

Patria SONAC ACS

Patria's Acoustic Mine Sweep is designed for both legacy and modern sea mines with advanced acoustic triggering.





EXTREME SURVIVABILITY

Finland is known for high technology and extreme resilience. The harsh nature and limited resources have pushed us to learn and innovate efficiently. Thorough preparation for the future is the backbone of our culture.

Patria has grown from its Finnish heritage to a modern and international defence and technology company with over 100 years of experience. We use resources wisely, create innovative solutions and build intelligent systems that provide extreme survivability in any condition. We work with our customers throughout the entire lifecycle to ensure maximum value. Honest and straightforward co-operation is at the core of our work.

We build exceptional partnerships that last through critical operations. That's what it takes when you stand for your sovereignty. Trust us, we have been there.

TOTAL CONTROL

Improve your critical security with our C5ISTAR and cyber intelligence solutions.

Patria's innovative data services, with insightful visualizations and analytics, ensure that you have real-time, comprehensive situational awareness and a powerful mission control. We create a seamless defence system for those who want to have the advantage in every situation.

Stay one step ahead in your decisions with our turnkey solutions and be in total control.

Patria - Extreme conditions embedded.

Patria SONAC ACS is a cutting-edge acoustic mine sweep specially designed for sweeping modern influence mines with advanced acoustic triggering. Patria SONAC ACS effectively simulates the sound of any ship, thus providing outstanding performance for Mine Setting Mode (MSM), Target Simulation Mode (TSM) and Mine Jamming Mode (MJM). It is capable of transmitting recorded acoustic waveforms with high sound pressure over a large frequency band. Both the intensity and spatial diversity of the underwater sound field can be further increased by using multiple SONAC ACSs.

Acoustic Mine Sweep

The acoustic sweeping gear is monitored and controlled with onboard software during the mission. The software includes views for telemetry and status of the gear as well as controls for adjusting the gear settings in real-time. At any time, the operator can select the desired acoustic signature from signal library for transmission as well as use a tool for designing custom waveforms. The acoustic sweeping gear has a comprehensive command protocol interface that enables full integration into other systems. Onboard handling, maintenance, deployment, and recovery of SONAC ACS are supported with solutions fitted to closed loop, straight tail and other towed sweeping systems. Due to the streamlined, compact form and lightweight design, SONAC ACS can be effortlessly towed with an Unmanned Surface Vessel (USV) or similar small vessel. Desired sweeping depth of the sweep is set with a float on a surface or alternatively with a frame containing float and depressor.



Patria SONAC ACS - Acoustic Mine Sweep - Technical specifications

Main components

- LF transmitters (low frequency)
- MF transmitters (medium frequency)
- HF transmitters (high frequency)
- Hydrophone for monitoring acoustic output
- Composite shell with a rigid frame
- Passive pressure compensation unit for each LFT
- Electronics housing
- Software for controlling and monitoring the sweep gear

Physical characteristics

- The sound producing elements are inside the hull.
- Outer shell design is favourable for modular design with numerous options.
- Hull allows integrations of additional elements, e.g. an echo repeater.
- Frame allows the integrations of additional sensors, e.g. sonar or optical sensors.

Technical details

- Length: 260 cm
- Diameter: 68 cm
- Weight in air: 400 500 kg
- Weight in water: 180 220 kg
- Frequency range: 7 Hz 70 kHz
 Power supply (preferred):
- 6 kVA
- 3P ≈ 380 440 VAC 50 60 Hz
- Data interface: Ethernet
- Shock tested
- Tow drag at 6 knots without cabling: <2kN</p>



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