



Radiated Noise
Measurement



Transmission Levels
Measurement



Sea Acceptance
Tests

Overview

SIERA offers a solution for the characterization and calibration of underwater acoustic systems (hull-mounted sonars, dipping sonars, towed sonars, buoys).

SIERA also allows radiated noise measurements in the far field.

SIERA is an autonomous system towed from a dedicated boat with different capabilities:
Noise maker, Repeater, Responder

SIERA is composed of 4 subsets: a processing and visualizing unit; a light towed body; two winches for towline storage; two 250 m electrical cables equipped with waterproof plugs and associated extension cables

SIERA is subject to export control authorization

Advantages

- Lightweight and easy to implement
- Easily measure and characterize the performance of a sonar system
- Real-time or delayed signal processing



Towed body

- Welded and screwed mechanical parts in 316 L stainless steel
- B&K 8106 Hydrophone
- Neptune Sonar D/11/BB Transducer
- Watertight enclosure:
 - 3 waterproof plugs
 - Pressure sensor
 - Protecting and filtering electronics
- Removable storage plug

+Two 250 m towed electrical cables equipped with two waterproof connecting sockets.

+Two aluminum winches equipped with a retractable handle, a locking system and mounting brackets on the deck.

Acquisition and CAG generation box

The acquisition and CAG generation box is composed of the following elements:

- 19-inch 6U enclosure with removable front panels, wheels and retractable handle
- 1U acquisition unit and application software
- 2 class D amplifiers, each in 1U format
- 3U impedance matching unit
- Wiring and connecting tools

Configuration and processing unit

- Connecting unit and laptop
- Operating system
- Software application
- Removable data storage unit



Features

- Reception sensibility: sea state 0 up to 180 dB/ μ Pa
- Emission level: 185 dB from 3 to 20 kHz
150 to 185 dB from 500 Hz to 3 kHz
130 dB from 20 kHz to 30 kHz
- Frequency band (E/R): 500Hz to 30 kHz
- Measures in ref: dB/ μ Pa related at 1 m
- GPS positioning

Hardware

- Size: L 1312 mm \varnothing 205 mm
- Weight: 19 kg
- Max Operating Depth: 500 m
- Max Towing Speed: 10 knots

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