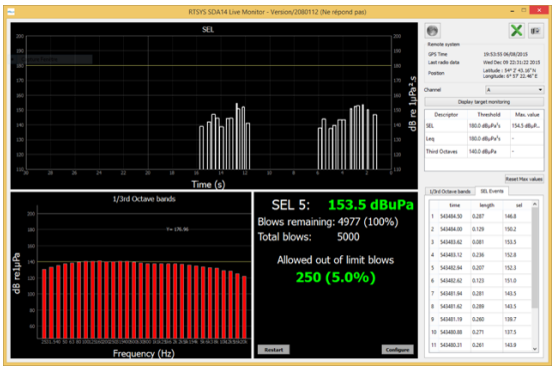
RUGGED REMOTE HYDROPHONE BUOY

Real-time underwater noise monitoring



Environmental monitoring

Noise impact studies

Coastal marine construction

Description

Made for an automated and intuitive operation, the RUBHY buoy can record underwater noise and simultaneously send and display real-time noise information such as SEL – Sound Exposure Level and SPL – Sound Pressure Level over a 10 km distance.

Especially adapted to offshore conditions, the RUBHY is an excellent solution for autonomous real-time noise surveying of port construction, pile driving operations and seismic surveys. Even if the RUBHY is robust, this buoy can be easily deployed and recovered from working boats, weighing less than 500 kg including mooring.

The recorder device is placed in the buoy tube and is easily removable, interchangeable and rechargeable.
The user interface is specifically adapted to an easy use and understanding of real-time noise information. Making of RUBHY a key decision that can also generate substantial cost savings in noise regulated offshore operations.

Advantages

- **Radio link: SEL/SPL calculation**
- **Wi-fi: Data and system management**

Payloads & Options

- **Up to 2 TB HDD memory extension**
- **Adapted moorings regarding deployment area**

Supplied Hardware

- **The hydrophone in a cage**
- **An antenna, a modem and supply**
- **A USB to RS232 converter**
- **A long Ethernet cable (1 m)**

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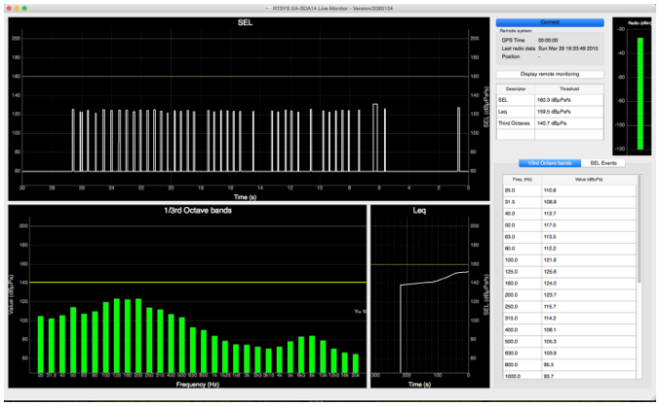


RT-Live Monitor software

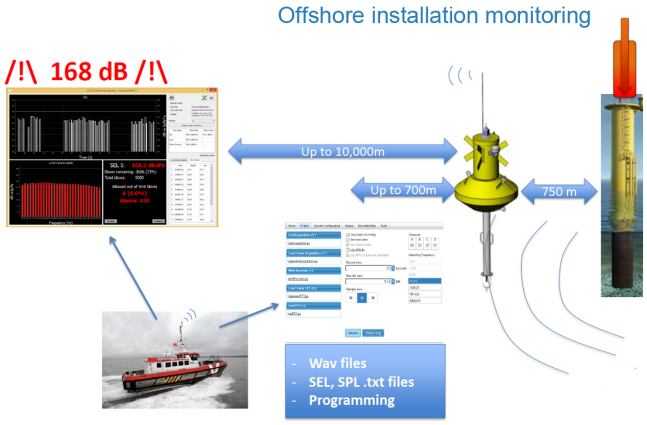
Software

Radio link: SEL/SPL calculation

The buoy streams the Sound Pressure Level (SPL), the Sound Exposure Level (SEL) and the 1/3rd octave band spectrum, every 5 seconds to the dedicated software.

The software provides configurable alert thresholds according to the current standards and regulations.

The processed in-stream data are stored locally for analysis on the receiving computer. The raw .wav files remain stored on the buoy and can be downloaded either during deployment with the Wi- Fi link or when the removable recorder is recovered.



Wi-Fi: Data and system management

The web interface embedded in the RHUBY system is accessed at all time with a remote control. The manager software of an additional tool that allows for more real-time functions:

- **buoy(s) access**
- **synchronous time set**
- **multiple buoys synchronization**
- **recording status control**
- **.wav data sample collection while recording**

The raw data are collected in 24 bits and stored in the standard .wav format that is directly processed for further analysis and reporting.

Recording capacities

- **Input impedance: 500 Ω**
- **Max Imput Level (MIL): - 10 dBV / 9920 mVpp**
- **Sensitivity: - 123 dBV (0.7 µVRMS)**
- **High pass filter: 350 Hz at - 3 dB**
- **Surge peak to peak voltage: 300 V (Time < 10 ms)**

Dimensions

- **Float diameter: 1250 mm**
- **Tail tube diameter: 190 mm**
- **Tail tube length: 2270 mm**
- **Typical mooring weight: 200 kg**
- **Weight: 238 kg**

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