

Superboard II Quick Reference

For the Briel Computers Superboard ///

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General Specifications	
CPU	65C02
Clock Speed	1 MHz
RAM	32 KB
ROM	10 KB
Keyboard	Integral 53-key
Video	Composite
Power Input	USB 5V host or power supply 1000mA or more
Serial Port Settings	9600 bps 8N1, no handshaking, no flow control

Memory Map

Address Range	Comments
\$0000 - \$00FF	Zero page RAM.
\$0100 - \$01FF	Stack RAM.
\$0000 - \$7FFF	RAM (32K Superboard ///).
\$A000 - \$BFFF	ROM (BASIC).
\$D085 - \$D39D	Video memory (25x25 mode).
\$D080 - \$D3FF	Video memory (32x28 mode).
\$DF00	Keyboard (write row, read column). Decimal 57088.
\$F000	6850 ACIA status/control register. Decimal 61440.
\$F001	6850 ACIA data register. Decimal 61441.
\$F800-\$FFFF	ROM (OSI routines and monitor).

ROM Monitor Commands

Display: AAAA DD

In address mode, enter 4 character hex address. In data mode, enter 2 character hex data.

"/" enters data mode.

"," enters address mode.

<Return> (in data mode) advances to next address.

"L" (in address mode) loads from cassette tape/serial port.

"G" (in address mode) starts execution from current address mode.

Useful Routines

Address	Description
\$000B,\$000C	Address to call get argument of USR() function. Value is returned in \$00AE,F.
\$000D	Number of NULLs to send as per BASIC NULL command.
\$000F	BASIC terminal width.
\$0064	BASIC <Control>O flag.
\$00FB	ROM monitor load flag(non-zero=load mode).
\$00FC	ROM monitor contents of current address.
\$00FE,\$00FF	ROM monitor current address.
\$0100	NMI address.
\$01C0	IRQ address.
\$0200	Cursor position for BASIC output is \$D300 +(\$0200). Default (bottom left) is \$65.
\$0203	LOAD flag (\$80=load from tape).
\$0205	SAVE flag (0=not in save mode). In BASIC, POKE 517,0 to turn off save mode
\$0212	BASIC <Control>C flag (non-zero=ignore <Control>C). Reset by RUN.
\$023E,\$023F	Address of BASIC USR() function.
\$A274	BASIC warm start.
\$BD11	BASIC cold start.
\$BF2D	Send character in A to terminal screen. Handles CR, LF, etc.
\$FCB1	Send character in A to ACIA.
\$FD00	Get key from keyboard and return in A.
\$FE00	ROM monitor entry point.
\$FE80	Get character from ACIA and return in A.
\$FEED	Calls \$FD00.
\$FF00	Reset address.
\$FF69	Output character to screen via \$BF2D, and if SAVE flag is non-zero, also to serial/tape.
\$FFBA	Get key from keyboard, or if LOAD flag has high bit set, from serial/tape.
\$FFEB	BASIC input routine. Via vector in \$0218,9 calls \$FFBA.
\$FFEE	BASIC output routine. Via vector in \$021A,B calls \$FF69.
\$FFFA,\$FFFC	NMI vector.
\$FFFC,\$FFFD	Reset vector.
\$FFFE,\$FFFF	IRQ vector.

Microsoft BASIC

Commands: CONT, LIST, NEW, NULL, RUN

Statements: CLEAR, DATA, DEF, DIM, END, FN, FOR, GOSUB, GOTO, IF, INPUT, LET, LOAD, NEXT, NOT, NULL, ON, OR, POKE, PRINT, READ, REM, RESTORE, RETURN, SAVE, STEP, STOP, THEN, TO, WAIT, ?

Functions: ABS(), ASC(), ATN(), CHR\$(), COS(), EXP(), FRE(), INT(), LEFT\$(), LEN(), LOG(), MID\$(), PEEK(), POS(), RIGHT\$, RND(), SGN(), SIN(), SPC(), SQR(), STR\$, TAB(), TAN(), USR(), VAL()

Operators: +, -, *, /, ^, NOT, AND, OR, =, <, >, <>, >=, <=

Editing:

<Shift>N	^ character	<Shift>+O	Erase last character
<Shift>+P	Erase current line	<Control>+C	Interrupt running program or LIST command
<Control>+O	Suspend output until typed again		

Boot Prompt

D/C/W/M ?_

- ROM Monitor
- Warm start (does not clear any BASIC program)
- Cold start (clears any BASIC program)
- Disk boot (requires disk controller)

Miscellaneous

Default video is 25 chars x 25 lines. Power on with BREAK key down to get 32 chars x 28 lines. BASIC always uses 24x24.

Serial Port protocol: 9600 bps, 8N1, no flow control or hardware handshaking. For BASIC, use 50ms char delay, 200ms line delay.

Sample Linux commands to initialize serial port and send file:

```
stty -hup -clocal raw 9600 </dev/ttyUSB0
ascii-xfr -s -l 200 -c 50 program.bas >/dev/ttyUSB0
```


