

# 1130 Series Midi Beacon



## Key features

- aae Sigma 2 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

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

## Midi Series Beacon Overview

The 1130 Series Midi Beacons have been designed to be used with applied acoustics Nexus 2 & 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 2082 BluFin charger 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 clear protective sleeve and stainless steel cage

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

## 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 1.0 pps 1133: 24 hours at 0.5 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
MIQ data telemetry	Navigation + Data @ 800 Bps 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 V DC @ 120 mA
Charge	Onboard fast charger for 4 hour charge, typical. Activated and monitored via 2082 BluFin 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 Lite, Nexus 2, Pyxis systems: Sigma 1, Sigma 2 spread spectrum
- aae Vesta: Sigma 3 spread spectrum
- aae Easytrak Alpha: Tone systems
- Exail / iXblue: GAPS USBL

## Options

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