

Blackbird Facts

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How many types of Blackbirds were built?

There were four major types:

A-12 single-seat reconnaissance aircraft operated by the Central Intelligence Agency (CIA).

YF-12A interceptor capable of launching air-to-air missiles. It had a pilot and a Fire Control Officer (FCO).

M-21 mothership for the D-21 reconnaissance drone. It had a pilot and a Launch Control Officer (LCO). The mated combination was called the MD-21.

SR-71 dual-seat reconnaissance aircraft operated by U.S. Air Force. It had a pilot and a Reconnaissance Systems Operator (RSO).

There were also trainer versions of the A-12 and SR-71. These were called the TA-12, SR-71B, and SR-71C. They had a second cockpit for an instructor pilot. It was located above and behind the student cockpit.

What is the D-21 drone?

The D-21 was an unpiloted, ramjet-powered drone that launched from a pylon on top of the M-21 mothership. It was designed to fly at speeds of Mach 3.5 and altitudes up to 90,000 feet while carrying a camera over hostile territory. Film packages dropped from the D-21 were recovered in mid-air by a C-130 crew.

The D-21B was a later model, built after an accident precluded further use of the M-21 as a launch platform. The D-21B was designed for launch from a B-52H.

Does NASA have any D-21 drones?

NASA Dryden Flight Research Center acquired four D-21B drones in June 1994. Three are displayed at California museums: Blackbird Airpark, Palmdale; Pacific Coast Air Museum, Santa Rosa; and March Field Museum, Riverside. The fourth was returned to Davis Monthan AFB, Arizona.

What were the Blackbirds made of?

The Blackbird is comprised of about 85-percent titanium (with stainless steel and some aluminum and other alloys) and 15% composite materials (primarily asbestos-silicone laminates).

How many Blackbirds were built?

A-12 12 (Single-seat, reconnaissance)

TA-12 1 (Trainer)

M-21 2 (Mothership)

YF-12A 3 (Interceptor)

SR-71A 29 (Dual-seat, reconnaissance)

SR-71B 2 (Trainer)

SR-71C 1 (Trainer)

D-21 6 (Drone, two later converted to D-21B)

D-21B 34 (32 plus two converted from original D-21)

When did the Blackbird make its first flight?

A-12 – 26 April 1962, Louis Schalk

YF-12A – 7 August 1963, James Eastham

MD-21 first mated flight – 22 December 1964, Bill Park

SR-71A – 22 December 1964, Robert Gilliland

SR-71B – 18 November 1965, Gilliland and Maj. Steven Belgeau

SR-71C – 14 March 1969, Gilliland and Belgeau.

D-21 free flight – 5 March 1966

D-21B free flight – 6 November 1967

What was the YF-12C?

It was the second SR-71A built, as flown by NASA from July 1971 through September 1978. The bogus designation was used to hide the fact that NASA was operating the SR-71. It was given a tail number from a (then secret) A-12. The number, 06937, fell into the same sequence as NASA's YF-12A aircraft (06935 and 06936).

What was the SR-71C?

It was a trainer built from the front half of a static test SR-71 fuselage, the aft section of the first YF-12A, and a new instructor's cockpit. It replaced the second SR-71B that crashed on 11 January 1968.

When did the Blackbird last fly?

SR-71A (61-7980/NASA 844) last flew on 9 October 1999 at the Edwards AFB Air Show and Open House to 80,100 feet and Mach 3.21. It was the last flight of any Blackbird.

When was the existence of the Blackbird made public?

President Lyndon B. Johnson announced the existence of the YF-12A (intentionally misidentifying it as "A-11" at the request of Lockheed chief engineer Clarence "Kelly" Johnson) on 29 February 1964. On 24 July 1964, the President announced the existence of the SR-71. Members of the general public caught their first glimpse of the D-21B in December 1976 on a tour of the storage area at Davis-Monthan AFB in Tucson, Arizona. Information about the vehicles was not released until 1982. The existence of the A-12 was not publicly announced until 1982, when the aircraft stored at Palmdale, California were moved outside the Lockheed building where they had been housed since 1968.

How many Blackbirds has NASA flown?

NASA crews have operated seven Blackbirds:

YF-12A (60-6935) – December 1969 to November 1979
YF-12A (60-6936) – March 1970 to June 1971
SR-71A/YF-12C (61-7951/"06937") – July 1971 to December 1978
SR-71A (61-7971/NASA 832) – January 1995 to June 1996
SR-71A (61-7967) – August 1995 to January 1996
SR-71B (61-7956/NASA 831) – July 1991 to October 1997
SR-71A (61-7980/NASA 844) – September 1992 to October 1999

When did NASA Dryden fly the Blackbirds?

Between December 1969 and November 1979, NASA Dryden conducted a joint research program with the Air Force that involved two YF-12A (60-6935 and 60-6936) and one SR-71A (61-7951 which, for political reasons was called a “YF-12C” with borrowed tail number 06937).

NASA crews also flew four SR-71 airplanes between July 1991 and October 1999. They were used for research and to support the U.S. Air Force reactivation of the SR-71 for reconnaissance missions. The Air Force had retired the Blackbirds in 1990, but Congress reinstated funding for additional flights.

Lockheed SR-71A (61-7980/NASA 844) arrived at NASA Dryden Flight Research Center on 15 February 1990. It was placed into storage until 1992. It served as a research platform until October 1999.

SR-71A (61-7971/NASA 832) arrived at Dryden on 19 March 1990. It departed to Lockheed Palmdale on 12 January 1995, having never been flown by NASA crews at the Center. It was flown by NASA crews at Palmdale in support of the SR-71 Reactivation.

SR-71A (61-7967) was flown by NASA crews at Palmdale in 1995 and 1996 in support of Reactivation.

Steve Ishmael and Rod Dyckman flew two functional check flights in Lockheed SR-71B (61-7956/NASA 831) at Palmdale in early July 1991 before delivering the aircraft to Dryden on 25 July. The SR-71B trainer served as a research platform and for crew training and proficiency until October 1997.

Why were there four Blackbirds at Dryden in 1999?

The Air Force closed down the operational detachment at Edwards. NASA took custody of their aircraft on 14 October 1999 and placed them in storage. SR-71A (61-7967) was transferred to the U.S. Air Force Academy in Colorado Springs, Colorado on 28 November 2001. SR-71A (61-7971) remained at Dryden until it departed to the Evergreen Aviation Museum in McMinnville, Oregon.

Was the YF-12A a prototype for the SR-71?

No. The YF-12A was a separate variant of the Blackbird, all models of which were developed from the original A-12. The YF-12A was a prototype for an interceptor version. The production model, had it been built, would have been known as the F-12B.

Is it true that the performance characteristics of the Blackbirds are still secret?

No. The top speed and altitude capabilities have been declassified.

How fast could the Blackbirds fly?

The maximum design cruise speed was Mach 3.2. The speed was limited by structural temperature restrictions.

Fastest known flights:

YF-12A (60-6936) – Mach 3.14 (2,070 mph), USAF, official, 1 May 1965

SR-71B (61-7956) – Mach 3.27 (2,158 mph), NASA, unofficial, 14 December 1995 and 4 March 1997

A-12 (60-6928) – Mach 3.29 (2,171 mph), CIA, unofficial, 8 May 1965

SR-71A (61-7972) – Mach 3.32 (2,193 mph), USAF, official, 27 July 1976

How high could the Blackbirds fly?

The Blackbirds were designed to fly as high as 90,000 feet, but typically operated between 70,000 and 85,000 feet.

Highest known flights:

YF-12A (60-6936) – 80,257 feet, USAF, official, 1 May 1965

SR-71B (61-7956) – 84,700 feet, NASA, unofficial, 18 October 1994

SR-71A (61-7972) – 85,068 feet, USAF, official, 27 July 1976

SR-71A (61-7953) – 86,700 feet, USAF, unofficial, circa 1968

A-12 (60-6932) – 90,000 feet, CIA, unofficial, 14 August 1965