RUGGED REMOTE BUOY

Real-time underwater noise monitoring

Description

Made for an automated and intuitive operation, the RB-SDA14 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 RB-SDA14 is an excellent solution for autonomous real-time noise surveying of port construction, pile driving operations and seismic surveys. Even if the RB-SDA14 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.

Applications

- **Piling noise monitoring**
- **Offshore marine construction**
- **Seismic surveys**
- **Environmental monitoring**
- **Noise impact studies**

Options

- **Communication: Satellite, 3G**
- **Up to 2 TB HDD memory extension**
- **Adapted moorings regarding deployment area**

Key Characteristics

- **Radio link over 10 km**
- **Wi-Fi link: 700 m**
- **GPS**
- **Stabilized float 1.25 m diameter**
- **User-friendly intuitive embedded web interface**

Float dim.:	1.25 m diameter
Tube dim.:	19 cm diameter
Total height:	227 cm
Weight:	238 kg
Power:	1800 Wh. Li-ion battery
Storage:	128 or 256 GB SD Card, 1 TB SSD, 2 TB HDD
Autonomy:	42 days (Wi-Fi and UHF off)

RTsys products respond to noise Good Environmental Status objectives defined by the Marine Strategy Framework Directive (MSFD)
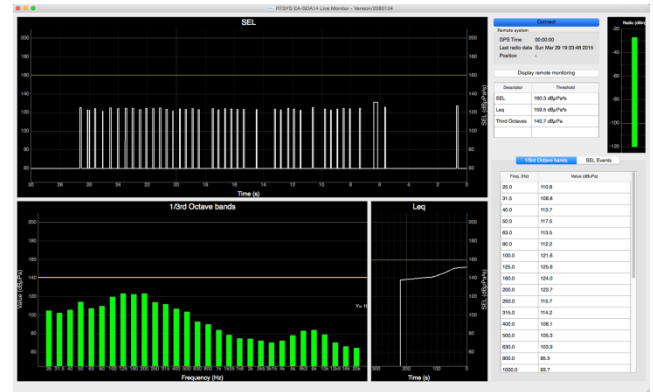
• Software

- 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 EA-SDA14 removable recorder is recovered.
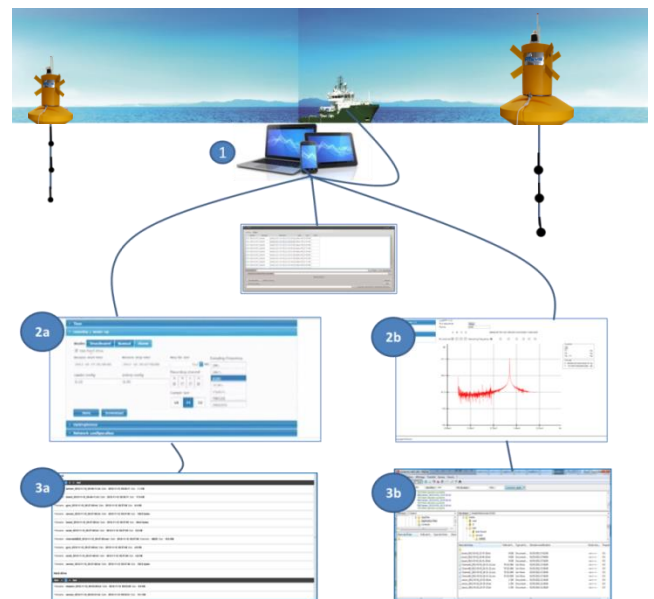
Live Monitor software

- Wi-Fi: Data and system management

The web interface embedded in the RB-SDA14 system is accessed at all time with a remote control. The manager software of the EA-SDA14 recorder is 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 compatible with processing software such as ©Matlab, ©LabVIEW and ©PAMguard.

Embedded web interface

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RTsys activities

- **Marine acoustics**
- **Embedded electronics**
- **Marine robotics**
- **Systems integration**
- **Customized R&D**

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