

BASCOM-8051

BASCOM-8051© is the Windows BASIC COMPILER for the 8051 family. It is designed to run on W95/W98/NT/W2000 and XP.

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 any 8051 uP such as AT89C1051, AT89C2051, 8031, 8032, 8051, 8052, 80552, 80535 and 80537 m Processors.
- Statements are highly compatible with Microsoft's VB/QB.
- Special commands for LCD-displays , I2C chips and 1WIRE chips.
- Integrated terminal emulator with download option.
- Integrated simulator for testing.
- Integrated flash programmer and support for SPI, PG2051, PG302, SE512, SE514, TAFE. (hardware can be purchased separately)
- Editor with statement highlighting.
- Context sensitive help.

The following statements are supported:

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, PRINTEX, 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, LCDHEX, OPEN, CLOSE, DEBOUNCE, SHIF TIN, SHIF TOUT.

Numeric functions

AND, OR, XOR, INC, DEC, MOD, NOT, ABS, BCD.

I2C

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

1WIRE

1WWRITE, 1WREAD, 1WRESET.

SPI

SPIINIT, SPIIN, SPIOUT.

Interrupt programming

ON INTO/INT1/TIMER0/TIMER1/SERIAL, RETURN, ENABLE, DISABLE, PRIORITY SET/RESET, COUNTERx, CAPTUREx, INTERRUPTS, CONFIG, START, LOAD.

Bit manipulation

SET, RESET, ROTATE, BITWAIT.

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, GETRC5.

Compiler directives

\$INCLUDE, \$NOINIT, \$BAUD and \$CRYSTAL, \$OBJ, \$SERIALINPUT, \$SERIALOUTPUT, \$ROMSTART, \$RAMSIZE, \$RAMSTART, \$MONSTART, \$IRAMSTART, \$DEFAULT XRAM, \$ASM-\$END ASM, \$LCD.

Conditional compilation

#IF, #ELSE, #ENDIF

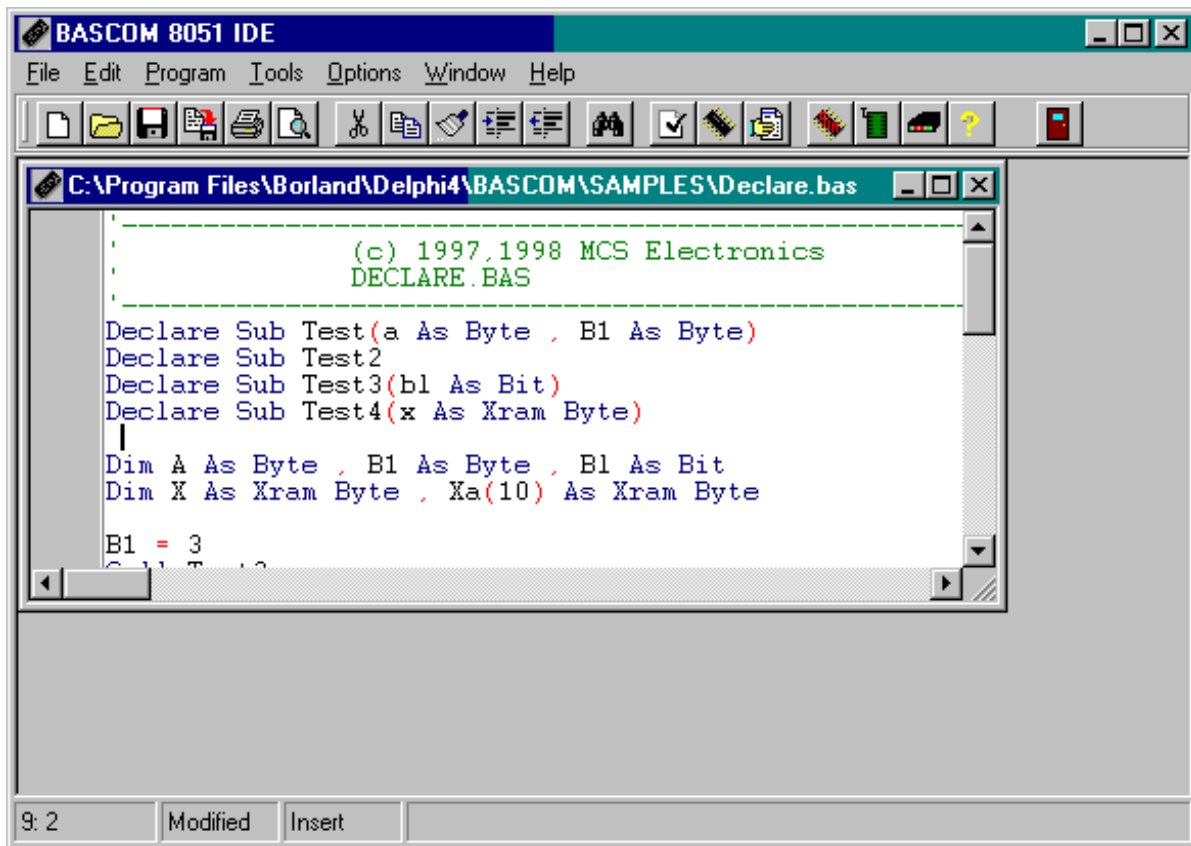
String manipulation

STRING, SPACE, LEFT, RIGHT, MID, VAL, HEXVAL, LEN, STR, HEX, LCASE, UCASE

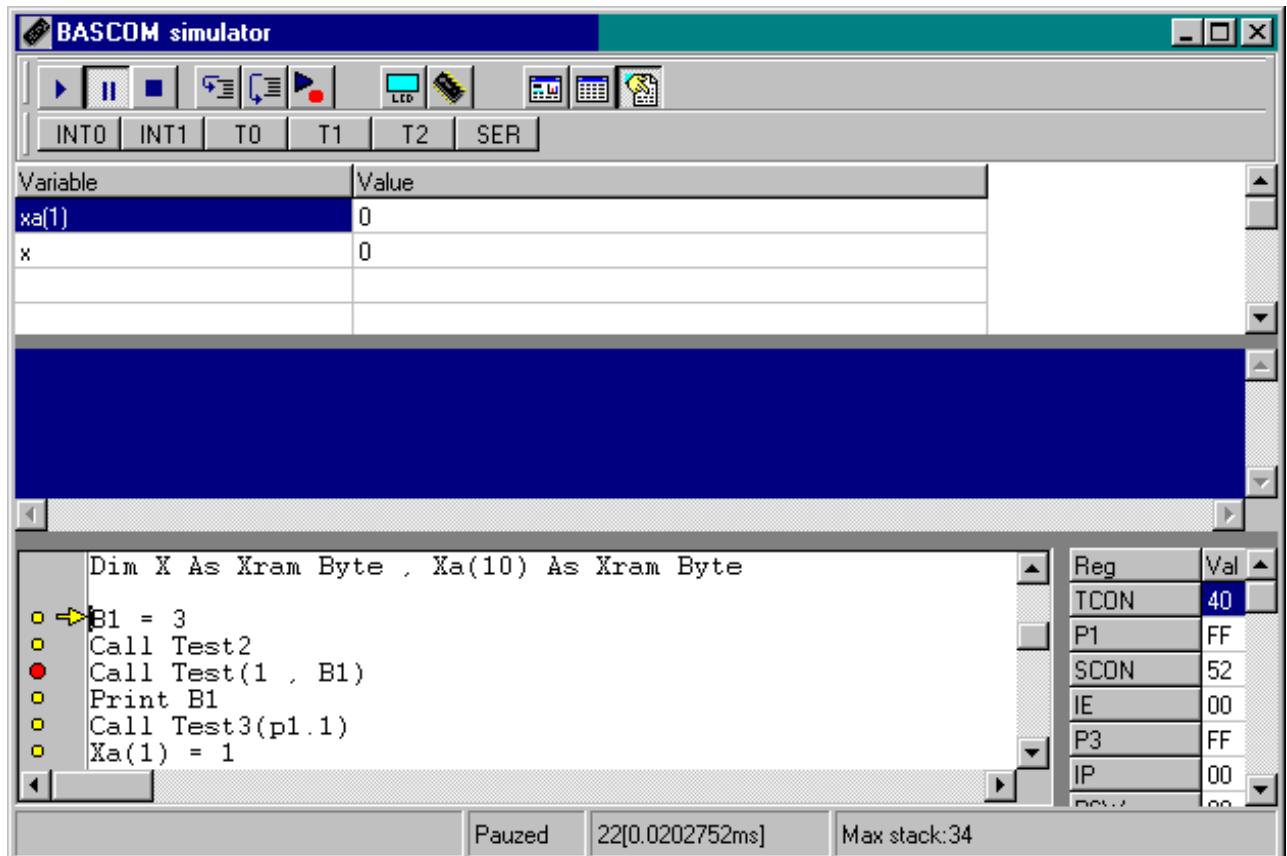
To make a program takes just a few steps:

- 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.

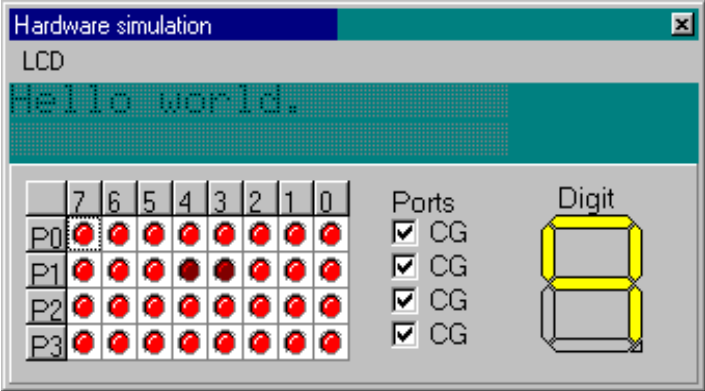


The simulator let you test your program before writing it to the uP. You can watch variables, step through the program one line at the time or run to a specific line, or you can alter variables. To watch a variables value you can also point the mouse cursor over it.



A powerful feature is the hardware emulator, to emulate the LCD display, and the ports.

The LCD emulator also emulates custom build LCD characters.



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

