

## Wi-Fi REMOTE HYDROPHONE BUOY

Broadband – GPS – Multi-sensor



### Description

REMHY is a Wi-Fi remote buoy equipped with a passive acoustic recorder that provides acoustic data and can be programmed in real-time.

The REMHY has 4 broadband synchronized hydrophones inputs, a GPS antenna and allows to use additional sensors that will be perfectly synchronized with acoustic data.

The Wi-Fi antenna provides access to a web embedded interface via any computer device. The user can stream data, launch and stop recordings up to 1.5 km distance from the REMHY buoy.

Embedded DSP allows to implement real-time data processing such as sound levels and thresholds detection, alarm or FFT graphs that can be displayed in real-time.

The REMHY is programmable as an autonomous recorder with mission schedule and internal data storage. Equipped with a rechargeable battery pack and high storage capacity SD card, the buoy is able to run continuously.

### Applications

- Real-time noise measurement
- Environmental assessment
- Offshore pilling & construction
- Radiated ship noise
- Detection / Tracking / Beam-forming

### Options

- Interchangeable hydrophones
- Up to 2 TB memory extension on hard drive
- RS232 serial port for external sensors
- **RT monitoring software (alarm threshold / detection - NEW)**
- **VHF - Long range remote connectivity - NEW**

### Characteristics

- **Multichannel:** 4 hydrophones inputs
- **Broadband:** from 3 Hz to over 500 kHz acquisition
- **Wide dynamic:** 24 bits recording
- **Versatile:** Wi-Fi remote real-time access & autonomous mission modes
- **Easy to use:** intuitive embedded web interface

- Float dim.: 60 cm diameter
- Tube dim.: 16 cm diameter
- Total weight: 51 kg
- Power: 900 Wh, rechargeable battery pack
- Storage: 128 or 256 GB SD Card, 1 TB SSD, 2 TB HDD



## • Wi-Fi real-time remote access & GPS

Wi-Fi offers downloading speed up to 300 Mbps at 1.5 km distance.

The GPS antenna allows real-time positioning of the buoy from the monitoring platform, ship or on-shore location.

Thanks to high Wi-Fi downloading speed, user can access the monitoring functions as stream acoustic and non-acoustic files in real-time to its computer.

## • Autonomous mode & rechargeable battery pack

The buoy can also be programmed as an autonomous recording system. Mission schedule such as start/end dates, sampling frequency, sensors and hydrophone recording channels can be programmed via Wi-Fi or Ethernet cable.

REMHY can last over 12 days long in continuous recording with Wi-Fi ON. Wi-Fi and recording duty cycles can double (or even more) the deployment autonomy.

Then the REMHY is easily opened and battery pack can be exchanged or recharged in several hours.

## • 4 hydrophones inputs & broadband acquisition

4 hydrophones can be connected simultaneously to the buoy system. The hydrophones can be either passive or pre-amplified and adapted with regards to the type of noise to record. Eight sampling frequencies are selectable from 39 kHz to 2.5 MHz.

Sound data are collected in 24 bits and stored or streamed in .wav standard format, directly compatible with processing software such as ©Matlab, ©LabVIEW and ©PAMguard.

The REMHY can monitor noises on a frequency bandwidth going from 3 Hz to more than 500 kHz guaranteeing over 100 dB dynamic and Signal to Noise Ratio.

## • Easy to use - Easy to deploy - Easy to recover

Thanks to small dimensions the REMHY buoy can be deployed and recovered quickly by a single person.

The interface is very easy to use and accessible with any computer using a web browser such as Google Chrome and Firefox. It is also very easy to connect and disconnect the hydrophone sensors.

## Contact

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## RTsys Activities

- Underwater acoustics
- Embedded electronics
- Underwater drones
- Sonar solutions
- Systems integration
- Customized R&D