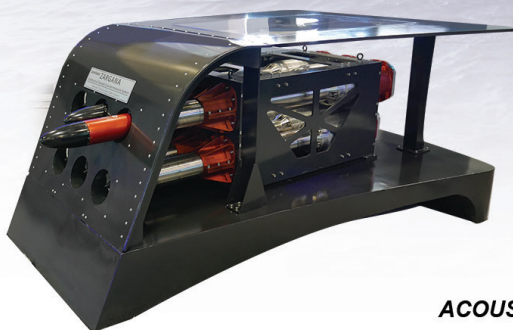


ZARGANA™

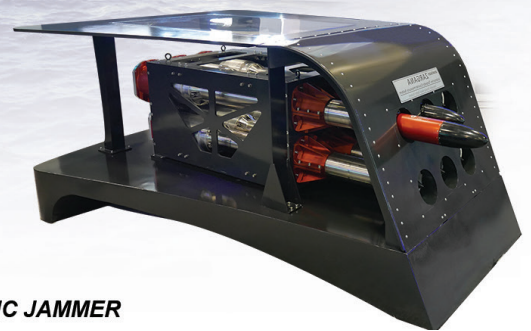
Submarine Torpedo Countermeasure System

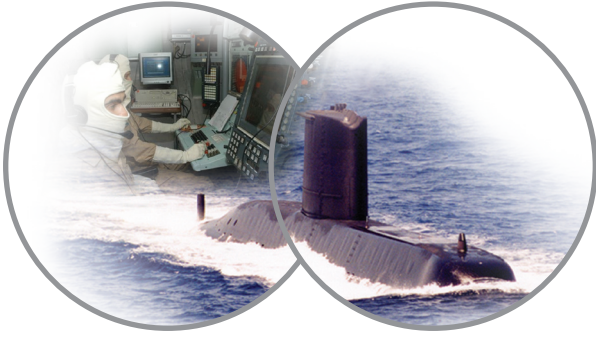


ACOUSTIC DECOY



ACOUSTIC JAMMER





ZARGANA™

SUBMARINE TORPEDO COUNTERMEASURE SYSTEM

ZARGANA™ Submarine Torpedo Countermeasure System ensures submarine survivability against torpedo attacks by autonomous operation and quick reaction capabilities. The system is designed to work integrated with submarine systems collecting real time data as well as operator provided data.

ZARGANA™ system basically collects platform and threat related data from submarine systems and performs detection, classification and localization to provide torpedo counter measure tactics with highest escape probability. Tactics include evasive maneuvering advices for submarine, deployment pattern and timing for acoustic jammers/decoys launching.

The Main Functions

- Host Platform Data Reception and Processing
- Threat Data Reception and Processing
- Sonar Data Reception and Processing
- Data Processing (e.g. DCL, Optimization, Filtering)
- Advise on Tactical Evasive Maneuver
- Display and Warning
- Launcher Control

System Components

- Computer Based Evaluation Simulator
- Decision Support System
- Outboard Launchers
- Expendable Acoustic Jammers
- Expendable Acoustic Decoys



Technical Specifications

Computer Based Evaluation Simulator

- Display of torpedoes, jammers, decoys, surface ships and submarines dynamics
- High fidelity torpedoes, decoys, jammers, submarine and surface ship models modeled by default hydrodynamic, acoustic and physical parameter values
- Platform sonar models for target alert
- Calculation of escape probability by statistical runs
- Language selection (Turkish/English)

Expendable Acoustic Jammers

- Blinding capability
- Programmable
- Compatible with operational depths of the submarine
- Wider frequency band enough to react against all acoustic torpedoes

Expendable Acoustic Decoys

- Self propelled, moving
- Programmable
- Compatible with operational depths of the submarine
- Wider frequency band enough to react against all acoustic torpedoes

Decision Support System

- Detection, Classification, Localization algorithms
- Launcher control
- Fully integrated with underwater command and control system
- Operator Control Unit
- Operating modes (Manual, Automatic, Semi-Automatic and Training modes)
- Remote computer based station or console

Outboard Launchers

- Instant reaction
- Separate launchers for port and starboard
- Interface with decoys
- Automatic programming of decoys before deployment