

1100 Series Mini Beacon



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 Nexus 2. The 1100 Series also retains compatibility with all Easytrak systems and other USBL manufacturers.

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

The MiQ Data Uplink 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 1082 Smart Switch or 1083 Multi-Charger that also activate and monitor the charging of the battery pack.

Key Features

- AAE proprietary Sigma 2 bi-directional spread spectrum technology
- Precise range resolution
- Multi-Fire common interrogate compatibility
- MiQ Data uplink functionality
- Quick and easy configuration
- Directional or omni-directional beam pattern options available
- High power option model to operate longer ranges
- Auto tune detect for optimal performance
- Options for use with remote transducers

Applications

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

Technical Specification

MODEL TYPES – PHYSICAL SPECIFICATION

Housing material: Hard anodised aluminium, with clear protection sleeve and stainless steel cage

	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in air
1115	±45°	194dB	2000m	74mm	410mm	3.10kg/1.50kg
1115H High Power	±30°	196dB	2000m	74mm	410mm	3.10kg/1.50kg
1119	±90°	188dB	1500m	74mm	395mm	2.90kg/1.40kg

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

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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 1115: 55 hours at 1.0pps 1115H: 35 hours at 1.0pps 1119: 55 hours at 1.0pps Operational life reduced when used with non AAE USBL systems.

Configuration

Transmit frequency range	21 - 31kHz
Receive frequency range	17 - 31kHz
Turnaround time	Auto select upon protocol. User defined
Transmit pulse width	Auto select upon protocol
Refresh rate	>1Hz
Multi-Fire	10 IDs
MIQ Data Uplink	Navigation + Data @ 800Bps 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 Vdc@80mA
Charge	Onboard fast charger for 3 hour charge, typical. Activated and monitored via 1082 Smart Switch 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:

AAE Nexus, Nexus 2	Sigma 1, Sigma 2 Spread Spectrum systems
AAE Easytrak	All models, tone systems
iXblue	GAPS USBL
Kongsberg	HiPAP
Sonardyne	USBL

OPTIONS

- Compatibility with USBL systems not listed above
- Non-rechargeable batteries (alkaline)
- Survival depth to 4000m
- Remote transducer (supplied with Model BCN-1110 electronic bottle);
- RM90, omni-directional rated to 1500m. RM45, directional, rated to 2000m.
Inter connect cable for each option, 2m standard
- Depth sensors 100m/300m/1000m/2000m/4000m (adds D suffix to model number)
- Floatation collar



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