

# MIRS

## Multi-influence signature measurement

**MIRS is a multi-influence signature measurement system for surface ships and submarines, capable of simultaneously measuring magnetic, electric, acoustic, seismic, and pressure influences.**

### Protection System

Surface ships and submarines are subject to numerous detection threats, due to the signature that characterises them and unequivocally identifies them (acoustic, electric, magnetic, seismic, and pressure).

Current naval mines include new sensors for their activation (UEP-Underwater Electric Potential, ELFE -Extra Low Frequency Electric Field, seismic, acoustic, magnetic, etc.), as well as advanced digital signal processing techniques capable of fully exploiting the aforementioned influences.

This poses a risk to the safety of both surface ships and submarines. Therefore, it is essential to monitor and control the signature of these platforms, in order to minimise the risk of detection.

### A Portable Station

Among the most advanced systems of its kind and in relation to fixed stations, a decisive advantage of the MIRS system is that, thanks to its portability, low weight and consumption and its high performance, the ship's signatures can be obtained in different geographical locations.

**Sistema de Control de Tierra RCS**  
*Range Control Station*



**Sistema de Posicionamiento de Superficie**  
*Onboard Tracking System OTS*



**Cable subacuático que conecta RCS con UJB**  
*Underwater cable connecting RCS to UJB*

**Buque a medir**  
*Vessel Under Test VUT*

**Cables subacuáticos conectando UJB - USU**  
*Underwater cables connecting UJB to USU*

**Caja de juntas submarina (UJB)**  
*Underwater junction box (UJB)*

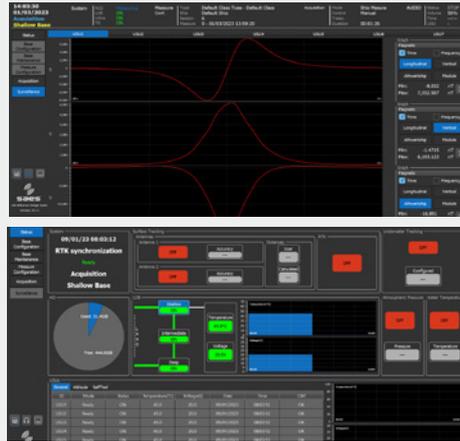
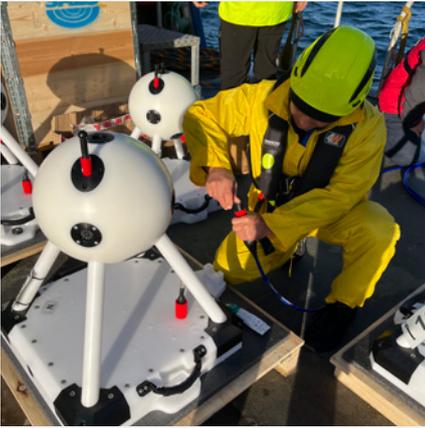


**Cables subacuáticos conectando UJB - USU**  
*Underwater cables connecting UJB to USU*



**Unidad de Adquisición Submarina (USU)**  
*Underwater Sensor Unit (USU)*





## Maximum Precision Anywhere

Its portability allows it to be used in any desired scenario and for multiple purposes: obtaining the ship's signature in a real scenario, using it in a fixed station, as a discreet way of gathering intelligence in strategic areas, routine signature checks or before a mission.

MIRS is a high-performance and precision system, easily deployable by two people from a rubber boat to be installed in the desired location and perform the ship's measurement.

It is a robust system with minimal maintenance needs, offering very good results when it remains submerged for long periods of time as a fixed measurement station.

## Catamaran. Multi-influence Signal Generator.

The catamaran allows for the metrological control of the measurement station, generating magnetic, electric and acoustic signals within the operating band of the sensors.

## Main Features

- Measurement of magnetic, electric, acoustic, seismic, and pressure influences.
- Database. Storage, analysis and management of signatures.
- Real-time monitoring, graphical presentation and recording of the different measured influences.
- Designed using mainly COTS (Commercial Off The Shelf) equipment.
- Data transmission to the Control and Analysis Centre via cable or radio frequency.
- Modular and portable design. Scalable system.
- Self-test capability to control the good operating status of the sensors.

## Use for Calibration and Testing

MIRS is also a tool for testing and calibration of:

- Systems designed to reduce the influences of ships such as degaussing systems, ASG (Active Shaft Grounding), etc.
- MCM (Mine Countermeasures) systems, such as influence sweeps.

