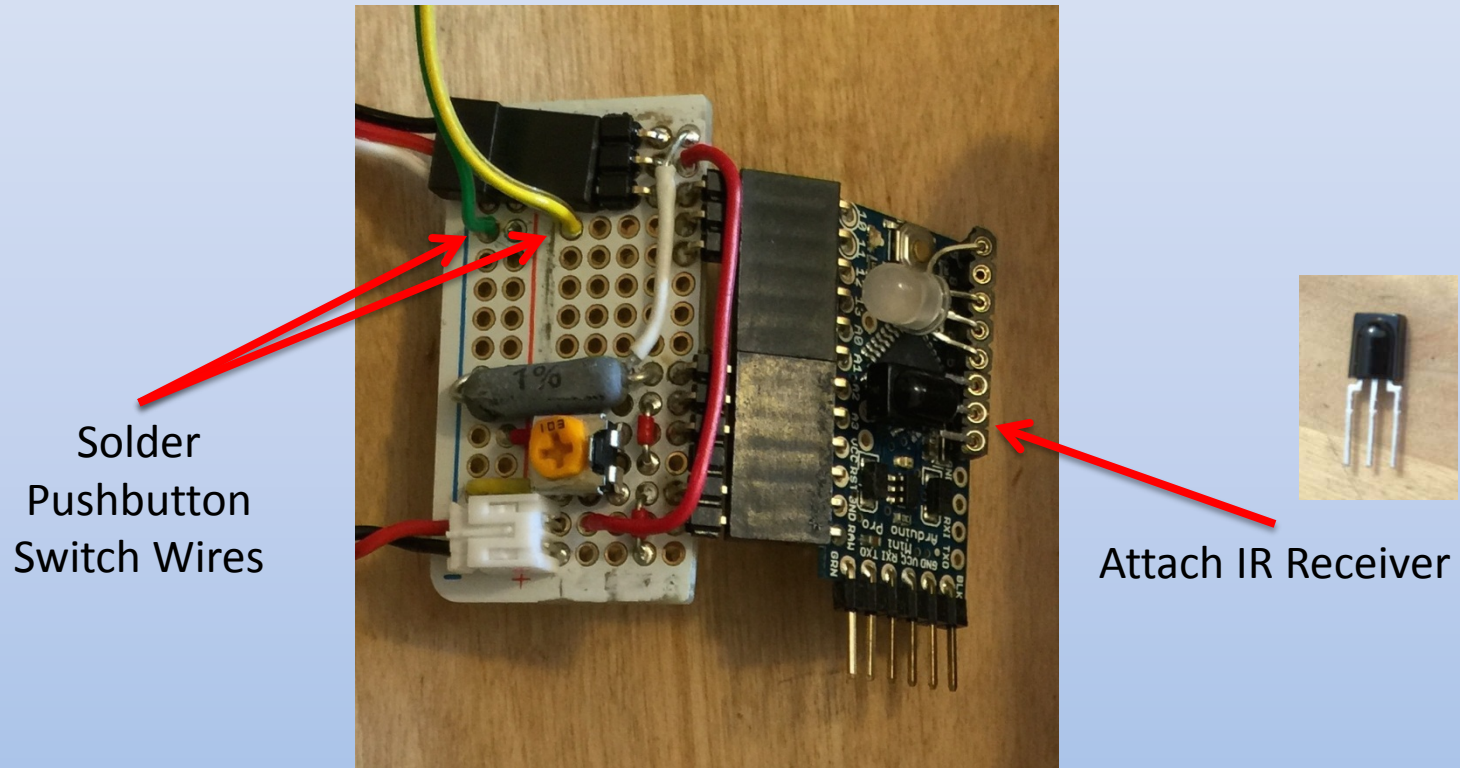
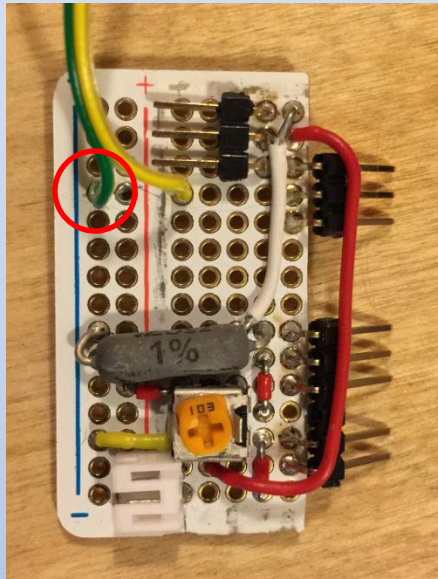


# BE Controller Final Preparations

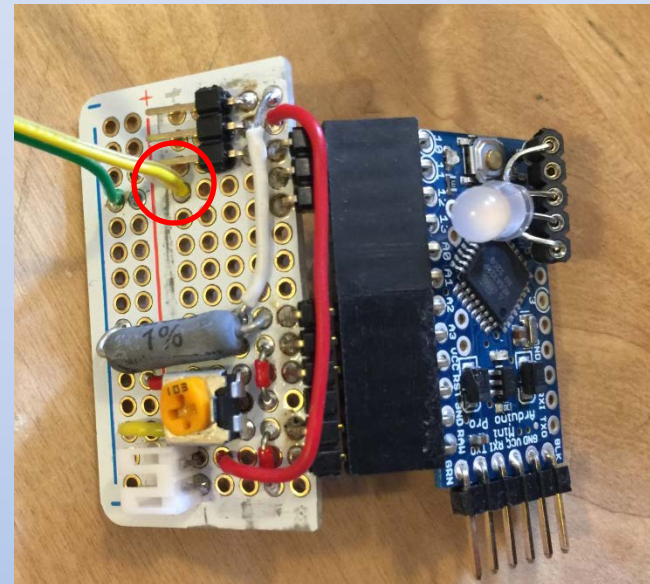


Final preparations for the buoyancy engine (BE) controller includes soldering two pushbutton switch wires to the circuit board and attaching an infrared (IR) receiver to the Arduino Pro Mini.

# Connect Pushbutton Switch Wires to Circuit Board

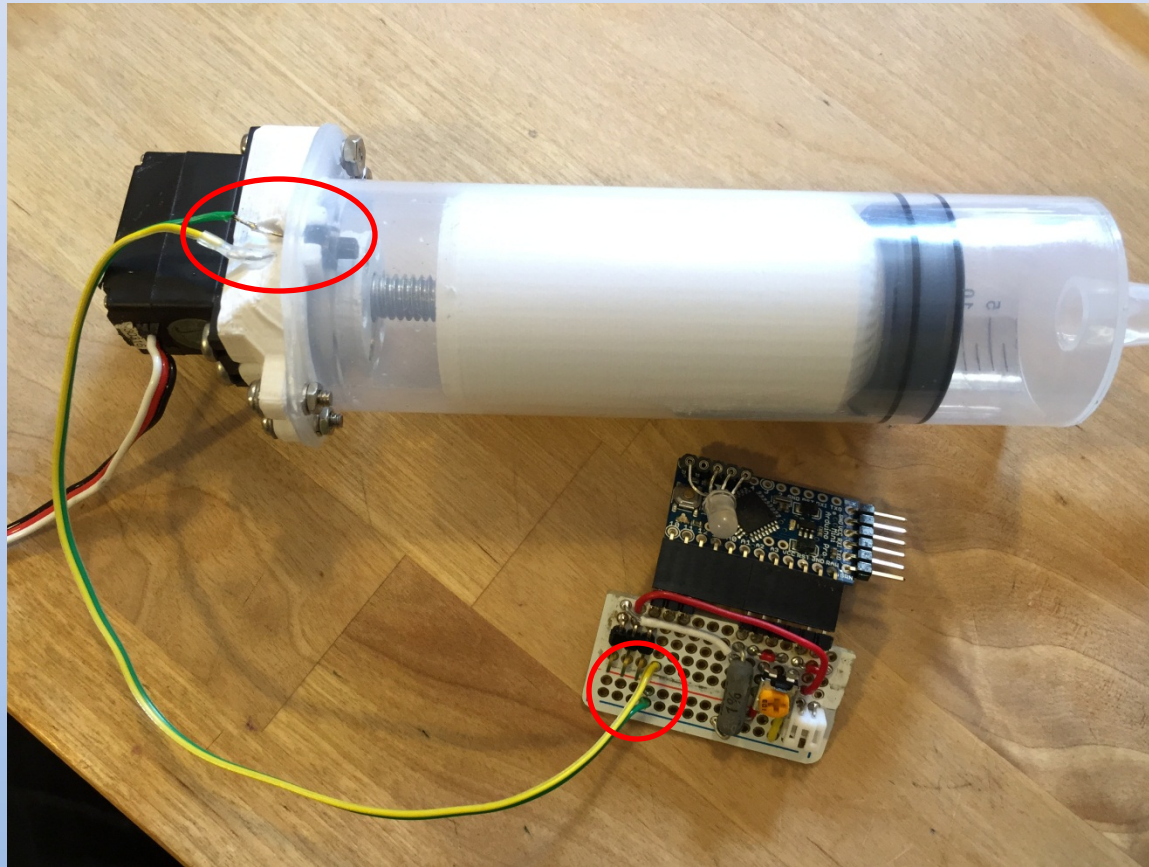


Solder one pushbutton switch wire to the ground rail.



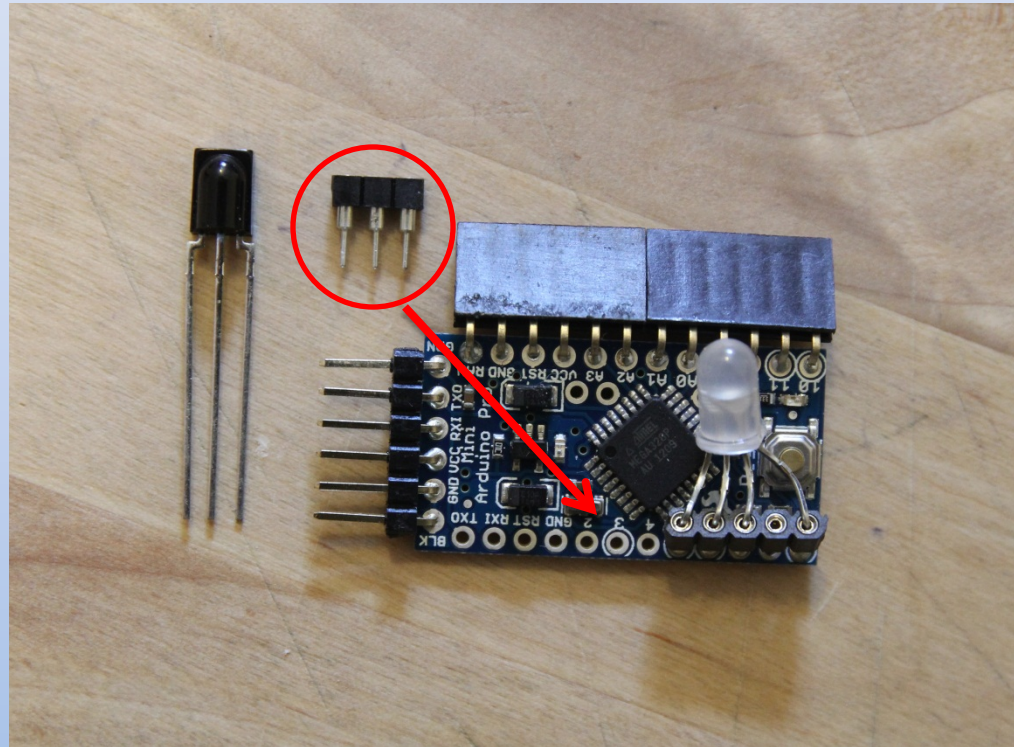
Solder the other to row 4 across from Pin 11 on the Arduino Pro Mini.

# Buoyancy Engine with Pushbutton Switch Wires Attached to Controller



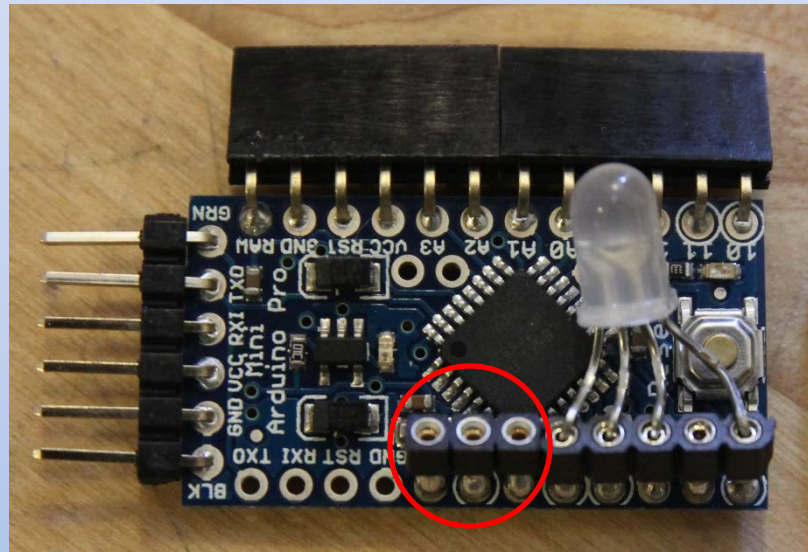


# Locate IR Receiver and Socket Pins



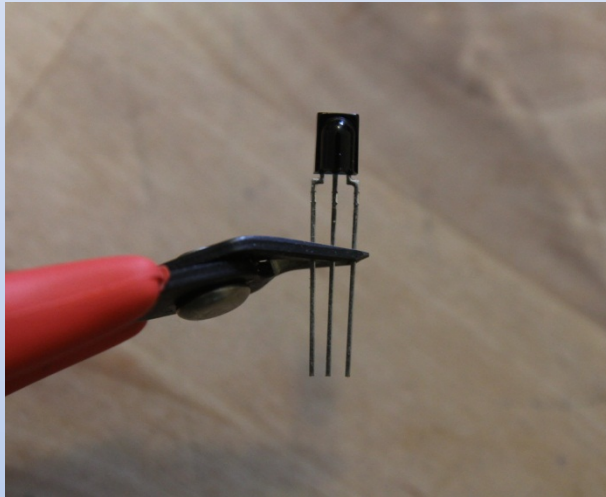
The set of three socket pins will be soldered next to the LED socket pins at a similar angle.

# Solder Socket Pins on Arduino Board

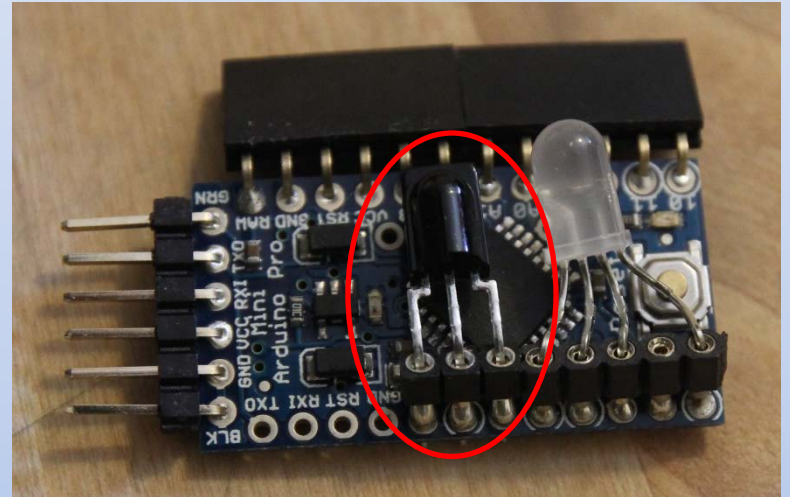


Make sure the angle of the socket pin set tilts in and matches that of the socket LED pins.

# Shorten IR Receiver Pins and Position on Board



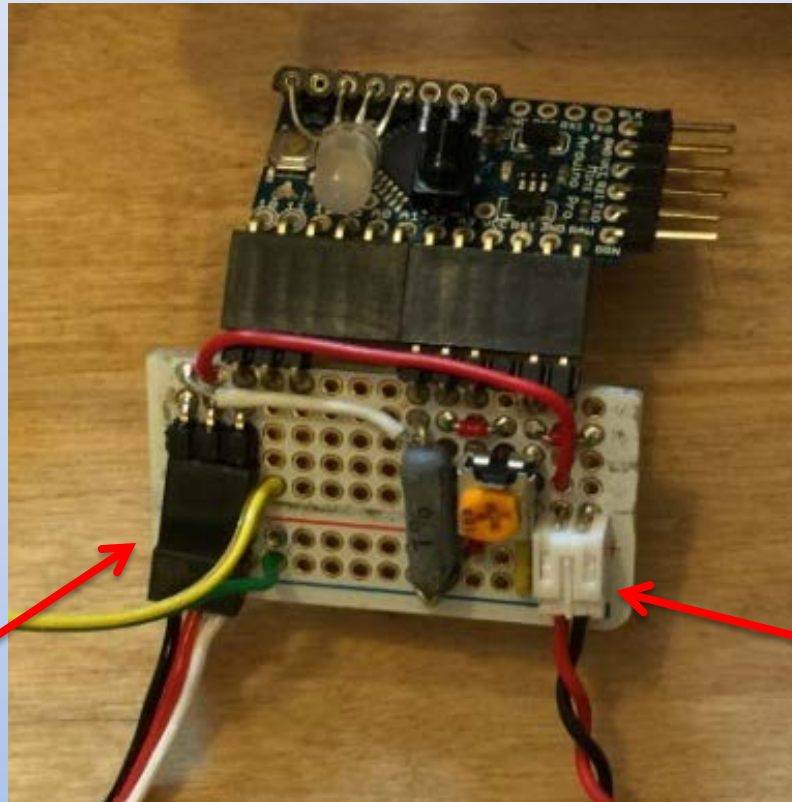
Cut IR receiver pin length approximately in half.



Insert IR receiver into the sockets. Bend it down to reduce its profile.

# Connect Power Supply and Servo to Circuit Board

Slide servo connector into right angle header pins. (Note wire order.)



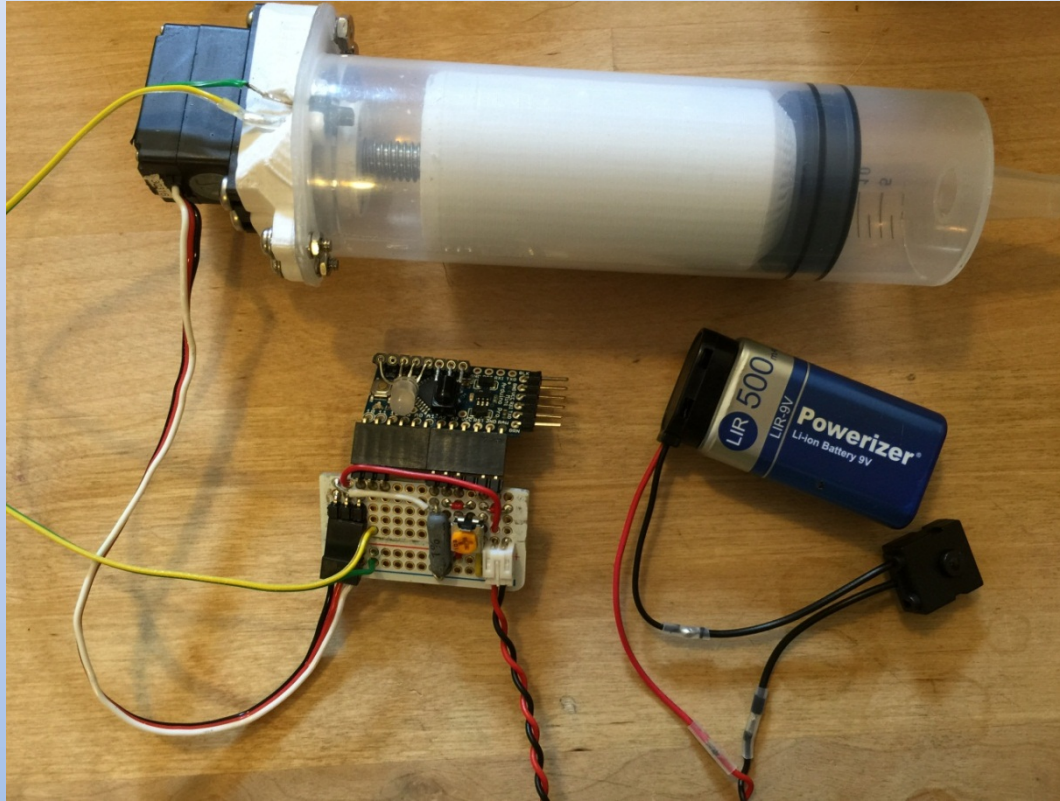
Slide power supply plug into power supply jack.

Join the Arduino Pro Mini to the circuit board and then connect the power supply and servo as described above.

Make sure you lineup the white wire in the servo connector with pin 10 on the Arduino.



# Completed Buoyancy Engine System with Controller and Power Supply



Make sure that the controller and power supply circuits have been tested separately then test the whole system with the buoyancy engine.



# Test the Infrared Remote's Operation



Play/Pause Button

The Play/Pause button on the remote should be able to stop and start the buoyancy engine once it is started with the manual switch.