

## 1100 Series Mini Beacon



**1100 Series Mini Beacons** incorporate the next generation of Applied Acoustics' Sigma 2 acoustic protocols. Utilising bi-directional wide band width spread spectrum provides precise range resolution and positional stability.

The Sigma 2 protocols are designed for use with Easytrak Nexus 2. The 1100 Series also retains compatibility with all Easytrak systems and other USBL 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.

### Key Features

- AAE proprietary Sigma 2 bi-directional spread spectrum technology
- Precise range resolution
- Quick and easy configuration
- Directional or omni-directional beam pattern options available
- Externally configurable as transponder, responder or pinger
- Group ID
- High power option model to operate longer ranges
- Auto tune detect for optimal performance
- Options for use with remote transducers

### Applications

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

## Technical Specification

### MODEL TYPES – PHYSICAL SPECIFICATION

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

	Beam Pattern	SPL*	Survival Depth	Diameter	Length	Weight in air
<b>1115</b>	±45°	194dB	2000m	74mm	410mm	3.08kg/1.46kg
<b>1115H</b> High Power	±30°	196dB	2000m	74mm	410mm	3.08kg/1.46kg
<b>1119</b>	±90°	188dB	1500m	74mm	395mm	2.88kg/1.38kg
<b>1122</b>	±20°	202dB	4000m	95mm	418mm	5.03kg/2.75kg

\*Effective SPL is 5dB less when used with iXBlue GAPS USBL systems.

### ELECTRICAL SPECIFICATION

#### Battery

Battery type                      Rechargeable. NiMH as standard  
Listening life                      60 days

## 1100 Series Mini Beacon Technical specification continued...

Operational life, AAE Sigma 2	Dependent on pulse rate and operational mode
	1115: 55 hours at 1.0pps
	1115H: 35 hours at 1.0pps
	1119: 55 hours at 1.0pps
	1122: 35 hours at 1.0pps
	Operational life reduced when used with non AAE USBL systems.

### 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
Refresh rate	>1Hz
Group ID	Multi Group ID's available in Sigma 2

### External Inputs

Connector type	MCBH5M 5-way connector
Responder key	+ 5 to 25 Volts
External power	22 to 35 Vdc@80mA
Charge	Onboard fast charger for 3 hour charge, typical. Activated and monitored via 1082 Smart Switch or 1083 Multi-Charger

### USBL COMPATIBILITY

AAE 1100 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	Sigma 1, Sigma 2 Spread Spectrum systems
AAE Easytrak	All models, tone systems
iXBlue	GAPS USBL
Kongsberg	HiPAP
Sonardyne	USBL

### OPTIONS

- Compatibility with USBL systems not listed above
- Non-rechargeable batteries (alkaline)
- Survival depth to 4000m
- Remote transducer (supplied with Model BCN-1110 electronic bottle);
- RM90, omni-directional rated to 1500m. RM45, directional, rated to 2000m. Inter connect cable, 2m standard
- Depth sensors 100m/300m/1000m/2000m/4000m (adds D suffix to model number)
- Digital depth transmission when used with AAE Nexus USBL systems
- Floatation collar



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