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1100 Series Mini Beacon



Key features

- aae proprietary Sigma 2 bi-directional spread spectrum technology
- Precise range resolution
- Multi-Fire common interrogate capability
- MiQ data telemetry functionality
- Directional or omni-directional beam patterns options available
- Auto tune detect for optimal performance

Applications

- General purpose tracking and positioning applications
- Static and dynamic operations e.g. ROV, sidescan sonar
- Navigation + Data for monitor third party sensors

1100 Series Mini Beacon Overview

1100 Series Mini Beacons incorporate the next generation of applied acoustics' Sigma 2 acoustic protocols. Utilising bi-directional wide band width spread spectrum provides precise range resolution and positional stability.

The Sigma 2 protocols are designed for use with Easytrak Pyxis and Nexus 2 systems. The 1100 Series also retains compatibility with all Easytrak systems and other USBL manufacturers.

When coupled with Pyxis or Nexus 2 systems the 1100 series provides Multi-Fire functionality, providing positional updates in <3 sec from an array of 10 beacons.

The MiQ data telemetry function provides third party data plus position to the surface for a variety of applications

With an industry standard 5-pin connector, the beacons are quick and easy to configure using the 2082 BluFin or 1083 Multi-Charger that also activate and monitor the charging of the battery pack.

Technical Specification

MODEL TYPES & PHYSICAL SPECIFICATION

Housing material; Hard anodised aluminium, with clear protective sleeve and stainless steel cage

Model	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in Air / Water
1119	±90°	188 dB	1500 m	74 mm	395 mm	2.90 kg / 1.40 kg
1113H	±30°	196 dB	2000 m	74 mm	410 mm	3.10 kg / 1.50 kg

*Effective SPL is 5dB less when used with iXblue GAPS USBL systems.

Electrical Specification

BATTERY	
Battery Type	Rechargeable. NiMH as standard
Listening Life	60 days
Operational Life, aae Sigma 2	Dependent on pulse rate and operational mode 1119: 55 hours at 1.0 pps 1113H: 35 hours at 1.0 pps

Configuration

Transmit Frequency Range	21 – 31 kHz
Receive frequency range	17 – 31 kHz
Turnaround time	Auto select upon protocol. User defined
Transmit pulse width	Auto select upon protocol
Refresh rate	>1 Hz
Multi-Fire	10 IDs
MIQ data telemetry	Navigation + Data @ 800 Bps payload Fixed RS232 interface @ 9600, 8, N, 1

External Inputs

Connector type	MCBH5M 5-way connector
Responder key	+ 5 to 25 Volts
External Power	22 to 35 V DC@80 mA
Charge	Onboard fast charger for 3 hour charge, typical. Activated and monitored via 2082 BluFin or 1083 Multi-Charger

USBL Compatibility

aae 1100 Series beacons use Tone, Chirp, MFSK, DSSS and FHSS as transmission/reception protocols, allowing cross-compatibility with many USBL systems, including:

- Nexus 2 / Pyxis systems: Sigma 1, Sigma 2, Sigma 3 spread spectrum systems
- aae Vesta: Sigma 3 digital protocol
- aae Nexus Lite / Alpha: Tone systems
- Exail / iXblue: GAPS USBL
- Kongsberg: HiPAP

Options

- Compatibility with USBL systems not listed across
- Remote transducer option supplied with [BCN-1110] electronic bottle and 2 m interconnect cable'

  [REM-RM91] Omni-directional transducer rated to 1500 m

  [REM-RM43] Directional transducer rated to 2000 m

- Digital depth transmission when fitted with depth sensor;

  Depth sensor 100 m/300 m/1000 m/2000 m (adds D suffix to model number) eg. [1119D-300 m]

- Floatation Collar

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Due to continual product improvement specification information may be subject to change without notice.
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