

Products

Auto-Detection Moorings



The EOM mooring system solves the problem of high flow-noise-to-signal ratios in passive acoustic applications. This is achieved using a robust mooring system (patent pending) that isolates the hydrophone from surface buoy motions. This system breaks the mooring into two sections: a dynamic upper section consisting of the surface buoy and an electromechanical (E/M) stretch mooring hose, and a static subsurface section that provides a quiet mounting location for the hydrophone.



The reinforced rubber E/M stretch hose is one of a family of such components developed at the Woods Hole Oceanographic Institution (WHOI) for surface mooring systems requiring a stable platform for sensors or instruments. It can stretch two and a half times its original length, and serves as a highly effective and robust mechanical motion isolator between the surface buoy and the quiet lower mooring section.

The hose construction makes use of automotive tire technology for elasticity and strength; the AB mooring hose also has eight #22 electrical conductors built into it to allow signals and power to be transmitted along its length. All mooring connections are bolted flanges to minimize other sources of mechanical noise.

The result is a quiet electromechanical mooring that allows for a hydrophone to be held nearly stationary, while providing a real-time satellite telemetry link—in all sea states. The system has also proven to be highly reliable: after multiple year-round system deployments in Massachusetts Bay, test hoses have been re-used continuously for over two years without the failure of a single electrical conductor.

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