



Defense Primer: The United States Air Force

When it was established as a separate service in 1947, the U.S. Air Force (USAF) was to be “organized, trained, and equipped primarily for prompt and sustained offensive and defensive air operations ... necessary for the effective prosecution of war except as otherwise assigned.” That statutory language remains almost identical today. Similarly, although the words used to describe its core missions have changed, space and cyberspace joined air as operational domains, and the means used to carry them out have evolved with technology, the USAF’s missions themselves have remained remarkably constant.

Table I. Air Force Core Missions

- Air and Space Superiority
- Intelligence, Surveillance, and Reconnaissance
- Rapid Global Mobility
- Global Strike
- Command and Control

Source: U.S. Air Force, *Global Vigilance, Global Reach, Global Power for America* at <http://www.af.mil/Airpower4America.aspx>.

Air and Space Superiority

The most familiar Air Force mission, air superiority, includes establishing and maintaining control of the skies over conflict areas, allowing U.S. forces to operate at the times and places of their choosing. The USAF points out that such control is almost taken as a given, as no enemy aircraft has killed U.S. ground troops since 1953. At the same time, potential adversary nations are creating and exporting advanced aircraft and anti-aircraft systems that could threaten U.S. air superiority, leading the USAF to invest in next-generation capabilities.

USAF systems also provide direct support to ground forces, particularly in helping to identify and destroy time-critical targets.

Space superiority involves securing U.S. space assets and the ability to maintain the navigational, communications, reconnaissance, and other capabilities U.S. space platforms provide. These systems enable all U.S. military services’ current operating plans. These responsibilities are being migrated to the U.S. Space Force, now a separate service within the Air Force.

Intelligence, Surveillance, and Reconnaissance (ISR)

Gathering information, monitoring current or potential adversaries, and providing real-time data to forces in combat is a continuous and growing mission. The USAF provides ISR using manned and unmanned aircraft, space assets, and other technologies to provide policymakers and

warfighters that data where and when it is needed. Many Air Force assets designed for other purposes (fighters, tankers, etc.) also gather, disseminate, or perform other ISR functions.

Rapid Global Mobility

USAF mobility forces carry cargo and personnel around the world, enabling operations by all U.S. and many allied military services. Tanker aircraft make global deployments possible, and aeromedical transport makes timely evacuation and treatment of injured troops possible. USAF mobility forces are also used extensively for humanitarian relief operations.

Global Strike

100% of the Earth is covered by air, and the USAF takes advantage of that to provide strike capability worldwide using bombers, special operations platforms, fighters, other aircraft, and missiles.

Global strike includes the nuclear deterrent force. Two legs of the nuclear triad—bombers and land-based intercontinental ballistic missiles (ICBMs)—are Air Force missions. The Air Force is modernizing the bomber fleet, and a large-scale modernization of the ICBM force is also underway.

Command and Control

Controlling a global force—whether USAF, other services, or allied—requires access to reliable communications and information networks. The Air Force, through space platforms, space control operations, cyberspace operations, and other means, provides and defends those global communications networks.

Each of these missions interacts with the others. Taken together, the Air Force sums up its core missions as providing “Global Vigilance, Global Reach, and Global Power.”

Personnel

To provide these capabilities, the Air Force requested end strength for FY2021 is 511,500 people:

- 333,700 in the active Air Force,
- 70,100 in the Air Force Reserve, and
- 107,700 in the Air National Guard.

Equipment

The U.S. Air Force operates more than 5,600 aircraft:

Table 2. Air Force Aircraft

Type	Number
Fighter/Attack	2056
Bombers	158
Special Operations	144
ISR/ELINT/EW/C3	497
Tanker	493
Transport	667
Training	1180
Helicopter	192
UAV	241

Source: *Air Force and Space Force Almanac 2020* (Air Force Association); UAV from *The Military Balance 2019* (International Institute for Strategic Studies).

Major Procurement Programs

The Air Force currently prioritizes three hardware programs ahead of its other modernization efforts:

- The **F-35A Lightning II** strike fighter, the Air Force portion of a multi-service, multi-national program slated to acquire 1,763 jets to replace several types currently in USAF service.
- The **KC-46 tanker**, 179 of which are scheduled to replace 50-year-old KC-135s.
- The **B-21 Raider** bomber, at least 100 of which are expected to enter service in the mid-2020s, replacing 1980s-era B-1s and B-2s.

Three other development programs are seen as significant to future Air Force capabilities and budgeting:

- The **Ground-Based Strategic Deterrent** includes acquisition of 642 intercontinental ballistic missiles.
- **Next-Generation Air Dominance**, a program to develop the major technologies likely to appear on next-generation combat aircraft.
- The **Advanced Battle Management System**, a network intended to provide data across all domains and allow disparate platforms to work together.

Relevant Statutes

Title 10, U.S. Code, Chapter 803 – Department of the Air Force
Title 50, U.S. Code, Chapter 44 – National Security

CRS Products

CRS In Focus IF10519, *Defense Primer: Strategic Nuclear Forces*, by Amy F. Woolf

CRS Report R44305, *The Air Force Aviation Investment Challenge*, by Jeremiah Gertler

CRS Report RL33640, *U.S. Strategic Nuclear Forces: Background, Developments, and Issues*, by Amy F. Woolf

CRS Report RL30563, *F-35 Joint Strike Fighter (JSF) Program*, by Jeremiah Gertler

CRS Report R44463, *Air Force B-21 Raider Long-Range Strike Bomber*, by Jeremiah Gertler

CRS Report R43049, *U.S. Air Force Bomber Sustainment and Modernization: Background and Issues for Congress*, by Jeremiah Gertler

CRS In Focus IF10546, *Defense Primer: United States Airpower*, by Jeremiah Gertler

CRS In Focus IF11495, *Defense Primer: The United States Space Force*, by Stephen M. McCall

CRS In Focus IF11172, *“Space Force” and Related DOD Proposals: Issues for Congress*, by Kathleen J. McInnis and Stephen M. McCall

CRS In Focus IF11493, *Joint All-Domain Command and Control (JADC2)*, by John R. Hoehn

CRS In Focus IF11659, *Air Force Next-Generation Air Dominance Program: An Introduction*, by Jeremiah Gertler

Other Resources

USAF. *Global Vigilance, Global Reach, Global Power*, September, 2013.

DOD. Joint Publication 3-30, *Command and Control of Joint Air Operations*, February 10, 2014

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