Ocean261/361/461 Hydrophone User Manual
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3. Download code from https://github.com/LULULULUKELI/Ocean-261-361-461-Hydrophone
4. Using oil to Waterproof piezo sensor
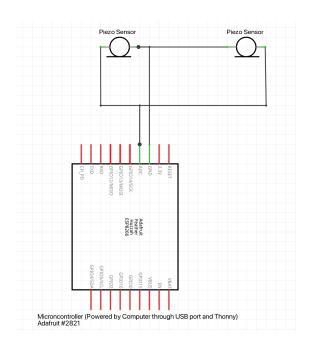5. Assemble instruments and ready for test

Part list:
https://docs.google.com/document/d/1tt_e2Ta36S_laTH3q2gMx1Cim-x2pYl2ur43yn2gsx4/edit?usp=sharing

Step One: build the hydrophone sensor:
- Superglue the piezo sensor on both side of the aluminium ring spacer
- Solder the two red wires from two sensors into one red wire, feel free to use soldering or   heat-shrink solder based on you needs. Do the same for the black wires
- Use soldering to connect the combined red wire and black wire to an long electric cable- red to red, black to black, leave rest color of wires from the cable(you don't need them) The length of the cable should fit your own needs, depends how deep you want to take sample and the distance from sensor to you.

Step two: build the circuit and connect the microcontroller with your sensor based on the schematic diagram.

Piezo Sensor   Piezo Sensor

CH_PD
TXD
RXD
GPIO12/MISO
GPIO13/MOSI
GPIO14/SCK
ADC
GND
3.3V
RESET

Adafruit
Feather
Huzzah
ESP8266

GPIO4/SDA
GPIO5/SCL
GPIO2
GPIO16
GPIO0
GPIO15
VBUS
EN
VBAT

Micronccontroller (Powered by Computer through USB port and Thonny)
Adafruit #2821

Step Three: download the hydrophone.py and upload it to your microcontroller
    Try run the code and create a noise near the sensor and see if voltage changes.

Step Four:
    Drill a hole on the lid of the falcon tube so the sensor or wire can fit through, and use Seaglant glue or heat gun or epoxy to fill the gap between hole and the cable for waterproof. Fill the falcon tube with mineral oil to achieve waterproof of the sensor and keep similar sound transport speed as water.

Step 5: Use the zip tie or tape to tie the cable on a rod you favour.

You are ready to go!