

ECE 4175

Project Five

LCD Display

Complete by:
Wednesday February 8th for an A+

References:
Chapter 7
LCDstuff.asm See piclab website

Overview

Modify your code from Project Four as follows. No longer send stepping rate information and keypad entry information to the PC monitor for display. Instead, use the LCD display to show three pieces of information:

Sign plus up to four digits for the accumulated stepper position: SAAAA

Two digits for the stepping rate: RR

A four-digit buffer to show digit keys building a number of steps to be taken: BBBB

The display should look like this if the accumulated stepper position is 4567 steps CW from the initial position, the stepping rate is 96 steps/sec (when steps are being taken) and the new number of steps to be taken from the present position is 1234 steps (the direction is still to be decided by a subsequent * or #). Update the displayed stepping rate every second, when **PotDisplay** gets a new value. Update the four-digit buffer in response to the press of a key. Update the accumulated stepper position each time that a step is taken.

	+	4	5	6	7		
9	6			1	2	3	4

A press of the SW3 pushbutton should clear the accumulated stepper position and change the display to

					0		
9	6			1	2	3	4

A press of the 5 digit key (with the four digits 1234 already entered) should clear the already entered number (because it is greater than 255) and produce a display of

					0		
9	6						5

Pressing the # key should produce a display of

				-	5		
9	6						

NOTE: When you press either the * or the # key, clear the display of the four-digit buffer immediately. You can enter new digits even as the accumulated stepper position is incrementing toward its final value.