FW06-LCDCSTM: Routine For Custom LCD Characters

Description

LCDCSTM.INC is a routine that defines 8 5x7 pixel characters for display on a character based LCD display module.

What's Included

LCDCSTM.INC	**The custom char. routine**
LCD_16.INC	LCD interface routines
CSTM_DEM.ASM	Custom Char. Demo PGM
WAIT.INC	1mS delay routine
P16F84.INC	PIC16F84 definitions
CSTM_DEM.HEX	Assembled demo program

Operation/Usage

This routine requires LCD_16.INC. The LCD module must be initialized by calling **LCDCSTM** prior to calling **LCDCSTM**. Refer to the following:

```
CALL       LCDINIT        ; initialize LCD
CALL       LCDCSTM        ; define cstm chars.
```

The first line initializes the LCD module and the second line defines the custom characters (**LCDINIT** is found in **LCD_16.INC**).

To display a custom character, use 0x00 – 0x07 instead of ASCII codes for the 8 custom characters.

Usage:

```
MOVLW      0x00           ; 1st custom char.
CALL       LCDOUT         ; send to LCD
```

To define your characters, edit the 8 bit patterns in **LCDCSTM.INC**. Refer to the following:

```
00011111
00011111        Each '1' will generate a 'on' pixel
00011111
00011111        Only put 1's in the 5 LSBs (char.
00011111        is 5x7 bits).
00011111
00011111        Leave the last line all zeros for a
00000000        5x7 character
```

The above pattern would generate a solid on bar 5 pixels wide and 7 pixels high.

Testing

We wrote CSTM_DEM.ASM to demonstrate the usage of LCDCSTM.INC. CSTM_DEM.ASM is intended for usage with a 2x16 character LCD display module with pin/signal assignments as defined in LCD_16.INC.

This program displays our company name using regular ASCII characters surrounded by a couple of smiley faces which are custom generated characters. It also displays a smoothly scrolling bar on line 2 which is also made up from custom characters.

Program was tested successfully on our **BB18** Development Board with a 2x16 LCD display by AZ Displays.

Contact Us

We maintain a website where you can get information on our products, obtain literature, and download support files. Visit us online at:

www.dhmicro.com

Email your technical support questions to **support@dhmicro.com**. We try to respond to your questions within an hour if it is received Monday through Friday between the hours of 8am to 5pm (Mountain Time).

For sales questions or to place an order, direct your emails to **sales@dhmicro.com**. Refer to the order form and price list available on our website for product pricing, shipping rates, payment instructions, and for other info we need to complete your order.

Our mailing address:

DH MicroSystems, Inc.
P.O. Box 2272
Pocatello, ID 83206-2272