

Applied Acoustic Engineering Ltd

Marine House, Marine Park, Gapton Hall Road, Great Yarmouth NR31 0NB, United Kingdom T +44 (0)1493 440355 E general@appliedacoustics.com W appliedacoustics.com

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

- 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 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 durable clear protection sleeve and stainless steel cage

Model	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in Air / Water
1139	±90°	191dB	3000m	100mm	540mm	6.90kg/3.00kg
1133H	±30°	203dB	4000m	100mm	540mm	6.90kg/3.00kg

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 2082 BluFin Charger 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: Sigma 2 spread spectrum systems
- aae Vesta, Nexus: Sigma 1, USBL
- aae Easytrak Alpha: Tone systems
- iXblue: GAPS USBL

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 ±90°, rated to 1500m.

[REM-RM43], directional ±30°, rated to 2000m.

[REM-RM15], directional ±15°, rated to 4000m.

Digital depth transmission when fitted with depth sensor;

Depth sensors 1000m/2000m/4000m (adds D suffix to model number) eg. [1139D-2000m]

Floatation collar



Due to continual product improvement specification information may be subject to change without notice. 1130 Series Midi Beacon April 2025 BCN-1130-9000/3 ©Applied Acoustic Engineering Ltd.

