Since version mios_v1_5b MIOS has supported 4-bit mode for HD44780 compatible displays

Usually this mode isn't needed, but some displays have been internally configured for 4-bit operation and don't have all the necessary connections for full 8-bit operation or You might have some other reason to try this mode out.

To configure MIOS application to use 4-bit CLCD mode, changes need to be made to the application:

First locate
'**USER_Init**' section of the source files [1)]

Then add to its own section just below the 'USER_Init' [2)]:

;; use a CLCD, E input of first CLCD at D.7, E of second CLCD @C.4

```
     ;; using the 4-bit interface:
     ;; -> connect MBHP_CORE:J15:D7-D4 of the core module to D7-D4 of the
LCD
     ;; -> left MBHP_CORE:J15:D3-D0 of the core module open!
     ;; -> tie D3-D0 of the LCD to ground
     movlw   0x37 | 0x80     ; E1: D.7, 4bit interface
     movwf   MIOS_PARAMETER1
     movlw   0x24 | 0x80     ; E2: C.4, 4bit interface
     movwf   MIOS_PARAMETER2
     movlw   0x00            ; LCD type 0
     call    MIOS_LCD_TypeSet''
```

Then you have to Compile the modified application.

See the comments [3)] in the code for how to connect the display to the core. In the display side, having the datasheet for it helps a lot.

More: MIOS function reference

1)
usually in 'main.asm', in MB_SID 'sid_init.inc'
2)
Don't add it in between the initialization commands or you can break something this way
3)
marked with ;; in the beginning of the line

From:
https://wiki.midibox.org/ - **MIDIbox**

Permanent link:
https://wiki.midibox.org/doku.php?id=4-bit_mode&rev=1160904901

Last update: **2007/11/17 17:21**