APPLIED ACOUSTICS
Underwater Technology
An AAE Technologies Group Company

Applied Acoustic Engineering Ltd
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1000 Series Midi Beacon

1000 Series Midi Beacons incorporate Applied Acoustics' proprietary Sigma acoustic protocols, proven for use with Applied Acoustics' USBL tracking systems, other manufacturers' USBL systems that operate 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, easy configuration
- Directional or omni-directional beam pattern, depending on application
- Externally configurable as transponder, responder or pinger
- Optional high power model to operate longer ranges
- Options for use with remote transducer

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 durable clear protection sleeve and stainless steel cage

	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in air
1033H	±30°	203dB	4000m	100mm	540mm	6.86kg/3.01kg
1035	±45°	200dB	4000m	100mm	540mm	6.86kg/3.01kg
1035H High Power	±45°	203dB	4000m	100mm	540mm	6.86kg/3.01kg
1039	±90°	191dB	4000m	100mm	540mm	6.84kg/3.01kg

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

ELECTRICAL SPECIFICATION

Battery

Battery type	Rechargeable. NiMH as standard
Listening life	90 days

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Operational life, AAE Spread Spectrum	Dependent on pulse rate and operational mode 1033H: 30 hours at 1.0pps 1035: 60 hours at 1.0pps 1035H: 30 hours at 1.0pps 1039: 150 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
Turn around 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@120mA
Charge via 1082	Onboard fast charger for 4 hour charge, typical. Activated and monitored 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)
- Remote transducer (supplied with Model BCN-1030 electronic bottle);
  RM90, omni-directional rated to 1500m. RM45, directional, rated to 2000m. RM15, directional, rated to 4000m. Interconnect cable for each option, 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, Toroidal beam (1035)

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