

Sonar Systems

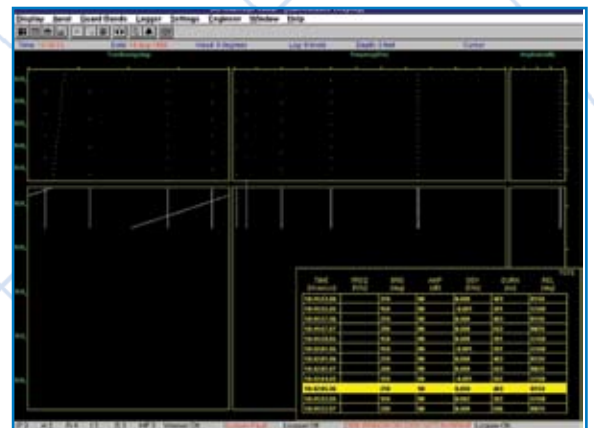


Drumgrange has long been associated with the design, development and implementation of sonar systems and has particular expertise in the fields of intercept and high frequency (HF) passive sonar research and design.



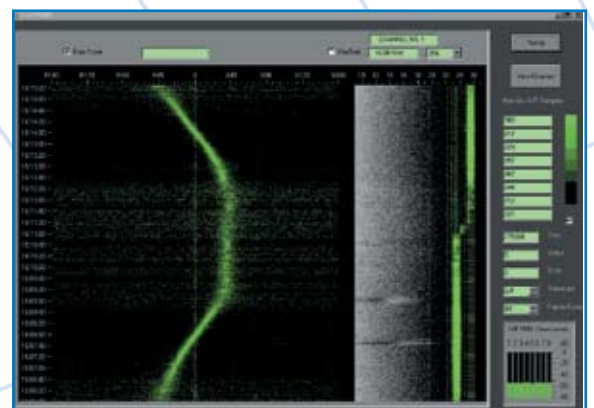
INTERCEPT SONAR - HIDRA

A compact integrated intercept sonar system capable of being configured to operate with most common transducer array topologies. A stand alone version is currently in service in RN submarines interfacing to the intercept array, but is equally well suited to operation within an integrated sonar suite. A networked X-Windows display option is available for use within a federated display system. The high levels of hardware integration allow two bands, with up to 13 hydrophones each, to be processed using only 3 double extended Eurocards.



HIGH FREQUENCY PASSIVE SONAR - LEOPARD

A high sensitivity, high frequency passive sonar system which can be interfaced with existing submarine arrays, or new configurations that may be incorporated into towed arrays or towed bodies. The sonar uses a narrow-band technique that responds to the spatial structure of received sonar wavefronts. The signal processing algorithm gives full 360 degree azimuth cover, and practically eliminates the side-lobe 'spokes' that are traditionally associated with this class of sonar.



SYSTEM MODELLING AND ANALYSIS

Drumgrange offers a complete sonar system design and development capability, based on sound principals of theoretical modelling of the platform and underwater environment. Experienced staff are available to support system installation and setting to work, with additional specialist facilities to support trials and calibration, including analysis and reporting of results.

ALGORITHMIC DESIGN

Drumgrange provides research facilities, enabling algorithmic design solutions from initial research, through modelling and demonstration, to successful implementation within the end product.

HIDRA - Intercept Sonar

Key Features

Surveillance Display

- Vertically scrolling history presentation
- Bearing, frequency and amplitude displays vs. time
- Fast and slow update areas (operator configurable)
- Optional frequency filters (display in different colours)
- Cursor readout of all parameters
- Tote presentation of contact parameters

Classification Display

- A-scan presentation
- Amplitude and frequency vs. time
- Operator selectable update rates
- Cursor, pause and zoom controls
- Comb cursor for repetition rate readout

Replay Facility

- Real-time random access and fast replay

Aural Facilities

- Baseband and heterodyned operation
- Wideband and narrowband modes
- Can be slaved to classification display

Warner Alarms

- Alarms on selected frequency filters
- Operator controlled

Data Logging

- All contacts can be logged to magnetic media
- Operator controlled
- Readout of disk space used

BITE Reporting

- BITE reporting to LRU
- BITE reports logged to magnetic media

LEOPARD - HF Passive Sonar

Key Features

- Interfaces to existing sonar arrays
- Suitable for use with towed arrays
- Responds to short duration events
- High sidelobe suppression
- Provided with Graphic User Interface
- Working in bands above normal passive sonar

“We design, develop and manufacture innovative products and are also experts at integrating existing technology to create successful, cost effective solutions.”



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