

Integrated Defensive Electronic Countermeasures (IDECM)

Executive Summary

- The Navy's Operational Test and Evaluation Force released the classified Integrated Defensive Electronic Countermeasure (IDECM) Block IV (IB-4) Operational Assessment report on February 27, 2017.
- DOT&E released the classified IB-4/Software Improvement Program (SWIP) Operational Assessment report on June 12, 2017.
- IB-4 is effective and suitable on the F/A-18 E/F.
- IB-4 is not effective and not suitable on the F/A-18 C/D Legacy Hornets because of Environmental Control System compatibility problems.
- SWIP is in developmental test with a planned fielding date of 3QFY18.
- DOT&E removed IDECM from the oversight list on June 21, 2017.

System

- The IDECM system is a self-protect electronic countermeasure suite on F/A-18 Strike Fighter aircraft that defends against radio frequency-guided threats. IDECM is comprised of on- and off-board components. The onboard components receive and process radar signals and can employ on- and/or off-board jamming components in response to identified threats.
- There are four IDECM variants: Block I (IB-1), Block II (IB-2), Block III (IB-3), and Block IV (IB-4). All the variants include an onboard radio frequency receiver and jammer.
 - IB-1 (fielded FY02) combined the legacy onboard receiver/jammer (ALQ-165) with the legacy (ALE-50) off-board towed decoy.
 - IB-2 (fielded FY04) combined an improved onboard receiver/jammer (ALQ-214) with the legacy (ALE-50) off-board towed decoy.
 - IB-3 (fielded FY11) combined the improved onboard receiver/jammer (ALQ-214) with a new (ALE-55) off-board fiber-optic towed decoy that is more integrated with the ALQ-214.
 - IB-4 (fielded FY16 on F/A-18 E/F) replaces the onboard receiver/jammer (ALQ-214(V)3) with a lightweight,



repackaged onboard jammer (ALQ-214(V)4)). IB-4 (ALQ-214(V)5) (currently in developmental testing) is intended to replace the ALQ-126B on F/A-18 C/D to provide advanced, carrier capable jamming for the first time to the F/A 18 C/D.

- IB-4 hardware will run enhanced onboard software known as SWIP. SWIP will give IDECM a new deny/delay capability to enhance survivability against modern radio frequency threat systems. IB-4 with SWIP is still in developmental testing.
- The F/A-18 E/F installation includes off-board towed decoys. The F/A-18 C/D installation includes only the onboard receiver/jammer components and not the towed decoy.

Mission

- Combatant Commanders will use IDECM to improve the survivability of Navy F/A-18 strike aircraft against radio frequency-guided threats while flying air-to-air and air-to-ground missions.
- The Navy intends to use the IB-4 complex jamming capabilities to increase survivability against modern radar-guided threats.

Major Contractors

- ALE-55: BAE Systems – Nashua, New Hampshire
- ALQ-214: Harris – Clifton, New Jersey
- ALE-50: Raytheon Electronic Warfare Systems – Goleta, California

Activity

- The Navy released the classified IDECM IB-4 Operational Assessment report on February 27, 2017. DOT&E released the classified IB-4/SWIP Operational Assessment report on June 12, 2017.
- The Navy conducted all testing in accordance with a DOT&E-approved test plan.
- DOT&E removed IDECM from its oversight list in June 2017.

FY17 NAVY PROGRAMS

IB-4

- The Navy fielded IB-4 for F/A-18 E/F in FY16.
- IB-4 operational testing for F/A-18 C/D is incomplete due to Environmental Control System compatibility problems. The remainder of operational testing may not be completed on Marine Corps F/A-18 C/D legacy Hornets (until the FY20 timeframe). The Navy will continue to study the correct fielding plan for IDECM on F/A-18 C/D Legacy Hornets.

SWIP

- SWIP is in developmental test. The Navy plans to field SWIP in 3QFY18.

Assessment

IB-4

- IB-4 is effective and suitable on the F/A-18 E/F.

- IB-4 is not suitable and not effective on the F/A-18 C/D Hornets due to Environmental Control System compatibility problems. The Navy will not field IB-4 on F/A-18 C/D aircraft.

SWIP

- Assessment results are included in the classified DOT&E Operational Assessment report.

Recommendations

- Status of Previous Recommendations. The Navy addressed previous FY16 recommendations.
- FY17 Recommendations. All recommendations can be found in DOT&E's classified Operational Assessment report from June 2017.