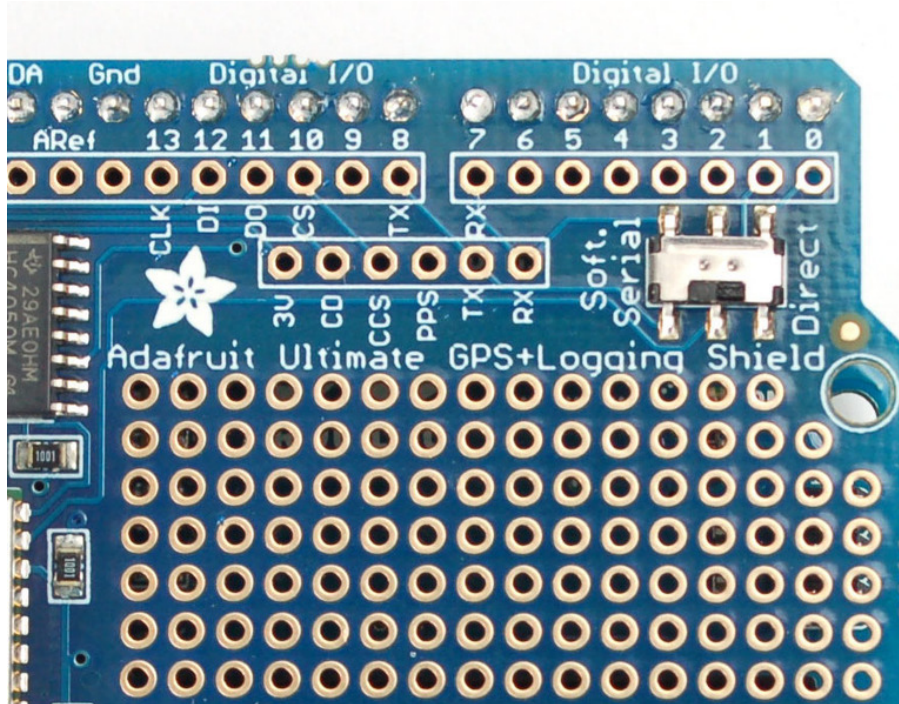


# Soft Serial Connect

Once you've gotten the GPS module tested with direct wiring, we can go forward and set it up for Soft Serial connection. The soft serial connection works by setting up a secondary UART on two pins (digital 7 and 8) so that the main UART is free for debugging & uploading sketches

Soft Serial connection works on Uno/Duemilanove/Diecimila Arduinos as well as Leonardos. It does not work on Mega as the Mega does not have Soft Serial support on pins 7 & 8



Next up, download the Adafruit GPS library. This library does a lot of the 'heavy lifting' required for receiving data from GPS modules, such as reading the streaming data in a background interrupt and auto-magically parsing it. [To download it, visit the GitHub repository and click the ZIP button in the top bar](#), rename the uncompressed folder **Adafruit\_GPS**. Check that the **Adafruit\_GPS** folder contains **Adafruit\_GPS.cpp** and **Adafruit\_GPS.h**

Place the **Adafruit\_GPS** library folder your *sketchbookfolder/libraries/* folder. You may need to create the libraries subfolder if its your first library. Restart the IDE. You can figure out your *sketchbookfolder* by opening up the Preferences tab in the Arduino IDE.

Open up the **File**→**Examples**→**Adafruit\_GPS**→**leo\_echo** sketch and upload it to the Arduino. Then open up the serial monitor. This sketch simply reads data from the software serial port (pins 7&8) and outputs that to the hardware serial port connected to USB.

You can configure the output you see by commenting/uncommenting lines in the **setup()** procedure. For example, we can ask the GPS to send different sentences, and change how often it sends data. 10 Hz (10 times a second) is the max speed, and is a lot of data. You may not be able to output "all data" at that speed because the 9600 baud rate is not fast enough.

In general, we find that most projects only need the RMC and GGA NMEA's so you don't need ALLDATA unless you have some need to know satellite locations.