

## **Ruggedized Instrumentation Package for Marine Mammal Evoked Potential Hearing Measurements (DURIP)**

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<http://www.hawaii.edu/HIMB/>

### **LONG-TERM GOALS**

To examine the hearing of as many marine mammals and species as possible in order to develop an understanding of the normal hearing capabilities of marine mammals. To advance the technology for testing hearing in the laboratory and the field.

### **OBJECTIVES**

To build a rugged field-ready portable battery-operated system to use to measure the hearing capabilities of marine mammals in the lab, on ships, on the beach or wherever we have the opportunity.

### **APPROACH**

Assemble equipment into a field-ready system, test the system in the laboratory, improve it with use, deploy it to stranded animal and field situations as they become available and test the hearing of marine mammals.

### **WORK COMPLETED**

New suction cups and other electrodes built and field tested. Equipment successfully used on two experiments with animals stranded on the beach.

### **RESULTS**

Construction of Ruggedized equipment continues. Equipment used on the beach to obtain audiograms. Ready and available for RIMPAC exercises.

## **IMPACT/APPLICATIONS**

Of the 85 species of whales and dolphins, we have basic hearing measurements on only 17 species. Many of our audiograms come from a single animal. This equipment will greatly assist in gathering information on what marine mammals hear. If navy operations are stopped because of the effects of noise on whales, it is imperative that we have baseline information on marine mammal hearing.

## **RELATED PROJECTS**

Basic Hearing and Echolocation Mechanisms of Marine Mammals: Measured Auditory Evoked Potential and Behavioral Experiments: Award Number: N00014-08-1-1160  
<http://www.hawaii.edu/HIMB/>