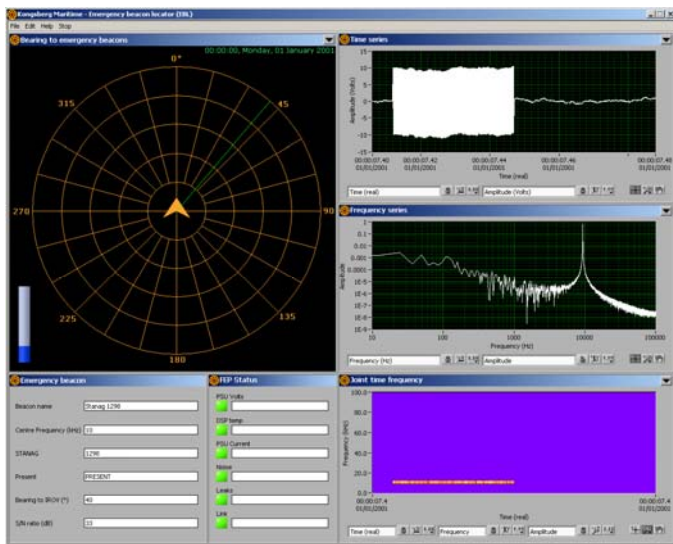


Product Specification

Acoustic Beacon Locator System Model Type 442

The Kongsberg Model 442 Acoustic Beacon Locator System was developed in response to a requirement for the NATO Submarine Rescue System to assist in localising the Disable Submarine (DISSUB).



The Acoustic Beacon Location system provides the ability to determine the bearing to any acoustic beacon within its frequency range. The system is designed to locate a beacon transmitting a single acoustic tone at regular intervals, such as those defined in STANAG 1298 and 1382. The system also provides a useful frequency management function.

Control and Display Unit

The CDU allows the operator to configure the system parameters and monitor the display for visual indication of beacon detection. The MMI displays a polar plot with vector indicating direction and signal strength to the beacon. A time series plot, frequency series plot and frequency time domain plot is provided to allow visual analysis of acoustic beacon parameters.

Hydrophone Array

The hydrophones are mounted on a frame in a fixed, known, configuration. This configuration is entered into the systems array model via the MMI.

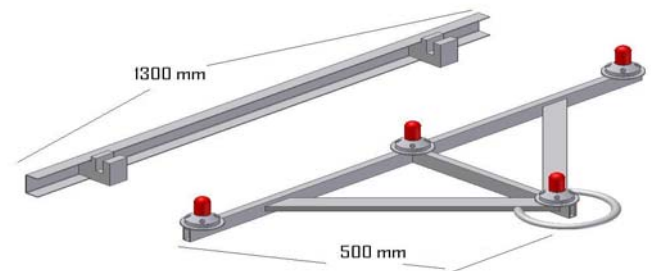


Figure 1 – A typical Hydrophone Array

Front-End Processor (FEP)

The FEP comprises a Digital Signal Processor (DSP), an Analogue to Digital Converter (ADC) and a Power Supply module. Configurable from the MMI these components are mounted within an approved pressure vessel, which is attached to the host platform. Data communication to and from the FEP is performed using an Ethernet link (copper or fibre optic).



Figure 2 – Front-End Processor

Key Features

- Easy deployment from surface vessel, ROV or manned submersible
- Compatible with STANAG 1298 and 1382
- Ability to locate beacons associated with aircraft flight recorders, hazardous material containers, exercise weapons, valuable underwater assets, etc
- Requires no mechanical array steering to locate beacon bearing
- Audio output available
- Frequency management tool – clear visual indication of acoustic sources in the operational environment
- Slave display of polar plot via Ethernet network
- Reconfigurable array model to suit a multitude of installations
- Remote access and control of FEP and sensors via Ethernet link

Optional Features

- Directional hydrophones
- Additional sensor inputs
- Compass input
- Increased frequency range to accommodate marine mammal detection

Technical Specification

Compatibility	STANAG 1298 and 1382 Most Commercial Beacons
Performance	
Beam pattern (standard)	Omni-directional
Frequency band	100Hz to 60kHz
Physical FEP	
Maximum operating depth	1000 metres
Diameter (main body)	170mm
Length (excluding retaining lugs)	460mm
Weight in air, mission ready	10.8kg
Weight in seawater	2.9kg

