applied acoustics
underwater technology

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1160 Series
Fatboy Beacon



Key features

- aae Sigma 2 bi-directional spread spectrum technology
- User configurable Tx power and Rx Gain
- Multi-Fire common interrogate capability
- Quick, easy configuration
- On-board fast charging for typical 8 hour charge time
- Survival depth to 4000 m as standard

Applications

- General purpose tracking and positioning applications for deeper water applications or in an acoustically challenging environment
- Static and dynamic operations e.g. Deep water ROV, subsea cable burying applications

Fatboy Series Beacon Overview

The 1160 series Fatboy Beacons are ideal for deep water operations, noisy and acoustically challenging environments, and applications requiring long operating ranges.

Fatboy transponders incorporate applied acoustics' proprietary Sigma acoustic protocols, allowing extremely stable and reliable performance with Pyxis and Nexus USBL systems, whilst maintaining compatibility with almost all of the industry's other standard USBL systems.

Technical Specification

MODEL TYPES & PHYSICAL SPECIFICATION

Housing material; Hard anodised aluminium, with clear protection sleeve and stainless steel cages

Model	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in Air / Water
1162	±15°	208 dB	4000 m	130 mm	652 mm	14.80 kg / 6.60 kg

*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
Operational Life, aae Sigma 2	Dependent on pulse rate and operational mode Spec at max operating power, position only. Operation life will increase with lower power and decreased repetition rates. 1162: 24 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
Transmit power level	User programmable
Receiver Gain	User programmable
Refresh rate	>1 Hz
Multi-Fire	10 IDs

External Inputs

Connector type	MCBH5M 5-way connector
Responder key	+ 5 to 25 Volts
External Power	22 to 35 V DC @ 120 mA
Charge	On-board fast charger for 8 hour charge, typical. Activated and monitored via 2082 BluFin Charger or 1083 Multi-Charger

USBL Compatibility

aae 1150 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, Pyxis systems: Sigma 1, Sigma 2 spread spectrum systems
- aae Easytrak Alpha: Tone systems
- Exail / iXblue: GAPS USBL
- Kongsberg: HPR / HiPAP

Options

- Compatibility with USBL systems not listed across
- Non-rechargeable batteries (alkaline)
- Depth sensor 100 m/300 m/1000 m/2000 m/4000 m (adds D suffix to model number)
- Floatation Collar

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