BASCOM-AVR

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BASCOM-AVR1© is a **Windows BASIC COMPILER** for the **AVR** family**.**
It is designed to run on **W95/W98/NT**

Key Benefits

- Structured **BASIC** with labels.
- Structured programming with IF-THEN-ELSE-END IF, DO-LOOP, WHILE-WEND, SELECT- CASE.
- Fast machine code instead of interpreted code.
- Variables and labels can be as long as 32 characters.
- Bit, Byte, Integer, Word, Long, Single and String variables.
- Compiled programs work with all AVR microprocessors that have internal memory.
- Statements are highly compatible with Microsoft's VB/QB.
- Special commands for **LCD**-displays , **I2C** chips and **1WIRE** chips, PC keyboad, matrix keyboad, **RC5** reception, software UART, SPI.
- Local variables, user functions, library support.
- Integrated terminal emulator with download option..
- Integrated simulator for testing.
- Integrated ISP programmer (application note AVR910.ASM).
- Integrated STK200 programmer and STK300 programmer. Also supported is the low cost Sample Electronics programmer. Can be built in 10 minutes!
- Editor with statement highlighting.
- Context sensitive help.
- Perfectly matches the DT006 SimmStick
- DEMO version compiles 2KB of code. Well suited for the AT2313.
- English an German Books available

The following statements are supported (actually there are more look in the helpfile):

Decision and structures
IF, THEN, ELSE, ELSEIF, END IF, DO, LOOP, WHILE, WEND, UNTIL, EXIT DO, EXIT WHILE, FOR, NEXT, TO, DOWNTO, STEP, EXIT FOR, ON .. GOTO/GOSUB, SELECT, CASE.

Input and output
PRINT, INPUT, INKEY, PRINT, INPUTHEX, LCD, UPPERLINE, LOWERLINE,DISPLAY

ON/OFF, CURSOR ON/OFF/BLINK/NOBLINK, HOME, LOCATE, SHIFTLCD LEFT/RIGHT, SHIFTCURSOR LEFT/RIGHT, CLS, DEFLCDCHAR, WAITKEY, INPUTBIN, PRINTBIN, OPEN, CLOSE, DEBOUNCE, SHIFTIN, SHIFTOUT, GETATKBD

Numeric functions
AND, OR, XOR, INC, DEC, MOD, NOT, ABS, BCD, LOG, EXP, SQR, SIN,COS,TAN,EXP.

I2C
I2CSTART, I2CSTOP, I2CWBYTE, I2CRBYTE, I2CSEND and I2CRECEIVE.

1WIRE
1WWRITE, 1WREAD, 1WRESET, 1WIRECOUNT, 1WSEARCHFIRST, 1WSEARCHNEXT.

SPI
SPIINIT, SPIIN, SPIOUT, SPIMOVE.

Interrupt programming
ON INT0/INT1/TIMER0/TIMER1/SERIAL, RETURN, ENABLE, DISABLE, COUNTERx, CAPTUREx, INTERRUPTS, CONFIG, START, LOAD.

Bit manipulation
SET, RESET, ROTATE, SHIFT, BITWAIT, TOGGLE.

Variables
DIM, BIT , BYTE , INTEGER , WORD, LONG, SINGLE, STRING , DEFBIT, DEFBYTE, DEFINT, DEFWORD.

Miscellaneous
REM, ' , SWAP, END, STOP, CONST, DELAY, WAIT, WAITMS, GOTO, GOSUB, POWERDOWN, IDLE, DECLARE, CALL, SUB, END SUB, MAKEDEC, MAKEBCD, INP,OUT, ALIAS, DIM , ERASE, DATA, READ, RESTORE, INCR, DECR, PEEK, POKE, CPEEK, FUNCTION, READMAGCARD, SPC.

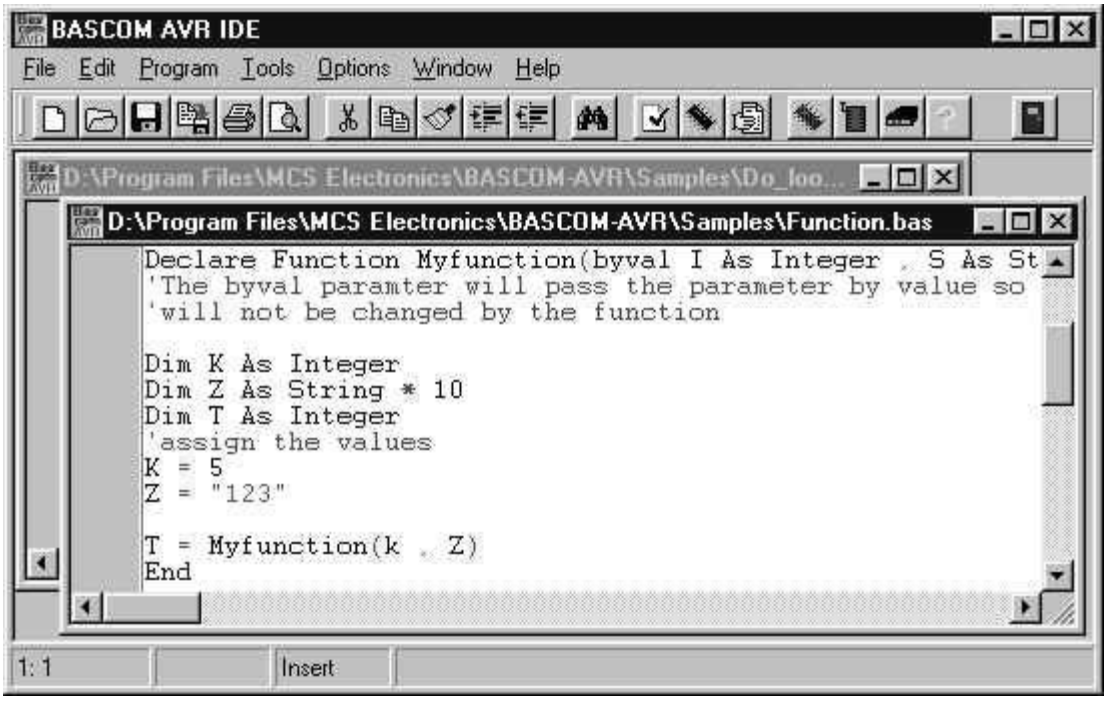
Compiler directives
$INCLUDE, $BAUD and $CRYSTAL, $SERIALINPUT, $SERIALOUTPUT, $RAMSIZE, $RAMSTART, $DEFAULT XRAM, $ASM-$END ASM, $LCD, $EXTERNAL, $LIB.

String manipulation
STRING, SPACE, LEFT, RIGHT, MID, VAL, HEXVAL, LEN, STR, HEX, LTRIM, RTRIM, TRIM, LCASE, UCASE, FORMAT, FUSING, INSTR.

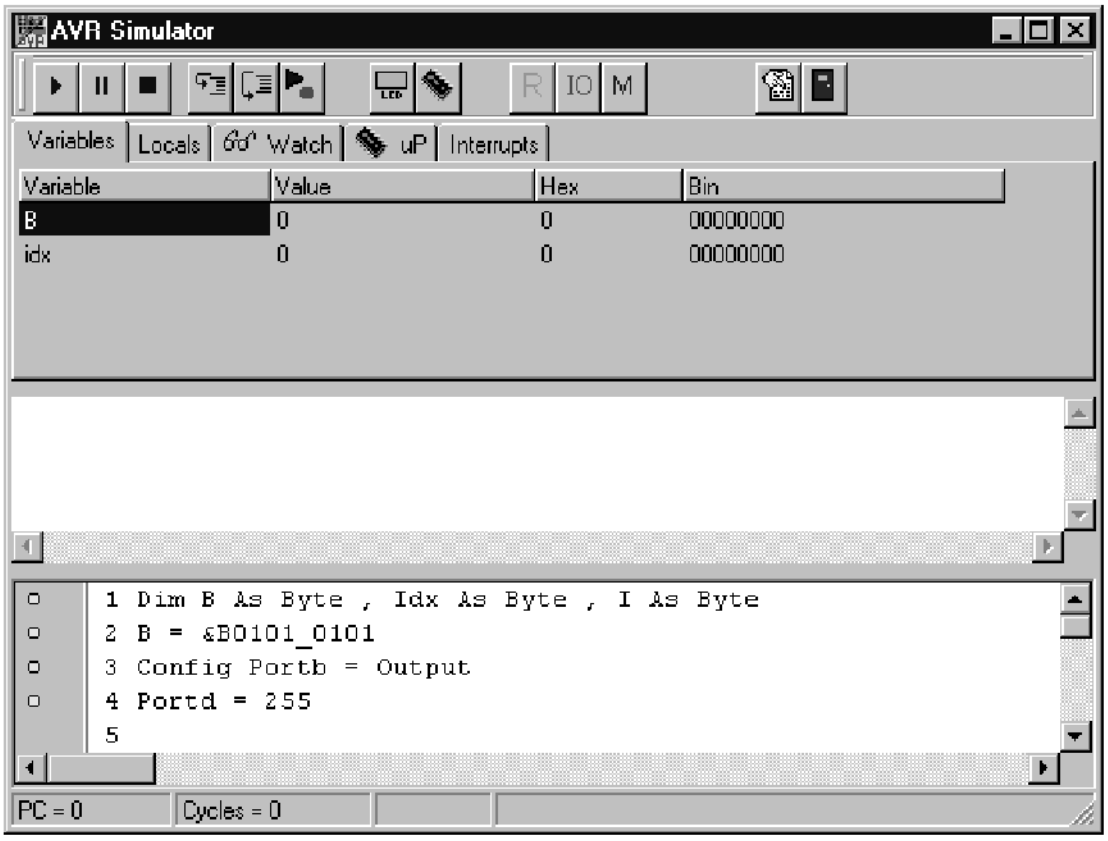
To make a program takes just a few steps :

- **Write the program in BASIC**
- **Compile it to fast machine binary code**
- **Test the result with the integrated simulator(with additional hardware you can simulate the hardware too).**
- **Program the chip with one of the integrated programmers.**
  (hardware must be purchased separately)

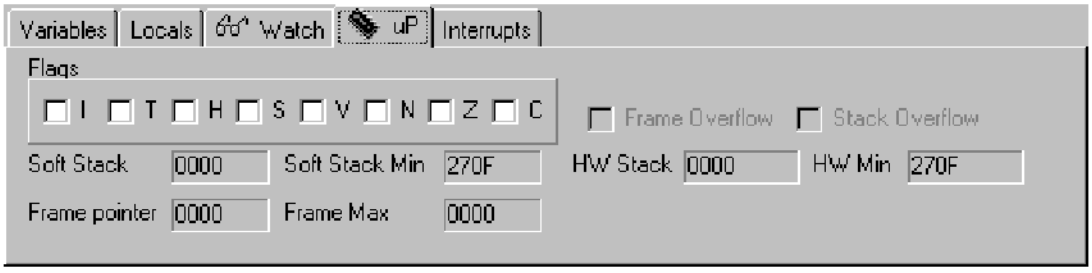
The program can be written in a comfortable MDI color coded editor. Besides the normal editing features, the editor supports Undo, Redo, Bookmarks and block indention.



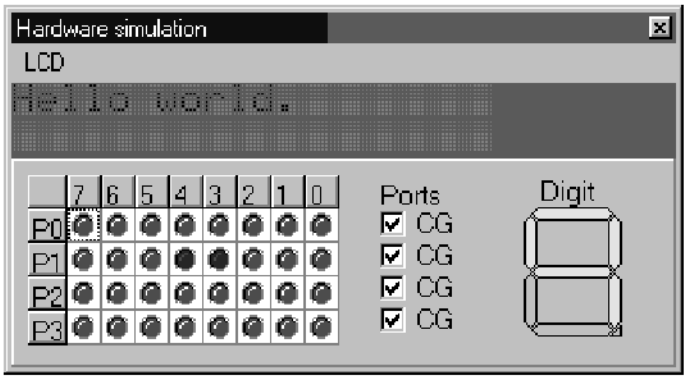
The simulator let you test your program before writing it to the uP. You can watch variables, step through the program one line at the time or run to a specific line,
or you can alter variables.
To watch a variables value you can also point the mouse cursor over it.



uP TAB of simulator

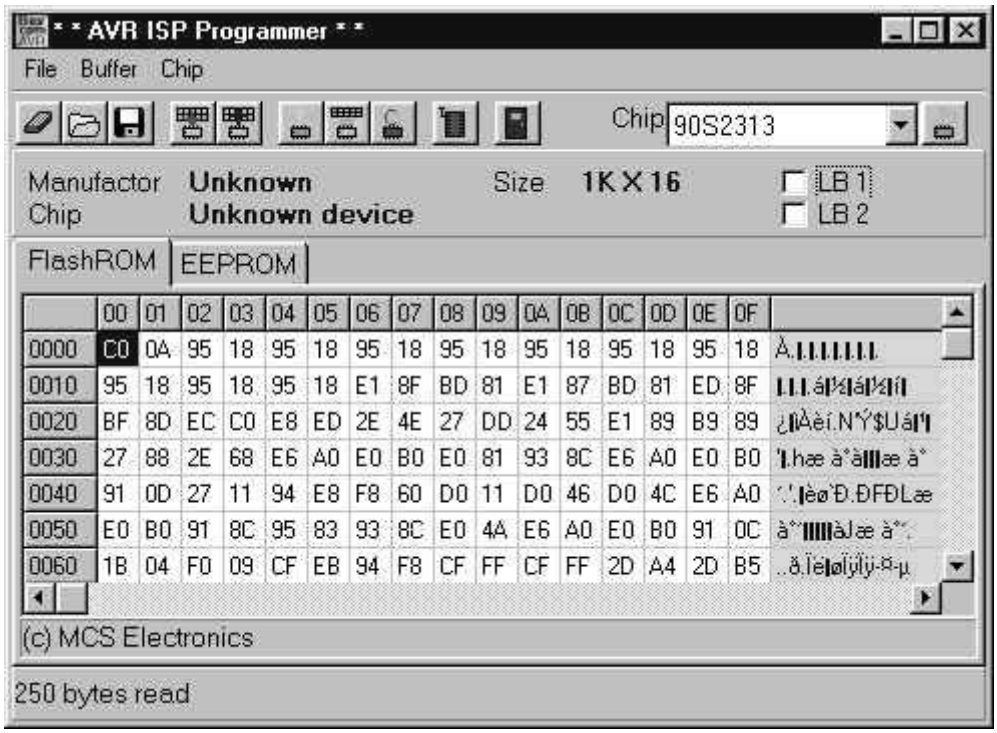


A powerful feature is the hardware emulator, to emulate the LCD display, and the ports.
The LCD emulator also emulates custom build LCD characters!



You can even simulate the hardware ports with the special basmon monitor program!

When you are done with the simulator it is time to program the chip using one of the supported programmer drivers.



The program, documentation and samples are in English.
A printed manual can be purchased separately.(not available yet)

Pricing

Description	SKU #
BASCOM-AVR	BSCAVR
BASCOM-AVR cross upgrade for BASCOM users. Serialnumber required.	BSCAVRB

Availability

BASCOM-AVR is available NOW.
BASCOM-LT and BASCOM-8051 users can order the cross upgrade BSCAVRB.
Your serialnumber is required for this.

Standard & Prof. Edition

There can be some confusion about this subject. There will only be one edition: BASCOM-AVR or BASCOM-AVR Standard Edition.
It will have all features that were intended for the prof. edition. But these features will be added step by step since implementing and testing them needs time.

Join the BASCOM listserver :
http://www.mcselec.bascom.htm

or look in the archive : http://www.grote.net/bascom/index.html

Send mail to mark@mcselec.com with questions or comments about this web site.
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