



# AIR COMBAT COMMAND

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## AGM-65 MAVERICK

Current as of January 8, 2020



### MISSION

The AGM-65 Maverick is a tactical, air-to-surface guided missile designed for close air support, interdiction and defense suppression mission. It provides stand-off capability and high probability of strike against a wide range of tactical targets, including armor, air defenses, ships, transportation equipment and fuel storage facilities.

### BACKGROUND

The Maverick is a modular design weapon. A different combination of the guidance package and warhead can be attached to the rocket motor section to produce a different weapon.

The Maverick has three different seekers and two different warheads. The solid-rocket motor propulsion section is common to all variants.

The seeker options are electro-optical (EO) imaging, imaging infrared (IIR) or a laser guidance package. The warhead is in the missile's center section. Either a 125-pound shaped-charge warhead or a 300-pound penetrator warhead can be used. A contact triggered fuse in the base of the warhead fires the shaped-charge. The penetrator uses a delayed-fuse, allowing the warhead to penetrate the target with its kinetic energy before firing. The latter is very effective against large, hard targets. The AGM-65 has a cylindrical body with long-chord delta wings and tail control surfaces mounted close to the trailing edge of the wing of the aircraft using it.

A-10 and F-16A-D aircraft carry Mavericks. As many as six Mavericks can be carried by an aircraft, usually in three round, underwing clusters, allowing the pilot to engage several targets on one mission. The missile also has "launch-and-leave" capability that enables a pilot to fire it and immediately take evasive action or attack another target as the missile guides itself to the target. Mavericks can be launched from high altitudes to tree-top level and can hit targets ranging from a distance of a few thousand feet to 13 nautical miles at medium altitude.

Maverick B models have an electro-optical television (TV) guidance system and utilizes the light weight shaped charge warhead. After the missile and its video circuitry is activated, the scene viewed by the guidance system appears on a cockpit television screen. The pilot selects the target, centers cross hairs on it, locks on, and launches the missile. The TV guidance system also has a scene magnification capability that enables the pilot to identify and lock on to smaller and more distant targets.

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The Maverick D has an imaging infrared guidance system, operated much like that of the A and B models, except that infrared video overcomes the daylight-only, adverse weather limitations of the other system. The infrared Maverick D can track heat generated by a target and provide the pilot a pictorial display of the target during darkness and hazy or inclement weather. The D model uses the lightweight shaped charge warhead.

The Maverick G/G2 model utilizes a similar guidance system as the D, with some software modifications that track larger targets. The G model utilizes a heavyweight penetrator warhead.

The Maverick H2 model uses an optical Charged Coupled Device (CCD) TV guidance system. The CCD system is an upgrade of the old TV system used in the B models. The CCD camera provides improved haze penetration, increases target contrast and longer range target identification; and improves the missiles' ability to maintain centroid track steering when locked on very small target. The H model, operates much like the other Maverick variants, utilizing the light weight shaped charge warhead. Maverick K2 model uses the H's CCD guidance system and heavyweight penetrator warhead.

Maverick L model uses the heavyweight penetrator warhead, rocket motor and GCS. If used in conjunction with ground or airborne laser designators, the missile seeker searches a sector 7 miles across and over 10 miles ahead. After launch, if the missile loses track of the laser designator, it flies up and over the target. A safety feature on the missile prevents the warhead from detonating high order, instead the warhead duds.



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