

# Build Right: Maker Series - Sara Chipps

## Introduction to Wearables

February 25, 2016

Hello, Maker Series Attendees!

First, BE NICE! Let's use this document for collaborative notes, announcements, comments—whatever!

On Twitter: [@brworkshop](#), [#brworkshop](#), [@hearsparkbox](#), [@SaraJChipps](#)

### Youtube Links:

[Sewing LEDs to Fabric](#)

[Sewing a Running Stitch](#)

[What is Conductive Thread?](#)

### Lunch Today:

Qdoba Burrito Bar (build your own) with grilled chicken, grilled steak, cilantro rice, black beans, pico de gallo, corn salsa, salsa roja, cheese, sour cream, guacamole, fajita veggies, queso, corn tortilla chips, and flour tortillas. Dessert: chocolate chip cookies and double chocolate brownies.

For Mac -> [bit.ly/sparkboxgemma](#)

For Win -> [bit.ly/gemmawindows](#)

**Questions?** (Include any questions below):

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**Heads up—Build Right events have a code of conduct that will be *strictly* enforced. Please read [it](#). If you experience or observe harassment of any kind, please contact the Build Right team (937-241-6758).**

What is conductive thread: <https://www.youtube.com/watch?v=SwiaXMpoy-o>

How to sew a running stitch: <https://www.youtube.com/watch?v=TmQEckZrEhw>

How to sew LEDs and Resistors into fabric: <https://www.youtube.com/watch?v=YpmBh-jlkm4>

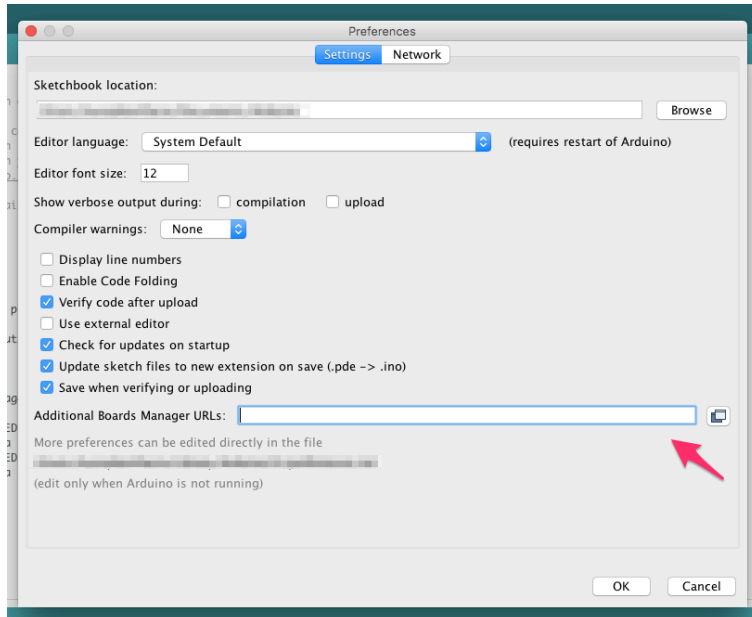
### Notes for Sewing:

- Positive and Negative lines cannot cross.
- Negative ( - ) lines can all be attached to ground (GND)
- Positive (+) lines are attached to D0, D1, or D2

- No more than 3 LEDs on any positive pin.

## Arduino Setup

1. Download the Arduino IDE: <https://www.arduino.cc/en/Main/Software>
2. Add Additional Boards Manager URL under Arduino > Preferences

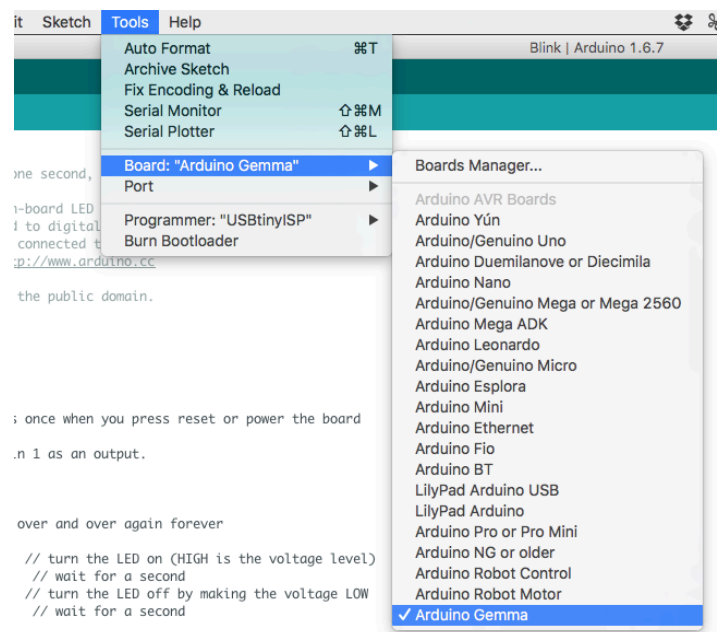


Mac users: [https://adafruit.github.io/arduino-board-index/package\\_adafruit\\_index.json](https://adafruit.github.io/arduino-board-index/package_adafruit_index.json)

Windows users download driver here:

<https://learn.adafruit.com/introducing-gemma/windows-setup>

3. Select Tools > Board > "Arduino Gemma"



#### 4. Select Tools > Programmer > USBtinyISP

