

# SIO2USB Clock Utility#

## General Information

Author: Carsten Strotmann

Assembler: Bibo-Assembler

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Download: <http://home.arcor.de/grasel/restarte.htm>

Download: [SIO2USB Clock Utility/S2UTIME.ATR](#)

A small utility to read the data and time out of the SIO2USB Device and set the internal Clock in Sparta DOS.

## Tested with

- BW-DOS 1.30
- Sparta DOS 3.3a (X33A.DOS)
- Sparta DOS 3.2d (X32D.DOS)
- Real DOS 1.0a build 24 <http://www.tcpipexpress.com/realdos.html>
- SpartaDOS X 4.41 [http://trub.atari8.info/index.php?ref=sdx\\_upgrade\\_en](http://trub.atari8.info/index.php?ref=sdx_upgrade_en)

## and with

- Atari ROM E: Handler
- Sparta DOS X 4.41 XEP80 Handler
- Sparta DOS X 4.41 64 Char Handler (CON64)
- Sparta DOS X 4.41 Quick E: Handler

just load S2UTIME.COM. On BW-DOS you first need to load the Clock Driver "CLOCK ON"

```
01000          .LI OFF
01010 *****
01020 **                **
01030 ** SPARTA DOS TIME **
01040 **   UTILITY FOR   **
01050 **     SIO2USB     **
01060 ** (C) 2008 ABBUC  **
01070 ** LICENSE: GPLv3 **
01080 **                **
01090 ** P: C. Strotmann **
01100 ** H: T. Grasel   **
01110 **   H. Reminder  **
01120 **   E. Puetz     **
01130 **                **
01140 ** VERSION 1.00   **
01150 **                **
01160 *****
01170          .LI OFF
01180 ;
01190 DOSVEC = $0A
01200 ZPF0   = $F0
01210 ZPF1   = ZPF0+1
01220 INITAD = $2E2
01230 DDEVIC = $300
01240 HATABS = $31A
01250 SDBASE = $700
01260 SDKRNL = $703
```

```

01270 SDDEV = $761
01280 SDDATE = $77B
01290 SDTIME = SDDATE+3
01300 PORTB = $D301
01310 EDITRV = $E400
01320 SIOV = $E459
01330 VSETTD = $FFC3
01340 -----
01350         .OR $5000
01360         .OF D:S2UTIME.COM
01370 -----
01380 RETURN     RTS
01390 -----
01400 START
01410         JSR COUTINIT
01420         JSR BANNER
01430         JSR GETTIME
01440         BMI SIOERROR
01450         JSR TESTDATA
01460         JSR DETECTDOS
01470         JMP EXIT
01480 -----
01490 ERRORMSG
01500         JSR PRINT
01510         .HX FD ; Beep
01520         .AS "Error: "
01530         .HX EA
01540         RTS
01550 -----
01560 SIOERROR
01570         JSR ERRORMSG
01580         JSR PRINT
01590         .AS "during SIO Communication"
01600         .HX EA
01610         JMP EEXIT
01620 -----
01630 DATAERROR
01640         JSR ERRORMSG
01650         JSR PRINT
01660         .AS "wrong or incomplete data recieved"
01670         .HX EA
01680         JMP EEXIT
01690 -----
01700 EEXIT
01710         JSR PRINT
01720         .HX 9B
01730         .AS "Date/Time not set!"
01740         .HX 9BEA
01750         JMP TODOS
01760 -----
01770 BANNER
01780         JSR PRINT
01790         .AS "SIO2USB DATE/TIME UTILITY v1.0"
01800         .HX 9B
01810         .AS "(C) 2008 ABBUC/RAF"
01820         .HX 9BEA
01830         RTS
01840 -----
01850 DETECTDOS

```

```

01860         LDY #0
01870         LDA SDBASE,Y
01880         CMP #'S
01890         BNE ISREAL
01900         INY
01910         INY
01920         INY
01930         LDA SDBASE,Y
01940         CMP #'B
01950         BEQ BEWEDOS
01960 ; IS ORIGINAL SPARTADOS
01970         JSR PRINT
01980         .AS "Sparta DOS"
01990         .HX EA
02000         JSR DETECTED
02010         JMP SETTIME
02020 BEWEDOS
02030         JSR PRINT
02040         .AS "BW-DOS"
02050         .HX EA
02060         JSR DETECTED
02070         JSR PRINT
02080         .HX 9BEA
02090         JMP SETTIMEBW
02100 ISREAL
02110         CMP #'R
02120         BNE NOSPARTA
02130         JSR PRINT
02140         .AS "REALDOS"
02150         .HX EA
02160         JSR DETECTED
02170         JMP SETTIME
02180 NOSPARTA
02190         JSR PRINT
02200         .AS "No SPARTA compatible DOS"
02210         .HX EA
02220         JSR DETECTED
02230         LDA #$9B
02240         JSR COUT
02250         JMP EEXIT
02260 -----
02270 DETECTED
02280         JSR PRINT
02290         .AS " detected"
02300         .HX EA
02310         RTS
02320 -----
02330 COUTINIT
02340         LDY #$1E
02350 .1     LDA HATABS,Y
02360         CMP #'E
02370         BEQ .3
02380         DEY
02390         DEY
02400         DEY
02410         BPL .1
02420         JMP .2
02430 .3     LDA HATABS+1,Y
02440         STA ZPF0

```

```

02450          LDA HATABS+2,Y
02460          STA ZPF1
02470          LDY #7
02480          LDA (ZPF0),Y
02490          STA COUT2+1
02500          DEY
02510          LDA (ZPF0),Y
02520          STA COUT1+1
02530 .2       RTS
02540 -----
02550 COUT
02560          TAX
02570 COUT2    LDA #$F2
02580          PHA
02590 COUT1    LDA #$AF
02600          PHA
02610          TXA
02620          RTS
02630 -----
02640 PRINT
02650          PLA
02660          STA ZPF0
02670          PLA
02680          STA ZPF1
02690 .1       INC ZPF0
02700          BNE .2
02710          INC ZPF1
02720 .2       LDX #0
02730          LDA (ZPF0,X)
02740          CMP #$EA
02750          BEQ .3
02760          JSR COUT
02770          JMP .1
02780 .3       JMP (ZPF0)
02790 -----
02800 ISXL
02810          LDY #$1B
02820          LDA (DOSVEC),Y
02830          CMP #$FF
02840          BEQ .1
02850          JSR PRINT
02860          .AS " under ROM (XL/XE)"
02870          .HX 9BEA
02880          CLC
02890          RTS
02900 .1       JSR PRINT
02910          .AS " in main RAM"
02920          .HX 9BEA
02930          SEC
02940          RTS
02950 -----
02960 GETTIME
02970          LDX #$0B
02980 .1       LDA READRTC,X
02990          STA DDEVIC,X
03000          DEX
03010          BPL .1
03020          JMP SIOV
03030 -----

```

```

03040 TESTDATA
03050         LDA BUF
03060         CMP #6
03070         BNE .3
03080         LDA BUF+7
03090         CMP #$FF
03100         BEQ .2
03110 .3      JMP DATAERROR
03120 ; CONVERT BCD -> DEC
03130 .2      LDX #5
03140 .1      LDA BUF+1,X
03150         AND #$F0
03160         LSR
03170         LSR
03180         STA ZPF0
03190         LSR
03200         ADC ZPF0
03210         SBC BUF+1,X
03220         EOR #$FF
03230         STA BUF+1,X
03240         DEX
03250         BPL .1
03260 ;
03270         LDX #2
03280         LDY #$0F
03290 .4      LDA BUF+4,X
03300         STA (DOSVEC),Y
03310         DEY
03320         DEX
03330         BPL .4
03340 ;
03350         LDY #$10
03360         LDA BUF+3
03370         STA (DOSVEC),Y
03380         INY
03390         LDA BUF+2
03400         STA (DOSVEC),Y
03410         INY
03420         LDA BUF+1
03430         STA (DOSVEC),Y
03440         RTS
03450 -----
03460 SETTIME
03470         JSR ISXL
03480         LDA PORTB
03490         PHA
03500         AND #$FE
03510         STA PORTB
03520         JSR VSETTD
03530         PLA
03540         STA PORTB
03550         RTS
03560 -----
03570 SETTIMEBW
03580         JMP ($708)
03590 ; FALLTHROUGH
03600 -----
03610 EXIT
03620         JSR PRINT

```

```
03630          .AS "Date/Time set"
03640          .HX 9BEA
03650 ; FALLTHROUGH
03660 -----
03670 TODOS
03680          JMP (DOSVEC)
03690 -----
03700 READRTC
03710          .HX 71000240
03720          .DA BUF
03730          .HX 07008000
03740 -----
03750 BUF          .HX 00000000
03760          .HX 00000000
03770 -----
03780          .OR INITAD
03790          .DA START
03800 -----
```

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Stefan Haubenthal | 22.04.2008 at 03:13 PM Short optimization:

```
01900 INY 01910 INY 01920 INY 01930 LDA SDBASE,Y
```

```
01900 LDA SDKRNL,Y
```

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Carsten Strotmann | 25.04.2008 at 03:30 PM

Hello Stefan,

thanks for the patch. Sometimes I don't see the forrest because of the trees ;)

I'll change this in the next version (on VCFe in Munich this weekend). Also, the structure of the source can be optimized.

Also, I would like to detect the different configurations of SpartaDOS X (banked, osram, none)