

Sikorsky And CAE Bring Digital Magnetic Anomaly Detection Capability To MH-60R Maritime Helicopters



A digital magnetic anomaly detection sensor will give MH-60R SEAHAWK helicopters a powerful new tool to detect submarines.

NOWRA, AUSTRALIA, June 18, 2025 – Sikorsky, a Lockheed Martin company (NYSE: LMT) and CAE (NYSE: CAE; TSX: CAE), a global leader in training and simulation, are collaborating to deliver the CAE Magnetic Anomaly Detection-Extended Role (MAD-XR) system for installation aboard U.S. Navy and Royal Australian Navy MH-60R SEAHAWK® helicopters. Designed and built by CAE, and integrated with the aircraft's primary mission computer by Sikorsky, the passive digital MAD sensor will give the world's most capable maritime helicopter a powerful new tool to detect and track submarines below the sea surface.

"MH-60R operators now have the option to significantly upgrade their anti-submarine warfare capability using a small, removeable device that senses changes in the Earth's magnetic field caused by large metallic objects in the water," said Tish Rourke, Sikorsky Maritime Systems vice president. "With recent upgrades to mission computer software, this non-acoustic digital MAD sensor can easily be installed into any operational MH-60R aircraft, and can operate independently or collaboratively with other mission systems, such as the aircraft's sonobuoys or long-range active dipping sonar."

Compact and efficient, CAE's MAD-XR consists of highly sensitive magnetometers and a processor/interface unit weighing less than 20 pounds (9 kg) including cabling and mounting hardware. An audio alert informs the crew of a detected object, while the display provides contact and range details. The device can be installed inside an MH-60R aircraft tail cone without any permanent airframe modification, and can be quickly removed and installed on another MH-60R aircraft as operationally needed.

"CAE's MAD-XR offers a cutting-edge solution to detect and track submarines and other underwater threats, significantly enhancing military aircraft capabilities – it is the trusted choice for defence and security applications worldwide," said France Hébert, Division President, Defense & Security Canada and Global Operations Lead. As a key partner to OEMs and global military forces, CAE provides unmatched expertise in designing and manufacturing digital magnetic anomaly detection systems. We are proud to support their integration on the MH-60R maritime helicopter, ensuring superior performance in diverse operational environments."

Sikorsky, CAE, the U.S. Navy, and Royal Australian Navy teamed to integrate, test and optimize the CAE MAD-XR capability. Two events occurred to bring the digital MAD capability to the MH-60R fleet.

- In early 2024, the U.S. Navy released new software and hardware to MH-60R operators that will allow MH-60R aircraft to accept the digital MAD system. The capability was included in advanced technology upgrades the U.S. Navy releases to MH-60R operators every other year to ensure mission effectiveness and operational readiness.
- In September 2024, Sikorsky was awarded a \$21 million U.S. Navy contract — with CAE subsequently subcontracted — to deliver 20 DMAD kits for the Royal Australian Navy; six for the U.S. Navy; and two for evaluation by the U.S. Navy Reserve. Deliveries are to be completed in May 2026. The contract includes options for additional U.S. Navy orders of 24 kits each in 2025 and 2026.

Cliff Kyle, General Manager Sikorsky Australia welcomed the significant capability announcement and commended the Royal Australian Navy in being the first MH-60R operator to install the digital MAD capability on its fleet of MH-60R aircraft.

"Through our partnership with the Royal Australian Navy, Sikorsky Australia's workforce look forward to playing their role in fielding and sustaining this important and cutting-edge capability, which further strengthens Australia's MH-60R Seahawks' fleet lethality."

The CAE MAD-XR sensor offers significant improvements over the AN/ASQ-81 Magnetic Anomaly Detection (MAD) sensor installed on former U.S. Navy SH-60B helicopters. Externally mounted and attached to the aircraft via a cable and reeling machine, the previous MAD sensor weighed 90-lb., and trailed in the air a short distance behind the aircraft.

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About CAE

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