CIRCUIT #15

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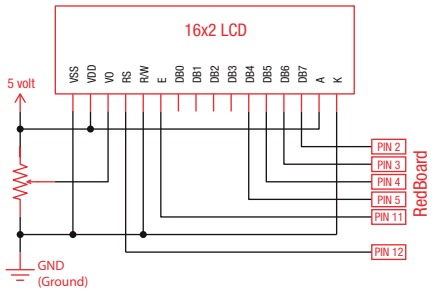
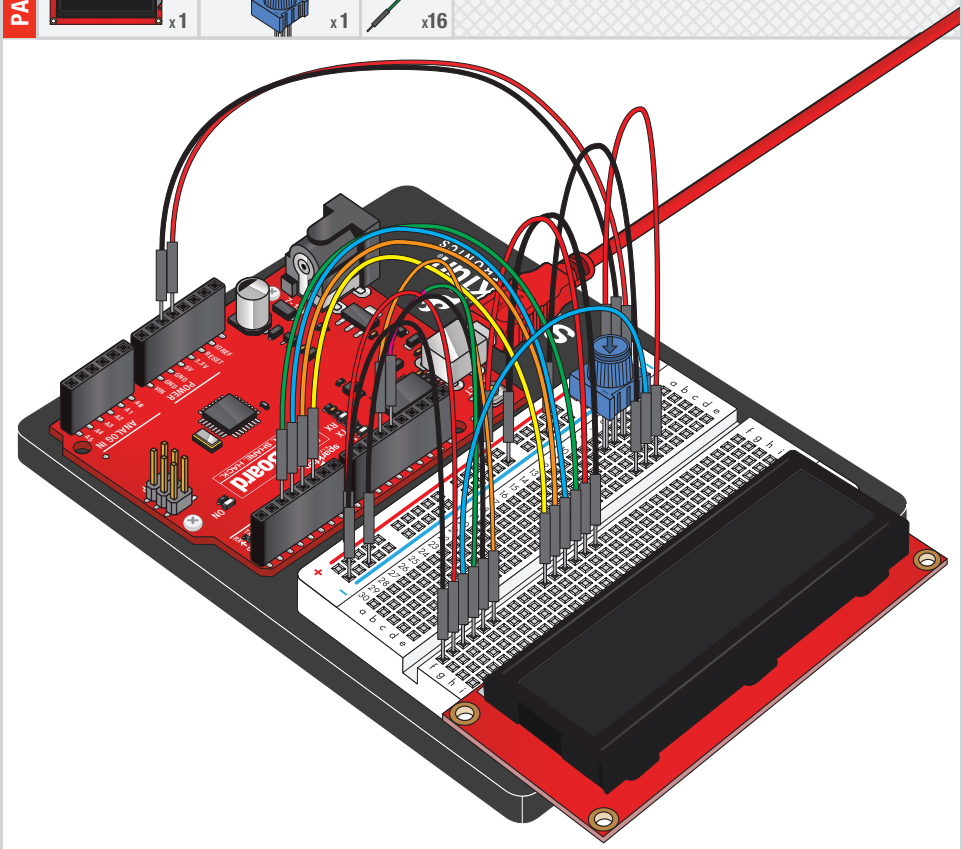
LCD

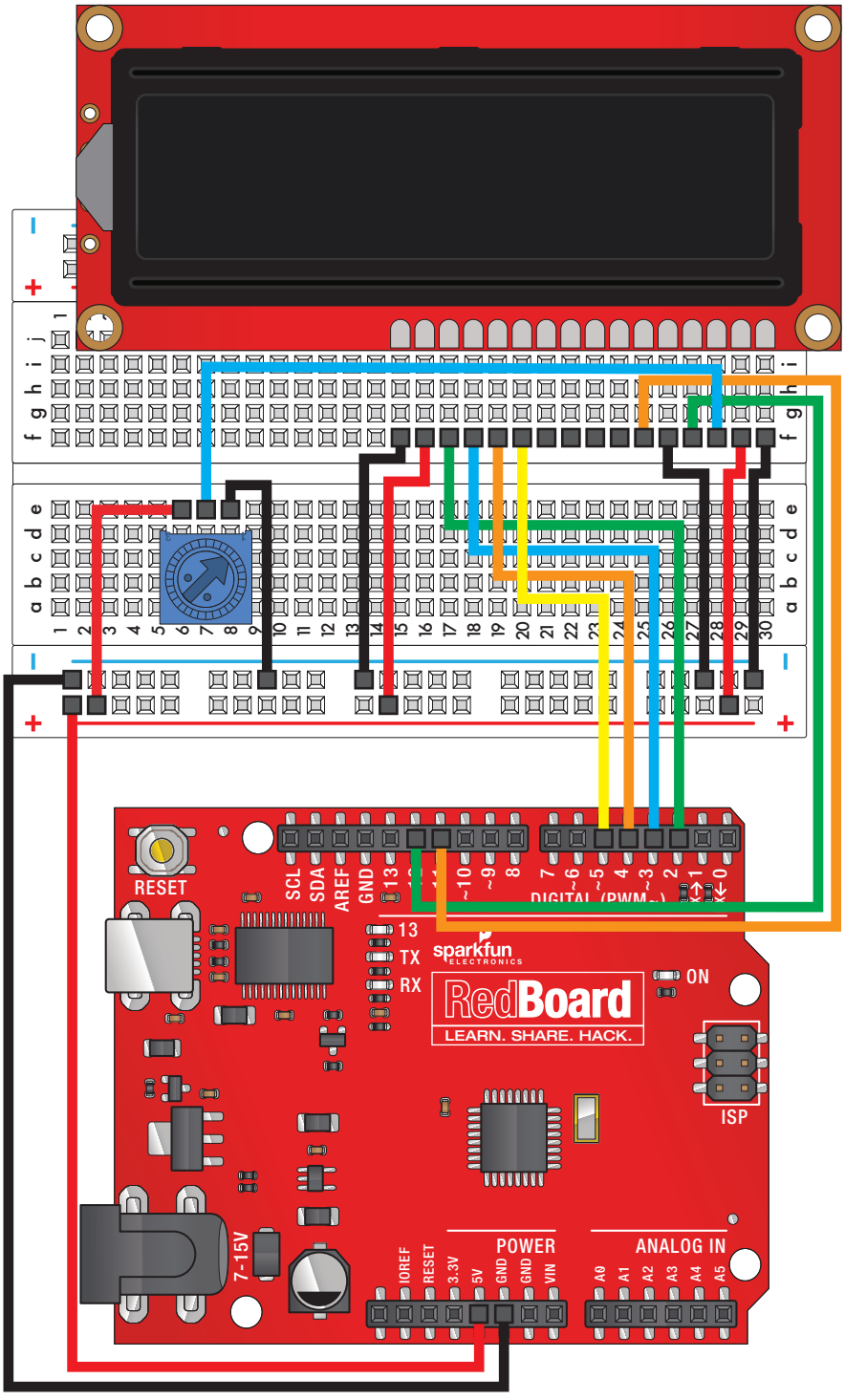


In this circuit, you'll learn about how to use an LCD. An LCD, or liquid crystal display, is a simple screen that can display commands, bits of information, or readings from your sensor - all depending on how you program your board. In this circuit, you'll learn the basics of incorporating an LCD into your project.

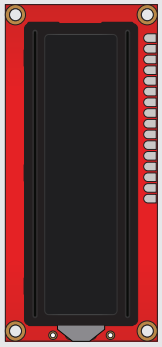
PARTS:

LCD	Potentiometer	Wire
x1	x1	x16





Circuit 15: LCD

Component:	Image Reference:		
LCD			j30 j29 j28 j27 j26 j25 j24 j23 j22 j21 j20 j19 j18 j17 j16 j15
Potentiometer			b8 b7 b6
Jumper Wire		5V	+
Jumper Wire		GND	-
Jumper Wire			e6 +
Jumper Wire			e7 f28
Jumper Wire			e8 -
Jumper Wire			f15 -
Jumper Wire			f16 +
Jumper Wire		Pin 2	f17

Component:	Image Reference:		
Jumper Wire		Pin 3	f18
Jumper Wire		Pin 4	f19
Jumper Wire		Pin 5	f20
Jumper Wire		Pin 11	f25
Jumper Wire			f26 -
Jumper Wire		Pin 12	f27
Jumper Wire			f29 +
Jumper Wire			f30 -

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Arduino Code:

Open Arduino IDE // File > Examples > SIK Guide > Circuit # 15

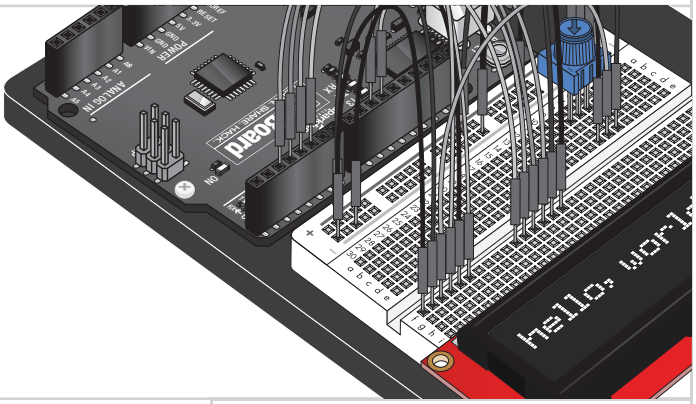
Code to Note:

`#include <LiquidCrystal.h>` ⇨ This bit of code tells your Arduino IDE to include the library for a simple LCD display. Without it, none of the commands will work, so make sure you include it!

`lcd.print("hello, world!");` ⇨ This is the first time you'll fire something up on your screen. You may need to adjust the contrast to make it visible. Twist the potentiometer until you can clearly see the text!

What you Should See:

Initially, you should see the words "hello, world!" pop up on your LCD. Remember you can adjust the contrast using the potentiometer if you can't make out the words clearly. If you have any issues, make sure your code is correct and double-check your connections.



Troubleshooting:

The Screen is Blank or Completely Lit?
Fiddle with the contrast by twisting the potentiometer. If it's incorrectly adjusted, you won't be able to read the text.

Not Working At All?
Double check the code, specifically that you include the LCD library.

Screen Is Flickering
Double check your connections to your breadboard and Arduino.

Real World Application:

LCDs are everywhere! From advanced LCDs like your television, to simple notification screens, this is a very common and useful display!