

Water clarity sensor user instructions

- 1) Ensure the two 9v batteries beneath the main electronics board are near a full charge.
- 2) Remove the camera module and then press the SD card to remove it. Delete any photos previously saved to it. Insert the SD card back into the camera module and replace the camera into the female header pins.
- 3) Pull up an [online clock](#) with millisecond accuracy. Be prepared to take a screenshot of the time while simultaneously turning on the sensor.
- 4) Locate the power switch in the upper right-hand corner. Pull the switch down (towards the red wire beneath the board) at the same time as taking a screenshot of the current time. You should now see red and orange LEDs on the board.
- 5) House the battery pack beneath the main board and gently press the main electronics board into place. The stand-offs on the bottom should sit on either side of the two batteries. Note: the batteries will curve slightly inward due to the shape of the housing.
- 6) Make sure all wires are clear of the O-ring lip prior to sealing the lid onto the housing. Make sure now wires are visibility broken.
- 7) Gently clean the lid of the pressure casing with methanol or rubbing alcohol.
- 8) Place the lid onto the pressure housing and begin to tight the four corner screws in a star-like pattern. Once all the screws are loosely in place, fully tighten them. You should still see the LEDs on the board to be powered on.
- 9) Ensure that the screws are fully tightened and there are no gaps between the lid and pressure housing.
- 10) Tightly wrap 2 – 4 layers of electrical tape around the seal between the lid and pressure housing. Be sure to overlap the layers so that the tape covers ~1 inch in width.
- 11) Firmly run your fingers over the electrical tape to ensure it has adhered to the pressure vessel.
- 12) Snap the sealed pressure casing the vertical leg of The Cheese beneath the mounted pressure sensor. Locate three ~6” zip ties.
- 13) Slide the zip ties through the holes on the back of the pipe mount piece and firmly tighten them so that the pressure housing does not easily rotate.
- 14) Orient the camera in the pressure housing so that it is aligned with the ball markers.
- 15) Carry the water clarity sensor to the sampling location along with a flotation device for surface expression. Tie the buoy to the sensor frame upon arrival.
- 16) Gently lower the sensor into the water and leave submerged for the desired sampling time.
- 17) To retrieve data from the sensor, unseal the pressure casing (follow steps 11 – 8 in reverse order) and remove the camera SD card. If there is no data on this SD card, check the backup SD card on the bottom side of the main electronics board.