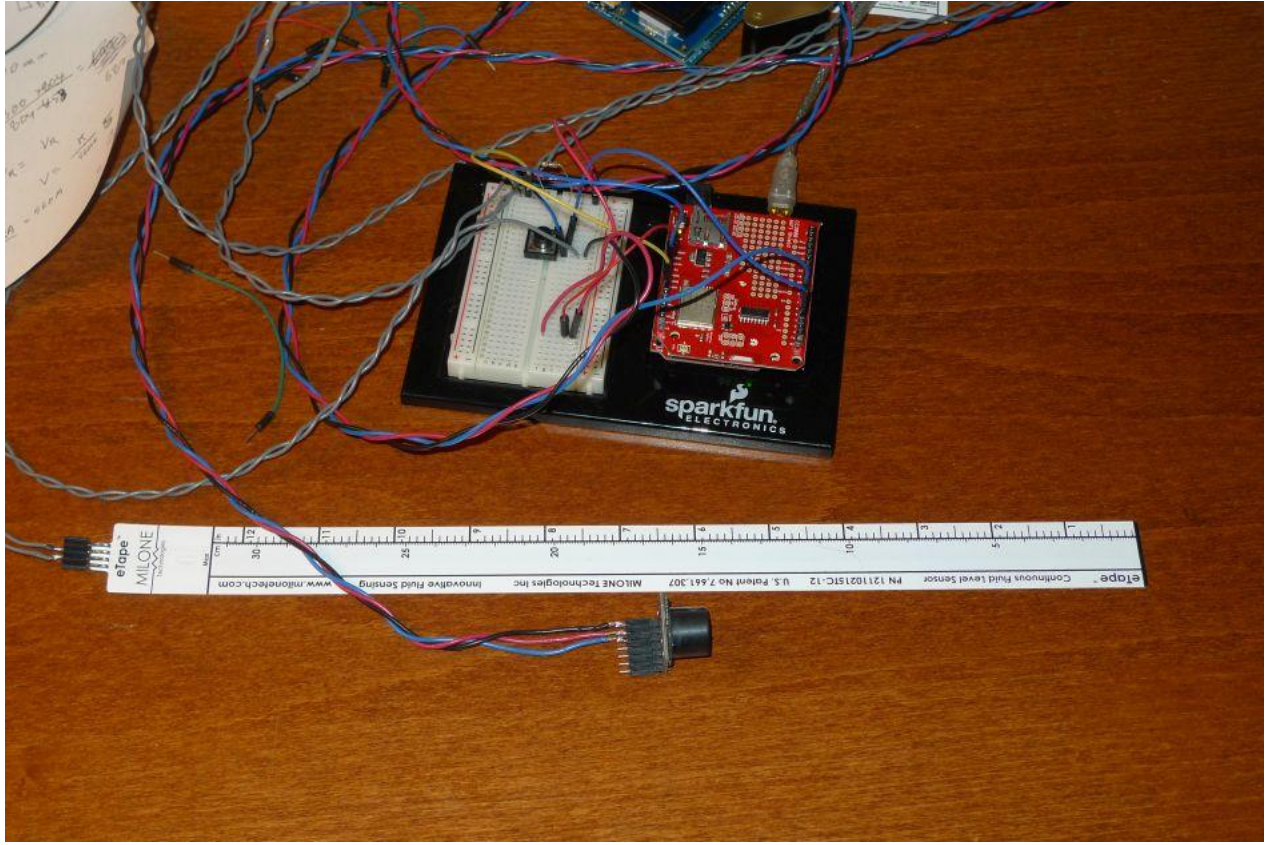
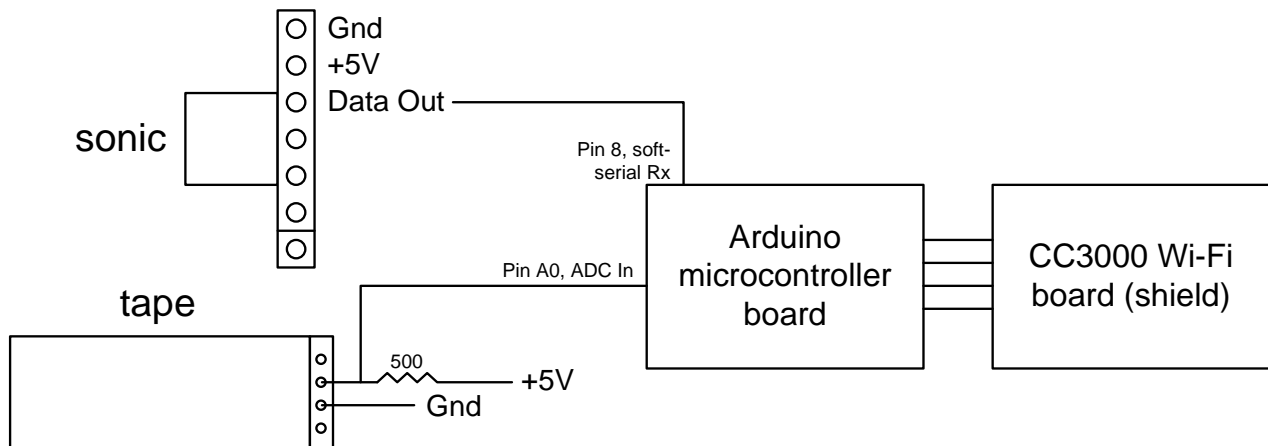


# Wi-Fi Sump Level Monitor



Resistive pressure tape sensor and ultrasonic range sensor, connected to a breadboard, and to Arduino microcontroller and Wi-Fi boards (red, stacked).

- ▶ Tape (pressure) sensor is submerged into sump water to directly measure depth; ultrasonic range sensor is mounted looking down onto sump water surface to indirectly measure depth.
  - ◆ Ultrasonic beam was interfered with by pump/piping giving false ranges, and so was generally not used.
- ▶ Arduino cyclically reads sensor (say 1 minute interval), makes internet connection to remote data storage site, uploads level data, and disconnects. External App or web-page accesses published data and reports/alerts.





Calibration testing of tape depth sensor in 30 cm of water.



Plastic plumbing tube and coupler assembly used to make free-standing tape support, with tape sensor attached to inside top of tube. A metal sleeve (weight) was slid over this structure; the plastic floats otherwise!