

# LCD Menu Module - Sample Program

## Running the Sample Program

### 1. Modify LCD.bas

The Menu module needs an extra sub to be added to the LCD module provided with Swordfish. This new sub allows Const strings to be written to the LCD. The file "LCD.bas" provided in the ZIP file has already been modified and can be placed straight into the UserLibrary folder of Swordfish.

If you would rather modify LCD.bas yourself then the following code should be placed after the "WriteAt" sub in the module LCD.bas:

```
Public Sub WriteConstStringAt(pY, pX As Byte, ByRefConst pText As String)

    SetLocationY(pY)
    SetLocationX(pX)
    MoveTo()

    EECON1 = 0
    EECON1.7 = 1

    TABLEPTR = @pText

    ASM
        TBLRD*+
    End ASM

    While TABLAT <> 0

        WriteItem(TABLAT)

        ASM
            TBLRD*+
        End ASM

    Wend

End Sub
```

The modified module should then be saved in the UserLibrary folder with the filename "LCD.bas".

### 2. Copy Other Files

Copy the files "Menu.bas" and "SampleDataModule.bas" into your UserLibrary folder.

### 3. Connect The Circuit

The sample program is written for a PIC18F2520 at 20MHz and uses the following hardware:  
(see over for circuit diagram)

Item	PIC Connection	Notes
4 Line Character LCD	Data: PortA.0 - 3 RS: PortA.4 EN: PortA.5	
LED	PortB.0	LED 1
LED	PortB.1	LED 2
Push button	PortB.4	"Up" button
Push button	PortB.5	"Down" button
Push button	PortB.6	"Select" button

### 4. Open Sample Program

Open the sample program - "MenuModuleSample.bas". Compile, program and you should see the Main Menu displayed on the LCD. Navigate the menu by pressing the "Up", "Down" and "Select" buttons.

# Circuit Diagram

