

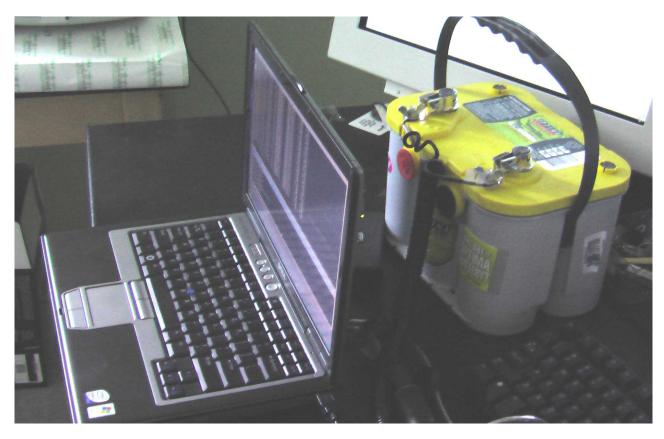
The weather module(right), the sonar device(center) and the hydrophone (left) under test.

La Crosse Technology WS-2308AL Hummingbird 797 Weather module:

Sonar module: Hydrophone: Cetacean research, CR1



 $\begin{array}{ll} Hardware\ interface\ for\ hydrophone\ (3db\ roll\ off\ at\ {\sim}40khz)\\ Audio\ preamplifier: \qquad Fishman\ GII \end{array}$ Computer audio interface: Tascam U122L

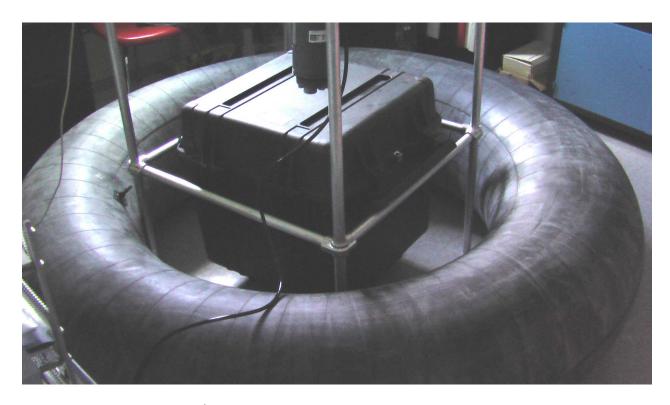


The complete system is powered by two 12VDC marine grade batteries.

Battery: Optima D34, dual purpose starting and deep cycle, 12 Volt, 55 Ah



Wind speed and direction are collected by the La Crosse WS-2308AL



A rear tractor inner tube (1m³ of air) provides flotation. The instrumentation frame is of aluminum. All the electronics are stored in a water proofed box.

Inner tube: 20.8R42 Box: Pelican 0305NF

Frame: 1in OD structural aluminum tubing with slip on structural fittings



The core (established) water quality parameters ( Conductivity , Resistivity, Total Dissolved Solids, Salinity, Dissolved Oxygen, pH , Turbidity, Chlorophyll) are measured by an industrial grade submersible probe.

Probe: YSI 6600V2