

U.S. Navy MH-60S Seahawk



Overview

CAE is the prime contractor responsible for the design and manufacture of MH-60S operational flight trainers (OFTs) and weapons tactics trainers (WTTs) for the United States Navy. The MH-60S OFTs and WTTs play a key role in the delivery of a safe environment for training and mission readiness of both pilots and rear crews who operate the MH-60S "Sierra" helicopter for the Navy.

MH-60S Missions

The MH-60S Seahawk is a multi-mission helicopter used by the Navy for vertical replenishment, airborne mine counter measures (AMCM), combat search and rescue (CSAR), maritime interdiction operations (MIO), and surface warfare (SUW) missions. The MH-60S, along with the MH-60R helicopter used primarily for anti-submarine warfare, form the cornerstone of the Navy's Helicopter Master Plan. The two aircraft share a common cockpit and technology. The Navy is acquiring 254 MH-60R and 271 MH-60S helicopters. The massive overhaul of the Navy's rotary wing fleet was the catalyst for a range of new training systems required.

Contract History

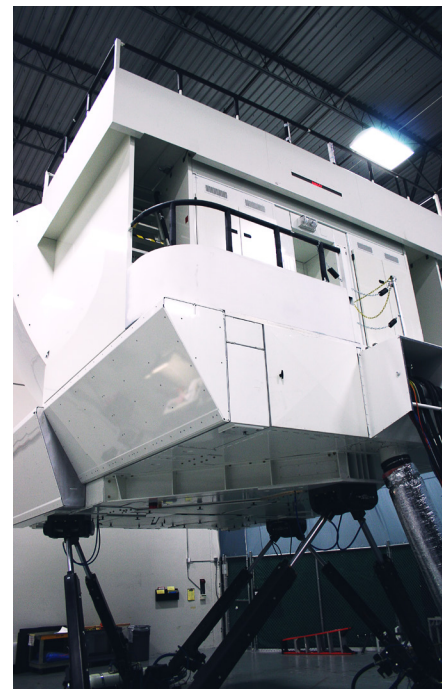
CAE began work on the MH-60S training program in June 2004. At that time, CAE won two competitive procurements to design and manufacture eight MH-60S OFTs (called OFT1, 3 through OFT9 by the Navy), and five MH-60S WTTs. CAE also performed a major upgrade and technology refresh to the MH-60S OFT1. In 2014, CAE won a competitive procurement for the program called the MH-60 Technology Refresh and Procurement of Simulators (TRPS).

As part of the "Tech Refresh" program for the U.S. Navy, CAE is providing hardware and software updates for existing MH-60S OFTs and WTTs. Some of the upgrades include an expanded 240-degree by 60-degree field-of-view display system and overhead windows. In addition, CAE is providing the structural integration and MH-60S OFT interoperability to the Navy's Aircrew Virtual Environment Trainer (AVET).

MH-60S OFTs

The MH-60S OFTs are full-mission simulators used to train pilots and co-pilots of the MH-60S helicopter. CAE delivered comprehensive suites of MH-60S simulators, including:

- Fixed-based MH-60S OFTs
- Six degree-of-freedom (DOF) full-motion system along with CAE's 3-DOF whole-cockpit vibration platform



MH-60S WTTs

The MH-60S WTTs replicate the back-end of the helicopter and are used to train sensor operators. The MH-60S WTTs feature detailed simulations of both the crews for AMCM missions. The MH-60S WTT sensor operator's common console provides the sensor controls and displays reflecting the dynamic conditions of the synthetic ocean environment. Simulations of the ocean topography, bottom types, obstructions, and biological environment are included in the training device. The MH-60S WTT supports the training of the three major phases of mine hunting - mission planning, mission execution, and post mission analysis - by using one of two selected sensors, Airborne Mine Neutralization System (AMNS), and AN/AES-1 Airborne Laser Mine Detection System (ALMDS). An interactive instructor operator station is used to develop and control the training scenario.

MH-60S Full Crew Tactical Training

When the MH-60S OFT and MH-60S WTT are integrated, they become an MH-60S tactical operational flight trainer (TOFT) to provide the Navy with a comprehensive training solution designed to provide a total aircrew mission training system. In this networked configuration, the pilot and co-pilot along with the rear crew can interact in the training scenario as they would during a mission.

In addition, all the MH-60S OFTs and WTTs are designed according to the Navy Aviation Simulation Master Plan (NASMP). The Navy has initiated the integration and modernization of all Navy aviation simulation assets to support networked training in a tactically relevant synthetic environment that meets the fleet's training requirements throughout the entire training continuum.



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