

AAI RQ-2 Pioneer

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The **RQ-2 Pioneer** is an unmanned aerial vehicle (UAV) that had been utilized by the United States Navy, Marine Corps, and Army, deployed at sea and on land from 1986 until 2007. Initially placed aboard battleships to provide gunnery spotting, its mission evolved into reconnaissance and surveillance, primarily for amphibious forces.

It was developed jointly by AAI Corporation and Israel Aircraft Industries. The program grew out of successful testing and field operation of the Tadiran Mastiff UAV by the American and Israeli militaries.^[1]

Essentially, the Pioneer is an upgraded Tadiran Mastiff which was re-engined to accommodate a greater payload by request of the US Navy. To accomplish this, the original "Limbach" two-cylinder two-stroke engine was replaced with a Fichtel & Sachs two-cylinder two-stroke. The Limbach motor utilized a 28 inch propeller from Propeller Engineering and Duplicating, Inc. of San Clemente, California. The newer, more powerful Fichtel & Sachs motor was outfitted with a 29 inch propeller (which spins in the opposite direction) from the Sensenich Propeller Manufacturing Company of Lancaster, Pennsylvania.

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Operation

Launched by rocket assist (shipboard), by catapult, or from a runway, the Pioneer recovers into a net (shipboard) or with arresting gear after flying up to 5 hours with a 75-pound (34 kg) payload. It flies day or night missions with a gimballed EO/IR sensor, relaying analog video in real time via a C-band line-of-sight (LOS) data link. Since 1991, Pioneer has flown reconnaissance missions during the Persian Gulf, Somalia (UNOSOM II), Bosnia, Kosovo and Iraq conflicts. In 2005, the Navy operated two Pioneer systems (one for training) and the marines operated two, each with five or more aircraft. It is also operated by Israel and the Republic of Singapore Air Force. In 2007 Pioneer was retired by the US Navy and was replaced by the Shadow

RQ-2 Pioneer



RQ-2 Pioneer over Iraq

Role	Reconnaissance UAV
Manufacturer	AAI Corporation, Israel Aircraft Industries
Introduction	1986
Number built	175 delivered; 35 in service
Variants	RQ-7 Shadow

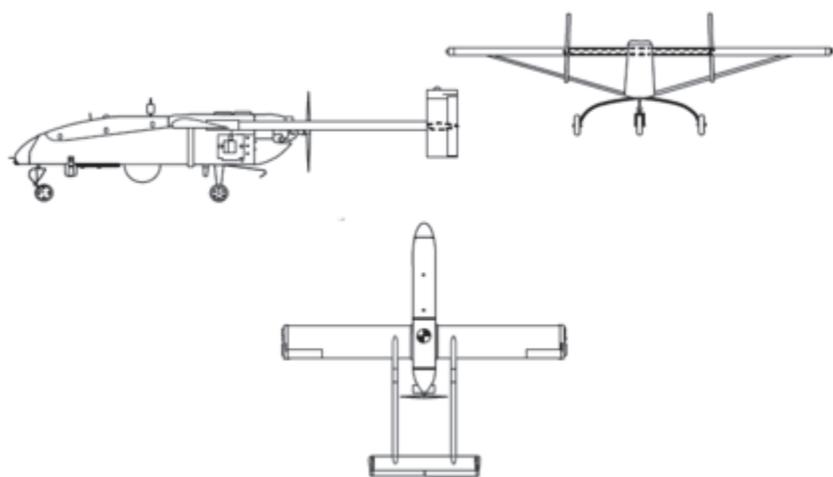
UAV.

Internationally, Pioneer drones are perhaps most remembered for their role in the 1991 Gulf War, when a Pioneer launched by the battleship USS *Wisconsin* (BB-64) observed Iraqi troops on Failaka Island surrendering shortly after *Missouri*'s attack on their trenchlines. When navy officials offered to transfer a Pioneer to the Smithsonian Institution, curators at the National Air and Space Museum specifically asked for the UAV that Iraqi troops surrendered to during the Gulf War.^[2]

The "R" is the Department of Defense designation for reconnaissance; "Q" means unmanned aircraft system. The "2" refers to its being the second of a series of purpose-built unmanned reconnaissance aircraft systems.

Specifications

- Primary Function: Artillery Targeting and Acquisition, Control of Close Air Support, Reconnaissance and Surveillance, Battle Damage Assessment, Search and Rescue, Psychological Operations
- Contractor: Pioneer UAVs, Incorporated; Israel Aircraft Industries
- Power Plant: Sachs 2-stroke 2-cylinder horizontally-opposed piston engine rated at 26 hp (19 kW) or alternative RQ-2C: UEL AR-741 rotary engine; 28.3 kW (38 hp)
- Length: 14 feet (4 m)
- Height: 3.3 feet (1.0 m)
- Weight: 205 kilograms (452 pounds)
- Wingspan: 16.9 feet (5.2 m)
- Speed: 110 knots (200 km/h)
- Range: five hours at 185 kilometers (100 nautical miles)
- Ceiling: 4600 meters (15,000 ft)
- Fuel Capacity: 44-47 liters
- Payload: Dual Sensor (12DS/POP-200/POP-300)
- System Cost:
- Inventory: 175 Delivered/35 In-Service



An RQ-2B on the tarmac



Crewmen recover an RQ-2 Pioneer aboard USS *Iowa* (BB-61)

Operators

United States

- **United States Navy**
 - VC-6 "Firebees": Naval Station Norfolk (decommissioned)^[3]
 - Training Air Wing 6 UAV Detachment: Naval Air Station Whiting Field (decommissioned)^[4]

- **United States Marine Corps**
 - VMU-1 'Watchdogs': Marine Corps Air Ground Combat Center Twentynine Palms, California
 - VMU-2 'Night Owls': MCAS Cherry Point, North Carolina

See also

- Unmanned Aerial Vehicle
- RQ-2 Pioneer image gallery at Commons

Related lists

- List of active United States military aircraft

References

- ↑ *Unmanned aviation: a brief history ...* - *Google Books* (http://books.google.com/books?id=HH_VZID81rkC&pg=PA96&lpg=PA96&dq=mastiff+uss+new+jersey#PPA97,M1) . http://books.google.com/books?id=HH_VZID81rkC&pg=PA96&lpg=PA96&dq=mastiff+uss+new+jersey#PPA97,M1. Retrieved 2010-08-02.
- ↑ "Pioneer RQ-2A UAV" (<http://www.nasm.si.edu/collections/artifact.cfm?id=A20000794000>) . Collections.nasm.si.edu. Archived (<http://web.archive.org/web/20110402170802/http://www.nasm.si.edu/collections/artifact.cfm?id=A20000794000>) from the original on 2 April 2011. <http://www.nasm.si.edu/collections/artifact.cfm?id=A20000794000>. Retrieved 2011-03-18.
- ↑ Thompson, Coleman (2008-08-08). "Fleet Composite Squadron 6 Deactivates" (http://www.navy.mil/search/display.asp?story_id=38993) . *NavNews* (United States Navy). http://www.navy.mil/search/display.asp?story_id=38993.
- ↑ Stegherr, Laura K. (2007-11-08). "UAV DET Launches Final Pioneer Flight" (http://www.navy.mil/search/display.asp?story_id=32916) . *NavNews* (United States Navy). http://www.navy.mil/search/display.asp?story_id=32916.

External links

- IAI/AAI RQ-2 Pioneer (<http://www.designation-systems.net/dusrm/app2/q-2.html>)

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Categories: IAI unmanned aerial vehicles | United States military reconnaissance aircraft 1980–1989 | Twin boom aircraft | Single-engined pusher aircraft

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