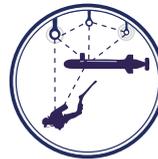


DIVERHELD SONAR & NAVIGATION SYSTEM FOR EOD DIVERS & SPECIAL FORCES

Sparse-LBL repositioning system - Sonar - Underwater real-time communication



MCM operations



Sparse-LBL Communication

Description

SonaDive is especially designed to assist military and professional divers in navigation and underwater object detection.

Two types of forward multibeam imaging sonar helps divers in the search and identification phase, from 0 to 300m with the most ultra-high-resolution display.

The embedded navigation system relies on several sensors: INS, DVL, pressure sensor, and a deployable floating GPS.

The contribution of native acoustic communication offers the most improved navigation thanks to the Sparse-LBL technology and allows a constant accuracy during the mission.

Divers can communicate all together and with the surface unit in realtime via the acoustic modem, sharing contacts and text messages within more than 2 km range, reaching up to 5 km using RTSYS relay beacons.

Sonar and navigation data are fully recorded allowing mission replay, data analysis and export. With 6 hours of battery life, the endurance can be extended by swapping batteries under water during mission.

The product is subject to export control authorization.

Advantages

- 5 meters constant navigation accuracy using sparse-LBL positioning system
- Clear Target identification underwater thanks to its large 12" screen
- Bidirectional communication allowing real-time monitoring of all mission participants
- Highest quality of communication network even in harbor and shallow water environments
- Always safe operations thanks to the lowest magnetism on the market (STANAG 2897 B Grade)

Navigation capabilities

- Max operating depth: 100 m
- Submarine signal range: More than 2000 m
- Positioning accuracy of less than 5 m
- Endurance: 6 hours extendable by underwater swapping batteries
- Sea conditions: Sea State 4
- Standards: STANAG 2897 B Grade

Payloads & Options

- Acoustic camera: 450 kHz or 900/2250 kHz
- DVL 1200 KHz
- Large screen: 12" visible in all water conditions
- Gradiometer & Earphone
- Surface Communication Module & Relay Beacons



Navigate

Detect & Identify



Communicate

Detection

SonaDive is fitted with BlueView 2D Multi-Beam Sonar acoustic cameras. Two models are available with the following equipment:

- BLUEVIEW M 450 kHz- 45
- BLUEVIEW M 900 kHz/2 250 kHz-45

The cameras are interchangeable from one model to another.

Advanced navigation capabilities

- Navigation accuracy: 5 meters with Sparse LBL
- DVL: 1200 kHz
- Floating GPS Antenna with 3 types of cable
- INS: High performance
- High accuracy pressure sensor

Communication

SonaDive integrates native Underwater Acoustic Communication functionalities providing real time transmission between nodes (fellow divers, Surface Communication Module and beacon units). RTSYS protocol named RACAM, allows both data communication network and subsea positioning thanks to Long Base Line technology (Sparse LBL). These technologies rely on the state of the art in underwater acoustic communication with data channel coding based on LDPC and timing synchronization management based on TDMA with atomic clock accuracy.

All of these leading edge technologies are combined in **SonaDive** and its associated equipments. **This system provides to the divers and surface supervisor an exhaustive tactical view of the mission in real time, with a positioning accuracy of less than 5 meters.**

Gradiometer

A flux gate probe positioned vertically on the side of the system can be connected and disconnected during the mission thanks to its wet mate connector.

Software

The windows PC software provided with **SonaDive** allows creation of markers (POI and waypoints) as well as navigation rails during mission planning phase. It offers also the use of viewing and analysis of post-operation files leading to a mission report with dive logs and sonar data.

Data security

No data stored on the system but on removable USB key.

v.010

Dimensions

- Height: 270 mm
- Width: 372 mm
- Length: 560 mm
- Weight (air): 20 kg
- Buoyancy (sea water): Neutral

Supplied Hardware

- Deployable GPS antenna
- INS
- Pressure sensors
- HD color video Camera & dive light
- Large screen: 12" visible in all water conditions
- Integrated chart georeferenced POI (S57, S63, GEOTIFF, KML)

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