

Topic Page: [Drone aircraft](#)

Definition: **drone aircraft** from *Collins English Dictionary*

n

1 a pilotless radio-controlled aircraft used for reconnaissance or bombing



Image from: [A Predator unmanned aerial vehicle is an example... in Encyclopedia of Intelligence & Counterintelligence](#)

Summary Article: **drone**

From *The Columbia Encyclopedia*

or remotely piloted vehicle, a pilotless craft guided by remote control. Aircraft, ships, and land vehicles can be designed or outfitted as drones; underwater vessels—both piloted and pilotless—are usually called submersibles, however, and the term *drone* is most typically applied to remotely controlled pilotless aircraft. Such drones were originally used largely by the military. Small, relatively inexpensive military drones have served as targets in combat practice since the 1940s, while high-performance models have been used in hazardous reconnaissance missions and to carry and launch missiles against enemy targets without exposing pilots and their far more expensive aircraft to

antiaircraft fire.

Depending on the mission, drones can be equipped with armament, radar, video cameras, lasers, or sensors for chemical or biological weapons; drones typically can stay aloft without refueling for much longer periods of time than piloted airplanes. Guidance of the drone can originate from an airplane, a ship, a ground station, or a satellite link; a satellite link enables a drone to be guided by an operator stationed thousands of miles away. Building upon the successful use of drones in the Second Persian Gulf War and in Afghanistan, the Homeland Security Department adopted unmanned aircraft to track drug smugglers, illegal immigrants, and terrorists along the U.S. borders. In the United States and elsewhere, drones are increasingly used by law enforcement and security agencies. As drones have become smaller and increasingly less expensive, they also have employed by criminals (such as smugglers) and by otherwise less technologically sophisticated military forces and armed groups.

Nonpolicing scientific, public safety, and commercial uses include monitoring crops, helping fight forest fires, atmospheric and wildlife research, filmmaking and photography, and news and sports reporting. The drones used for many of these purposes are typically smaller devices that are lifted and propelled by helicopterlike rotors. Such drones are also increasingly popular with recreational hobbyists. The commercial and recreational use of drones has led to significant concern over the aviation and public safety and the privacy issues associated with their more widespread use. The Federal Aviation Administration is responsible for operational and safety regulations governing the commercial use of drones, and now requires that users register drones weighing more than .55 lb (.25 kg). Recreational users are relatively unregulated (compared to commercial users).

Early attempts to use unmanned aerial vehicles are documented as early as the U.S. Civil War. Both Union and Confederate troops launched balloons loaded with explosives in the hope that the balloons would come down inside ammunition or supply depots and explode, but the balloons were at the mercy of the prevailing winds and proved largely ineffective. Toward the end of World War II the Japanese

launched similarly ineffective high-altitude balloons loaded with incendiary and other explosives in the hope that winds would carry them to the United States, where they would start forest fires. A U.S. project at about the same time, called "Operation Aphrodite," involved using a modified manned aircraft as a cruise missile. The pilot would take off, get the plane to altitude, pass control to a manned aircraft through a radio link, and then bail out. The somewhat more successful German V-1 was essentially an early cruise missile, not a remote-controlled drone. By the Vietnam War the technology to launch and control drones had evolved. Initially, pilotless aircraft equipped with video cameras flew over North Vietnam to provide reconnaissance data; drones were later used to drop leaflets, interfere with electronic communications, and locate surface-to-air missile batteries. By the early 21st cent., small, hand-launched drones were used by U.S. ground forces to scout otherwise obscured areas, and very small bird- and insectlike drones had been developed.

See study by N. Friedman (2010).

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drone. (2018). In P. Lagasse, & Columbia University, *The Columbia encyclopedia* (8th ed.). New York, NY: Columbia University Press. Retrieved from <https://search.credoreference.com/content/topic/drone>



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