

U.S. Navy MH-60S

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 training and mission readiness of both flight and rear crews who fly the MH-60S "Sierra" helicopter for the Navy.

The MH-60S, also called the Knighthawk, is a multi-mission helicopter used by the Navy for vertical replenishment, airborne mine countermeasures, combat search and rescue, anti-surface warfare, and carrier plane guard. 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 plans to procure 271 MH-60S and 254 MH-60R helicopters over the next decade. The massive overhaul of the Navy's rotary wing fleet was the catalyst for a range of new training systems required.

CAE began work on the MH-60S training program in June 2004. At that time, CAE won a competitive procurement to design and manufacture MH-60S OFTs and WTTs. Prior to CAE's involvement on the MH-60S training program, the Navy had already procured two MH-60S OFTs (called OFT1 and OFT2 by the Navy). Since June 2004, the Navy has put CAE under contract to design and manufacture seven additional MH-60S OFTs (called OFT3 through OFT9 by the Navy). The MH-60S WTTs were a brand new development beginning in June 2004 and the Navy has contracted CAE to design and manufacture a total of five MH-60S WTTs since that time.



MH-60S OFTs

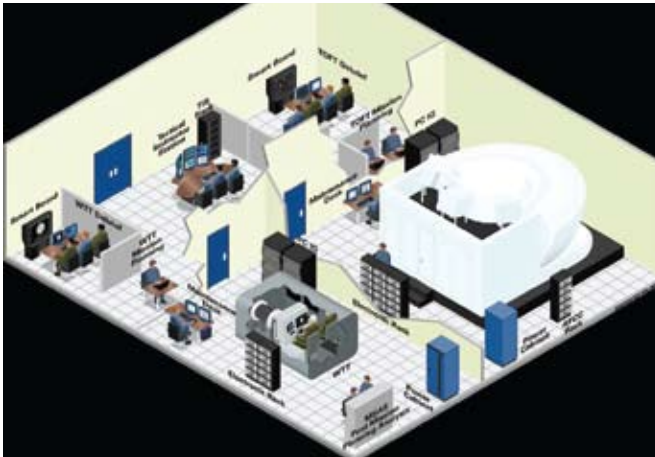
The MH-60S OFTs are full-mission simulators used to train pilots and co-pilots of the MH-60S helicopter. The first three MH-60S OFTs developed by CAE were fixed-based simulators and have been delivered already to Naval Air Station (NAS) Norfolk (OFT3 and OFT4) and NAS North Island (OFT5). As of spring 2008, CAE began development of the first MH-60S OFT (OFT6) that features a six degree-of-freedom (DOF) full-motion system along with CAE's 3-DOF whole-cockpit vibration platform. This first MH-60S OFT with a vibration platform and full-motion system was delivered to NAS Norfolk in early 2009. All subsequent MH-60S OFTs (OFT7 through OFT9) will be full-motion, vibration-platform simulators.





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 underwater environment and sensors to prepare rear crews for various missions. From the sensor operator's common console, the MH-60S WTT simulates an underwater sensor device while towing in a synthetic ocean. 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 – deployment, towing, and recovery using the AN/AQS-20A sonar mine detection set, the Airborne Mine Neutralization System (AMNS), the AN/ALQ-220 Organic Airborne and Surface Influence Sweep (OASIS), and the 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 together, 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. With the MH-60S OFT and WTT networked together, the pilot and co-pilot along with the rear crew can interact in the training scenario in the same way they will need to do during a mission. In addition, all the MH-60S OFTs and WTTs are designed according to the Navy's Naval Air System Master Plan (NASMP). The vision of the Navy is for the seamless integration and modernization of all Navy aviation simulation assets capable of being networked in a tactically relevant synthetic environment that will meet the fleet's training requirements throughout the entire training continuum.

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