



# Drumgrange Ltd

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## When Mission Criticality Matters



# A world leader in Maritime Communications

**Designing, developing, installing and commissioning VLF (Very Low Frequency) communications technologies, products and systems since the 1980s.**

Our equipment spans the whole VLF broadcast chain including OTAM – from communications centres, transmitter sites, maritime platforms to reference systems. Our product portfolio has maintained compatibility with the latest NATO STANAGs from the original 5030 to the current 4724 and upgrade options for 5065 (LF) standards.

Today, we continue to support, refine, and refresh those systems via long-term contracts with national governments, NATO and Prime Contractors.

## Portfolio

- Transmitter sites: Keystream Processors, Modulators, Demodulators, OTAM EOW, Caesium PTFE
- Platforms: Demodulators
- HQ Sites, MTCC, OTAM, EOW, Closed Loop Test Facility, Bearer Multiplexer Units
- Reference systems and test facilities
- MSK VLF Single or Dual Demodulator System
- MSK VLF Dual Modulator Subsystem
- MSK VLF 3003 E Single 1U Demodulator, developed in collaboration with Hagenuk Marinekommunikation as the OEM



# Multi-domain integration for C5ISR applications

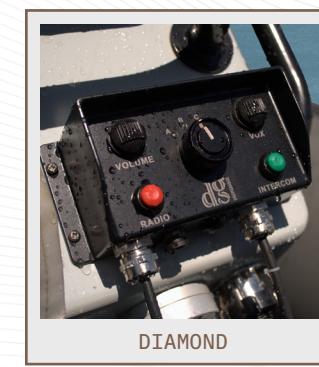
**Integrating Shared Situational Awareness systems with systems, software, platforms and people in some of the most operationally critical areas of defence and security.**

Data security is assured from the point of collection through to transfer, integration, storage and analysis. This security is maintained across land, sea, and cyberspace domains, including across different security domains.

Our expertise focuses on delivering a full comprehensive capability, ensuring that all the systems work seamlessly.

## Portfolio

- **Walk-On-Fit (WOF)**  
SSA capability suitable for small boats and vehicles.
- **Video Capture & Analysis**  
Design, development, and integration of Milestone Video Management Software (VMS) for covert operations.



# Expert solutions for Maritime Mission Systems

**Rapid, high-quality and cost-effective realisations of innovative technological solutions that are delivered on time, to specification, and to customer satisfaction.**

We specialise in creating complex, high-performance solutions that are certified to meet functional, environmental, shock and information assurance requirements.

Today, our products are in service with the UK Armed Forces, NATO Forces and foreign militaries.

## Expertise

- Active intercept & surveillance sonar processing
- Digital data acquisition & sensor systems
- Acoustic Signature Management Systems (SMS)
- Precise Time and Frequency Equipment (PTFE)
- Naval GPS acquisition & distribution solutions (NAVFIX)



# Innovative technologies for future forces

**From writing the latest sonar signal processing algorithms to integrating novel sensors into existing systems, Drumgrange continuously builds upon our 45+ years of technical expertise to maintain our existing capabilities and improve upon them.**

We collaborate with partners across the industry to develop the latest technologies for the end user. This collaboration takes many forms, including assessing the viability of incorporating artificial intelligence and machine learning into existing and future products and investing the potential for quantum technologies. For example, we support the UK Hub in Quantum Position, Navigation and Timing and aims to integrate new sensor types, timing solutions and technologies into our next generation of products.

In addition to the engineering services we offer, we can also provide independent expert advice in a range of areas.

## Expertise

- Technical studies
- Research and development
- Computer modelling and algorithm development
- System design and integration of third-party solutions
- Assessment of low TRL solutions for system development
- Acoustic metrology and sonar calibration services
- CONOPS development for unmanned platform deployment
- Novel acoustic research
- Acoustic communications
- Technical demonstrators
- Independent technical assessment of sonar systems
- Assessment and recommendations for the use of third-party equipment within systems



# Drumgrange at a glance

Established in 1979, Drumgrange is an independent, family-owned British engineering company specialising in the multidomain integration of electronics and communications systems. We deliver end-to-end solutions in operationally critical areas of defence and security, with expertise that spans the entire engineering lifecycle; from concept, research, design, development, testing, manufacture, integration, installation, in-service support through to obsolescence management.

## Drumgange in numbers

**45+**

years of experience

**80+**

active projects

**170+**

employees

**4**

business streams

**2**

sites

**>25M**

turnover per annum

## Areas of expertise

- Prime contract management
- System engineering and integration
- Electronic hardware and PCB design
- Software development, including real-time embedded
- Mechanical design and ruggedisation
- Simulation and 3D modelling
- Documentation and technical publications, including the provision of a handbook
- Technical studies and consultancy services
- Security accreditation and application of Secure by Design (SbD) principles
- Safety management, safety case production and Independent Safety Advisor
- In-service support
  - Integrated Logistics Support (ILS)
  - Contractor Logistics Support (CLS) and Contracting for Availability (CFA)
  - Post-Design Services (PDS)
  - Obsolescence Management & Resolution