

B-2 Spirit



The B-2 Spirit entered USAF service in 1993 as the world's first "stealth" bomber. This long-range, four-engine, subsonic Northrop aircraft was a flying wing, with no fuselage or tail. It drew its stealthiness from extremely low radar, acoustic, infrared, and visual signatures, plus advanced avionics. These, in combination, thwarted detection and tracking systems that might have allowed a foe to direct missiles or interceptors against it.

The B-2 emerged from top-secret 1970s research into "very low observable" technologies. Body and wing surfaces blended together smoothly to deflect radar. Engines were buried in its wing to conceal fans and cut exhaust signatures. Radar-absorbent coatings added more camouflage. Redundant computers managed all functions.

Designed as a nuclear bomber for striking the Soviet Union, the B-2 was redesigned for conventional war when the Soviet threat faded in the mid-1980s. Because of the B-2's high cost, the US cut production from a planned 132 to only 21 bombers.

The B-2 made its combat debut March 24, 1999, during Operation Allied Force. Two B-2s, after 16-hour flights from Whiteman AFB, Mo., each dropped 16 GPS-aided bombs on Serb targets, scoring 32 direct hits. In October 2001, six B-2s opened the war in Afghanistan; all six flew sorties lasting more than 40 hours to hit al Qaeda and Taliban targets. B-2s made big contributions in Iraq in 2003 and Libya in 2011. The bomber can still deliver nuclear weapons, too, if ever required.

—Robert S. Dudley with Walter J. Boyne

This aircraft: USAF B-2A Spirit—#88-0329, *Spirit of Missouri*—as it looked in June 1996 when assigned to 393rd Bomb Squadron, 509th Bomb Wing, Whiteman AFB, Mo.

A B-2 flies over the Pacific as part of US Pacific Command's continuous bomber presence.



USAF photo by SSgt. Bennie J. Davis III

In Brief

Designed, built by Northrop ★ purpose, long-range strike ★ first flight July 17, 1989 ★ number built 21 ★ crew of two pilots ★ four General Electric F118-GE-100 non-afterburning turbofan engines ★ defensive armament, none. **Specific to Block 30:** max payload 40,000+ lb of conventional or nuclear munitions ★ max speed Mach .95 (630 mph) ★ cruise speed Mach .85 (560 mph) ★ max range 6,900 mi (unrefueled) ★ weight (max T/O) 376,000 lb ★ span 172 ft ★ length 69 ft ★ height 17 ft ★ ceiling 50,000 ft.

Famous Fliers

Distinguished Flying Cross: Eric Single, Paul Tibbets IV. **First Combat Mission:** Eric Single-Steve Basham; Steve Sicking-Darrell Davis. **Notable Flights:** Mel Deaile-Brian Neal (44.3-hour combat sortie); Rex Bailey (first to 500 B-2 flight hours); Rich Vandenburg (first to 1,000 and 1,500 B-2 flt hours); Justin Amann-Brian McKay, William Eldridge-Kevin Minor (round-the-world flights); Justin Grieve-Ryan Link (both ejected and survived crash caused by equipment failure). **USAF Notables:** Mike Loh-John Bellanger (B-2 delivery), Jennifer Wilson

(first combat sortie by female B-2 pilot), Tony Imondi (first SAC pilot to fly B-2), Ron Marcotte, Thomas Goslin, Leroy Barnidge, Anthony Przybyslawski, Douglas Raaberg, Christopher Miller, Gregory Biscone, Garrett Harencak, Robert Wheeler, Scott Vander Hamm, Thomas Bussiere, Glen Vanherck, Jeff Long, Terry Sunnarborg.

Other Notable: David Arthurton (RAF, first non-US pilot). **Test Pilots:** First flight—Bruce Hinds (Northrop) and Richard Couch (USAF).

Interesting Facts

Won Collier Trophy in 1991 ★ similar in size to classic Northrop flying wings of the 1940s ★ carries all munitions internally ★ with a single refueling, can reach any target on Earth ★ featured in films "Independence Day" and "Sum of All Fears" ★ cost an average of \$2.1 billion per aircraft due to low production ★ named for states, with two exceptions—*Spirit of America* and *Spirit of Kitty Hawk*.

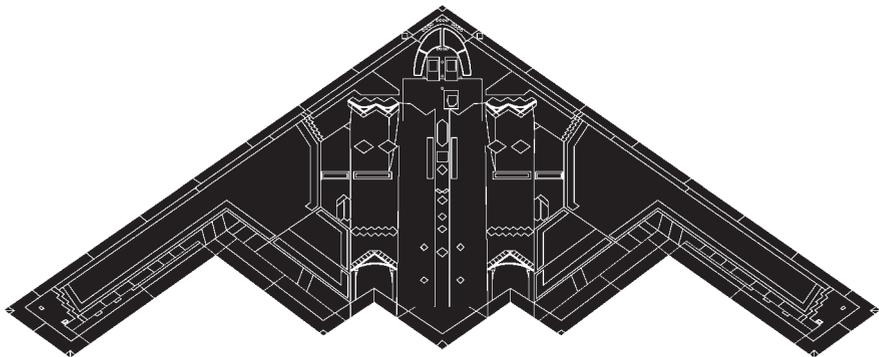


Illustration by Zaur Eylanbekov