P-3C Orion Update I - 1984

United States



Type: Maritime Patrol Aircraft (MPA)
Min Speed: 205 kt
Max Speed: 410 kt
Commissioned: 1984
Length: 35.6 m
Wingspan: 30.4 m
Height: 10.3 m
Crew: 10
Empty Weight: 27890 kg
Max Weight: 61235 kg
Max Payload: 9070 kg
Propulsion: 4x T56-A-14

Sensors / EW: - AN/APS-115 - Radar, Radar, Surface Search, Long-Range, Max range: 370.4 km
- AN/ALD-2 DF - ESM, HF/DF, Max range: 926 km
- AN/ASQ-81(V)1 - (P-3C) MAD, MAD, Max range: 1.9 km
- AN/AAS-36 IRDS - (P-3C Update II) Infrared, Infrared, Surveillance Camera, Max range: 55.6 km

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Weapons / Loadouts:
- Mk46 LWT Mod 2 - (1972) Torpedo. Subsurface Max: 5.6 km.
- AN/SSQ-53A DIFAR - (A-Size, 31 Chn, 27m/304m) Sonobuoy.
- AN/SSQ-62A DICASS - (1979, A-Size, 31 Chn, 27/457m, 1hr) Sonobuoy.
- AN/SSQ-77A VLAD - (1981-2002, A-Size, 99 Chn, 152/305m, 1/4/8hrs) Sonobuoy.
- Mk46 NEARTIP Mod 5 - (1984) Torpedo. Subsurface Max: 7.4 km.
- Mine [Mk52 1000lb] - (1962) Bottom Mine.
- Mine [Mk55 2000lb] - (1962, 180m max depth) Bottom Mine.
- Mine [Mk62 Quickstrike Mk82] - (1982) Bottom Mine.
- Mine [Mk65 Mod 0 Quickstrike 2000lb] - (1984, 90m max depth) Bottom Mine.
- Mine [Mk63 Quickstrike Mk83] - (1982) Bottom Mine.
- Mine [Mk60 CAPTOR Encapsulated Torpedo] - (1981) Rising Mine. Subsurface Max: 2.8 km.
- B57 Multipurpose Sub Bomb [20kT Nuclear] - (Aerial) Depth Charge. Subsurface Max: 0.9 km.

OVERVIEW: The Lockheed P-3 Orion is a four-engine turboprop anti-submarine and maritime surveillance aircraft developed for the United States Navy and introduced in the 1960s. Lockheed based it on the L-188 Electra commercial airliner. The aircraft is easily distinguished from the Electra by its distinctive tail stinger or "MAD Boom", used for the magnetic detection of submarines.

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Over the years, the aircraft has seen numerous design advancements, most notably to its electronics packages. The P-3 Orion is still in use by numerous navies and air forces around the world, primarily for maritime patrol, reconnaissance, anti-surface warfare and anti-submarine warfare.[1] A total of 734 P-3s have been built, and during 2012, it joined the handful of military aircraft including the Boeing B-52 Stratofortress and Boeing KC-135 Stratotanker that have served 50 years of continuous use by the United States military. The U.S. Navy's remaining P-3C aircraft will eventually be replaced by the P-8A Poseidon.

DETAILS: he P-3 has an internal bomb bay under the front fuselage which can house conventional Mark 50 torpedoes or Mark 46 torpedoes and/or special (nuclear) weapons. Additional underwing stations, or pylons, can carry other armament configurations including the AGM-84 Harpoon, AGM-84E SLAM, AGM-84H/K SLAM-ER, the AGM-65 Maverick, 127 millimetres (5.0 in) Zuni rockets, and various other sea mines, missiles, and gravity bombs. The aircraft also had the capability to carry the AGM-12 Bullpup guided missile until that weapon was withdrawn from U.S./NATO/Allied service.

The P-3 is equipped with a magnetic anomaly detector (MAD) in the extended tail. This instrument is able to detect the magnetic anomaly of a submarine in the Earth's magnetic field. The limited range of this instrument requires the aircraft to be near the submarine at low altitude. Because of this, it is primarily used for pinpointing the location of a submarine immediately prior to a torpedo or depth bomb attack. Due to the sensitivity of the detector, electromagnetic noise can interfere with it, so the detector is placed in P-3's fiberglass tail stinger (MAD boom), far from other electronics and ferrous metals on the aircraft.

The crew complement varies depending on the role being flown, the variant being operated, and the country that is operating the type. In U.S. Navy service, the normal crew complement was 12 until it was reduced to its current complement of 11 in the early 2000s when the in-flight ordnanceman (ORD) position was eliminated as a cost-savings measure and the ORD duties assumed by the in-flight technician (IFT).

SPECIFICATIONS: Crew: 11 || Length: 116 ft 10 in (35.6 m) || Wingspan: 99 ft 8 in (30.4 m) || Height: 38 ft 8 in (11.8 m) || Max. takeoff weight: 142,000 lb (64,400 kg) || Powerplant: (4) Allison T56-A-14[1] turboprop, 4,600 shp (3,700 kW) each || Propellers: Four-bladed Hamilton Standard propeller || Propeller diameter: 13 ft 6 in (4.11 m).

PERFORMANCE: Max speed: 411 kn (750 km/h) || Range: 2,380 nmi radius (4,400 km) || Combat radius: 1,346 nmi (2,490 km) three hours on-station at 1,500 feet || Endurance: 16 hours || Service ceiling: 28,300 ft (8,625 m) || Rate of climb: 3,140 ft/min (16 m/s).

SENSORS: Raytheon AN/APS-115 Maritime Surveillance Radar || AN/APS-137D(V)5 Inverse Synthetic Aperture Search Radar || IFF: APX-72, APX-76, APX-118/123 Interrogation Friend or Foe (IFF) || ASX-4 Advanced Imaging Multispectral Sensor (AIMS) || ASX-6 Multi-Mode Imaging System (MMIS) || ALR-66 Radar Warning Receiver || ALR-95(V)2 Specific Emitter Identification/Threat Warning || Hazeltine Corporation AN/ARR-78(V) sonobuoy receiving system || Fighting Electronics Inc AN/ARR-72 sonobuoy receiver || IBM Proteus UYS-1 acoustic processor || AQA-7 directional acoustic frequency analysis and recording sonobuoy indicators || AQH-4 (V) sonar tape recorder || ASQ-81 magnetic anomaly detector (MAD) || ASA-65 magnetic compensator || Lockheed Martin AN/ALQ-78(V) electronic surveillance receiver.

ARMAMENT: Hardpoints: (10) wing stations in total (3) on each wing and (2) on each wing root and eight internal bomb bay stations with a capacity of 20,000 lb (9,100 kg) || AGM-65 Maverick || AGM-84 Harpoon || AGM-84 Standoff Land Attack Missile (SLAM-ER) || Mk 101 Lulu nuclear depth bomb || MK20 Rockeye || MK80 Series (MK82, MK83, MK84) general purpose bombs || B57 nuclear bomb (US service only, retired 1993) || Mk 44, Mk 46, Mk 50, Mk 54, or MU90 Impact torpedoes || Mk 25, Mk 39, Mk 55, Mk 56, Mk 60 CAPTOR or Mk 65 Quickstrike naval mines || Stonefish naval mine (in Australian service) || Active and passive Sonobuoys.

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