

MODEL 997

Hull-Mounted Sonar (HMS)

L3Harris Model 997's scalable architecture provides the best combination of cost and performance for new construction and modernization programs. The selection of array sizes provides the ideal solution for ships of any size – from offshore patrol vessels (OPVs) to cruisers.

Model 997 HMS is designed to give the maximum performance possible while searching, detecting, tracking, and classifying targets. The system provides an unsurpassed capability to prosecute close-in, anti-submarine warfare (ASW) threats and defend against torpedoes while avoiding mines and underwater obstacles.

Multiple transmission parameters combined with sensitive receivers and optimum signal processing allows maximum target information to be extracted from the acoustic environment.

L3Harris HMS systems are designed to provide a standoff capability with excellent shallow-water performance against any threat.

The L3Harris HMS system creates and maintains a complete UTP.

- > Creates a comprehensive view of the sonar picture, combat management system (CMS) information and common tactical picture (CTP) on a single display
- > Offers additional operator selectable sonar displays
- > Integrates all data coming from networked platforms and sensors
- > Provides full authority undersea warfare track management and fully-integrated weapon control to the operator, such as torpedo fire control
- > Displays overlays of bottom topography, water depth and acoustic performance conditions
- > Produces torpedo alerts and mine avoidance data



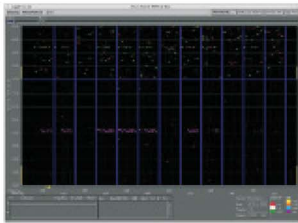
Photo by Petty Officer 2nd Class Aaron Chase



BENEFITS

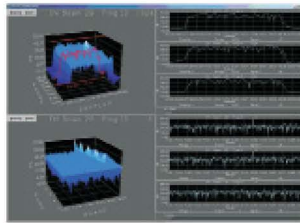
- > Scalable architecture and array size allows navies to choose the system that matches mission requirements
- > Active sonar operates in three frequency bands permitting multiple systems to operate in close proximity
- > Commercial off-the-shelf (COTS) components and open system architecture (OSA) minimizes costs
- > Combined frequency modulation (FM) and continuous wave (CW) transmission optimizes sonar coverage for both slow and fast targets
- > Mine and obstacle detection allows rapid transition to close-in threats
- > Maintenance of close contact (MCC) feature provides the ability to maintain contact at close range

UNDERSEA WARFARE COMBAT SYSTEM: SONAR OPERATOR DISPLAYS



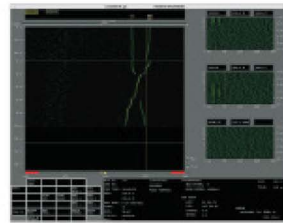
ACTIVE SEARCH DISPLAY

- > CW, FM, or combined
- > 12-ping history brightness (B) scan



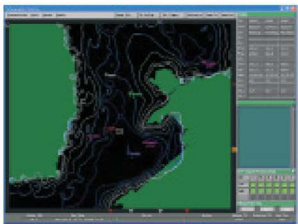
ACTIVE CLASSIFICATION DISPLAY

- > CW, FM, or combined
- > 3D or 2D history plot



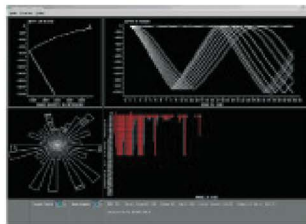
PASSIVE BROADBAND

- > Short and long integration
- > 3 demodulated noise (DEMON)



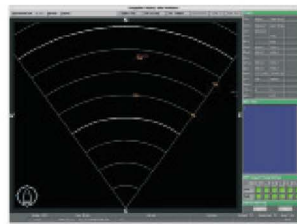
UNDERWATER TACTICAL PICTURE

- > Landmasses and sea bottom
- > Sonar and other CMS contacts



PERFORMANCE PREDICTION DISPLAY

- > 3D range-dependent model
- > Integrated expendable bathythermograph (XBT) data



MINE AVOIDANCE DISPLAY

- > Geographic orientation and chart overlay
- > Bottom stabilization

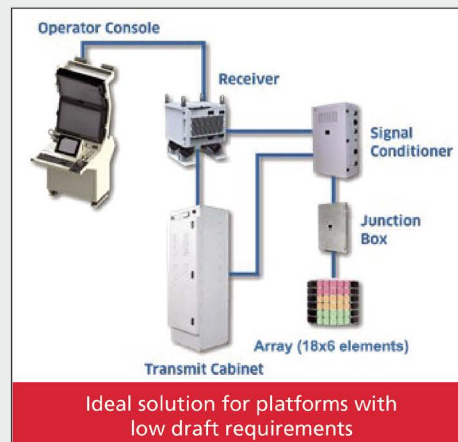
FEATURES

- > Single operator conducts the entire mission from one console
- > Data recorders can be used for both mission analysis and operator training
- > Built-in test (BIT) isolates faults to a single module
- > Logistics support available from totally indigenous to fully supported
- > Environmental characteristics:
 - > Temperature: 0° to 45° C operating
 - > Humidity: MIL-S-810
 - > Shock: MIL-S-901C
 - > Vibration: MIL-STD-167
 - > MI/EMC: MIL-STD-461/2

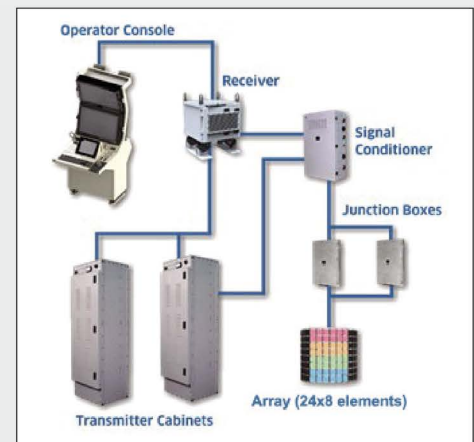
SCALABLE ARCHITECTURE PROVIDES BEST FIT FOR DIVERSE PLATFORMS



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