SH-60B Seahawk - 2002

United States



Type: Anti-Submarine Warfare (ASW)
Min Speed: 55 kt
Max Speed: 155 kt
Commissioned: 2002
Length: 15.2 m
Wingspan: 2.2 m
Height: 5.2 m
Crew: 3
Empty Weight: 6190 kg
Max Weight: 9927 kg
Max Payload: 3031 kg
Propulsion: 2x T700-GE-401C

Sensors / EW: - AN/APS-124 - Radar, Radar, Surface Search, Long-Range, Max range: 296.3 km
- AN/ALQ-142 - (AN/SLQ-32) ESM, ELINT, Max range: 926 km
- AN/AAS-44 - (AN/SLQ-32) Infrared, Infrared, Target Search, Tracking and Identification Camera, Max range: 55.6 km
- AN/APN-217 - (1983) Radar, Radar, Navigation, Max range: 64.8 km
- Generic Laser Designator - (Surface Only) Laser Designator, Laser Target Designator & Ranger (LTD/R), Max range: 18.5 km
- AN/ASQ-81(V)4 - (LAMPS Towed) MAD, MAD, Max range: 1.9 km

Weapons / Loadouts:
- 120 USG Drop Tank - Drop Tank.
- AGM-119B Penguin Mk2 Mod 7 - Guided Weapon. Surface Max: 37 km.
- Mk46 NEARTIP Mod 5A(S) - (1997) Torpedo. Subsurface Max: 7.4 km.
- AN/SSQ-62C DICASS - (1997-2002, A-Size, 86 Chn, 27/121/457m) Sonobuoy.
- AN/SSQ-53D DIFAR - (1992, A-Size, 99 Chn, 27/121/304m, 0.5/1/2/4/8hrs) Sonobuoy.
- AGM-114M Hellfire II - Guided Weapon. Surface Max: 9.3 km. Land Max: 9.3 km.
- Cargo [Air Drop, 2 tons] - Cargo.
- Cargo [Air Drop, 3 tons] - Cargo.
- Mk50 Barracuda Mod 0 ALWT - (1991) Torpedo. Subsurface Max: 7.4 km.

OVERVIEW: The Sikorsky SH-60/MH-60 Seahawk (or Sea Hawk) is a twin turboshaft engine, multi-mission United States Navy helicopter based on the United States Army UH-60 Black Hawk and a member of the Sikorsky S-70 family. The most significant airframe modification is a hinged tail to reduce its footprint aboard ships.

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The U.S. Navy uses the H-60 airframe under the model designations SH-60B, SH-60F, HH-60H, MH-60R, and MH-60S. Able to deploy aboard any air-capable frigate, destroyer, cruiser, fast combat support ship, amphibious assault ship, or aircraft carrier, the Seahawk can handle anti-submarine warfare (ASW), anti-surface warfare (ASUW), naval special warfare (NSW) insertion, search and rescue (SAR), combat search and rescue (CSAR), vertical replenishment (VERTREP), and medical evacuation (MEDEVAC). All Navy H-60s carry a rescue hoist for SAR/CSAR missions.

DETAILS: The SH-60B maintained 83% commonality with the UH-60A. The main changes were corrosion protection, more powerful T700 engines, single-stage oleo main landing gear, replacing left side door with fuselage structure, adding two weapon pylons, and shifting the tail landing gear 13 feet (3.96 m) forward to reduce the footprint for shipboard landing. Other changes included larger fuel cells, an electric blade folding system, folding horizontal stabilators for storage, and adding a 25-tube pneumatic sonobuoy launcher on left side. An emergency flotation system was also originally installed in the stub wing fairings of the main landing gear on both sides of the aircraft. However, this system was found to be impractical and possibly impede egress in an emergency, and the flotation gear was subsequently removed from the stub wings.

The SH-60B carries a complex system of sensors including a towed Magnetic Anomaly Detector (MAD) and air-launched sonobuoys. Other sensors include the APS-124 search radar, ALQ-142 ESM system and optional nose-mounted forward looking infrared (FLIR) turret. It carries the Mk 46, Mk 50, or Mk 54 torpedo, AGM-114 Hellfire missile, and a single cabin-door-mounted M60D/M240 7.62 mm (0.30 in) machine gun or GAU-16 .50 in (12.7 mm) machine gun.

The SH-60F primarily serves as the carrier battle group's primary antisubmarine warfare (ASW) aircraft. The helicopter hunts submarines with its AQS-13F dipping sonar, and carries a 6-tube sonobuoy launcher. The SH-60F is unofficially named "Oceanhawk". The SH-60F can carry Mk 46, Mk 50, or Mk 54 torpedoes for its offensive weapons, and it has a choice of fuselage-mounted machine guns, including the M60D, M240D, and GAU-16 (.50 caliber) for self-defense. The standard aircrew consists of one pilot, one co-pilot, one tactical sensor operator (TSO), and one acoustic sensor operator (ASO).

The HH-60H is the primary combat search and rescue (CSAR), naval special warfare (NSW) and anti-surface warfare (ASUW) helicopter. It carries a variety of defensive and offensive sensors making it one of the most survivable helicopters in the world. Sensors include a FLIR turret with laser designator and the Aircraft Survival Equipment (ASE) package including the ALQ-144 Infrared Jammer, AVR-2 Laser Detectors, APR-39(V)2 Radar Detectors, AAR-47 Missile Launch Detectors and ALE-47 chaff/flare dispensers. Additionally, airframe improvements in engine exhaust deflectors provide infrared thermal reduction reducing the threat of heat-seeking missiles. The HH-60H can carry up to four AGM-114 Hellfire missiles on an extended wing using the M299 launcher and a variety of cabin and port window mounted guns including M60D, M240, GAU-16 and GAU-17/A machine guns.

The MH-60R is designed to combine the features of the SH-60B and SH-60F. Its sensors include the ASE package, MTS-FLIR, the AN/APS-147 multi-mode radar/IFF interrogator, an advanced airborne fleet data link, and a more advanced airborne active sonar. It does not carry the MAD suite. Pilot instrumentation is based on the MH-60S's glass cockpit, using several digital monitors instead of the complex array of dials and gauges in Bravo and Foxtrot aircraft. Offensive capabilities are improved by the addition of new Mk-54 air-launched torpedoes and Hellfire missiles.

The MH-60S - unofficially known as the "Knighthawk" - replaced the Navy's venerable CH-46 Sea Knight helicopters in 1997. After sea demonstrations by a converted UH-60, the Navy awarded production contract for the CH-60S in 1998. The variant first flew in 27 January 2000 and it began flight testing later that year. The CH-60S was redesignated MH-60S in February 2001 to reflect its planned multi-mission use.

The MH-60S is based on the UH-60L and has many naval SH-60 features. Unlike all other Navy H-60s, the MH-60S is

not based on the original S-70B/SH-60B platform with its forward-mounted twin tail-gear and single starboard sliding cabin door. Instead, the S-model is a hybrid, featuring the main fuselage of the S-70A/UH-60, with large sliding doors on both sides of the cabin and a single aft-mounted tail wheel; and the engines, drivetrain and rotors of the S-70B/SH-60.

The MH-60S is deployed aboard aircraft carriers, amphibious assault ships, Maritime Sealift Command ships, and fast combat support ships. Its missions include vertical replenishment, medical evacuation, combat search and rescue, anti-surface warfare, maritime interdiction, close air support, intelligence, surveillance and reconnaissance, and special warfare support. The MH-60S is to deploy with the AQS-20A Mine Detection System and an Airborne Laser Mine Detection System (ALMDS) for identifying submerged objects in coastal waters. The S-model is the first US Navy helicopter to field the glass cockpit whereby the flight data information is relayed to pilots using four digital screens rather than electromechanical gauges and dials. The primary means of defense is with the M60D, M240 or GAU-17/A machine guns. A "batwing" Armed Helo Kit based on the Army's UH-60L was developed to accommodate Hellfire missiles, Hydra 70 2.75 inch rockets, or larger guns. The MH-60S can be equipped with a nose mounted forward looking infrared (FLIR) turret to be used in conjunction with the Hellfire missiles and also carries the ALQ-144 Infrared Jammer.

SPECIFICATIONS: Crew: (3-4) || Capacity: 5 passengers in cabin, slung load of 6,000 lb (2,700 kg) or internal load of 4,100 lb (1,900 kg) for B, F and H models; and 11 passengers or slung load of 9,000 lb (4,100 kg) for S-model || Length: 64 ft 8 in (19.75 m) || Rotor diameter: 53 ft 8 in (16.35 m) || Height: 17 ft 2 in (5.2 m) || Max. takeoff weight: 21,884 lb (9,927 kg) || Powerplant: (2) General Electric T700-GE-401C turboshaft, 1,890 shp (1,410 kW) take-off power each.

PERFORMANCE: Max Speed: 146 kn (270 km/h; 168 mph) || Range: 450 nmi (518 mi or 834 km) at cruise speed || Service ceiling: 12,000 ft (3,580 m) || Rate of climb: 1,650 ft/min (8.38 m/s).

ARMAMENT: Up to three Mark 46 torpedos or Mk-54s || AGM-114 Hellfire missile || AGM-119 Penguin missile || M60 machine gun || M240 machine gun || GAU-16/A machine gun || GAU-17/A Minigun || Rapid Airborne Mine Clearance System (RAMICS) using Mk 44 Mod 0 30 mm Cannon.

SOURCE: [SCO] Wikipedia http://en.wikipedia.org