

1130 Series Midi Beacon



Key features

- AAE Sigma II bi-directional spread spectrum technology
- User configurable Tx power and Rx Gain
- Multi-Fire common interrogate capability
- MiQ data telemetry functionality
- Directional or omni-directional beam pattern, depending on application
- Externally configurable as transponder or responder

Applications

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

Series Midi Beacon Overview

The 1130 Series Midi Beacons have been designed to be used with Applied Acoustics Nexus 2 & Pyxis positioning system, utilising Applied Acoustics proven Sigma II acoustic protocols.

They also retain compatibility with all Easytrak systems and systems from other manufacturers.

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.

Technical Specification

MODEL TYPES – PHYSICAL SPECIFICATION

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

Model	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in Air / Water
1139	±90°	191dB	4000m	100mm	540mm	6.90kg/3.00kg
1133H	±30°	203dB	4000m	100mm	540mm	6.90kg/3.00kg

*Effective SPL is 5dB less when used with ixblue GAPS USBL systems, SPL specification is at maximum configured Tx Power.

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. 1139: 50 hours at 1.0pps 1133: 24 hours at 0.5pps

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
Transmit Power Level	User programmable
Receiver Gain	User programmable
Refresh rate	>1Hz
Multi-Fire	10 IDs
MIQ data telemetry	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 @ 120mA
Charge	On-board fast charger for 4 hour charge, typical. Activated and monitored via 1082 Smart Switch or 1083 Multi-Charger

USBL Compatibility

AAE 1130 Series beacons use Tone, Chirp, MFSK, DSSS and FHSS as transmission/reception protocols, allowing cross-compatibility with many USBL systems, including:

- Nexus 2, Pyxis: Sigma II spread spectrum systems
- AAE Nexus: Sigma 1, USBL
- AAE Easytrak Alpha: Tone systems
- iXblue: GAPS USBL
- Kongsberg: HPR/HiPAP

Options

- Compatibility with USBL systems not listed above
- Remote transducer, supplied with Model [BCN-1130] electronic bottle and 2m interconnect cable;
 - [REM-RM91], omni-directional $\pm 90^\circ$, rated to 1500m.
 - [REM-RM43], directional $\pm 30^\circ$, rated to 2000m.
 - [REM-RM15], directional $\pm 15^\circ$, rated to 4000m.
- Digital depth transmission when fitted with depth sensor;
 - Depth sensors 100m/300m/1000m/2000m/4000m (adds D suffix to model number) eg. [1139D-2000m]
- Floatation collar