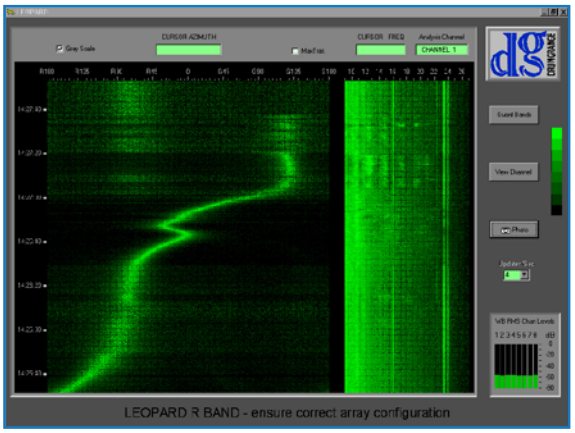
Sonar Systems

Drumgrange has long been associated with the design, development and implementation of sonar systems and offers a complete design and through-life support capability. Drumgrange's sonar solutions are in-service with the UK's Royal Navy either as stand-alone systems or as integrated sub-systems using the latest open systems architecture software and COTS hardware.

Active Intercept Sonar

Drumgrange has particular expertise in Intercept Sonar, having developed a series of high performance wideband Intercept Sonar Processors. We can provide complete hardware and/or software solutions using single arrays or multi-site architectures covering low to very high frequencies. Drumgrange's solutions are fully digital allowing easy integration within an integrated sonar suite by a third party.



High Frequency Passive Sonar - LEOPARD

A high sensitivity, high frequency passive sonar which can be interfaced with existing sonar arrays or new array configurations. 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.

S2054(IR)

Drumgrange has supplied various sonar processing sub-systems for the new open architecture Sonar 2054 Inboard Replacement (IR) programme being fitted to the Vanguard Class submarines by Lockheed Martin.

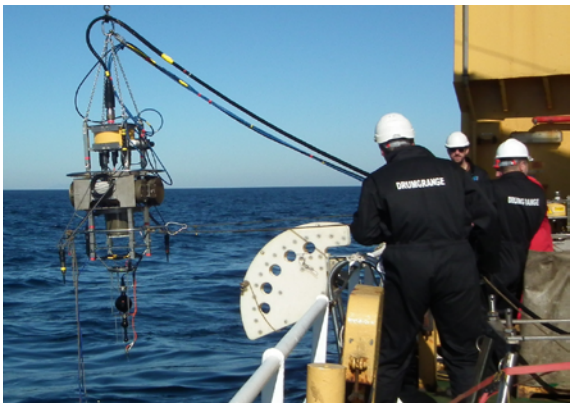
Hull Vibration Monitoring Equipment (HVME)

Drumgrange has been contracted to manufacture and install a Technical Refresh (TR) to the HVME systems on the Royal Navy's existing Type 23 Frigates, submarines and mine counter measures vessels. HVME (TR) provides a comprehensive vibration monitoring and investigation capability using COTS hardware and arrays of transducers mounted on the hull throughout the platform.

Drumgrange's HVME (TR) provides a comprehensive vibration investigation and monitoring capability

Sonar Research and Development

Drumgrange has a highly capable sonar modelling and simulation capability to support algorithm development and system performance modelling using simulated or recorded data.



In Service Support

Drumgrange has extensive experience of providing in-service support including platform installation and setting to work, service and repair, contractor logistics support (CLS), post-design services, documentation and safety management coupled with specialist facilities to support sonar trials, static/underway calibration and sonar recording for data analysis.

Technical Specification

Generic 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

HF Passive Sonar Key Features

- Interfaces to existing sonar arrays
- Processing suitable for various arrays including towed, hull and intercept
- Responds to short duration events
- High sidelobe suppression
- Provided with Graphic User Interface
- Working in bands above normal passive sonar

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