UH-1 Iroquois



A UH-1D 'Huey' seen offloading troops during the Vietnam War



Australian Army UH-1H Iroquois

The <u>Bell Helicopter</u> **UH-1 Iroquois**, commonly (or officially in the <u>United States Marine Corps</u>) known as the "Huey", was a multipurpose military <u>helicopter</u>, famous for its use in the <u>Vietnam War</u>.

Overview

The Huey was developed from 1955 US Army trials with the Bell Model 204. The initial designation of HU-1 (helicopter utility) led to its nickname. It was first used by the military in 1959 and went into triservice production in 1962 as the UH-1. The last were produced in 1976 with more than 10,000 made in total, of which the majority (7,000 or so) were deployed in Vietnam. In Vietnam, 2,202 Huey pilots were killed and approximately 2,500 aircraft were lost, roughly half to combat and the rest to operational accidents.

In Vietnam primary missions included general support, <u>air assault</u>, cargo transport, <u>aeromedical evacuation</u>, <u>search and rescue</u>, and electronic warfare. During the conflict, the craft was upgraded, notably to a larger version based on the Model 205. This version was initially designated the UH-1D and flew operationally from 1963.

The Huey was phased out with the introduction of the <u>UH-60 Black Hawk</u>, although the Army UH-1 Residual Fleet has around 700 UH-1s that were supposed to be retained until 2015. Army support for

the craft was intended to end in 2004. Modern twin-engine versions of the aircraft continue in service for the US Marine Corps.

The Australian Army still uses the HU-1 mainly as a troop transport, and it is not uncommon to see them flying in the skies in and around military bases, although it can cost upwards of \$1000 per hour of flight time, mainly due to the age of the aircraft.

Variant Overview

- XH-40 The initial Bell 204 prototype. Three protoypes were built.
- YH-40 Six pre-production aircraft.
- HU-1A Initial Bell 204 production model, redesignated as the UH-1A in 1962.
- HU-1B Upgraded HU-1A, various external and rotor improvements. Redesignated UH-1B in 1962.
- **UH-1C** UH-1B with improved engine for better performance in the gunship role.
- YUH-1D Seven pre-production prototypes of the UH-1D.
- **UH-1D** Initial Bell 205 production model (long fuselage version of the 204). Designed as a troop carrier to replace the CH-34 then in US Army service
 - o HH-1D Search Air Rescue (SAR) variant of UH-1D.
- **UH-1E** UH-1B/C for USMC with different avionics and equipment. Initial models were also fitted with a retractable rescue hoist.
 - o **TH-1E** Trainer based on the UH-1E for USMC.
- UH-1F UH-1B/C for USAF with different engine.
 - TH-1F Trainer based on the UH-1F for the USAF.
- **UH-1G** Skipped because initially the AH-1G was to be the AUH-1G, a decision that led to the confusion in designations with the AH-1. Interestingly enough UH-1D/H gunships operating in Cambodia were locally given the designation UH-1G.
- **UH-1H** Improved UH-1D with the same engine as the UH-1C, which had actually been developed after the UH-1D.
 - CUH-1H <u>Canadian Armed Forces</u> designation for the UH-1H utility transport helicopter. Redesignated CH-118.
 - EH-1H Experiment Electronic Intelligence (ELINT) configuration
 - HH-1H Based off of medical evacuation (MEDEVAC) conversions of the UH-1H, SAR variant to USAF with rescue hoist.
 - o JUH-1H Four UH-1Hs converted to SOTAS battlefield surveillance configuration.
 - TH-1H Recently modified UH-1H troop carriers for use as basic helicopter flight trainers by the USAF.
- **UH-1J** Improved Japanese version of the UH-1H. UH-1H variant built under licence in Japan by Fuii.
- HH-1K Purpose built SAR variant for the US Navy with USN avionics and equipment.
- UH-1L Utility variant of the HH-1K.
 - TH-1L Helicopter flight trainer based off of the UH-1L for the USN.
- UH-1M Gunship specific UH-1C upgrade with new engine. Often confused as a dedicated "night-fighter" because the first three UH-1Ms were delivered to the South East Asia Night Operations (SEA NITEOPS) office to be used in the Iroqouis Night Fighter and Night Tracker (INFANT) program.
- UH-1N Initial <u>Bell 212</u> production model, the Bell 'Twin Pac' twin engined Huey. Over the
 years the primary operators, the <u>USMC</u> have developed a number of upgrades for the aircraft
 including imporved avionics, defenses, and a <u>FLIR</u> turret.
 - o VH-1N VIP transport configuration
 - o **HH-1N** SAR variant.

- CUH-1N Canadian Armed Forces designation for the UN-1N utility transport helicopter. Redesignated CH-135 Twin Huey.
- <u>UH-1P</u> UH-1F variant for USAF for special operations use including psycological warfare and covert insertion/extraction, and attack operations.
- **UH-1V** Aeromedical evacuation, rescue version for the US Army.
- **UH-1X** One aircraft only.
- UH-1Y Essentially a massive UH-1N upgrade for the USMC.
- RH-2 One UH-1A used as a research aircraft.
- **Bell Model 204** Bell Helicopters company designation, covering aircraft from the XH-40, YH-40 prototypes to the UH-1A, UH-1B, UH-1C, UH-1E, UH-1F, HH-1K, UH-1L, UH-1P and UH-1M production aircraft.
 - o **Bell Model 204B** Civil or military utility transport helicoper.
 - Agusta-Bell AB 204 Civil or military utility transport helicopter. Built under licence in Italy by <u>Agusta</u>.
 - Agusta-Bell AB 204AS Anti-submarine warfare, anti-shipping version of the AB 204 helicopter.
 - Fuji-Bell Model 204B-2 Civil or military utility transport helicopter. Built under licence in Japan by <u>Fuji Heavy Industries</u>. Used by the <u>Japan Ground Self Defence Force</u> under the name **Hiyodori**.
- Bell Model 205 Bell Helicopters company designation of the UH-1D and UH-1H helicopters.
 - Bell Model 205A-1 Civil or military utility transport helicopter version.
 - Agusta-Bell 205 Civil or military utility transport helicopter. Built under licence in Italy by Agusta.
 - Agusta-Bell 205A-1 Modified version of the AB 205.
 - o Agusta-Bell 205BG Prototype fitted with two Gnome H 1200 turboshaft engines.
 - o agusta-Bell 205TA Prototype fitted with two Turbomeca Astazous turboshaft engines.
 - Fuji-Bell Model 205A-1 Civil or military utility transport helicopter. Built under licence in Japan by Fuji. Used by the Japanese Ground Self Defence Force under the designation HU-1H.
- Bell Model 212 Bell Helicopters company designation for the UH-1N.
 - Twin Two-Twelve Civil utility transport version. It can carry up to 14-passenger.
 - Agusta-Bell AB 212 Civil or military utility transport version. Built under licence in Italy by Agusta.
 - Agusta-Bell AB 212ASW Anti-submarine warfare, anti-shipping version of the AB 212 helicopter.

Vietnam era usage

The UH-1 has long become a symbol of US involvement in South East Asia. In Vietnam, the Huey was used for various purposes and various terms for each task abounded. Hueys tasked with an attack role were outfitted with rocket launchers, grenade launchers, and/or machine guns were often called "Hogs" or "Frogs". Hueys used for troop transports were often called "Slicks" due to the absence of weapons pods. Slicks did have door gunners, but for the most part they were strictly troop carriers and medevacs. In the US Navy and USMC the difference between gunships and troop carrying UH-1s was split between the terms "Sharks" and "Dolphins." UH-1s also flew hunter-killer teams with "Loach" observation helicopters, namely the Bell OH-58 Kiowa and the Hughes OH-6 Cayuse Towards the end of the conflict, Hueys were tested with TOW missiles, and two UH-1B helicopters equiped with the XM26 Armament Subsystem were deployed to help counter the 1972 Easter Invasion.

The three basic missions of the helicopter in Vietnam were troop transport, reconnaissance, and attack. The troop transports were designated by "Blue" teams, hence the nickname for troops carried in by these Hueys as "Blues". The reconnaissance or observation teams were "White" teams. The attack ships were called "Red" teams. Over the duration of the conflict the tactics used by the military evolved and teams were mixed for more effective results. "Purple" teams with one or two "Blue" slicks dropping off the troops, while a "Red" attack team provided protection until the troops could defend themselves. Another highly effective team was the "Pink" Recon/Attack team, which offered the capability of carrying out assaults upon areas where the enemy was known to be present but could not be pinpointed.

During the course of the war, the Huey went through several upgrades. The UH-1A, B, and C models (short fuselage, Bell 204) and the UH-1D and H models (stretched-fuselage, Bell 205) each had improved performance and load-carrying capabilities. The UH-1B and C performed the gunship and some of the transport duties until 1967, when the new AH-1 Cobra arrived on the scene. The newer Cobra, a purpose-designed attack helicopter based on the Huey, was faster, sleeker, harder to hit, and could carry more ordnance. Devotees of the UH-1 in the gunship role cited its proven history and its ability to act as an impromptu dustoff if the need arose. Another important fact was, a four-member Huey crew could effectively observe the front, sides, and rear of the helicopter, and the door gunners could continue to fire on a target even after the completion of a gun-run, which the two-man Cobra could not. After Vietnam the Cobra was adopted as the Army's main attack helicopter.

<u>USAF</u> <u>Lieutenant</u> <u>James P. Fleming</u> piloted a UH-1F on a <u>26 November</u> <u>1968</u> mission that won him the <u>Medal of Honor</u>.

Foreign users



Royal New Zealand Air Force Iroquois in the Soloman Islands

The Iroquois was widely sold abroad. Users include:

- Argentina
- Austria

The <u>Royal Australian Air Force</u> (though now operated by the <u>Australian Army</u>). <u>Australian</u> Iroquois pilots have served in <u>Vietnam</u> and <u>East Timor</u>.

- Royal Australian Navy
- Bahrain
- Bangladesh
- Bolivia

- Brazil
- Brunei
- Burma/Myanmar
- Cambodia
- Canada
- Chile
- Colombia
- Costa Rica
- Dominican Republic
- El Salvador
- Ecuador
- Ethiopia

The <u>Italian Army</u> (Aviation) (Iroquois were license produced in Italy by Agusta, known as AB205B),

Italian Navy

The <u>Royal New Zealand Air Force</u> <u>No. 3 Squadron RNZAF</u>, (<u>New Zealand</u> Iroquois pilots served in <u>Vietnam</u> the <u>Sinai</u> and <u>East Timor</u>).

The Royal Norwegian Air Force, until replaced by the Bell 412.

The <u>Philippine Air Force</u> has used its UH-1H helicopters to fight Communist insurgents and Muslim separatists in various parts of the country. It has now undertaken the <u>Huey II</u> upgrade program in order to extend the operational life and capability of its Hueys.

The <u>Japan Ground Self-Defense Force</u> has used UH-1B and UH-1Hs produced under license by Fuji Heavy Industries Ltd., who made original improvements to create the UH-1J version. These are now being replaced by the UH-60JA Black Hawk.

The <u>German Army</u> and <u>Airforce</u> still use some UH-1D for transport and special duties. They are going to be replaced by the <u>NHIndustries NH90</u>.

- Greek Air Force
- Greek Army They are going to be replaced by <u>NHIndustries NH90</u>.
- Guatemala
- Honduras
- Indonesia
- Iran (Air Force)
- Iran (Army)
- Israel
- Jamaica
- Kuwait

The <u>Lebanese Air Force</u> has a fleet of around thirty UH-1H helicopters which are used for rescue missions, fire fighting, and fighting drug-smuggling.

- Mexico
- Morocco
- Roval Netherlands Navv
- Oman

- Pakistan
- Panama
- Papua New Guinea
- Peru
- Royal Saudi Air Force
- Singapore
- Somalia
- South Korea
- South Vietnam
- Spain
- Sweden
- Taiwan
- Tanzania
- Thailand
- Tunisia
- Turkish Army
- Turkish Gendarmerie
- Turkish Navy
- Vietnam
- Uganda
- United Arab Emirates
- Uruguay
- Venezuela
- Vietnam
- Yemen
- Yugoslavia
- Zambia
- Zimbabwe

Literature, Television, & Movies

The image of American troops disembarking from a Huey has become a fixture in depictions of the <u>Vietnam War</u>, and can be seen in practically every movie and television show on the subject.

- The famous "Ride of the Valkyries" attack scene in <u>Apocalypse Now</u> features a squadron of UH-1H gunships (leased from the Philippine Air Force for filming).
- In the film <u>Star Trek IV: The Voyage Home</u>, <u>Sulu</u> uses a UH-1 to carry <u>transparent aluminum</u> to the captured <u>Klingon</u> Bird of Prey, for use in making the <u>humpback whale</u> tank.
- The movie <u>We Were Soldiers</u>, based on the first confrontation between US ground forces and those of North Vietnam in the <u>Ia Drang Valley</u> in November 1965, employs Hueys as the transport, <u>casevac</u>, supply and attack-support choppers for Lt Col <u>Hal Moore</u>'s hard-pressed 1/7th US Cavalry, 1st Air Cavalry Division.
- Robert Mason, an Iroquois pilot, wrote an autobiography, <u>Chickenhawk</u>, which became a best seller.
- In the *Transformers* the Protectobot Blades is modeled after the Huey.
- It also featured in many Vietnam based video games, such as <u>Battlefield: Vietnam</u>(PC only), <u>Conflict: Vietnam</u> (PC, PS2 and Xbox) and <u>Men of Valor</u>(PC and Xbox) plus many others. The helicopter was also the featured craft (in a modified form as the UH-1X) in the <u>Super Huey</u> computer game series of the mid-1980's.
- In Resident Evil, S.T.A.R.S uses UH-1 copters, and in RE4 Leon is saved by a Huey gunship.
- Meg Ryan's character pilots a medivac UH-1 in the movie Courage Under Fire.

• A <u>minigun</u>-armed UH-1 is used in <u>The Matrix</u>, and also makes a couple of appearances in the <u>Enter the Matrix</u> video game.

Specifications (UH-1D)

General characteristics

- Crew: 1-2
- Capacity: 3,880 lb including 14 troops, or 6 stretchers, or equivalent cargo
- **Length:** 57 ft 1 in with rotors (17.4 m)
- Fuselage width: 8 ft 7 in (2.6 m))
- Rotor diameter: 48 ft 0 in (14.6 m)
- **Height:** 14 ft 5 in (4.4 m)
- Disc area: ()
- Empty weight: 5,215 lb (2,365 kg)
 Loaded weight: 9,040 lb (4,100 kg)
- Maximum Take-Off Weight: 9,500 lb (4,310 kg)
- Fuel capacity: 1,850 lb (840 kg))
- Powerplant: 1x Lycoming T53-L-13 turboshaft, 1,400 shp (1,045 kW)

Performance

- Maximum speed: 135 mph (220 km/h)
- Cruise speed: 125 mph (205 km/h)
- Range: 315 mi (510 km)
- **Service ceiling:** 19,390 ft (5,910 m)
- Rate of climb: 1,755 ft/min (8.9 m/s)
- Power/mass: 0.15 hp/lb (0.25 kW/kg)

Armament

- 1x 7.62 mm M240 machine gun, or 1x 7.62 mm GAU-17 machine gun
- 2x 7-shot or 19-shot 2.75 in (70 mm) rocket pods

External links

- The Bell UH-1 Huev
- FAS.org Huey profile

Related development

Bell UH-1F

- Bell 212 Panha Shabaviz 2-75

See also

• <u>US Helicopter Armament Subsystems</u>