



icListen

The new standard in broadband digital marine acoustics

The icListen Smart Hydrophone is the industry's most sensitive broadband digital hydrophone. It's a compact, all-in-one instrument capable of processing data while collecting in real-time.

Use icListen as a digital hydrophone, acoustic data logger, or both at once. Collect hard to detect data accurately and cost effectively while reducing data handling and storage.

Introducing our newest icListens

icListen HF-X2 - Record high intensity sounds: pile driving and explosions.

icListen AF - Extends LF's quiet performance into the audio band.

Applications	HF	HF-X2	AF	AF(L)	LF
Marine Mammal Monitoring	*		*		
Earthquake and Tsunamis				*	*
Pile Driving/Explosives		*			
Ocean Observatory	*		*	*	
Pipeline Leak Detection	*				
Wind Farms	*				
Shipping Noise	*		*		

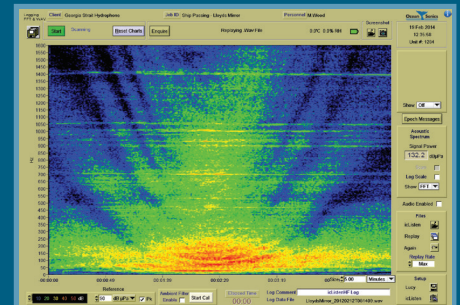
- **Detect** real-time events using Epoch Mode. Determine when spectral or WAV data is stored or transmitted in real-time.
- **Use** a web browser to access the webserver to setup, test, and operate icListen.
- **Synchronize** multiple hydrophones for a high quality multi-channel array avoiding the problem of cross-talk.
- **Simplify** data processing and project planning.
- **Wide** dynamic range eliminates gain settings.
- **Easy** to connect through a network, radio or cabled to a PC.
- **Compact** and self-contained, can be carried in one hand.
- **Extend** your reach beyond 100m using the GSM Radio Buoy, ISM Radio Buoy or Ethernet Extender.

icListen Models HF, AF, LF



24-bit Smart Hydrophone

- Quiet
- Low Power
- Calibrated
- Acoustic Array
- High Value Rich Data
- Easy to Deploy



Lucy Software

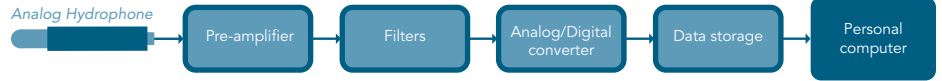
Lucy is used to setup and test icListen.

Display real-time waveform or waterfall displays using our PC software Lucy.

What makes icListen different?

The icListen replaces preamp, filters, converters and data link with a compact unit that gives trusted sound data in real units.

Traditional approach



Smart Hydrophone approach



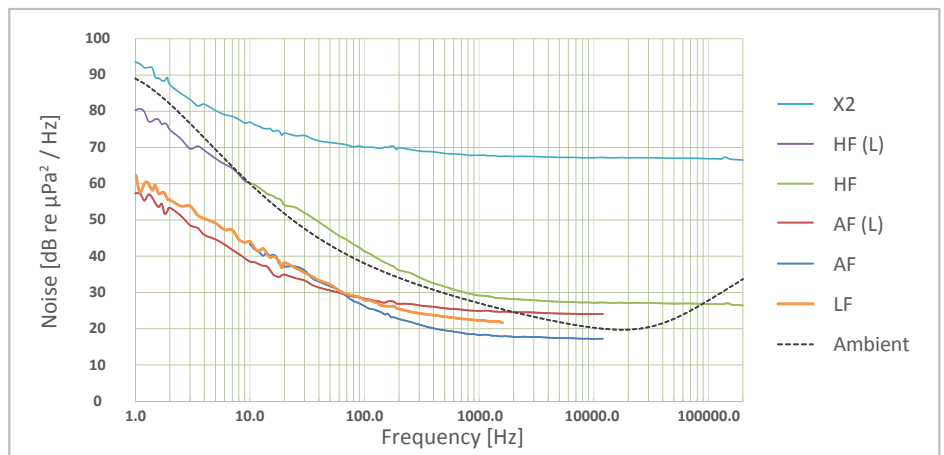
Hydrophone Sensing Element; ultra low noise and wide dynamic range for high signal quality and long term stability.

Intelligent Digital Hydrophone processes data before it is transmitted using spectral analysis and event detection, preconfigured for each application.

Comparison of the icListen Models

icListen	Min Freq	Max Freq	Battery Life	Interface	Web Server	Self Noise
HF	10 Hz	200 kHz	10 Hours	Ethernet	Yes	27
HF(L)	1 Hz	200 kHz	10 Hours	Ethernet	Yes	27
HF-X2	1 Hz	200 kHz	10 Hours	Ethernet	Yes	67
AF	10 Hz	12 kHz	10 Hours	Ethernet	Yes	18
AF(L)	1 Hz	12 kHz	10 Hours	Ethernet	Yes	24
LF	1 Hz	1.6 kHz	30 Hours	Serial		22

Compare icListen Models to Ocean Ambient Levels



Bandwidth (+/- 6 dB)

HF: 10 Hz to 200 kHz

AF: 1 Hz to 12 kHz

LF: 1 Hz to 1600 Hz

Sample Rate (Max S/sec)

HF: 512,000 **HF-X2:** 512,000

AF: 32,000 **LF:** 4,000

Power

12 - 24 Vdc input

2 W with Ethernet link

Synchronization

Accuracy 0.25 usec

Lock Range 1.0 Hz +/- 8ppm

GPS PPS

External IEEE 1588 Module Optional

Acquire Modes

Record: Waveform / FFT / Epoch

Maximum Internal Data Storage

128 GB

Dynamic Range

HF and AF: 118 dB

LF: 134 dB

Sensitivity

HF, AF and LF: -170 dBV re. μ Pa

HF-X2: -210 dBV re. μ Pa

Case Material and Depth

Engineered Plastic - 200m

Titanium - 3500m



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