

ST Mouse Driver for Basic#

This is driver for an Atari ST mouse for Atari Basic and Turbo Basic

General Information

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Assembler: Bibo Assembler
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Atari Basic or even TurboBasic is way too slow to process the low level data send by an Atari ST Mouse to move a mouse pointer in a usable way.

The ML routine below will read the information from the Atari ST mouse, will paint a mouse cursor until one of the mouse buttons are pressed (with an unmodified Atari ST mouse you can only read one mouse button from an A8, but it is possible to modify an Atari ST mouse in a way that the A8 can read both mouse buttons and the mouse is still usable on an Atari ST).

Usage:#

you load the ML routine MOUSE.COM (from DOS as Autorun.sys or from TurboBasic with BLOAD "D:MOUSE.COM")

then, in your Basic Programm you call the routine at \$400

```
100 ...  
110 x = USR($400) : REM Turbo Basic  
120 ...
```

```
100 ...  
110 x = usr(1024) : REM Atari Basic  
120 ...
```

while in the Mouse Routine, your BASIC Programm is stopped. Line 120 will executed when one mouse button has been pressed.

STRIG(0) -- first mouse button and STRIG(1) -- 2nd mouse button

you can get the information which mouse button has been pressed.

Peek(\$03FD) will give you the x position of the mouse pointer, Peek(\$03FE) will give you the y position of the mouse pointer

It should be straightforward to assemble the Assembler code in any Assembler (Mac/65, ATASm, x-asm ...). With BiboAssembler (also in the Wiki as ATR download) you can just type in the source.

Mirko Sobe from BOSS X has asked me to write a VBI driven Mouse Driver for his BOSS X System. I have that on my to-do list. Such a mouse driver would run an the same time as the basic program.

```
00010          .LI OFF  
00020 *****  
00030 *                               *  
00040 * PROGRAMM:MOUSE ROUTINE      *  
00050 * AUTOR      :CARSTEN STROTMANN *  
00060 * DATUM      :22.04.91         *  
00070 * VERSION   :04.00            *  
00080 * FUER      :ALLGEMEIN        *  
00090 *                               *
```

```

00100 *****
00110 ;
00120 ; SYSTEM REGISTER
00130 ;
00140 XM          =  $03FD
00150 YM          =  $03FE
00160 SETVBV     =  $E45C
00170 SYSVBV     =  $E45F
00180 XITVBV     =  $E462
00190 SDMCTL     =  $022F
00200 PMBASE     =  $D407
00210 VCOUNT     =  $D40B
00220 GRCTL      =  $D01D
00230 PORTA     =  $D300
00240 STICK0     =  $0278
00250 STRIG0     =  $0284
00260 STRIG1     =  $0285
00270 HPOS0     =  $D000
00280 PCOLO     =  $02C0
00290 GPRIOR    =  $026F
00300 ;
00310 ;
00320             .OR  $0400
00330             .OF  "D:MOUSE.COM"
00340 ;
00350 ;
00360 BS
00370             PLA          BASIC !
00380             PLA
00390             PLA
00400             STA  PCOLO
00410 X          LDA  #$78
00420             STA  PMBASE
00430             LDA  #$3A
00440             STA  SDMCTL
00450             LDA  #2
00460             STA  GRCTL
00470             STA  GPRIOR
00480             LDX  /PLAYVBI
00490             LDY  #PLAYVBI
00500             LDA  #7
00510             JSR  SETVBV
00520 LOOP      JMP  RUN
00530 -----
00540 PLAYVBI
00550             LDA  XM
00560             CLC
00570             ADC  #49
00580             STA  HPOS0
00590             LDX  #0
00600             TXA
00610 .1         STA  $7C00,X
00620             INX
00630             BNE  .1
00640             LDX  YM
00650             LDY  #0
00660 .2         LDA  PLAYTAB,Y
00670             STA  $7C20,X
00680             INX

```

```

00690          INY
00700          CPY #11
00710          BNE .2
00720          JMP XITVBV
00730 -----
00740 END
00750          RTS
00760 -----
00770 PLAYTAB
00780          .HX 0080C0E0F0E0E0B0
00790          .HX 101000
00800 XT       .HX 0020301000
00810 YT       .HX 80C0400080
00820 REG      .HX 00
00830 REG2     .HX 00
00840 XX       .HX 00
00850 YY       .HX 00
00860 -----
00870 STICK
00880          LDA STICK0
00890          TAY
00900          CMP #15
00910          BEQ .5
00920          TYA
00930          AND #2
00940          BEQ .1
00950          LDA YM
00960          BEQ .1
00970          DEC YM
00980 .1
00990          TYA
01000          AND #1
01010          BEQ .2
01020          LDA YM
01030          CMP #191
01040          BEQ .2
01050          INC YM
01060 .2
01070          TYA
01080          AND #8
01090          BEQ .3
01100          LDA XM
01110          BEQ .3
01120          DEC XM
01130 .3
01140          TYA
01150          AND #4
01160          BEQ .4
01170          LDA XM
01180          CMP #159
01190          BEQ .4
01200          INC XM
01210 .4
01220          LDA VCOUNT
01230          BNE .4
01240 .5
01250          RTS
01260 -----
01270          .OR $0600

```

```

01280 RUN
01290          JSR STRIG
01300          LDA PORTA
01310          AND #$30
01320          STA REG
01330          JSR XFRAG
01340          JSR XALG
01350          LDA PORTA
01360          AND #$C0
01370          STA REG2
01380          JSR YFRAG
01390          JSR YALG
01400          JMP RUN
01410 XALG
01420          JSR STICK
01430          JSR STRIG
01440          LDA PORTA
01450          AND #$30
01460          CMP REG
01470          BEQ YALG
01480          LDX XX
01490          INX
01500          CMP XT,X
01510          BNE .1
01520          LDA XM
01530          CMP #159
01540          BEQ .2
01550          INC XM
01560          JMP .2
01570 .1      LDX XX
01580          DEX
01590          CMP XT,X
01600          BNE .2
01610          LDA XM
01620          BEQ .2
01630          DEC XM
01640 .2      RTS
01650 YALG
01660          JSR STICK
01670          JSR STRIG
01680          LDA PORTA
01690          AND #$C0
01700          CMP REG2
01710          BEQ XALG
01720          LDX YY
01730          INX
01740          CMP YT,X
01750          BNE .1
01760          LDA YM
01770          CMP #191
01780          BEQ .2
01790          INC YM
01800          JMP .2
01810 .1      LDX YY
01820          DEX
01830          CMP YT,X
01840          BNE .2
01850          LDA YM
01860          BEQ .2

```

```
01870          DEC YM
01880 .2        RTS
01890 -----
01900 XFRAG
01910          LDX #4
01920 .1        LDA XT,X
01930          CMP REG
01940          BEQ .2
01950          DEX
01960          BNE .1
01970 .2        STX XX
01980          RTS
01990 -----
02000 YFRAG
02010          LDX #4
02020 .1        LDA YT,X
02030          CMP REG2
02040          BEQ .2
02050          DEX
02060          BNE .1
02070 .2        STX YY
02080          RTS
02090 -----
02100 STRIG
02110          LDA STRIG0
02120          BNE .1
02130          PLA
02140          PLA
02150          JMP END
02160 .1        LDA STRIG1
02170          BNE .2
02180          PLA
02190          PLA
02200          JMP END
02210 .2        RTS
02220 -----
```