOOP
                               PAGE   60
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*** MC6800 EXORCISER EXBUG MONITOR ***

                        ********************************************
   F4D8                 START  EQU    *        ;
   F4D8                 NMI    EQU    *        ;
                        ********************************************
   F4D8   86 3C         LBF4D8 LDAA   #$3C     ;'00111100' DDR
   F4DA   B7 FC F9              STAA   LBFCF9   ;PIA CR-A
   F4DD   86 34                 LDAA   #$34     ;'00110100' DDR
   F4DF   B7 FC FB              STAA   LBFCFB   ;PIA CR-B
                        * SAVE TOP 7 BYTES OF STACK
   F4E2   C6 07                 LDAB   #7       ;SET LOOP CNTR
   F4E4   CE FF 1C              LDX    #LBFF1C  ;LOAD ADDR USER REGS
   F4E7   32            LBF4E7  PULA            ;SAVE USER REGS ON
   F4E8   A7 00                 STAA   0,X      ; USER STACK IN MEMORY
   F4EA   09                    DEX             ;NEXT
   F4EB   5A                    DECB            ;DONE ?
   F4EC   26 F9                 BNE    LBF4E7   ;NO, LOOP...
   F4EE   BF FF 1D              STS    LBFF1D   ;
   F4F1   8E FF 8A              LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F4F4   8D C9                 BSR    LBF4BF   ;SWAP H/L OF PC & X
   F4F6   BD F3 C9              JSR    LBF3C9   ;RESTORE ORIG BP IN MEM
                        * PGM ABORTED ?
   F4F9   B6 FC F9              LDAA   LBFCF9   ;PIA CR-A
   F4FC   F6 FC F8              LDAB   LBFCF8   ;PIA DP-A (RESET ?)
   F4FF   85 80                 BITA   #$80     ;PGM ABORTED ? (IRQA1)
   F501   26 4A                 BNE    LBF54D   ;NO,
                        * STOP ON ADDRESS ?
   F503   B6 FC FB              LDAA   LBFCFB   ;PIA CR-B
   F506   F6 FC FA              LDAB   LBFCFA   ;PIA DP-B
   F509   85 80                 BITA   #$80     ;STOP ON ADDRESS ?
   F50B   26 2C                 BNE    LBF539   ;YES, BRANCH

   F50D   7D FF 60              TST    LBFF60   ;TST ??? FLAG
   F510   27 32                 BEQ    LBF544   ;
   F512   BD FA C9              JSR    LBFAC9   ;DISPLAY USER PGM REGS
   F515   7D FF 50              TST    LBFF50   ;
   F518   27 0B                 BEQ    LBF525   ;
   F51A   FE FF 51              LDX    LBFF51   ;DECR
   F51D   27 0E                 BEQ    LBF52D   ; TRACE
   F51F   09                    DEX             ;  STEP
   F520   FF FF 51              STX    LBFF51   ;   CNTR
   F523   20 25                 BRA    LBF54A   ;PRT '*' PROMPT
   F525   FE FF 16      LBF525  LDX    LBFF16   ;
   F528   BC FF 14              CPX    LBFF14   ;
   F52B   26 1D                 BNE    LBF54A   ;PRT '*' PROMPT
   F52D   7F FF 60      LBF52D  CLR    LBFF60   ;CLR ??? FLAG
   F530   7F FF 50              CLR    LBFF50   ;.
   F533   7F FF 54              CLR    LBFF54   ;.
   F536   7E F0 F9      LBF536  JMP    LBF0F9   ;PRT '*' PROMPT

   F539   CE FB 8F      LBF539  LDX    #LBFB8F  ;'STOP ON ADDRESS'
   F53C   BD FA 33              JSR    PDATA    ;PRINT IT
   F53F   BD FA CC              JSR    LBFACC   ;PRINT USER PGM REGS
   F542   20 F2                 BRA    LBF536   ;PRT '*' PROMPT

   F544   BD F3 95      LBF544  JSR    LBF395   ;INIT FF1F -> FF2F ???
   F547   7F FF 54              CLR    LBFF54   ;CLR ??? FLAG
   F54A   7E F4 31      LBF54A  JMP    LBF431   ;PRT '*' PROMPT
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   F54D   CE FB AB      LBF54D LDX    #LBFBAB  ;'ABORTED AT'
   F550   BD FA 33             JSR    PDATA    ;PRINT IT
   F553   BD FA CC             JSR    LBFACC   ;PRINT USER PGM REGS
   F556   20 0F                BRA    LBF567   ;
                       *    VECTOR ENTRY 1    ;
   F558   0F           LBF558 SEI              ;
   F559   CE 83 FF             LDX    #$83FF   ;SET USER
   F55C   FF FF 00             STX    LBFF00   ; PGM PC
   F55F   86 00                LDAA   #$00     ;NULL
   F561   B7 FF 02             STAA   LBFF02   ;
                       * SET HARDWARE VECTORS
   F564   8E FF 8A             LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F567   BF FF 1D      LBF567 STS    LBFF1D   ;
   F56A   CE F4 D8             LDX    #LBF4D8  ;INIT USER NMI VECTOR
   F56D   FF FF FC             STX    NMISVC   ;
   F570   CE F4 D8             LDX    #LBF4D8  ;INIT USER START VECTOR
   F573   FF FF FE             STX    PWRSVC   ;
   F576   CE F4 77             LDX    #SWI     ;INIT USER SWI VECTOR
   F579   FF FF FA             STX    SWISVC   ;
   F57C   FE FF 00             LDX    LBFF00   ;
   F57F   09                   DEX             ;X = X-7
   F580   09                   DEX             ; .
   F581   09                   DEX             ;  .
   F582   09                   DEX             ;   .
   F583   09                   DEX             ;    .
   F584   09                   DEX             ;     .
   F585   09                   DEX             ;      .
   F586   EE 00                LDX    0,X      ;
   F588   FF FF F8             STX    IRQSVC   ;
                       * CLEAR BP TABLE + USER MEM AREA
   F58B   CE FF 1F             LDX    #BRKPTS  ;
   F58E   6F 00         LBF58E CLR    0,X      ;
   F590   08                   INX             ;
   F591   8C FF 63             CPX    #BRKPES  ;END OF USER RAM AREA  ?
   F594   26 F8                BNE    LBF58E   ;NO, LOOP

   F596   8E FF 8A             LDS    #EXOSTK  ;INIT EXBUG STACK PTR
   F599   86 38                LDAA   #$38     ;'00111000'
   F59B   B7 FC F9             STAA   LBFCF9   ;PIA CR-A
   F59E   86 30                LDAA   #$30     ;'00110000'
   F5A0   B7 FC FB             STAA   LBFCFB   ;PIA CR-B
   F5A3   86 FF                LDAA   #$FF     ;RESET DP-A&B
   F5A5   B7 FC F8             STAA   LBFCF8   ;PIA DP-A
   F5A8   B7 FC FA             STAA   LBFCFA   ;PIA DP-B
   F5AB   86 34                LDAA   #$34     ;'00110100'
   F5AD   B7 FC FB             STAA   LBFCFB   ;PIA CR-B
   F5B0   86 3C                LDAA   #$3C     ;'00111100'
   F5B2   B7 FC F9             STAA   LBFCF9   ;PIA CR-B

   F5B5   86 03                LDAA   #$03     ;'00000011'
   F5B7   B7 FC F4             STAA   ACIACS   ;
   F5BA   B6 FC FD             LDAA   LBFCFD   ;PIA CR-A
   F5BD   84 35                ANDA   #$35     ;'00110101'
   F5BF   B7 FC F4             STAA   ACIACS   ;
   F5C2   86 10                LDAA   #$10     ;
   F5C4   BD F9 CF             JSR    LBF9CF   ;PRINT IT
   F5C7   86 3A                LDAA   #$3A     ;':'
   F5C9   BD F9 CF             JSR    LBF9CF   ;PRINT IT
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

   F5CC   86 10               LDAA   #$10     ;ASCII DLE
   F5CE   BD F9 CF            JSR    LBF9CF   ;PRINT IT
   F5D1   86 39               LDAA   #$39     ;'9'
   F5D3   BD F9 CF            JSR    LBF9CF   ;PRINT IT
   F5D6   CE FB B7            LDX    #LBFBB7  ;
   F5D9   BD FA 35            JSR    PDAT1    ;PRINT W/O CRLF
                              PAGE   60
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

                        ************************************************
                        *      RESTART EXBUG ENTRY
                        ************************************************
   F5DC   CE FB 2B      RSTART LDX    #LBFB2B  ;'EXBUG 1.1'
   F5DF   BD FA 33             JSR    PDATA    ;PRINT IT
   F5E2   B6 FC F5             LDAA   ACIADT   ;ANY INPUT ?
   F5E5   CE FF 03             LDX    #LBFF03  ;LOAD ADDR INPBUF
   F5E8   BD FA 4E      LBF5E8 JSR    LBFA4E   ;X, ^, CR, OR LF ?
   F5EB   A7 00                STAA   0,X      ;SAVE IT INPBUF
   F5ED   08                   INX             ;
   F5EE   8C FF 07             CPX    #LBFF07  ;END INPBUF ?
   F5F1   26 F5                BNE    LBF5E8   ;NEXT LOOP...
   F5F3   CE FA F5             LDX    #LBFAF5  ;4 CMD TABLE
   F5F6   B6 FF 03      LBF5F6 LDAA   LBFF03   ;
   F5F9   A1 00                CMPA   0,X      ;1ST CHAR MATCH ?
   F5FB   26 19                BNE    LBF616   ;
   F5FD   B6 FF 04             LDAA   LBFF03+1 ;
   F600   A1 01                CMPA   1,X      ;2ND CHAR MATCH ?
   F602   26 12                BNE    LBF616   ;
   F604   B6 FF 05             LDAA   LBFF03+2 ;
   F607   A1 02                CMPA   2,X      ;3RD CHAR MATCH ?
   F609   26 0B                BNE    LBF616   ;
   F60B   B6 FF 06             LDAA   LBFF03+3 ;
   F60E   A1 03                CMPA   3,X      ;4TH CHAR MATCH ?
   F610   26 04                BNE    LBF616   ;
   F612   EE 04                LDX    4,X      ;PNT TO CMD ADDR
   F614   6E 00                JMP    0,X      ;EXECUTE CMD

   F616   08            LBF616 INX             ;NEXT
   F617   08                   INX             ; ENTRY
   F618   08                   INX             ;  IN
   F619   08                   INX             ;   CMD
   F61A   08                   INX             ;    TABLE
   F61B   08                   INX             ;     ...
   F61C   8C FB 2B             CPX    #LBFB2B  ;END OF CMD TABLE ?
   F61F   26 D5                BNE    LBF5F6   ;NO, LOOP...
   F621   20 B9                BRA    RSTART   ;YES, RESTART EXBUG

   F623   4F            LBF623 CLRA             ;
   F624   20 02                BRA    LBF628   ;

   F626   86 01         LBF626 LDAA   #$01     ;
   F628   B7 FF 02      LBF628 STAA   LBFF02   ;
   F62B   20 AF                BRA    RSTART   ;RESTART EXBUG

                        * PROCESS 'S120'
   F62D   86 FF         LBF62D LDAA   #$FF     ;
   F62F   20 F7                BRA    LBF628   ;

   F631   CE FB F5      LBF631 LDX    #LBFBF5  ;'HDR-X'
   F634   BD FA 33             JSR    PDATA    ;PRINT IT
   F637   CE FF 8D             LDX    #LBFF8D  ;SPECIFY
   F63A   BD FA A0      LBF63A JSR    INCHNP   ;
   F63D   81 20                CMPA   #$20     ;VALID
   F63F   2D 04                BLT    LBF645   ; ASCII
   F641   81 61                CMPA   #$61     ;  CHAR ?
   F643   2D 02                BLT    LBF647   ;YES
   F645   86 20         LBF645 LDAA   #$20     ;NO, REPL WITH SPC
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

   F647   A7 00         LBF647 STAA   0,X      ;SAVE IT
   F649   08                   INX             ;NEXT
   F64A   8C FF 93             CPX    #LBFF93  ;END BUFFER ?
   F64D   26 EB                BNE    LBF63A   ;NO, LOOP...
   F64F   BD F7 0B             JSR    LBF70B   ;EXEC ?
   F652   0D                   SEC             ;SET CARRY
   F653   79 FF 62             ROL    LBFF62   ;
   F656   7D FF 02             TST    LBFF02   ;
   F659   2A 0A                BPL    LBF665   ;
   F65B   86 10                LDAA   #$10     ;
   F65D   BD F9 DC             JSR    OUTCH    ;PRINT IT
   F660   86 30                LDAA   #$30     ;'0'
   F662   BD F9 DC             JSR    OUTCH    ;PRINT IT
   F665   86 12         LBF665 LDAA   #$12     ;DC2 PUNCH ON
   F667   BD F9 DC             JSR    OUTCH    ;PRINT IT
   F66A   BD F7 00             JSR    LBF700   ;PRINT 40 NULLS
   F66D   C6 83                LDAB   #$83     ;
   F66F   CE FB E5             LDX    #LBFBE5  ;PUNCH S0 RECORD
   F672   BD FA 35             JSR    PDAT1    ; W/O CRLF
   F675   CE FF 8D             LDX    #LBFF8D  ;
   F678   BD F6 FA      LBF678 JSR    LBF6FA   ;PRINT 2 HEX CHAR
   F67B   8C FF 93             CPX    #LBFF93  ;
   F67E   26 F8                BNE    LBF678   ;
   F680   53                   COMB            ;
   F681   37                   PSHB            ;
   F682   30                   TSX             ;
   F683   8D 75                BSR    LBF6FA   ;PRINT 2 HEX CHAR
   F685   33                   PULB            ;
   F686   FE FF 0A             LDX    LBFF0A   ;
   F689   FF FF 5A             STX    LBFF5A   ;
   F68C   B6 FF 0D      LBF68C LDAA   LBFF0C+1 ;BEG
   F68F   B0 FF 5B             SUBA   LBFF5A+1 ; ADDR <
   F692   F6 FF 0C             LDAB   LBFF0C   ;  END
   F695   F2 FF 5A             SBCB   LBFF5A   ;   ADDR ?
   F698   26 04                BNE    LBF69E   ;
   F69A   81 10                CMPA   #$10     ;END@ - BEG@ < 16 ?
   F69C   25 02                BCS    LBF6A0   ;
   F69E   86 0F         LBF69E LDAA   #$0F     ;
   F6A0   8B 04         LBF6A0 ADDA   #$04     ;
   F6A2   B7 FF 58             STAA   LBFF58   ;
   F6A5   80 03                SUBA   #$03     ;
   F6A7   B7 FF 07             STAA   LBFF07   ;
   F6AA   CE FB D0             LDX    #LBFBD0  ;CR LF
   F6AD   BD FA 35             JSR    PDAT1    ;PRINT W/O CRLF
   F6B0   5F                   CLRB            ;
   F6B1   CE FF 58             LDX    #LBFF58  ;
   F6B4   8D 44                BSR    LBF6FA   ;PRINT 2 HEX CHAR
   F6B6   CE FF 5A             LDX    #LBFF5A  ;
   F6B9   8D 3F                BSR    LBF6FA   ;PRINT 4 HEX CHAR
   F6BB   8D 3D                BSR    LBF6FA   ;.
   F6BD   FE FF 5A             LDX    LBFF5A   ;
   F6C0   8D 38         LBF6C0 BSR    LBF6FA   ;PRINT 2 HEX CHAR
   F6C2   7A FF 07             DEC    LBFF07   ;
   F6C5   26 F9                BNE    LBF6C0   ;
   F6C7   FF FF 5A             STX    LBFF5A   ;
   F6CA   53                   COMB            ;
   F6CB   37                   PSHB            ;
   F6CC   30                   TSX             ;
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   F6CD   8D 2B               BSR    LBF6FA   ;PRINT 2 HEX CHAR
   F6CF   33                  PULB            ;
   F6D0   FE FF 5A            LDX    LBFF5A   ;
   F6D3   09                  DEX             ;
   F6D4   BC FF 0C            CPX    LBFF0C   ;
   F6D7   26 B3               BNE    LBF68C   ;
   F6D9   CE FB D6            LDX    #LBFBD6  ;
   F6DC   BD FA 35            JSR    PDAT1    ;PRINT W/O CRLF
   F6DF   8D 1F               BSR    LBF700   ;PRINT 40 NULLS
   F6E1   86 14               LDAA   #$14     ;DC4 PUNCH OFF
   F6E3   BD F9 DC            JSR    OUTCH    ;PRINT DC4
   F6E6   7D FF 02            TST    LBFF02   ;
   F6E9   2A 0A               BPL    LBF6F5   ;
   F6EB   86 10               LDAA   #$10     ;
   F6ED   BD F9 DC            JSR    OUTCH    ;PRINT IT
   F6F0   86 39               LDAA   #$39     ;'9'
   F6F2   BD F9 DC            JSR    OUTCH    ;PRINT IT
   F6F5   7F FF 62      LBF6F5 CLR    LBFF62   ;
   F6F8   20 1F               BRA    LBF719   ;
   F6FA   EB 00         LBF6FA ADDB   0,X      ;
   F6FC   BD FA 14            JSR    LBFA14   ;
   F6FF   39                  RTS             ;RETURN TO CALLER
                      *
                      * PRINT 40 BYTES OF NULL'S
   F700   C6 28         LBF700 LDAB   #40      ;SET CNTR
   F702   86 00         LBF702 LDAA   #$00     ;
   F704   BD F9 DC            JSR    OUTCH    ;PRINT IT
   F707   5A                  DECB            ;
   F708   26 F8               BNE    LBF702   ;LOOP...
   F70A   39                  RTS             ;RETURN TO CALLER

   F70B   CE FB 7F      LBF70B LDX    #LBFB7F  ;'EXEC '
   F70E   BD FA 33            JSR    PDATA    ;PRINT IT
   F711   BD FA 4E            JSR    LBFA4E   ;X, ^, CR, OR LF ?
   F714   81 59               CMPA   #$59     ;'Y' ?
   F716   26 F3               BNE    LBF70B   ;RETRY LOOP...
   F718   39                  RTS             ;RETURN TO CALLER
                      *
                      * PUNCH & PRINT COMMAND
   F719                 PNCH   EQU    *        ;
   F719                 PRNT   EQU    *        ;
   F719   BD F7 89      LBF719 JSR    MBUGE    ;GET FROM-TO ADDR
   F71C   B6 FF 04            LDAA   LBFF03+1 ;
   F71F   81 52               CMPA   #$52     ;'R' PRNT ?
   F721   27 03               BEQ    LBF726   ;
   F723   7E F6 31            JMP    LBF631   ;
                      *
                      * PROCESS '$R' DISPLAY USER REGS
   F726   8D E3         LBF726 BSR    LBF70B   ;'EXEC' Y?
   F728   FE FF 0A            LDX    LBFF0A   ;
   F72B   FF FF 08            STX    LBFF08   ;
   F72E   B6 FF 09            LDAA   LBFF08+1 ;SET XXX0 BOUNDARY
   F731   84 F0               ANDA   #$F0     ;.
   F733   B7 FF 09            STAA   LBFF08+1 ;.
   F736   BD FA 41      LBF736 JSR    PCRLF    ;
   F739   BD FA 41      LBF739 JSR    PCRLF    ;
   F73C   CE FF 08            LDX    #LBFF08  ;LOAD MEM LOC POINTER
   F73F   BD FA 22            JSR    OUT4HS   ;PRINT IT
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

   F742   FE FF 08             LDX    LBFF08   ;
   F745   C6 10                LDAB   #16      ;16 HEX PER LINE
   F747   BD FA 24      LBF747 JSR    OUT2H    ;
   F74A   5A                   DECB            ;DONE ?
   F74B   26 FA                BNE    LBF747   ;NO, LOOP
   F74D   86 20                LDAA   #$20     ;SPACE
   F74F   BD F9 DC             JSR    OUTCH    ;PRINT IT
   F752   C6 10                LDAB   #16      ;
   F754   FE FF 08             LDX    LBFF08   ;16 ASCII CHAR
   F757   A6 00         LBF757 LDAA   0,X      ;
   F759   84 7F                ANDA   #$7F     ;
   F75B   81 20                CMPA   #$20     ;PRINTABLE ?
   F75D   2D 04                BLT    LBF763   ;NO
   F75F   81 61                CMPA   #$61     ;'a' PRINTABLE ?
   F761   2D 02                BLT    LBF765   ;YES
   F763   86 2E         LBF763 LDAA   #$2E     ;'.' NON-PRINTABLE
   F765   BD F9 DC      LBF765 JSR    OUTCH    ;PRINT IT
   F768   08                   INX             ;NEXT LOC
   F769   5A                   DECB            ;DONE ?
   F76A   26 EB                BNE    LBF757   ;NO, LOOP
   F76C   FF FF 08             STX    LBFF08   ;
   F76F   8C 00 00             CPX    #$0000   ;
   F772   27 A5                BEQ    LBF719   ;
   F774   B6 FF 0C             LDAA   LBFF0C   ;BEG
   F777   F6 FF 0D             LDAB   LBFF0C+1 ; ADDR >
   F77A   F0 FF 09             SUBB   LBFF08+1 ;  END
   F77D   B2 FF 08             SBCA   LBFF08   ;   ADDR ?
   F780   25 97                BCS    LBF719   ;RETRY INPUT
   F782   7D FF 09             TST    LBFF08+1 ;1 OR 2 LINES SEPARATION ?
   F785   26 B2                BNE    LBF739   ;ONE
   F787   20 AD                BRA    LBF736   ;TWO
                       *
                       * MBUGE SOFT RESTART RETURN TO THE MONITOR PROMPT
   F789                MBUGE  EQU    *        ;
   F789   CE FB 36             LDX    #LBFB36  ;'BEG ADDR '
   F78C   BD FA 33             JSR    PDATA    ;PRINT IT
   F78F   CE FF 0A             LDX    #LBFF0A  ;
   F792   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F795   2B F2                BMI    MBUGE    ;
   F797   CE FB 40      LBF797 LDX    #LBFB40  ;'END ADDR '
   F79A   BD FA 33             JSR    PDATA    ;PRINT IT
   F79D   CE FF 0C             LDX    #LBFF0C  ;
   F7A0   BD F9 64             JSR    LBF964   ;PRINT & READ 4 HEX
   F7A3   2B F2                BMI    LBF797   ;
   F7A5   B6 FF 0C             LDAA   LBFF0C   ;BEG
   F7A8   F6 FF 0D             LDAB   LBFF0C+1 ; ADDR >
   F7AB   F0 FF 0B             SUBB   LBFF0A+1 ;  END
   F7AE   B2 FF 0A             SBCA   LBFF0A   ;   ADDR ?
   F7B1   25 D6                BCS    MBUGE    ;RETRY INPUT
   F7B3   39                   RTS             ;RETURN TO CALLER

   F7B4                SRCH   EQU    *        ;
   F7B4   86 FF                LDAA   #$FF     ;
   F7B6   B7 FF 5A             STAA   LBFF5A   ;SET ??? FLAG
   F7B9   20 24                BRA    CONT     ;
                       *
                       * INIT MEMORY LOADER
   F7BB                LOAD   EQU    *        ;
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

   F7BB   7F FF 5A      LBF7BB CLR    LBFF5A   ;CLR ??? FLAG
   F7BE   20 08                BRA    LBF7C8   ;

   F7C0                VERF   EQU    *        ;
   F7C0   86 01                LDAA   #$01     ;
   F7C2   B7 FF 5A             STAA   LBFF5A   ;
   F7C5   7F FF 61             CLR    LBFF61   ;CLR ??? FLAG
   F7C8   CE FB 85      LBF7C8 LDX    #LBFB85  ;'SGL/CONT '
   F7CB   BD FA 33             JSR    PDATA    ;PRINT IT
   F7CE   BD FA 4E             JSR    LBFA4E   ;X, ^, CR, OR LF ?
   F7D1   B7 FF 58             STAA   LBFF58   ;
   F7D4   81 53                CMPA   #$53     ;'S' STOP ?
   F7D6   27 07                BEQ    CONT     ;
   F7D8   81 43                CMPA   #$43     ;'C' CONTINUE ?
   F7DA   26 EC                BNE    LBF7C8   ;INVALID ENTRY
   F7DC   BD FA 41             JSR    PCRLF    ;
   F7DF   BD F8 A4      CONT   JSR    LBF8A4   ;
   F7E2   B6 FF 8C             LDAA   LBFF8C   ;
   F7E5   81 30                CMPA   #$30     ;'0' ?
   F7E7   26 33                BNE    LBF81C   ;NO, BRANCH
   F7E9   B6 FF 8D             LDAA   LBFF8D   ;
   F7EC   CE FF 8D             LDX    #LBFF8D  ;
   F7EF   08            LBF7EF INX              ;
   F7F0   4A                   DECA             ;
   F7F1   26 FC                BNE    LBF7EF   ;LOOP...
   F7F3   86 04                LDAA   #$04     ;
   F7F5   A7 00                STAA   0,X      ;
   F7F7   CE FF 90             LDX    #LBFF90  ;'A...'
   F7FA   BD FA 33             JSR    PDATA    ;PRINT IT
   F7FD   BD F9 1D             JSR    LBF91D   ;
   F800   7D FF 5A             TST    LBFF5A   ;
   F803   2A DA                BPL    CONT     ;LOOP...
   F805   CE FB 4A      LBF805 LDX    #LBFB4A  ;'CONT/LOAD/VERF'
   F808   BD FA 33             JSR    PDATA    ;PRINT IT
   F80B   BD FA 4E             JSR    LBFA4E   ;X, ^, CR, OR LF ?
   F80E   81 43                CMPA   #$43     ;'C' CONTINUE ?
   F810   27 CD                BEQ    CONT     ;
   F812   81 4C                CMPA   #$4C     ;'L' LOAD ?
   F814   27 A5                BEQ    LOAD
   F816   81 56                CMPA   #$56     ;'V' VERIFY ?
   F818   27 A6                BEQ    VERF     ;
   F81A   20 E9                BRA    LBF805   ;LOOP...

   F81C   7D FF 5A      LBF81C TST    LBFF5A   ;
   F81F   2B BE                BMI    CONT     ;
   F821   BD F9 1D             JSR    LBF91D   ;
   F824   B6 FF 8C             LDAA   LBFF8C   ;
   F827   81 31                CMPA   #$31     ;'S1' ?
   F829   27 0E                BEQ    LBF839   ;
   F82B   81 39                CMPA   #$39     ;'S9' ?
   F82D   26 B0                BNE    CONT     ;
   F82F   B6 FF 58             LDAA   LBFF58   ;
   F832   81 43                CMPA   #$43     ;'C' CONTINUE ?
   F834   27 A9                BEQ    CONT     ;
   F836   7E F5 DC             JMP    RSTART   ;RESTART EXBUG
                       *
                       * PROCESS S1 RECORD
   F839   B6 FF 8D      LBF839 LDAA   LBFF8D   ;SKIP
```

```
*** MC6800 EXORCISER EXBUG MONITOR ***

   F83C   80 03                SUBA   #$03     ; S-REC
   F83E   B7 FF 8D             STAA   LBFF8D   ;  HEADER
   F841   CE FF 90             LDX    #LBFF90  ;
   F844   FF FF 08             STX    LBFF08   ;
   F847   FE FF 8E             LDX    LBFF8E   ;
   F84A   FF FF 56      LBF84A STX    LBFF56   ;SAVE LOAD ADDR
   F84D   FE FF 08             LDX    LBFF08   ;
   F850   A6 00                LDAA   0,X      ;
   F852   08                   INX              ;NEXT
   F853   FF FF 08             STX    LBFF08   ;UPDATE LOAD ADDR
   F856   FE FF 56             LDX    LBFF56   ;
   F859   7D FF 5A             TST    LBFF5A   ;TST ??? FLAG
   F85C   27 37                BEQ    LBF895   ;VERIFY OR STORE
   F85E   A1 00                CMPA   0,X      ;
   F860   27 2A                BEQ    LBF88C   ;
   F862   36                   PSHA             ;
   F863   FF FF 56             STX    LBFF56   ;
   F866   7D FF 61             TST    LBFF61   ;TST ??? FLAG
   F869   26 0A                BNE    LBF875   ;
   F86B   0D                   SEC              ;
   F86C   79 FF 61             ROL    LBFF61   ;SET ??? FLAG
   F86F   CE FB 6B             LDX    #LBFB6B  ;'ADDR/MEM/TAPE'
   F872   BD FA 33             JSR    PDATA    ;PRINT IT
   F875   CE FF 56      LBF875 LDX    #LBFF56  ;
   F878   BD FA 41             JSR    PCRLF    ;
   F87B   BD FA 22             JSR    OUT4HS   ;PRINT ADDR
   F87E   FE FF 56             LDX    LBFF56   ;
   F881   BD FA 24             JSR    OUT2H    ;MEM
   F884   30                   TSX              ;
   F885   BD FA 24             JSR    OUT2H    ;
   F888   32                   PULA             ;
   F889   FE FF 56             LDX    LBFF56   ;
   F88C   08            LBF88C INX              ;
   F88D   7A FF 8D             DEC    LBFF8D   ;
   F890   26 B8                BNE    LBF84A   ;LOOP...
   F892   7E F7 DF             JMP    CONT     ;

   F895   A7 00         LBF895 STAA   0,X      ;STORE IT
   F897   A1 00                CMPA   0,X      ;SAVE SUCCESSFULL ?
   F899   27 F1                BEQ    LBF88C   ;
   F89B   CE FB 5A             LDX    #LBFB5A  ;'NO CHANGE'
   F89E   BD FA 33             JSR    PDATA    ;PRINT IT
   F8A1   7E F5 DC             JMP    RSTART   ;RESTART EXBUG

   F8A4   7F FF 8C      LBF8A4 CLR    LBFF8C   ;CLR ??? FLAG
   F8A7   7D FF 02             TST    LBFF02   ;
   F8AA   2A 0C                BPL    LBF8B8   ;
   F8AC   86 10         LBF8AC LDAA   #$10     ;
   F8AE   BD F9 CF             JSR    LBF9CF   ;PRINT IT
   F8B1   86 37                LDAA   #$37     ;'7'
   F8B3   BD F9 CF             JSR    LBF9CF   ;PRINT IT
   F8B6   20 0D                BRA    LBF8C5   ;CONTINUE
   F8B8   B6 FC FD      LBF8B8 LDAA   LBFCFD   ;PIA CR-A
   F8BB   84 55                ANDA   #$55     ;
   F8BD   B7 FC F4             STAA   ACIACS   ;
   F8C0   86 11                LDAA   #$11     ;DC1 READER ON
   F8C2   BD F9 DC             JSR    OUTCH    ;PRINT IT
   F8C5   0D            LBF8C5 SEC              ;SET TERMINAL
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   F8C6   79 FF 53             ROL    AECHO    ; ECHO ON
   F8C9   BD FA A0             JSR    INCHNP   ;
   F8CC   81 0D                CMPA   #$0D     ;CR ?
   F8CE   26 05                BNE    LBF8D5   ;
   F8D0   7D FF 02             TST    LBFF02   ;
   F8D3   2B D7                BMI    LBF8AC   ;
   F8D5   81 53         LBF8D5 CMPA   #$53     ;'S' ?
   F8D7   26 EC                BNE    LBF8C5   ;
   F8D9   CE FF 8D             LDX    #LBFF8D  ;
   F8DC   0D            LBF8DC SEC              ;SET TERMINAL
   F8DD   79 FF 53             ROL    AECHO    ; ECHO ON
   F8E0   BD FA A0             JSR    INCHNP   ;
   F8E3   81 7F                CMPA   #$7F     ;DEL ?
   F8E5   27 F5                BEQ    LBF8DC   ;NEXT...
   F8E7   81 30                CMPA   #$30     ;'S0' ?
   F8E9   27 08                BEQ    LBF8F3   ;
   F8EB   81 31                CMPA   #$31     ;'S1' ?
   F8ED   27 04                BEQ    LBF8F3   ;
   F8EF   81 39                CMPA   #$39     ;'S9' ?
   F8F1   26 D2                BNE    LBF8C5   ;LOOP...
                        *
                        * PROCESS S0/S1/S9 RECORD
   F8F3   B7 FF 8C      LBF8F3 STAA   LBFF8C   ;
   F8F6   7F FF 8B             CLR    LBFF8B   ;CLEAR CHKSUM
   F8F9   8D 50                BSR    LBF94B   ;READ & SUPPR 'DEL'
   F8FB   B7 FF 07             STAA   LBFF07   ;
   F8FE   8D 4B         LBF8FE BSR    LBF94B   ;READ & SUPPR 'DEL'
   F900   7A FF 07             DEC    LBFF07   ;
   F903   26 F9                BNE    LBF8FE   ;LOOP...
   F905   7C FF 8B             INC    LBFF8B   ;FORCE CHKSUM ERROR
   F908   B6 FC FD             LDAA   LBFCFD   ;PIA CR-A
   F90B   84 35                ANDA   #$35     ;'00110101'
   F90D   B7 FC F4             STAA   ACIACS   ;
   F910   CE FB B8             LDX    #LBFBB8  ;DC3 + 4 NULLS
   F913   BD FA 35             JSR    PDAT1    ;PRINT W/O CRLF
   F916   B6 FC F5             LDAA   ACIADT   ;
   F919   B6 FC F5             LDAA   ACIADT   ;
   F91C   39                   RTS             ;RETURN TO CALLER

   F91D   7D FF 8B      LBF91D TST    LBFF8B   ;CHECK SUM ERROR ?
   F920   27 1C                BEQ    LBF93E   ;
   F922   CE FB 65      LBF922 LDX    #LBFB65  ;'CKSM'
   F925   BD FA 33             JSR    PDATA    ;PRINT IT
   F928   CE FF 8E             LDX    #LBFF8E  ;
   F92B   BD FA 22             JSR    OUT4HS   ;
   F92E   BD FA 4E             JSR    LBFA4E   ;X, ^, CR, OR LF ?
   F931   81 52                CMPA   #$52     ;'R' ?
   F933   26 03                BNE    LBF938   ;
   F935   7E F7 DF             JMP    CONT     ;
   F938   81 43         LBF938 CMPA   #$43     ;'C' ?
   F93A   26 E6                BNE    LBF922   ;
   F93C   86 FF                LDAA   #$FF     ;
   F93E   39            LBF93E RTS              ;RETURN TO CALLER
                        *
                        * READ CHAR AND SUPPRESS 'DEL'S
   F93F   0D            LBF93F SEC              ;SET CARRY
   F940   79 FF 53             ROL    AECHO    ;
   F943   BD FA A5             JSR    LBFAA5   ;READ HEX CHAR
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   F946   81 7F               CMPA   #$7F     ;'DEL' ?
   F948   27 F5               BEQ    LBF93F   ;LOOP...
   F94A   39                  RTS             ;RETURN TO CALLER

   F94B   8D F2        LBF94B BSR    LBF93F   ;READ & SUPPRESS 'DEL'
   F94D   48                  ASLA            ;MOVE LO
   F94E   48                  ASLA            ; NIBBLE
   F94F   48                  ASLA            ;  TO
   F950   48                  ASLA            ;   HI NIBBLE
   F951   16                  TAB             ;
   F952   8D EB               BSR    LBF93F   ;READ & SUPPRESS 'DEL'
   F954   1B                  ABA             ;
   F955   A7 00               STAA   0,X      ;STORE INPUT
   F957   BB FF 8B            ADDA   LBFF8B   ;UPDATE CHECKSUM
   F95A   B7 FF 8B            STAA   LBFF8B   ;.
   F95D   8C FF D5            CPX    #LBFFD5  ;END OF BUFFER ?
   F960   27 01               BEQ    LBF963   ;
   F962   08                  INX             ;EXTRA INC ???
   F963   39           LBF963 RTS             ;RETURN TO CALLER
                       *
                       * PRINT AND READ 4 HEX-DEC CHARACTERS TO STORE
   F964   FF FF 56     LBF964 STX    LBFF56   ;SAVE X
   F967   86 04               LDAA   #4       ;4 HEX-DECIMAL CHAR
   F969   B7 FF 5C            STAA   LBFF5C   ;
   F96C   BD FA 22            JSR    OUT4HS   ;PRINT 4 HEX
   F96F   20 0B               BRA    LBF97C   ;
                       *
                       * PRINT AND READ 2 HEX-DEC CHARACTERS TO STORE
   F971   FF FF 56     LBF971 STX    LBFF56   ;
   F974   86 02               LDAA   #2       ;2 HEX-DECIMAL CHAR
   F976   B7 FF 5C            STAA   LBFF5C   ;
   F979   BD FA 24            JSR    OUT2H    ;PRINT 2 HEX

   F97C   BD FA 62     LBF97C JSR    LBFA62   ;READ 2 OR 4 HEX
   F97F   FE FF 56            LDX    LBFF56   ;
   F982   BD FA 50            JSR    LBFA50   ;X, ^, CR, OR LF ?
   F985   26 36               BNE    LBF9BD   ;NO, RETURN
   F987   5D                  TSTB            ;
   F988   27 2D               BEQ    LBF9B7   ;RETURN
   F98A   F1 FF 5C            CMPB   LBFF5C   ;
   F98D   22 2E               BHI    LBF9BD   ;RETURN
   F98F   F1 FF 07            CMPB   LBFF07   ;
   F992   22 29               BHI    LBF9BD   ;RETURN
   F994   F6 FF 5C            LDAB   LBFF5C   ;
   F997   C1 02               CMPB   #$02     ;
   F999   27 13               BEQ    LBF9AE   ;
   F99B   F6 FF 08            LDAB   LBFF08   ;
   F99E   E7 00               STAB   0,X      ;STORE IT
   F9A0   E1 00               CMPB   0,X      ;SAVE SUCCESFULL ?
   F9A2   27 09               BEQ    LBF9AD   ;YES
   F9A4   CE FB 5A     LBF9A4 LDX    #LBFB5A  ;'NO CHANGE'
   F9A7   BD FA 33            JSR    PDATA    ;PRINT IT
   F9AA   7E F0 F9            JMP    LBF0F9   ;PRT '*' PROMPT

   F9AD   08           LBF9AD INX             ;
   F9AE   F6 FF 09     LBF9AE LDAB   LBFF08+1 ;
   F9B1   E7 00               STAB   0,X      ;
   F9B3   E1 00               CMPB   0,X      ;SAVE SUCCESFULL ?
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```
   F9B5   26 ED               BNE    LBF9A4   ;'NO CHANGE'
   F9B7   5F            LBF9B7 CLRB            ;
   F9B8   FE FF 56            LDX    LBFF56   ;
   F9BB   5D                  TSTB             ;
   F9BC   39                  RTS              ;RETURN TO CALLER
   F9BD   C6 FF         LBF9BD LDAB   #$FF     ;
   F9BF   39                  RTS              ;RETURN TO CALLER
                       *
                       * CONVERT HI NIBBLE TO HEX ASCII
   F9C0   44           LBF9C0 LSRA             ;MOVE HI NIBLE TO LO
   F9C1   44                  LSRA             ;
   F9C2   44                  LSRA             ;
   F9C3   44                  LSRA             ;
                       * CONVERT LO NIBBLE TO HEX ASCII
   F9C4   84 0F        LBF9C4 ANDA   #$0F     ;REMOVE HI NIBBLE
   F9C6   8B 30               ADDA   #$30     ;MAKE IT ASCII
   F9C8   81 39               CMPA   #$39     ;NUMERIC ?
   F9CA   23 02               BLS    LBF9CE   ;YES
   F9CC   8B 07               ADDA   #$07     ;MAKE IT A-F
   F9CE   39           LBF9CE RTS              ;RETURN TO CALLER
                       *
                       * PRINT ONE CHARACTER
   F9CF   37           LBF9CF PSHB             ;SAVE B
   F9D0   F6 FC F4     LBF9D0 LDAB   ACIACS   ;TX BUFFER EMPTY ?
   F9D3   C5 02               BITB   #$02     ;
   F9D5   27 F9               BEQ    LBF9D0   ;WAIT...
   F9D7   B7 FC F5            STAA   ACIADT   ;TRANSMIT DATA
   F9DA   33                  PULB             ;RESTORE B
   F9DB   39                  RTS              ;RETURN TO CALLER
                       *
                       * OUTPUT ON CHAR
   F9DC                OUTCH  EQU    *        ;
   F9DC   37                  PSHB             ;SAVE B
   F9DD   F6 FC F4     LBF9DD LDAB   ACIACS   ;READ ACIA CS
   F9E0   C5 02               BITB   #$02     ;TX BUFFER EMPTY ?
   F9E2   27 F9               BEQ    LBF9DD   ;WAIT...
   F9E4   B7 FC F5            STAA   ACIADT   ;TRANSMIT DATA
   F9E7   81 0D               CMPA   #$0D     ;CR ?
   F9E9   26 1B               BNE    LBFA06   ;NO
   F9EB   7D FF 62            TST    LBFF62   ;TST ??? FLAG
   F9EE   26 09               BNE    LBF9F9   ;
   F9F0   C6 17               LDAB   #$17     ;
   F9F2   7D FF 02            TST    LBFF02   ;TST ??? FLAG
   F9F5   27 0D               BEQ    LBFA04   ;EXIT
   F9F7   2B 02               BMI    LBF9FB   ;
                       * PRINT 4 NULL CHAR
   F9F9   C6 04        LBF9F9 LDAB   #4        ;SET LOOP CNTR
   F9FB   36           LBF9FB PSHA             ;
   F9FC   86 00               LDAA   #$00     ;LOAD NULL
   F9FE   8D CF               BSR    LBF9CF   ;PRINT IT
   FA00   32                  PULA             ;
   FA01   5A                  DECB             ;
   FA02   26 F7               BNE    LBF9FB   ;LOOP...
   FA04   33           LBFA04 PULB             ;
   FA05   39                  RTS              ;RETURN TO CALLER
                       *
   FA06   7D FF 02     LBFA06 TST    LBFF02   ;
   FA09   2A F9               BPL    LBFA04   ;
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*** MC6800 EXORCISER EXBUG MONITOR ***

   FA0B   7D FF 62             TST    LBFF62   ;
   FA0E   26 F4                BNE    LBFA04   ;
   FA10   C6 03                LDAB   #3       ;PRINT 3 NULL CHAR
   FA12   20 E7                BRA    LBF9FB   ;.
                       *
                       * PRINT 2 HEX CHAR POINTED BY X                    ;
   FA14   A6 00        LBFA14  LDAA   0,X      ;PRINT HEX CHAR
   FA16   8D A8                BSR    LBF9C0   ;GET HI NIBBLE
   FA18   8D C2                BSR    OUTCH    ;PRINT IT
   FA1A   A6 00                LDAA   0,X      ;
   FA1C   8D A6                BSR    LBF9C4   ;GET LO NIBBLE
   FA1E   8D BC                BSR    OUTCH    ;PRINT IT
   FA20   08                   INX             ;
   FA21   39                   RTS             ;RETURN TO CALLER

   FA22                OUT4HS  EQU    *        ;PRINT 4 HEXDEC CHAR
   FA22   8D F0                BSR    LBFA14   ;
   FA24                OUT2H   EQU    *        ;PRINT 2 HEXDEC CHAR
   FA24   8D EE                BSR    LBFA14   ;
   FA26   86 20        PSPAC   LDAA   #$20     ;SPACE
   FA28   8D B2        LBFA28  BSR    OUTCH    ;PRINT IT
   FA2A   39                   RTS             ;RETURN TO CALLER

   FA2B   8D E7        LBFA2B  BSR    LBFA14   ;PRINT 2 HEX
   FA2D   8D E5                BSR    LBFA14   ;.
   FA2F   86 2F                LDAA   #$2F     ;'/'
   FA31   20 F5                BRA    LBFA28   ;PRINT IT

   FA33   8D 0C        PDATA   BSR    PCRLF    ;PRINT STRING
   FA35   A6 00        PDAT1   LDAA   0,X      ;
   FA37   81 04                CMPA   #$04     ;EOF ?
   FA39   27 05                BEQ    LBFA40   ;
   FA3B   8D 9F                BSR    OUTCH    ;PRINT IT
   FA3D   08                   INX             ;
   FA3E   20 F5                BRA    PDAT1    ;LOOP...
   FA40   39           LBFA40  RTS             ;RETURN TO CALLER
                       *
                       *    VECTOR ENTRY 12    ;
   FA41   86 0A        PCRLF   LDAA   #$0A     ;XMIT LF
   FA43   8D 97                BSR    OUTCH    ;PRINT IT
   FA45   86 0D        PCR     LDAA   #$0D     ;XMIT CR
   FA47   8D 93                BSR    OUTCH    ;PRINT IT
   FA49   86 00                LDAA   #$00     ;XMIT NULL
   FA4B   8D 8F                BSR    OUTCH    ;PRINT IT
   FA4D   39                   RTS             ;RETURN TO CALLER

   FA4E   8D 50        LBFA4E  BSR    INCHNP   ;READ ASCII CHAR
   FA50   81 58        LBFA50  CMPA   #$58     ;'X' ?
   FA52   26 03                BNE    LBFA57   ;
   FA54   7E F5 DC             JMP    RSTART   ;RESTART EXBUG

   FA57   81 5E        LBFA57  CMPA   #$5E     ;'^'
   FA59   27 06                BEQ    LBFA61   ;
   FA5B   81 0D                CMPA   #$0D     ;CR ?
   FA5D   27 02                BEQ    LBFA61   ;
   FA5F   81 0A                CMPA   #$0A     ;LF ?
   FA61   39           LBFA61  RTS             ;RETURN TO CALLER
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   FA62   CE FF 08      LBFA62 LDX    #LBFF08  ;
                        *    VECTOR ENTRY 6    ;
   FA65   7F FF 07      LBFA65 CLR    LBFF07   ;CLEAR CNTR
   FA68   6F 00                CLR    0,X      ;CLEAR INPUT AREA
   FA6A   6F 01                CLR    1,X      ;
   FA6C   8D 37         LBFA6C BSR    LBFAA5   ;READ HEX CHAR
   FA6E   2B 17                BMI    LBFA87   ;INVALID HEX ?
   FA70   C6 04                LDAB   #4       ;SHIFT
   FA72   68 01         LBFA72 ASL    1,X      ; WORD
   FA74   69 00                ROL    0,X      ;  4 BITS
   FA76   5A                   DECB            ;   LEFT
   FA77   26 F9                BNE    LBFA72   ;
   FA79   AA 01                ORAA   1,X      ;INSERT
   FA7B   A7 01                STAA   1,X      ; LOW NIBBLE
   FA7D   7C FF 07             INC    LBFF07   ;MAX
   FA80   F6 FF 07             LDAB   LBFF07   ; 4
   FA83   C1 05                CMPB   #5       ;  CHAR
   FA85   26 E5                BNE    LBFA6C   ;LOOP...
   FA87   F6 FF 07      LBFA87 LDAB   LBFF07   ;LOAD CNTR 0=OK
   FA8A   39                   RTS             ;RETURN TO CALLER
                        *
                        * INPUT ONE CHARACTER
   FA8B   B6 FC F4      INCH   LDAA   ACIACS   ;
   FA8E   47                   ASRA            ;
   FA8F   24 FA                BCC    INCH     ;WAIT...
   FA91   B6 FC F5             LDAA   ACIADT   ;
   FA94   7D FF 53             TST    AECHO    ;ECHO ENABLED ?
   FA97   26 03                BNE    LBFA9C   ;NO
   FA99   7E F9 DC             JMP    OUTCH    ;ECHO INPUT
   FA9C   7F FF 53      LBFA9C CLR    AECHO    ;DISABLE ECHO
   FA9F   39                   RTS             ;RETURN TO CALLER

   FAA0                 INCHNP EQU    *        ;INP ON CHAR WITHOUT PARITY
   FAA0   8D E9                BSR    INCH     ;
   FAA2   84 7F                ANDA   #$7F     ;REMOVE PARITY BIT
   FAA4   39                   RTS             ;RETURN TO CALLER

   FAA5   8D F9         LBFAA5 BSR    INCHNP   ;READ ASCII CHAR
   FAA7   81 30         CBCDHX CMPA   #$30     ;'0' ?
   FAA9   2B 11                BMI    LBFABC   ;INVALID HEX CHAR ?
   FAAB   81 39                CMPA   #$39     ;'9' ?
   FAAD   2F 0A                BLE    LBFAB9   ;0-9
   FAAF   81 41                CMPA   #$41     ;'A' ?
   FAB1   2B 09                BMI    LBFABC   ;INVALID HEX CHAR ?
   FAB3   81 46                CMPA   #$46     ;'F' ?
   FAB5   2E 05                BGT    LBFABC   ;INVALID HEX CHAR ?
   FAB7   80 07                SUBA   #$07     ;MAKE IT HEX A-F
   FAB9   84 0F         LBFAB9 ANDA   #$0F     ;REMOVE HI NIBBLE
   FABB   39                   RTS             ;RETURN TO CALLER
   FABC   7D FA F4      LBFABC TST    LBFAF4   ;SET INVALID HEX
   FABF   39                   RTS             ;RETURN TO CALLER

   FAC0   BD F9 DC      LBFAC0 JSR    OUTCH    ;PRINT IT
   FAC3   86 2D                LDAA   #$2D     ;'-'
   FAC5   BD F9 DC             JSR    OUTCH    ;PRINT IT
   FAC8   39                   RTS             ;RETURN TO CALLER

   FAC9   BD FA 41      LBFAC9 JSR    PCRLF    ;
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   FACC   CE FF 16      LBFACC LDX    #LBFF16  ;GET USER REGS ADDR
   FACF   86 50                LDAA   #$50     ;'P'
   FAD1   8D 1B                BSR    LBFAEE   ;PRINT '-' + 4 HEX
   FAD3   86 58                LDAA   #$58     ;'X'
   FAD5   8D 17                BSR    LBFAEE   ;PRINT '-' + 4 HEX
   FAD7   86 41                LDAA   #$41     ;'A'
   FAD9   8D 0D                BSR    LBFAE8   ;PRINT '-' + 2 HEX
   FADB   86 42                LDAA   #$42     ;'B'
   FADD   8D 09                BSR    LBFAE8   ;PRINT '-' + 2 HEX
   FADF   86 43                LDAA   #$43     ;'C'
   FAE1   8D 05                BSR    LBFAE8   ;PRINT '-' + 2 HEX
   FAE3   86 53                LDAA   #$53     ;'S'
   FAE5   8D 07                BSR    LBFAEE   ;PRINT '-' + 4 HEX
   FAE7   39                   RTS             ;RETURN TO CALLER

   FAE8   8D D6         LBFAE8 BSR    LBFAC0   ;PRINT '-'
   FAEA   BD FA 24             JSR    OUT2H    ;FOLLOWED 2 HEX CHAR
   FAED   39                   RTS             ;RETURN TO CALLER

   FAEE   8D D0         LBFAEE BSR    LBFAC0   ;PRINT '-'
   FAF0   BD FA 22             JSR    OUT4HS   ;FOLLOWED 4 HEX CHAR
   FAF3   39                   RTS             ;RETURN TO CALLER
   FAF4   FF            LBFAF4 FCB    $FF      ;
                               PAGE   60
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*** MC6800 EXORCISER EXBUG MONITOR ***

                        ****************************************************
                        *      EXBUG COMMANDS
                        ****************************************************
   FAF5   4C 4F 41 44   LBFAF5 FCC    "LOAD"   ;
   FAF9   F7 BB                FDB    LOAD     ;
   FAFB   56 45 52 46          FCC    "VERF"   ;
   FAFF   F7 C0                FDB    VERF     ;
   FB01   53 52 43 48          FCC    "SRCH"   ;
   FB05   F7 B4                FDB    SRCH     ;
   FB07   50 52 4E 54          FCC    "PRNT"   ;
   FB0B   F7 19                FDB    LBF719   ;
   FB0D   50 4E 43 48          FCC    "PNCH"   ;
   FB11   F7 19                FDB    LBF719   ;
   FB13   4D 41 49 44          FCC    "MAID"   ;
   FB17   F0 F3                FDB    MAID     ;

   FB19   53 31 30 2E          FCC    "S10."   ;
   FB1D   F6 23                FDB    LBF623   ;
   FB1F   53 33 30 2E          FCC    "S30."   ;
   FB23   F6 26                FDB    LBF626   ;
   FB25   53 31 32 30          FCC    "S120"   ;
   FB29   F6 2D                FDB    LBF62D   ;

   FB2B   45 58 42 55   LBFB2B FCC    "EXBUG 1.1 "
   FB2F   47 20 31 2E
   FB33   31 20
   FB35   04                   FCB    4        ;
   FB36   42 45 47 20   LBFB36 FCC    "BEG ADDR "
   FB3A   41 44 44 52
   FB3E   20
   FB3F   04                   FCB    4        ;
   FB40   45 4E 44 20   LBFB40 FCC    "END ADDR "
   FB44   41 44 44 52
   FB48   20
   FB49   04                   FCB    4        ;
   FB4A   43 4F 4E 54   LBFB4A FCC    "CONT/LOAD/VERF "
   FB4E   2F 4C 4F 41
   FB52   44 2F 56 45
   FB56   52 46 20
   FB59   04                   FCB    4        ;
   FB5A   4E 4F 20 43   LBFB5A FCC    "NO CHANGE"
   FB5E   48 41 4E 47
   FB62   45
   FB63   07 04                FCB    $07,4    ;
   FB65   43 4B 53 4D   LBFB65 FCC    "CKSM "
   FB69   20
   FB6A   04                   FCB    4        ;
   FB6B   41 44 44 52   LBFB6B FCC    "ADDR/MEM/TAPE"
   FB6F   2F 4D 45 4D
   FB73   2F 54 41 50
   FB77   45
   FB78   04                   FCB    4        ;
   FB79   20 49 4E 56   LBFB79 FCC    " INVL"
   FB7D   4C
   FB7E   04                   FCB    4        ;
   FB7F   45 58 45 43   LBFB7F FCC    "EXEC "
   FB83   20
   FB84   04                   FCB    4        ;
```

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*** MC6800 EXORCISER EXBUG MONITOR ***

   FB85   53 47 4C 2F   LBFB85 FCC    "SGL/CONT "
   FB89   43 4F 4E 54
   FB8D   20
   FB8E   04                   FCB    4        ;
   FB8F   53 54 4F 50   LBFB8F FCC    "STOP-ON-ADDRESS "
   FB93   2D 4F 4E 2D
   FB97   41 44 44 52
   FB9B   45 53 53 20
   FB9F   04                   FCB    4        ;
   FBA0   53 54 4F 50   LBFBA0 FCC    "STOP ADDR "
   FBA4   20 41 44 44
   FBA8   52 20
   FBAA   04                   FCB    4        ;
   FBAB   41 42 4F 52   LBFBAB FCC    "ABORTED AT "
   FBAF   54 45 44 20
   FBB3   41 54 20
   FBB6   04                   FCB    4        ;
   FBB7   14            LBFBB7 FCB    $14      ;DC4 PUNCH OFF
   FBB8   13            LBFBB8 FCB    $13      ;DC3 READER OFF
   FBB9   00 00 00 00          FCB    $00,$00,$00,$00,4  ;
   FBBD   04
   FBBE   07 20 3F 04   LBFBBE FCB    $07,$20,$3F,4      ; ' ?'
   FBC2   2A            LBFBC2 FCC    "*"      ;
   FBC3   04                   FCB    4        ;
   FBC4   42 4B 50 54   LBFBC4 FCC    "BKPT ERROR "
   FBC8   20 45 52 52
   FBCC   4F 52 20
   FBCF   04                   FCB    4        ;
   FBD0   0D 0A 00      LBFBD0 FCB    $0D,$0A,$00
   FBD3   53 31 04             FCB    $53,$31,$04   ; S1 EOF
   FBD6   0D 0A 00      LBFBD6 FCB    $0D,$0A,$00
   FBD9   53 39 30 33          FCC    "S9030000FC"  ; S9 END RECORD
   FBDD   30 30 30 30
   FBE1   46 43
   FBE3   0D 04                FCB    $0D,4    ;
   FBE5   0D 0A 00      LBFBE5 FCB    $0D,$0A,$00
   FBE8   53 30 30 42          FCC    "S00B00005820" ; S0 RECORD HEADER
   FBEC   30 30 30 30
   FBF0   35 38 32 30
   FBF4   04                   FCB    4        ;
   FBF5   48 44 52 3D   LBFBF5 FCC    "HDR=X " ;
   FBF9   58 20
   FBFB   04                   FCB    4        ;
   FBFA                 LBFBFA EQU    $FBFA
   FBFC   04 04 F6 EA          FCB    $04,$04,$F6,$EA
   FBFD                 LBFBFD EQU    $FBFD

                               PAGE   60
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*** MC6800 EXORCISER EXBUG MONITOR ***

                        ***************************************************
                        *      MEMORY MAPPED I/O DEVICES
                        ***************************************************
   FCF0                         ORG    $FCF0
   FCF0   00                    FCB    $00       ;0
   FCF1   00                    FCB    $00       ;1
   FCF2   00                    FCB    $00       ;2
   FCF3   00                    FCB    $00       ;3
                        * ACIA
   FCF4   00            ACIACS  FCB    $00       ;CONTROL/STATUS REG
   FCF5   3D            ACIADT  FCB    $3D       ;TX/RX DATA REG
   FCF6   00                    FCB    $00       ;
   FCF7   00                    FCB    $00       ;
                        * PIA#1
   FCF8   FF            LBFCF8  FCB    $FF       ;DATA PORT A
                        * PA0 - PA7 ADDR BUS COMPARE A0-A7
   FCF9   3C            LBFCF9  FCB    $3C       ;CONTROL REG A
   FCFA   FF            LBFCFA  FCB    $FF       ;DATA PORT B
                        * PB0 - PB7 ADDR BUS COMPARE A8-A15
   FCFB   34            LBFCFB  FCB    $34       ;CONTROL REG B
                        * PIA#2
   FCFC                 LBFCFC  EQU    $FCFC     ;DATA PORT A
                        * PA0  OUT PINS 74166
                        * PA1  OUT B PIN 74166
                        * PA3  INP ?
                        * PA4  OUT D PIN 74166
                        * PA5  COMP VUA ?
                        * PA6  ???

   FCFD                 LBFCFD  EQU    $FCFD     ;CONTROL REG A
   FCFE                 LBFCFE  EQU    $FCFE     ;DATA PORT B
                        * PB7 FIRQ
   FCFF                 LBFCFF  EQU    $FCFF     ;CONTROL REG B

                                PAGE   60
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*** MC6800 EXORCISER EXBUG MONITOR ***

                        ************************************************
                        *      RAM AREA IN TOP OF MEMORY $FF00 - $FFFF
                        ************************************************
   FF00                         ORG    $FF00    ;
   FF00   83 FF         LBFF00 FDB    $83FF    ;USER PGM START ADDR
   FF02   00            LBFF02 FCB    $00      ;??? FLAG 0 1 2 ?
                        * EXBUG COMMAND INPUT BUFFER
   FF03   4D 41 49 44   LBFF03 FCC    "MAID"   ;
   FF07   04            LBFF07 FCB    $04      ; .
   FF08   00 00         LBFF08 FDB    $0000    ;GENERAL ADDRESS INPUT
   FF0A   00 00         LBFF0A FDB    $0000    ;BEGIN ADDRESS
   FF0C   00 00         LBFF0C FDB    $0000    ;END ADDRESS
   FF0E   00 00         LBFF0E FDB    $0000    ;SEARCH START ADDRESS
   FF10   00 00         LBFF10 FDB    $0000    ;SEARCH END ADDRESS
   FF12   00            LBFF12 FCB    $00      ;SEARCH MASK
   FF13   00            LBFF13 FCB    $00      ;
   FF14   00 00         LBFF14 FDB    $0000    ;TRACE END ADDRESS

   FF16   E8 00         LBFF16 FDB    $E800    ;USER PC-SAVE
   FF17                 LBFF17 EQU    LBFF16+1 ;USER PC LO
   FF18   00 00                FDB    $0000    ;USER X-SAVE
   FF1A   00                   FCB    $00      ;USER A-SAVE
   FF1B   00                   FCB    $00      ;USER B-SAVE
   FF1C   00            LBFF1C FCB    $00      ;USER CC-SAVE
   FF1D   FF 8A         LBFF1D FDB    $FF8A    ;USER SP-SAVE
                        *
                        * TABLE FOR EIGHT USER PRGM BREAK POINTS
   FF1F   00 00         BRKPTS FDB    $0000    ;8 BREAK POINTS
   FF21   00 00                FDB    $0000    ;
   FF23   00 00                FDB    $0000    ;
   FF25   00 00                FDB    $0000    ;
   FF27   00 00                FDB    $0000    ;
   FF29   00 00                FDB    $0000    ;
   FF2B   00 00                FDB    $0000    ;
   FF2D   00 00                FDB    $0000    ;

   FF2F   00 00         LBFF2F FCB    $00,$00  ;SAVE ORG USER OPCODE
   FF31   00 00                FCB    $00,$00  ;
   FF33   00 00                FCB    $00,$00  ;
   FF35   00 00                FCB    $00,$00  ;
   FF37   00 00                FCB    $00,$00  ;
   FF39   00 00                FCB    $00,$00  ;
   FF3B   00 00                FCB    $00,$00  ;
   FF3D   00 00                FCB    $00,$00  ;

   FF3F   00 00         LBFF3F FDB    $0000    ;BP HIT COUNTERS
   FF41   00 00                FDB    $0000    ;
   FF43   00 00                FDB    $0000    ;
   FF45   00 00                FDB    $0000    ;
   FF47   00 00                FDB    $0000    ;
   FF49   00 00                FDB    $0000    ;
   FF4B   00 00                FDB    $0000    ;
   FF4D   00 00                FDB    $0000    ;

   FF4F                         ORG    $FF4F    ;
   FF4F   FF            LBFF4F FCB    $FF      ;??? FLAG
   FF50   00            LBFF50 FCB    $00      ;??? FLAG
   FF51   00 00         LBFF51 FDB    $0000    ;HI TRACE STEP COUNTER
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*** MC6800 EXORCISER EXBUG MONITOR ***

   FF53   00            AECHO  FCB    $00      ;DIS/ENABLE INPUT ECHO
   FF54   00            LBFF54 FCB    $00      ;??? FLAG
   FF55   00                   FCB    $00      ;
   FF56   00 00         LBFF56 FDB    $0000    ;NNNN/ ADDR
   FF58   00            LBFF58 FCB    $00      ;
   FF59   00                   FCB    $00      ;
   FF5A   00            LBFF5A FCB    $00      ;TEMP USED BY CONV.
   FF5B   00            LBFF5B FCB    $00      ;.
   FF5C   00            LBFF5C FCB    $00      ;READ 2 OR 4 HEXDEC CHAR
   FF5D   00            LBFF5D FCB    $00      ;??? FLAG
   FF5E   00 00         LBFF5E FDB    $0000    ;$S STOP ADDR
   FF60   00            LBFF60 FCB    $00      ;??? FLAG
   FF61   00            LBFF61 FCB    $00      ;??? FLAG
   FF62   00            LBFF62 FCB    $00      ;

   FF63   00 00 00 00   BRKPES FCB    $00,$00,$00,$00 ; S
   FF67   00 00 00 00          FCB    $00,$00,$00,$00 ; T
   FF6B   00 00 00 00          FCB    $00,$00,$00,$00 ; A
   FF6F   00 00 00 00          FCB    $00,$00,$00,$00 ; C
   FF73   00 00 00 00          FCB    $00,$00,$00,$00 ; K
   FF77   00 00 00 00          FCB    $00,$00,$00,$00 ;
   FF7B   00 00 00 00          FCB    $00,$00,$00,$00 ; A
   FF7F   00 00 00 00          FCB    $00,$00,$00,$00 ; R
   FF83   00 00 00 00          FCB    $00,$00,$00,$00 ; E
   FF87   00 00 00             FCB    $00,$00,$00     ; A
   FF8A   00            EXOSTK FCB    $00      ;EXBUG STACK

   FF8B   32            LBFF8B FCB    $32      ;CHECK SUM
   FF8C   03            LBFF8C FCB    $03      ;TEMP
                        * 6 CHAR BUFFER FOR HDR-X ......
   FF8D   42            LBFF8D FCB    $42      ;B
   FF8E   47            LBFF8E FCB    $47      ;G
   FF8F   32                   FCB    $32      ;2
   FF90   41            LBFF90 FCB    $41      ;A
   FF91   20 20                FCB    $20,$20  ;SPACE

   FF93   86 1F         LBFF93 FCB    $86,$1F  ;DUMP END ADDRESS ???
   FF95   01                   FCB    $01      ;
   FF96   0B                   FCB    $0B      ;
   FF97   09                   FCB    $09      ;
   FF98   12                   FCB    $12      ;
   FF99   4F                   FCB    $4F      ;
   FF9A   02                   FCB    $02      ;
   FF9B   42                   FCB    $42      ;
   FF9C   87                   FCB    $87      ;
   FF9D   00                   FCB    $00      ;
   FF9E   53                   FCB    $53      ;
   FF9F   83                   FCB    $83      ;
   FFA0   02                   FCB    $02      ;
   FFA1   7F                   FCB    $7F      ;
   FFA2   00                   FCB    $00      ;
   FFA3   16                   FCB    $16      ;
   FFA4   6F                   FCB    $6F      ;
   FFA5   12                   FCB    $12      ;
   FFA6   37                   FCB    $37      ;
   FFA7   01                   FCB    $01      ;
   FFA8   11                   FCB    $11      ;
   FFA9   4F                   FCB    $4F      ;
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*** MC6800 EXORCISER EXBUG MONITOR ***

   FFAA   00                  FCB    $00      ;
   FFAB   56                  FCB    $56      ;
   FFAC   43                  FCB    $43      ;
   FFAD   02                  FCB    $02      ;
   FFAE   13                  FCB    $13      ;
   FFAF   05                  FCB    $05      ;
   FFB0   90 7B               FCB    $90,$7B  ;
   FFB2   00                  FCB    $00      ;
   FFB3   36                  FCB    $36      ;
   FFB4   A7 10               FCB    $A7,$10  ;
   FFB6   0F                  FCB    $0F      ;
   FFB7   01                  FCB    $01      ;
   FFB8   10                  FCB    $10      ;
   FFB9   B7 00 76            FCB    $B7,$00,$76
   FFBC   27 00               FCB    $27,$00  ;
   FFBE   1F                  FCB    $1F      ;
   FFBF   83                  FCB    $83      ;
   FFC0   10                  FCB    $10      ;
   FFC1   CF                  FCB    $CF      ;
   FFC2   80 76               FCB    $80,$76  ;
   FFC4   2F 40               FCB    $2F,$40  ;
   FFC6   03                  FCB    $03      ;
   FFC7   09                  FCB    $09      ;
   FFC8   10                  FCB    $10      ;
   FFC9   2F                  FCB    $2F      ;
   FFCA   00                  FCB    $00      ;
   FFCB   76 2F C0            FCB    $76,$2F,$C0
   FFCE   0B                  FCB    $0B      ;
   FFCF   00                  FCB    $00      ;
   FFD0   10                  FCB    $10      ;
   FFD1   CF                  FCB    $CF      ;
   FFD2   00                  FCB    $00      ;
   FFD3   56                  FCB    $56      ;
   FFD4   3F                  FCB    $3F      ;
   FFD5   09            LBFFD5 FCB    $09      ;END PUNCH BUFFER ???
   FFD6   1F                  FCB    $1F      ;
   FFD7   85 52               FCB    $85,$52  ;
   FFD9   DA 00               FCB    $DA,$00  ;
   FFDB   26 47               FCB    $26,$47  ;
   FFDD   C1 6F               FCB    $C1,$6F  ;
   FFDF   03                  FCB    $03      ;
   FFE0   10                  FCB    $10      ;
   FFE1   2F 00               FCB    $2F,$00  ;
   FFE3   16                  FCB    $16      ;
   FFE4   4F                  FCB    $4F      ;
   FFE5   8B 17               FCB    $8B,$17  ;
   FFE7   01                  FCB    $01      ;
   FFE8   19                  FCB    $19      ;
   FFE9   DF 00               FCB    $DF,$00  ;
   FFEB   56                  FCB    $56      ;
   FFEC   3F                  FCB    $3F      ;
   FFED   A3                  FCB    $A3      ;
   FFEE   9B 10               FCB    $9B,$10  ;
   FFF0   10                  FCB    $10      ;
   FFF1   DF 00               FCB    $DF,$00  ;
   FFF3   96 8B               FCB    $96,$8B  ;
   FFF5   91 83               FCB    $91,$83  ;
   FFF7   49                  FCB    $49      ;
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*** MC6800 EXORCISER EXBUG MONITOR ***


   FFF8                         ORG    $FFF8    ;
   FFF8   00 00         IRQSVC  FDB    $0000    ;IRQ VECTOR
   FFFA   F4 77         SWISVC  FDB    SWI      ;SWI VECTOR
   FFFC   F4 D8         NMISVC  FDB    NMI      ;NMI VECTOR
   FFFE   F0 00         PWRSVC  FDB    PWRUP    ;START VECTOR

   F4D8                         END    START    ;
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*** MC6800 EXORCISER EXBUG MONITOR ***

FCF4  ACIACS        FCF5  ACIADT        FF53  AECHO         FF63  BRKPES
FF1F  BRKPTS        FAA7  CBCDHX        F052  CHXBCD        F7DF  CONT
FF8A  EXOSTK        FA8B  INCH          FAA0  INCHNP        FFF8  IRQSVC
F02D  LBF02D        F037  LBF037        F046  LBF046        F05B  LBF05B
F05E  LBF05E        F07E  LBF07E        F08B  LBF08B        F0A0  LBF0A0
F0A8  LBF0A8        F0AB  LBF0AB        F0CD  LBF0CD        F0DA  LBF0DA
F0EA  LBF0EA        F0F9  LBF0F9        F10F  LBF10F        F116  LBF116
F11D  LBF11D        F128  LBF128        F12E  LBF12E        F130  LBF130
F13E  LBF13E        F144  LBF144        F155  LBF155        F15A  LBF15A
F168  LBF168        F179  LBF179        F180  LBF180        F183  LBF183
F186  LBF186        F198  LBF198        F19A  LBF19A        F1A3  LBF1A3
F1AD  LBF1AD        F1B8  LBF1B8        F1C6  LBF1C6        F1CA  LBF1CA
F1CD  LBF1CD        F1D6  LBF1D6        F1E9  LBF1E9        F210  LBF210
F21C  LBF21C        F221  LBF221        F229  LBF229        F23D  LBF23D
F24B  LBF24B        F267  LBF267        F272  LBF272        F27A  LBF27A
F27F  LBF27F        F289  LBF289        F290  LBF290        F297  LBF297
F2A3  LBF2A3        F2A6  LBF2A6        F2A9  LBF2A9        F2B1  LBF2B1
F2B4  LBF2B4        F2BA  LBF2BA        F2BD  LBF2BD        F2C6  LBF2C6
F2D0  LBF2D0        F2D9  LBF2D9        F2DF  LBF2DF        F2EC  LBF2EC
F2F0  LBF2F0        F313  LBF313        F31E  LBF31E        F32C  LBF32C
F33A  LBF33A        F33D  LBF33D        F355  LBF355        F358  LBF358
F360  LBF360        F368  LBF368        F37D  LBF37D        F395  LBF395
F39D  LBF39D        F3A8  LBF3A8        F3B7  LBF3B7        F3BC  LBF3BC
F3C8  LBF3C8        F3C9  LBF3C9        F3D1  LBF3D1        F3DC  LBF3DC
F3E2  LBF3E2        F3EC  LBF3EC        F3F0  LBF3F0        F3FC  LBF3FC
F406  LBF406        F409  LBF409        F414  LBF414        F41C  LBF41C
F41F  LBF41F        F427  LBF427        F42C  LBF42C        F431  LBF431
F439  LBF439        F467  LBF467        F476  LBF476        F47C  LBF47C
F4AB  LBF4AB        F4B7  LBF4B7        F4BF  LBF4BF        F4D3  LBF4D3
F4D6  LBF4D6        F4D8  LBF4D8        F4E7  LBF4E7        F525  LBF525
F52D  LBF52D        F536  LBF536        F539  LBF539        F544  LBF544
F54A  LBF54A        F54D  LBF54D        F558  LBF558        F567  LBF567
F58E  LBF58E        F5E8  LBF5E8        F5F6  LBF5F6        F616  LBF616
F623  LBF623        F626  LBF626        F628  LBF628        F62D  LBF62D
F631  LBF631        F63A  LBF63A        F645  LBF645        F647  LBF647
F665  LBF665        F678  LBF678        F68C  LBF68C        F69E  LBF69E
F6A0  LBF6A0        F6C0  LBF6C0        F6F5  LBF6F5        F6FA  LBF6FA
F700  LBF700        F702  LBF702        F70B  LBF70B        F719  LBF719
F726  LBF726        F736  LBF736        F739  LBF739        F747  LBF747
F757  LBF757        F763  LBF763        F765  LBF765        F797  LBF797
F7BB  LBF7BB        F7C8  LBF7C8        F7EF  LBF7EF        F805  LBF805
F81C  LBF81C        F839  LBF839        F84A  LBF84A        F875  LBF875
F88C  LBF88C        F895  LBF895        F8A4  LBF8A4        F8AC  LBF8AC
F8B8  LBF8B8        F8C5  LBF8C5        F8D5  LBF8D5        F8DC  LBF8DC
F8F3  LBF8F3        F8FE  LBF8FE        F91D  LBF91D        F922  LBF922
F938  LBF938        F93E  LBF93E        F93F  LBF93F        F94B  LBF94B
F963  LBF963        F964  LBF964        F971  LBF971        F97C  LBF97C
F9A4  LBF9A4        F9AD  LBF9AD        F9AE  LBF9AE        F9B7  LBF9B7
F9BD  LBF9BD        F9C0  LBF9C0        F9C4  LBF9C4        F9CE  LBF9CE
F9CF  LBF9CF        F9D0  LBF9D0        F9DD  LBF9DD        F9F9  LBF9F9
F9FB  LBF9FB        FA04  LBFA04        FA06  LBFA06        FA14  LBFA14
FA28  LBFA28        FA2B  LBFA2B        FA40  LBFA40        FA4E  LBFA4E
FA50  LBFA50        FA57  LBFA57        FA61  LBFA61        FA62  LBFA62
FA65  LBFA65        FA6C  LBFA6C        FA72  LBFA72        FA87  LBFA87
FA9C  LBFA9C        FAA5  LBFAA5        FAB9  LBFAB9        FABC  LBFABC
FAC0  LBFAC0        FAC9  LBFAC9        FACC  LBFACC        FAE8  LBFAE8
FAEE  LBFAEE        FAF4  LBFAF4        FAF5  LBFAF5        FB2B  LBFB2B
FB36  LBFB36        FB40  LBFB40        FB4A  LBFB4A        FB5A  LBFB5A
FB65  LBFB65        FB6B  LBFB6B        FB79  LBFB79        FB7F  LBFB7F
FB85  LBFB85        FB8F  LBFB8F        FBA0  LBFBA0        FBAB  LBFBAB
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*** MC6800 EXORCISER EXBUG MONITOR ***

FBB7  LBFBB7        FBB8  LBFBB8        FBBE  LBFBBE        FBC2  LBFBC2
FBC4  LBFBC4        FBD0  LBFBD0        FBD6  LBFBD6        FBE5  LBFBE5
FBF5  LBFBF5        FBFA  LBFBFA        FBFD  LBFBFD        FCF8  LBFCF8
FCF9  LBFCF9        FCFA  LBFCFA        FCFB  LBFCFB        FCFC  LBFCFC
FCFD  LBFCFD        FCFE  LBFCFE        FCFF  LBFCFF        FF00  LBFF00
FF02  LBFF02        FF03  LBFF03        FF07  LBFF07        FF08  LBFF08
FF0A  LBFF0A        FF0C  LBFF0C        FF0E  LBFF0E        FF10  LBFF10
FF12  LBFF12        FF13  LBFF13        FF14  LBFF14        FF16  LBFF16
FF17  LBFF17        FF1C  LBFF1C        FF1D  LBFF1D        FF2F  LBFF2F
FF3F  LBFF3F        FF4F  LBFF4F        FF50  LBFF50        FF51  LBFF51
FF54  LBFF54        FF56  LBFF56        FF58  LBFF58        FF5A  LBFF5A
FF5B  LBFF5B        FF5C  LBFF5C        FF5D  LBFF5D        FF5E  LBFF5E
FF60  LBFF60        FF61  LBFF61        FF62  LBFF62        FF8B  LBFF8B
FF8C  LBFF8C        FF8D  LBFF8D        FF8E  LBFF8E        FF90  LBFF90
FF93  LBFF93        FFD5  LBFFD5        F7BB  LOAD          F0F3  MAID
F789  MBUGE         F4D8  NMI           FFFC  NMISVC        FA24  OUT2H
FA22  OUT4HS        F9DC  OUTCH         FA45  PCR           FA41  PCRLF
FA35  PDAT1         FA33  PDATA         F719  PNCH          F719  PRNT
FA26  PSPAC         FFFE  PWRSVC        F000  PWRUP         F5DC  RSTART
F7B4  SRCH          F4D8  START         F477  SWI           FFFA  SWISVC
F7C0  VERF
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