

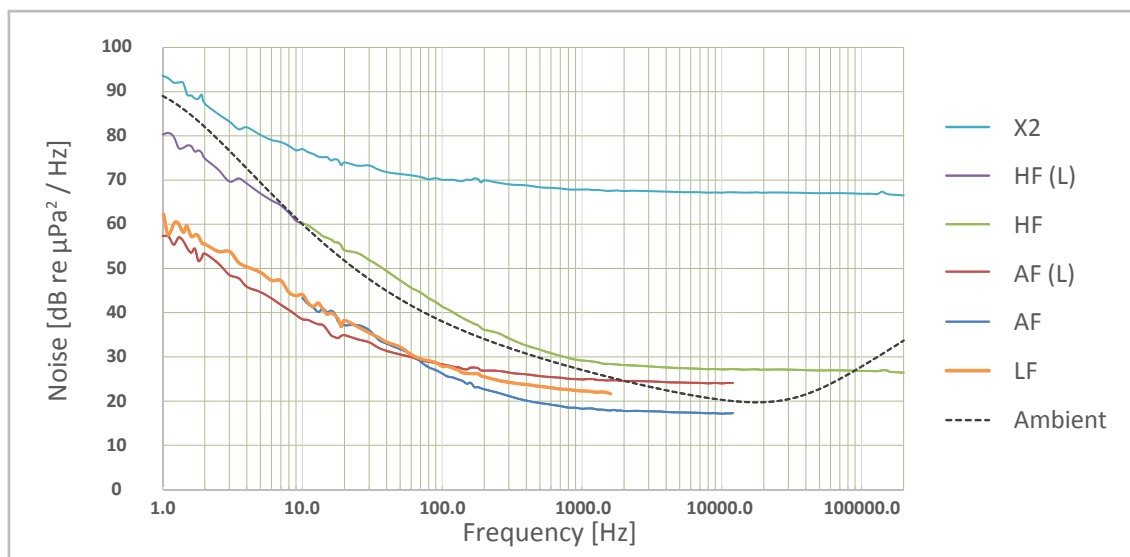
icListen Specification

The new standard in broadband digital marine acoustics

The icListen Smart Hydrophone is a compact, all-in-one instrument that logs calibrated waveforms, spectral or event data in standard formats and can be used to stream real-time data. Use the icListen as a digital hydrophone, acoustic data logger, or both at once.

This compact instrument includes rechargeable batteries, large memory and 24 bit data acquisition system. The icListen detects real-time events and can log or transmit just the event data in real-time.

icListen Self-Noise



Instrument access methods

- **Stream/Collect** waveform and spectrum (FFT) data.
- Use **Lucy PC software** to view and process data or enquire and set up instrument.

HF and AF

- Use the **Web Browser** to view, real-time acoustic data, instrument status, download logged data, configure instrument settings and put to sleep.
- Use **FTP** to manage files on the instrument copy and delete stored data files, and install firmware upgrades.
- Ethernet Interface



icListen Models
HF, AF, LF



200m icListen HF
Engineered Plastic



3500m icListen HF
Titanium

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LF	AF(L)	AF	HF(L)	HF	X2	R-TYPE	UNITS
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SIGNAL PERFORMANCE

Low Frequency Cutoff	1	1	10	1	10	1	10	Hz
+/- 3 dB bandwidth	1.6	4	4	100	100	100	200	kHz
+/- 6 dB bandwidth	6.4	12.8		200	200	N/A		kHz
Sigma Delta Modulator Rate	1.024	16.384		16.384	16.384	16.384		MHz
Maximum Data Rate	4 / 16 ^A	32		512	512	512		ksps
Minimum Data Rate	0.25	1		1	1	1		ksps
Resolution	24	16 or 24		16 or 24	16 or 24	16 or 24		bits
Minimum Self Noise	22	19	18	27	67	39		dB re $\mu\text{Pa}^2/\text{Hz}$
Peak Input Level (μPa)	176	166	165	175	215	182		dB re μPa
Peak Input Level (Volts)	5	6		6	6	6		dBV
Voltage Sensitivity	-171	-160	-159	-169	-209	-176		dBV re μPa
Digital Sensitivity, 24-bit, $\text{count}^2 / \mu\text{Pa}^2$	-41	-31	-30	-40	-80	-47		dB
Digital Sensitivity, 16-bit, $\text{count}^2 / \mu\text{Pa}^2$	-	-79	-78	-88	-128	-95		dB
Dynamic range, 1.0 Hz BW	154	147	147	148	148	143		dB
Dynamic range, Spectrogram, Full BW	148	132	132	121	121	116		dB
Full Bandwidth Dynamic Range	122	106	106	95	95	90		dB

SOFTWARE / INTERFACE

Communications Interface	RS-422	Ethernet	Ethernet	Ethernet	Ethernet	
		RS-422	RS-422	RS-422	RS-422	
Lucy Software Support	Yes	Yes	Yes	Yes	Yes	
Collect Data Protocol	Serial	Serial / TCP	Serial / TCP	Serial / TCP	Serial / TCP	
Streaming Data Protocol	-	TCP / UDP	TCP / UDP	TCP / UDP	TCP / UDP	
Web Server (HTTP)	-	TCP	TCP	TCP	TCP	
FTP, SFTP and SSH Console	-	TCP	TCP	TCP	TCP	
Maximum Internal Data Storage	32	128	128	128	128	GB

POWER

Internal Battery Life ^C	30	10	10	10	10	Hours
Metalic Lithium Equivalent Content	420	780	780	780	780	mg
Recommended Supply Voltage	12 - 36	18 - 36	18 - 36	18 - 36	18 - 36	V
Supply Voltage Limits	9 - 48	15 - 48	15 - 48	15 - 48	15 - 48	V
External Power (min, no networking)	-	1.8	1.8	1.8	1.8	W
External Power (typical)	0.14	2.1	2.1	2.1	2.1	W
External Power (charging)	1	3.8	3.8	3.8	3.8	W

MECHANICAL

Mass (Titanium Case)	977	958	958	958	-	gm
Mass (Plastic Case)	461	442	442	442	478	gm
Volume (Displacement)	360	320	320	320	334	cm^3
Overall Length, including connector	267	267	267	267	317	mm
Sensor Element Length	65	65	65	65	116	mm
Body (Can) Length	165	165	165	165	165	mm
Element Diameter	38	22	22	22	16	mm
Body Diameter	48	48	48	48	48	mm

Notes:

A. No internal logging above 4 ksps.
 B. dBBSR is the ratio of Sensitivity in dB to a reference sensitivity. (see our white paper on Digital Hydrophone Sensitivity.)
 C. Initial battery life. Battery life will decrease by about 20% per year.

