



AIR COMBAT COMMAND

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AIM-9M SIDEWINDER/AIM-9X NEXT GENERATION SIDEWINDER

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FEATURES: AIM-9M

The AIM-9M Sidewinder is a short range air-to-air missile that primarily targets fixed-wing aircraft, rotary helicopters, airborne cruise missiles and unmanned aerial vehicles. The AIM-9M is a supersonic, heat-seeking missile carried by USAF and NATO fighter aircraft. It is equipped with a high-explosive warhead and has an infrared guidance system. The missile is comprised of five major components: the Guidance Control Section (GCS), Target Detector (TD), Safe and Arming Device (S-A), Warhead, and Rocket Motor (RM). Four movable fin assemblies attach to the GCS and four fixed wing assemblies attach to the RM. A TMU-72 Coolant Tank provides an on-board source of coolant (Argon or nitrogen) used to cool the Refrigerated Detector Unit (RDU) in the GCS during captive carriage phase of flight.

The AIM-9M has a cylindrical body with roll-stabilizing rear wing/roller-on assembly. Also, the four fins are detachable and serve as the steering control surfaces of the weapon. Both roller-ons and control surfaces are mounted in cross-like arrangement. The AIM-9M is integrated on the A-10, F-15A-E, F-15EX and F-16A-D and is manufactured by Raytheon.



FEATURES: AIM-9X

The AIM-9X is a short range air-to-air missile that primarily targets fixed-wing aircraft, rotary helicopters, airborne cruise missiles and unmanned aerial vehicles. Additionally, the AIM-9X has surface attack capability with equipped aircraft.

The AIM-9X is a 5th generation supersonic, air-to-air guided missile that has full day/night capability and employs a passive infrared target acquisition system, proportional navigational guidance, a closed-loop position servo Fin Actuation Unit (FAU), and an Active Optical Target Detector (AOTD). The AIM-9X is configured with an Annular Blast Fragmentation warhead controlled by an Electronic Safe-Arm Device (ESAD). The Propulsion/Steering Section consists of a solid propellant Rocket Motor (RM) that propels the missile and incorporates a manual SAFE-ARM selector assembly, the FAU to activate four movable control surface fins mounted in line with four forward-mounted fixed wings that provide aerodynamic lift and stability, and a Jet Vane Control that enhances the missile's rear-steered maneuverability by deflecting RM thrust to aid in turning.

The AIM-9X-2 Sidewinder improves on the AIM-9X with updated processors within the Guidance Unit (GU) Electronics and an improved integrated Data Link (DL). The integrated DL improves the Lock-On-After-Launch performance. Extended battery life and an Ignition Safety Device that replaces the SAFE-ARM selector assembly allowing the GU to arm and initiate the RM.

The AIM-9X-3 (also referred to as AIM-9X-2+) is operationally identical to the AIM-9X-2, but with enhanced survivability modifications. This missile variant is reserved exclusively for external carriage on the F-35.

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