

# 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 and Pyxis positioning systems, utilising applied acoustics proven Sigma 2 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. <b>1139:</b> 50 hours at 1.0pps <b>1133:</b> 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