Steak Electronics: PH Sensor

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1 Overview

What could we measure with a PH Sensor and an Arduino as a data log?

2 Installation

Built board up with a Nokia 5110 LCD, and an Uno on a piece of plywood. On the Nokia, be careful what guide you follow on this. As usual, the internet is a piece of shit, and official arduino website posts https://create.arduino.cc/projecthub/muhammad-aqib/interfacing-nokia-5110-lcd-with-arduino-7bfcdd [1] are wrong. It doesn't help that this post has been syndicated by at least one other website: https://electronicshobbyists.com/interfacing-nokia-5110-lcd-with-arduino-nokia-5110-arduino-tutorial/ And this one: https://www.hackster.io/muhammad-aqib/interfacing-nokia-5110-lcd-with-arduino-7bfcdd

This particular doc gives you a guide that specifies certain pins. However the library (if you read the source at github) mentions different pins. Notably, the source that Sir Aqib includes, omits these pinouts.

This is easily verified with an oscilloscope, as the hub guide has you putting something that is obviously not clock on the CLK pin (this being SPI).

Instead, I found success by just following the adafruit code (which includes a pinout in its source).

Oddly enough, there is no requirement to include 5V to 3.3V level shifters to the Nokia. Instead, they recommend dropping some 10K resistors in there, and just using the 5V IO on the Uno. It does work, but not without some trepidation on the builder's end.

[1] So great that we could deprecate the useful Arduino wiki, and bring in new docs that are incorrect...