

PIC10F Simulator IDE

Getting Started

This presentation will help you to test the included DEMO.BAS example and in that way get acquainted with the most frequently used features of PIC10F Simulator IDE.

EXAMPLE 1

- Examine demo.bas file from the application folder. This program reads analog value on AN0 analog input and sends formatted output to an external device using software implemented serial communication. File demo.asm was generated using integrated Basic compiler. File demo.hex was generated using integrated assembler.

```
Define CONF_WORD = 0x00a
Define CLOCK_FREQUENCY = 4
Define OSCCAL_VALUE = 0xfe

Define SEROUT_REG = GPIO
Define SEROUT_BIT = 1
Define SEROUT_BAUD = 9600

Dim an0 As Byte
Dim i As Byte

ADCON0.ANS1 = 0 'setup GP1 pin for digital purposes

loop:
  Adcin 0, an0
  Serout "Analog value AN0 = "
  i = an0 / 100 'get number of 100s in AN0
  an0 = an0 Mod 100
  i = i + 48 'to get an ascii value of I
  Serout i
  i = an0 / 10
  i = i + 48
  Serout i
  i = an0 Mod 10
  i = i + 48
  Serout i, CrLf
  WaitMs 1
Goto loop
```

- Start PIC10F Simulator IDE.
- Click on Options>Select Microcontroller.
- Select 'PIC10F222' and click on Select button.
- Click on Tools\BASIC Compiler
- Click on File\Open
- Select demo.bas file and click on Open. The basic source program will be displayed in the editor.
- Click on Tools\Compile & Assemble & Load. The compiler will generate demo.asm file with assembler source. The integrated assembler will assemble that file and make demo.lst and demo.hex files. Demo.hex file will be loaded into the simulator program memory.
- Select the option Compact Microcontroller View from the Options menu.
- Click on Tools\Microcontroller View. That will open the Microcontroller View window.
- Click on Tools\Software UART Simulation Interface.
- On the opened window click on TX Line label and select GPIO.1 pin.
- With similar procedure select GPIO.2 pin for the RX Line and 9600 for the baud rate.
- Click on Tools\Oscilloscope. That will open the four channel digital oscilloscope window.
- Select Fast mode from the Mode menu.
- Click on Settings\Turn On/Off Oscilloscope Channel 1.
- Select GPIO.1 and then click on Select.
- Reposition the windows on the screen to get better view. If needed use Always On Top option on the windows.
- Select the Rate\Extremely Fast simulation rate.

