

HILO ACOUSTIC RECORDER

DESCRIPTION

Developed by RS Aqua, now working in collaboration with Seiche, the RS-HILO is a real time, dual channel, underwater acoustic data acquisition instrument optimised for underwater noise measurements at an affordable price. The unit features ultra-low power consumption enabling long term deployments even at 100% duty cycle. It offers real-time signal processing on calibrated hydrophone data, raw recording and reporting of third octave spectrums, SPL histograms, SEL, peak levels and average levels, as well as transient calculations for pulsed measurements.





Flexible enough for virtually any underwater noise measurement scenario, the RS-HILO is simple to deploy. Users can configure averaging times and analysis window lengths for SPL and SEL measurements, and easily set up the instrument for event-triggered recording or real-time reporting on noise statistics. Data can be recorded and processed autonomously or streamed live.



SPECIFICATIONS

Number of channels: 2, ADC number of bits: 24
Dynamic range per channel: 100 dB (full bandwidth)
Configurable gain: 0 dB- 40 dB on both channels
Sampling rates supported: 24 kHz, 48 kHz, 96 kHz
Universal micro circular connectors for all 8 pin hydrophones
Hydrophone bandwidth: 10 Hz to 40 kHz or customised upon request
Memory: integrated 128 GB SD Card (Fat32 formatted file system)
Configurable recording, schedule and duty cycling
Real time one third octave spectral processing designed for IEC and ANSI specifications
RMS SPL computed in all one third octave bands: 10 Hz–10 kHz, 20 Hz–20 kHz, 40 Hz–40 kHz
Triggered recording or real time reporting on noise statistics (exceeding SPL or SEL thresholds in any third octave band, instantaneous or cumulative)
Configurable RMS averaging window times: 100 ms – 1 hour
Configurable analysis window times: 1 s – 1 month
Comms: full speed USB for download, RS422 for real time monitoring (RS232 available with external converter), Bluetooth for setup and configuration with Android Phone or Tablet
Operating temperature: -10°C to +-50°C
Depth rating: 2500m (deeper on request)
Power: Alkaline C Cells (internal user replaceable) 10-18 V DC (external), 5 V DC (USB)
Average consumption: 300 mW (average) Less than 1mW in sleep mode
Deployment duration: 60 days – 1 year (depending on duty cycle)
Integrated sensors: 3 axis compass, 3 axis accelerometer, real time clock

APPLICATIONS

-  Seismic monitoring
-  Pile driving monitoring
-  General ambient and environmental noise studies
-  Wind and tidal energy monitoring