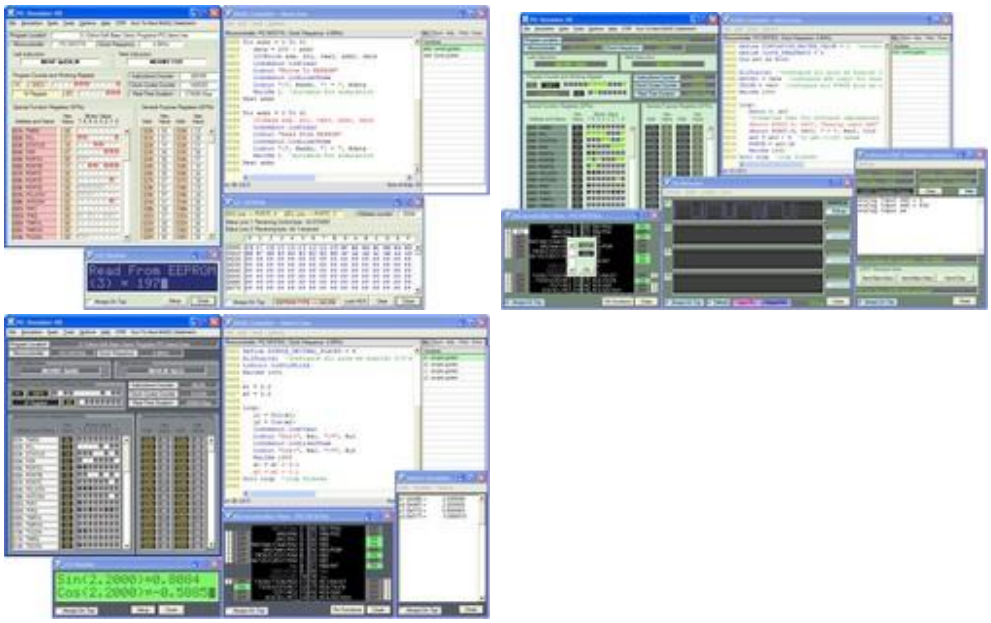
PIC SIMULATOR IDE

(with pic basic compiler)

HOMEPAGE

PIC Simulator IDE is powerful application that supplies Microchip microcontroller users with user-friendly graphical development environment for Windows with integrated simulator (emulator), pic basic compiler, assembler, disassembler and debugger. PIC Simulator IDE supports the extensive number of microcontrollers (MCUs) from the **Microchip 8-bit PIC Mid-Range architecture** product line (selected PIC16F, PIC12F, PIC10F models).

SCREENSHOTS



You are welcome to download the fully functional evaluation copy of the software on the downloads page. PIC Simulator IDE requires a license to operate after the evaluation period. For more information please visit the licenses page.

PIC Simulator IDE main features:
- Main simulation interface showing internal microcontroller architecture,
- FLASH program memory editor, EEPROM data memory editor, hardware stack editor,
- Microcontroller pinout interface for simulation of digital I/O and analog inputs,
- Variable simulation rate, simulation statistics,
- Breakpoints manager for code debugging with breakpoints support,
- PIC assembler, interactive assembler editor for beginners, PIC disassembler,
- Powerful PIC Basic compiler with smart Basic source editor,
- PIC Basic compiler features: three basic integer data types (1-bit, 1-byte, 2-byte), 4-byte (32-bit) long integer data type with 32-bit arithmetics, 4-byte (32-bit) single precision floating point data type with single precision math functions, arrays, string data type with extensive set of string related functions, all standard Basic language elements, support for structured language (procedures and functions), Modbus master/slave implementation support, interfacing MMC/SD/SDSC/SDHC cards implementation (with

FAT16 file system support and FAT32 file system support), high level language support for using internal EEPROM memory, using internal A/D converter module, using interrupts, serial communication using internal hardware UART, software UART implementation, I2C communication with external I2C devices, Serial Peripheral Interface (SPI) communication, interfacing character LCDs, interfacing graphical LCDs with 128x64 dot matrix, R/C servos, stepper motor control, 1-Wire devices, DS18S20, using internal PWM modules, ...
- PIC Basic Compiler Library Support - more info,
- Configuration bits editor,
- PC's serial port terminal for communication with real devices connected to serial port,
- LCD module simulation interface for character LCD modules,
- Graphical LCD module simulation interface for 128x64 graphical LCD modules,
- Stepper motor phase simulation interface for stepper motor driving visualization,
- Simulation module for external I2C EEPROMs from 24C family,
- Hardware UART simulation interface,
- Software UART simulation interface for software implemented UART routines,
- Oscilloscope (with Zoom feature) and signal generator simulation tools,
- 7-segment LED displays simulation interface,
- DS18S20/DS18B20 digital thermometer simulation tool,
- Modbus simulation device tool (master/slave),
- Support for external simulation modules,
- Extensive program options, color themes, ...

You can direct further OshonSoft.com software development - quote microcontroller models you would like to see supported by OshonSoft.com software HERE

PIC Simulator IDE supports the following microcontrollers (MCUs) from the **Microchip 8-bit PIC Mid-Range architecture** product line (selected PIC16F, PIC12F, PIC10F models):
PIC10F320, PIC10F322, PIC12F609, PIC12F615, PIC12F617, PIC12F629, PIC12F635, PIC12F675, PIC12F683, PIC12F752, PIC16F72, PIC16F73, PIC16F74, PIC16F76, PIC16F77, PIC16F83, PIC16F84, PIC16F84A, PIC16F87, PIC16F88, PIC16F610, PIC16F616, PIC16F627, PIC16F627A, PIC16F628, PIC16F628A, PIC16F630, PIC16F631, PIC16F636, PIC16F639, PIC16F648A, PIC16F676, PIC16F677, PIC16F684, PIC16F685, PIC16F687, PIC16F688, PIC16F689, PIC16F690, PIC16F707, PIC16F716, PIC16F720, PIC16F721, PIC16F722, PIC16F722A, PIC16F723, PIC16F723A, PIC16F724, PIC16F726, PIC16F727, PIC16F737, PIC16F747, PIC16F753, PIC16F767, PIC16F777, PIC16F785, PIC16F818, PIC16F819, PIC16F870, PIC16F871, PIC16F872, PIC16F873, PIC16F873A, PIC16F874, PIC16F874A, PIC16F876, PIC16F876A, PIC16F877, PIC16F877A, PIC16F882, PIC16F883, PIC16F884, PIC16F886, PIC16F887, PIC16F913, PIC16F914, PIC16F916, PIC16F917, PIC16F946.

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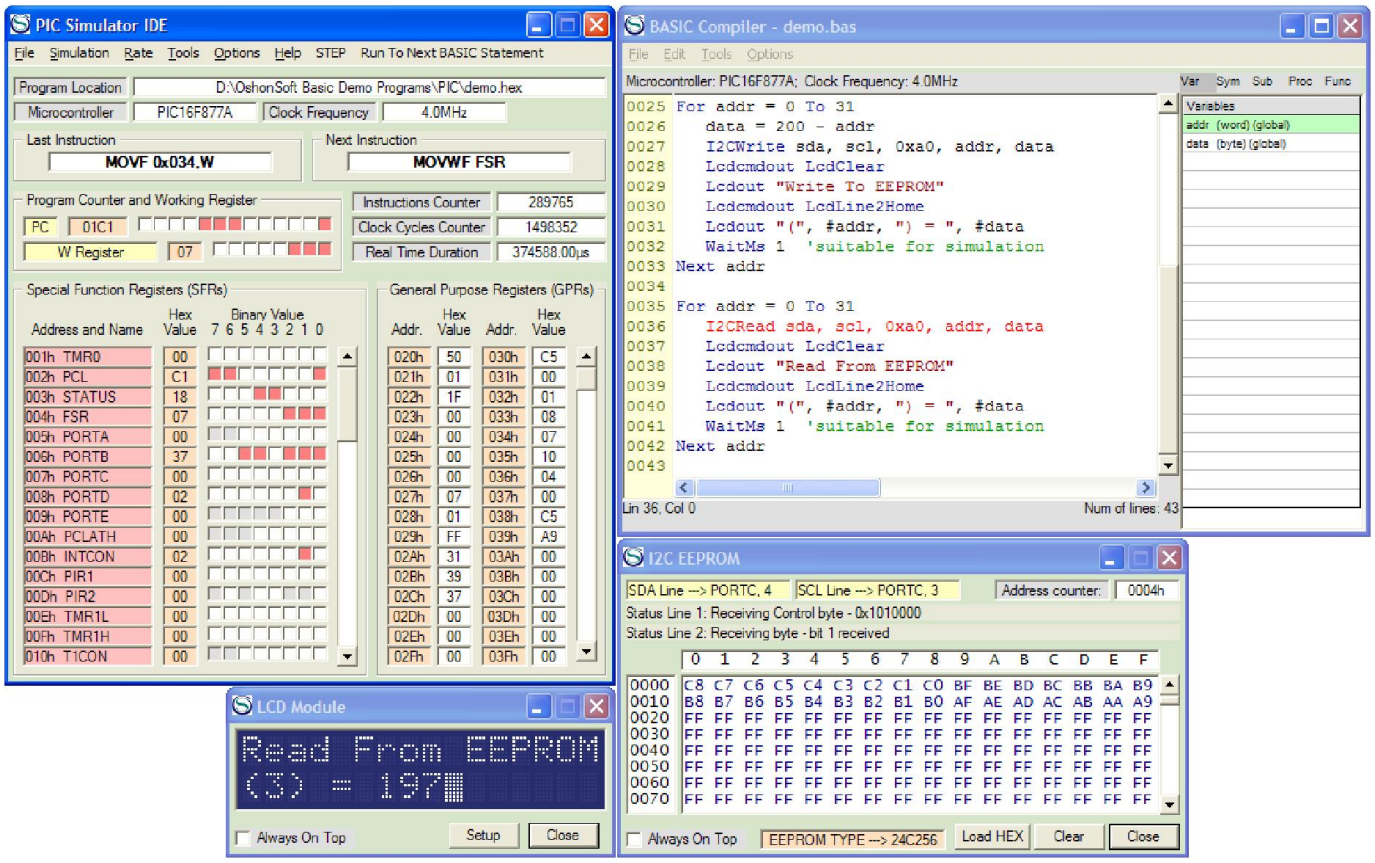
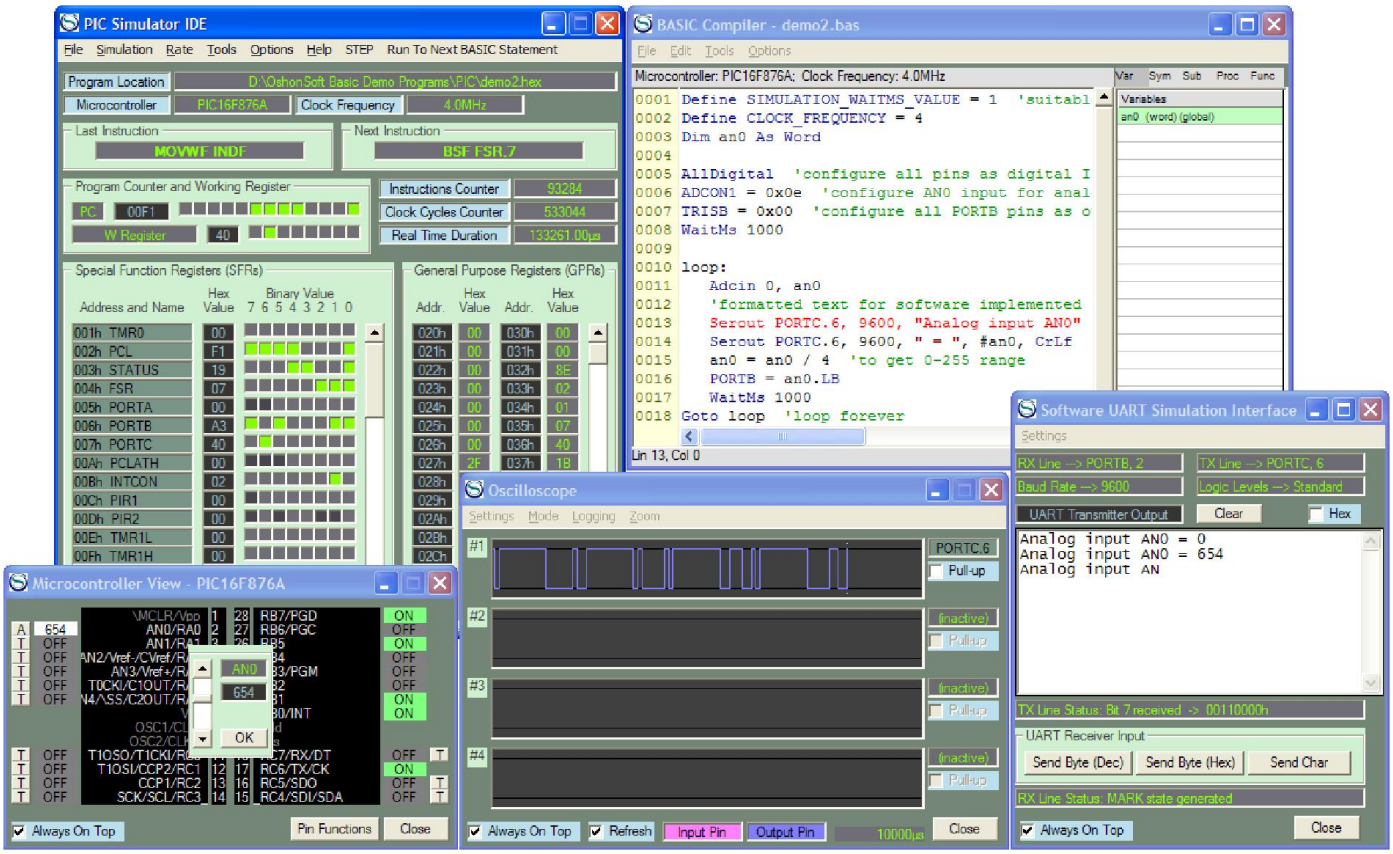
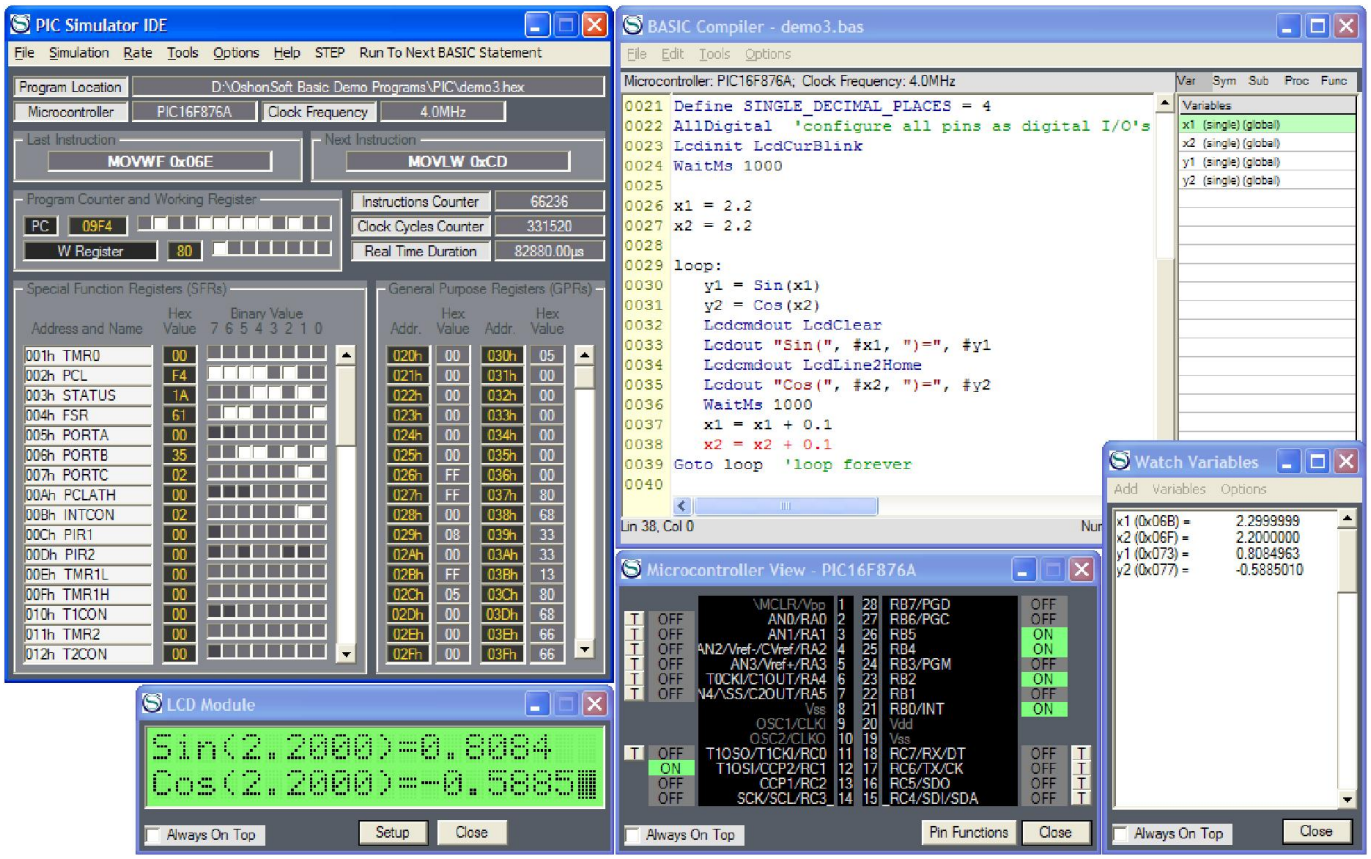


Another screenshot (with color theme):



Yet another screenshot (with color theme):


PIC Simulator IDE
File Simulation Rate Tools Options Help STEP Run To Next BASIC Statement
Program Location
D:\OshonSoft Basic Demo Programs\PIC\demo3.hex
Microcontroller
PIC16F876A
Clock Frequency
4.0MHz
Last Instruction
MOVWF 0x06E
Next Instruction
MOVLW 0xCD
Program Counter and Working Register
PC
09F4
W Register
80
Instructions Counter
66236
Clock Cycles Counter
331520
Real Time Duration
82880.00µs
Special Function Registers (SFRs)
Address and Name
Hex Value
Binary Value 7 6 5 4 3 2 1 0
001h TMR0 00
002h PCL F4
003h STATUS 1A
004h FSR 61
005h PORTA 00
006h PORTB 35
007h PORTC 02
00Ah PCLATH 00
00Bh INTCON 02
00Ch PIR1 00
00Dh PIR2 00
00Eh TMR1L 00
00Fh TMR1H 00
010h T1CON 00
011h TMR2 00
012h T2CON 00
General Purpose Registers (GPRs)
Addr. Hex Value Addr. Hex Value
020h 00 030h 05
021h 00 031h 00
022h 00 032h 00
023h 00 033h 00
024h 00 034h 00
025h 00 035h 00
026h FF 036h 00
027h FF 037h 80
028h 00 038h 68
029h 08 039h 33
02Ah 00 03Ah 33
02Bh FF 03Bh 13
02Ch 05 03Ch 80
02Dh 00 03Dh 68
02Eh 00 03Eh 66
02Fh 00 03Fh 66
BASIC Compiler - demo3.bas
File Edit Tools Options
Microcontroller: PIC16F876A; Clock Frequency: 4.0MHz
Var Sym Sub Proc Func
Variables
x1 (single) (global)
x2 (single) (global)
y1 (single) (global)
y2 (single) (global)
0021 Define SINGLE_DECIMAL_PLACES = 4
0022 AllDigital 'configure all pins as digital I/O's
0023 Lcdinit LcdCurBlink
0024 WaitMs 1000
0025
0026 x1 = 2.2
0027 x2 = 2.2
0028
0029 loop:
0030 y1 = Sin(x1)
0031 y2 = Cos(x2)
0032 Lcdcmdout LcdClear
0033 Lcdout "Sin(", #x1, ")=", #y1
0034 Lcdcmdout LcdLine2Home
0035 Lcdout "Cos(", #x2, ")=", #y2
0036 WaitMs 1000
0037 x1 = x1 + 0.1
0038 x2 = x2 + 0.1
0039 Goto loop 'loop forever
0040
Lin 38, Col 0
Watch Variables
Add Variables Options
x1 (0x06B) = 2.2999999
x2 (0x06F) = 2.2000000
y1 (0x073) = 0.8084963
y2 (0x077) = -0.5885010
Always On Top
Close
Microcontroller View - PIC16F876A
\MCLR/Vpp 1 28 RB7/PGD
AN0/RA0 2 27 RB6/PGC
AN1/RA1 3 26 RB5
AN2/Vref-/CVref/RA2 4 25 RB4
AN3/Vref+/RA3 5 24 RB3/PGM
T0CKI/C1OUT/RA4 6 23 RB2
N4/SS/C2OUT/RA5 7 22 RB1
Vss 8 21 RB0/INT
OSC1/CLKI 9 20 Vdd
OSC2/CLKO 10 19 Vss
T1OSO/T1CKI/RC0 11 18 RC7/RX/DT
T1OSI/CCP2/RC1 12 17 RC6/TX/CK
CCP1/RC2 13 16 RC5/SDO
SCK/SCL/RC3 14 15 RC4/SDI/SDA
Always On Top
Pin Functions
Close
LCD Module
Sin(2.2000)=0.8084
Cos(2.2000)=-0.5885
Always On Top
Setup
Close