

1000 Series Mini Beacon



1000 Series Mini Beacons incorporate Applied Acoustics' proprietary Sigma acoustic protocols, proven for use with AAE's USBL tracking systems, other manufacturers' USBL systems operating with wide bandwidth transmissions, as well as those using 'narrow band' tone signalling.

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 bi-directional spread spectrum technology
- Quick and easy configuration
- Directional or omni-directional beam pattern options available
- Externally configurable as transponder, responder or pinger
- High power option model to operate longer ranges
- Options for use with remote transducers

Applications

- General purpose tracking and positioning applications
- Static and dynamic operations e.g. ROV, sidescan sonar.

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
1015	±45°	194dB	2000m	74mm	410mm	3.08kg/1.46kg
1015H High Power	±30°	196dB	2000m	74mm	410mm	3.08kg/1.46kg
1019	±90°	188dB	1500m	74mm	395mm	2.88kg/1.38kg
1022	±20°	202dB	4000m	95mm	418mm	5.03kg/2.75kg

*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

1000 Series Mini Beacon Technical specification continued...

Operational life, AAE Spread Spectrum	Dependent on pulse rate and operational mode
	1015: 150 hours at 1.0pps
	1015H: 100 hours at 1.0pps
	1019: 150 hours at 1.0pps
	1022: 100 hours at 1.0pps
	Operational life reduced when used with non AAE USBL systems.

Configuration

Transmit frequency range	24 - 33.5kHz
Receive frequency range	17 - 31kHz
Turnaround time	15/30/60/100ms dependent on channel selection
Transmit pulse width	1.5/3.0/10ms dependent on channel selection

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 1000 Series beacons use Tone, Chirp, MFSK, DSSS and FHSS as transmission/reception protocols, allowing cross-compatibility with many USBL systems, including:

AAE Nexus	Spread Spectrum systems
AAE Easytrak	All models, tone systems
iXBlue	GAPS USBL
Kongsberg	HPR/HiPAP
ORE/Edgetech	USBL
Sonardyne	USBL

OPTIONS

Compatibility with USBL systems not listed above

Non-rechargeable batteries (alkaline)

Toroidal beam pattern version, Model 1019T

Survival depth to 4000m

Remote transducer (supplied with Model BCN-1010 electronic bottle);
RM90, omni-directional rated to 1500m. RM45, directional, rated to 2000m. Inter connect cable, 2m standard

Depth sensors 100m/300m/1000m/2000m/4000m (adds D suffix to model number)

Digital depth transmission when used with AAE Nexus USBL systems

Floatation collar



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