



P-3C Tactical Operational Readiness Trainer



Tactical Coordinator



The P-3C TORT is the latest innovation supporting Orion crew readiness.

The P-3C Tactical Operational Readiness Trainer (TORT) - built by Link Simulation & Training - is a computer-controlled, high fidelity, real-time training device that accurately simulates all airborne equipment found on the P-3C Orion aircraft. The trainer includes crew stations for the tactical coordinator, navigation/communications officer, acoustic and non-acoustic operators, as well as a fully functioning flight deck for the two pilots.

The P-3C TORT, the latest innovation in Orion crew readiness training, is providing the U.S. Navy the ability to train aircrews in a high fidelity, realistic and robust environment across all P-3C mission areas. By placing a greater emphasis on simulation-based training in the form of the TORT, vital aircraft can be better used performing operational missions versus supporting costly aerial training.

System Capabilities and Functions

The P-3C TORT - with its simulated crew stations, operational flight program (OFP), communications suite, simulated sensor equipment and instructor stations, and high-fidelity tactical environment - is an effective instructional tool that provides training scenarios designed to teach full operational and employment skills for the aircraft, sensors and weapons.

P-3C Tactical Operational Readiness Trainer



NAV COM Officer



Acoustical Station



Non-Acoustic Station

The P-3C TORT allows crews to train to a level of fidelity never before found in their training devices and earn readiness points from sorties completed in the simulator. The device is designed to not only train new operators, but also to maintain a fully qualified crew's proficiency.

The P-3C TORT provides mission rehearsal capability and complete readiness-level proficiency training for Anti-Submarine Warfare (ASW), Anti-Surface Warfare (ASuW) and Intelligence Surveillance and Reconnaissance (ISR) missions for acoustic and non-acoustic sensor operators. By increasing the overall fidelity of the device, crews can now employ their systems in the simulator precisely as they do in the actual aircraft. The TORT has taken P-3C training to new heights by providing crews with the ability to search for contacts, identify targets, program and release weapons and pass vital information into the Global Information Grid (GIG).

The crew station physical arrangement and the layout of controls within the crew station racks identically replicate that of the aircraft, allowing the development of natural crew-to-crew and crew-to-aircraft interactions. Each crew station provides an environment that immerses the operators into the scenario and allows for a more robust training experience. Additionally, the flight deck has been replicated to include all useful

cockpit displays and computers, electronically-controlled flight controls, aircraft seats and a full-scale flight and engine model. A 140° horizontal field-of-view visual display system allows for visual identification of targets, as well as tactical employment of weapons.

Combined force operations require coordination between the P-3C aircraft and external entities. The HLA, NASMP-compliant P-3C TORT simulates these crew-to-external interactions in audio and data forms.

System Description

The P-3C TORT training device is a completely new design that simulates all aspects of the actual P-3 aircraft and operating environments. The design of the device includes the following major elements:

Five crew stations:

- > Tactical Coordinator (TACCO)
- > Navigation/Communication (NAV/COMM)
- > Sensor Stations 1 and 2 (Acoustical Operators)
- > Sensor Station 3 (Non-Acoustical Operator)
- > Flight Deck

Three identical instructor stations that provide:

- > Full control of the training environment
 - Including surface and subsurface acoustic modeling
 - 25 acoustic capable contacts
 - Over 900 target sensor pairs
 - Wide area photo textured databases
- > Communications with the entire crew
- > Problem control and scenario monitoring
- > Repeat of crew displays
- > Mission debrief and replay capabilities

The P-3C TORT instructor station provides an intuitive approach to operation, ensuring that only a short period of time is required to become very comfortable with its man-machine interface.

Software Engineering Environment System:

- > Provides platform for software updates and maintaining concurrency
- > Provides a configuration control system
- > Allows for software maintenance in a "remote" location

For further information contact:

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