display() and noDisplay() methods

The Liquid Crystal Library allows you to control LCD displays that are compatible with the Hitachi HD44780 driver. There are many of them out there, and you can usually tell them by the 16-pin interface.

This example sketch shows how to use the display() and noDisplay() methods to turn on and off the display. The text to be displayed will still be preserved when you use noDisplay() so it's a quick way to blank the display without losing everything on it.

Hardware Required

- Arduino or Genuino Board
- LCD Screen (compatible with Hitachi HD44780 driver)
- pin headers to solder to the LCD display pins
- 10k ohm potentiometer
- 220 ohm resistor
- hook-up wires
- breadboard

Circuit

Before wiring the LCD screen to your Arduino or Genuino board we suggest to solder a pin header strip to the 14 (or 16) pin count connector of the LCD screen, as you can see in the image above.
To wire your LCD screen to your board, connect the following pins:

- LCD RS pin to digital pin 12
- LCD Enable pin to digital pin 11
- LCD D4 pin to digital pin 5
- LCD D5 pin to digital pin 4
- LCD D6 pin to digital pin 3
- LCD D7 pin to digital pin 2

Additionally, wire a 10k pot to +5V and GND, with it's wiper (output) to LCD screens VO pin (pin3). A 220 ohm resistor is used to power the backlight of the display, usually on pin 15 and 16 of the LCD connector

click the images to enlarge

image developed using Fritzing. For more circuit examples, see the Fritzing project page

Schematic

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image developed using Fritzing. For more circuit examples, see the Fritzing project page

Code

```
/*
  LiquidCrystal Library - display() and noDisplay()

 Demonstrates the use a 16x2 LCD display.  The LiquidCrystal
 library works with all LCD displays that are compatible with the
 Hitachi HD44780 driver. There are many of them out there, and you
 can usually tell them by the 16-pin interface.

 This sketch prints "Hello World!" to the LCD and uses the
 display() and noDisplay() functions to turn on and off
 the display.

 The circuit:
 * LCD RS pin to digital pin 12
 * LCD Enable pin to digital pin 11
 * LCD D4 pin to digital pin 5
 * LCD D5 pin to digital pin 4
 * LCD D6 pin to digital pin 3
 * LCD D7 pin to digital pin 2
 * LCD R/W pin to ground
 * 10K resistor:
 * ends to +5V and ground
 * wiper to LCD VO pin (pin 3)

 Library originally added 18 Apr 2008
 by David A. Mellis
 library modified 5 Jul 2009
 by Limor Fried (http://www.ladyada.net)
 example added 9 Jul 2009
 by Tom Igoe
 modified 22 Nov 2010
 by Tom Igoe
 modified 7 Nov 2016
 by Arturo Guadalupi
```

```
 This example code is in the public domain.

 http://www.arduino.cc/en/Tutorial/LiquidCrystalDisplay

*/

// include the library code:
#include <LiquidCrystal.h>

// initialize the library by associating any needed LCD interface pin
// with the arduino pin number it is connected to
const int rs = 12, en = 11, d4 = 5, d5 = 4, d6 = 3, d7 = 2;
LiquidCrystal lcd(rs, en, d4, d5, d6, d7);

void setup() {
  // set up the LCD's number of columns and rows:
  lcd.begin(16, 2);
  // Print a message to the LCD.
  lcd.print("hello, world!");
}

void loop() {
  // Turn off the display:
  lcd.noDisplay();
  delay(500);
  // Turn on the display:
  lcd.display();
  delay(500);
}
```

[Get Code]

See Also

- Liquid Crystal Library - Your reference for the Liquid Crystal library.

- lcd.begin()
- lcd.print()
- lcd.Display()
- lcd.NoDisplay()

- Hello World! – How to wire an LCD display and bring it to life.
- Blink - Control of the block-style cursor.
- Cursor - Control of the underscore-style cursor.
- TextDirection - Control which way text flows from the cursor.

- Scroll - Scroll text left and right.
- Serial display - Accepts serial input, displays it.
- SetCursor - Set the cursor position.
- Autoscroll - Shift text right and left.