

THE RECORD-SETTING SR-71 BLACKBIRD

SET AND HOLDS A SPEED RECORD OF 2,193.2 MPH (MACH 3.3) FLYING AT 85,069 FEET

THE FASTEST AIR-BREATHING MANNED AIRCRAFT IN THE WORLD

SEE THE SR-71 SUCCESSOR – THE SR72

203



The Lockheed SR-71 "Blackbird" was an advanced, long-range, Mach 3+ strategic reconnaissance aircraft. It was developed as a black project from the Lockheed A-12 reconnaissance aircraft in the 1960s by Lockheed and its Skunk Works division. Clarence "Kelly" Johnson was responsible for many of the design's innovative concepts. During reconnaissance missions, the SR-71 operated at high speeds and altitudes to allow it to outrace threats. If a surface-to-air missile launch was detected, the standard evasive action was simply to accelerate and outfly the missile.

SR-71 BLACKBIRD: A FAST HISTORY (VIDEO)

http://www.codeonemagazine.com/article.html?item_id=153.

The SR-71 served with the U.S. Air Force from 1964 to 1998. A total of 32 aircraft were built; 12 were lost in accidents, but none were lost to enemy action. The SR-71 has been given several nicknames, including Blackbird and Habu. Since 1976, it has held the world record as the fastest air-breathing manned aircraft



TO READ - COPY THE ADDRESS AND PASTE THE BELOW LINKS INTO YOUR BROWSER

DOCUMENTARY VIDEOS ABOUT THE SR-71

<https://www.youtube.com/watch?v=OBVmYi7mkZM> (47 minutes)

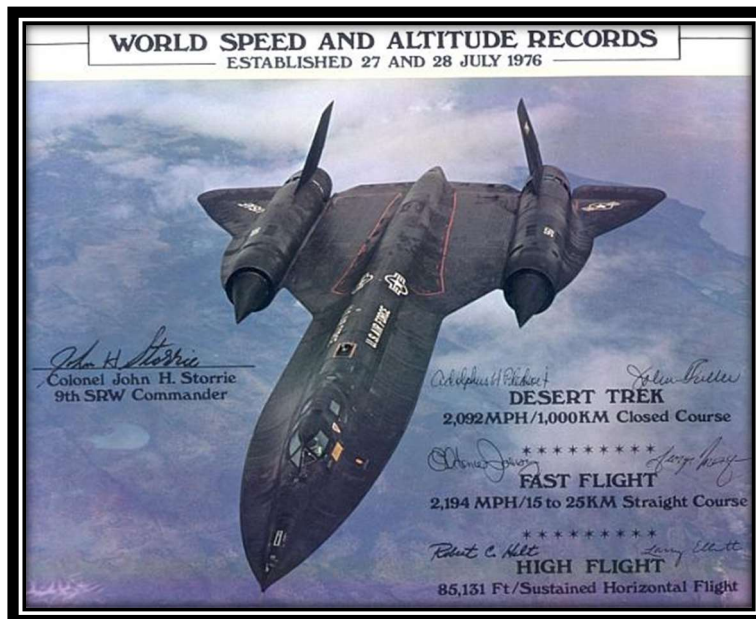
<https://www.youtube.com/watch?v=dXh8bJC2tQg> (5 minutes)

<https://www.youtube.com/watch?v=81ofbypM2al> (7 minutes)

QUESTIONS AND THOUGHTS ABOUT THE SR-71

<http://www.wvi.com/~sr71webmaster/srqt~1.htm> (Read Article)

On July 28, 1976, the Lockheed SR-71 Blackbird set the absolute airspeed record with a blistering speed of 3,529.6 kilometers per hour (2,193.2 mph), which is about Mach 3.3. Later that day, another Blackbird set a separate record: the highest sustained altitude during horizontal flight. The Blackbird soared at 25,929 (85,069 feet) meters above sea level.



The designer of the SR-71 was Clarence “Kelly” Johnson, who worked at **Lockheed's famed Skunk Works**. It was used by the US Air Force on reconnaissance missions for over 30 years. It played a key role in gathering intelligence during the Cold War. On top of being able to fly higher than 85,000 feet and faster than Mach 3.2, **it could survey up to 100,000 square miles in an hour**. The design of the plane reduced its radar signature, and its speed was fast enough to outrun any missile fired at it.



[LOCKHEED'S SKUNKWORKS 70th ANNIVERSARY PATCH](#)

Post-WWII, the American government, and military leaders wanted information on the Soviet Union's nuclear missiles, ICBM program, and military installations. In the early 50s, President Eisenhower approved the use of bombers and balloons, but they were susceptible to anti-aircraft fire and fighter interceptors. The CIA requested designs for a new aircraft that would present less of a target.



Kelly Johnson submitted the design for the U-2, which was essentially a glider with a camera underneath. It was slow and visible, but could supposedly fly high enough to be out of reach of Soviet defenses.

As a joint endeavor by the Air Force and the CIA, the U-2 flew along the border of the Soviet Union beginning in 1956 and flew 24 missions with great success. However, the design of the U-2 made it easily detectable on radar, and eventually, one was shot down by the Soviets. On May 1, 1960, Gary Powers was piloting a U-2 that was hit with a long-range surface-to-air missile over Soviet airspace. The U.S. stopped flying over the USSR proper and began carrying out missions over areas with less capable air defenses.

Before the Powers incident, the CIA had already begun studying what characteristics a reconnaissance aircraft needed to avoid being shot down. They determined that the plane had to be supersonic and have a small radar signature. Kelly Johnson stepped up with a new design. Since the U-2 had been known as "Kelly's Angel" or just "Angel," Lockheed's designs for the new plane were prefixed with an "A" for "Archangel." The contract granted by the CIA was for the A-11, which was modified and **re-designated as the A-12.**

The A-12 is a single-seat, twin-engine, twin-tail design made of titanium alloy. It has one advanced camera looking down. It was planned to add an infrared camera, radar, and a gamma spectrometer. The size was similar to the SR-71 at 100 feet long with a wingspan of 55 feet and a weight of 120,000 pounds. The CIA ordered twelve. In 1965, they began flying missions out of Kadena Air Force Base in Okinawa, Japan, as part of Operation Black Shield. They flew over Laos, North Vietnam, and North Korea.



The US Air Force was a major supporter of the CIA's A-12 program, with major investments in money, refueling support, use of Kadena Air Force Base facilities, and transport. They realized a two-seat version of the A-12 could be useful for Strategic Air Command. The original plan was to use the planes for post-nuclear strike reconnaissance. They would fly over a site after it had been struck with nuclear armaments and gather data. As this scenario seemed less likely over time, they were outfitted with traditional reconnaissance equipment.

The Air Force knew from the A-12 program that the SR-71 would require two men, the pilot plus a Reconnaissance Systems Officer (RSO), to operate the intelligence-gathering equipment and defensive systems.



The cost of operating both A-12 and SR-71 programs was prohibitive, so the SR-71 was chosen to assume the Operation Black Shield missions in 1968. Its first operational mission was over Vietnam. They flew one to three missions per week. Flights frequently lasted over six hours and covered 7,000 square miles. They gathered images of supply depots, harbor installations, industrial complexes, and prisoner-of-war camps.

And on the off chance that an enemy tried to shoot it down with a missile, all the Blackbird had to do was speed up and outrun it, as it was faster than any missile that could be fired at it.

One of these attempts occurred in 1981 when North Korea launched a Russian-guided missile at an SR-71 Blackbird. This footage shows that gripping encounter and the amazing skills of an SR-71 Blackbird in action.

[Copy the below link into your browser to view this video.](#)

<https://www.youtube.com/watch?v=ru4AHP7wOMA>

The SR-71 served with the U.S. Air Force from 1964 to 1998. A total of 32 aircraft were built; 12 were lost in accidents and none were lost to enemy action. This was not for lack of trying; throughout its reconnaissance missions during the Vietnam War, **[the North Vietnamese fired approximately 800 SAMs at SR-71s, none of which managed to score a hit.](#)**



[SR-71 COCKPIT](#)



SR-71 BACKSEAT

The SR-71 was used to gather information on the 1973 Yom Kippur War and the 1986 raid the U.S. conducted in Libya.

Eventually, space-based surveillance systems became sophisticated enough to take over many of the functions of the SR-71, and the more expensive Blackbird program was ended in 1989. They resumed briefly in the '90s before coming to an end in 1998.

END OF THE SR-71 PROGRAM

PRESIDENT BILL CLINTON VETO'S IT FROM THE BUDGET AGAINST ADVICE

Tuesday, October 14, 1997, 5:00 PM EDT (Reuters News Service)

WASHINGTON — Operations and maintenance of the SR-71 spy plane and research into a military space plane were among items vetoed by President Bill Clinton in a Defense Department spending bill Tuesday, the White House said. "THERE IS NO MILITARY requirement to continue to operate the SR-71," it said in a statement detailing projects affected by Clinton's exercise of his line-item veto authority.

BRASILIA (Reuters) - President Clinton used his new line-item veto authority Tuesday for the third time, scratching a Cold-War era spy plane, a futuristic asteroid interceptor, and other projects worth \$144 million. Clinton struck a total of 13 projects from a \$248 billion Defense Department spending bill. The president said neither he nor the Pentagon had asked for them and that he wanted to demonstrate his resolve to hold the line on spending. "These are the items for which we don't have a military requirement," Deputy Defense Secretary John Hamre told a news briefing in Washington, referring to all of the vetoed items.

Among the projects hit by the veto included the SR-71 Blackbird spy plane, a supersonic, high-altitude jet that was developed in the 1960s and retired by the Air Force in 1990, but revived by Congressional supporters in 1995. The fleet of three planes has been used lately mostly for research and helped locate a crashed U.S. warplane in Colorado last April.

The programs recommended for elimination were approved by White House Chief of Staff Erskine Bowles and other top White House officials after they met with representatives of the Pentagon, the National Security Council, and the Office of Management and Budget on Monday. The list was then sent to Clinton, who was traveling in South America that week.

Tuesday's decision, announced by Clinton marks a clear step back from the more confrontational use of the line-item veto last week on a military construction bill. In that much smaller \$9.2 billion measure, **Clinton struck 38 items worth \$287 million.** The cuts sparked angry outbursts from Republicans and Democrats who said Clinton was abusing his newly acquired power.

To see the full story of the effect of the veto go to the following link...

<http://www.wvi.com/~sr71webmaster/sract~1.htm>

After being retired for five years, the US Government reactivated 3 SR-71s in 1995 for another three years of service. In October 1999 the last operational flight was made with an SR-71 by NASA, ending an amazing career.



OPERATIONAL HIGHLIGHTS OF THE ENTIRE BLACKBIRD FAMILY AS OF 1990 INCLUDED:

3,551 mission sorties flown
17,300 total sorties flown
11,008 mission flight hours
53,490 total flight hours
2,752 hours Mach 3 time (missions)
11,675 hours Mach 3 time (total)

When the US government decided to retire the SR-71 for the first time in 1990, Lt. Col. Raymond E. "Ed" Yielding and Lt. Col. Joseph T. "JT" Vida set four new speed records on the final flight of SR-71, S/N 61-7972: (These are still records after 26 years)

1. Los Angeles, California, to Washington, D.C., distance 2,299.7 miles (3,701.0 km), average speed 2,144.8 miles per hour (3,451.7 km/h), and an elapsed time of 64 minutes 20 seconds.
2. West Coast to East Coast, distance 2,404 miles, average speed 2,124.5 miles per hour, and an elapsed time of 67 minutes 54 seconds.
3. Kansas City, Missouri, to Washington, D.C., distance 942 miles, average speed 2,176 miles per hour, and an elapsed time of 25 minutes 59 seconds.
4. St. Louis, Missouri, to Cincinnati, Ohio, distance 311.4 miles, average speed 2,189.9 miles per hour, and an elapsed time of 8 minutes 32 seconds.

Two additional speed records are:

New York to London: 1 hr 54min 56.4 sec.

London to Los Angeles - 3 hrs. 47 min 39 sec.

SOME ADDITIONAL "BLACKBIRD" INFO

During the late 1950's Cold War was at large, and the USA was actively planning the construction of a top-secret aircraft that would soon replace the U-2. What came next was an airplane that would never become obsolete to this day - the Blackbird. Read the amazing story about the most influential aircraft of the 20th century.

COVER-UPS & SECRECY

When the request for a strategic reconnaissance aircraft was put in by the C.I.A., Lockheed Skunk Works was the first to respond with a superbly radical design. Proposed was an airframe that could reach an extreme velocity of Mach 3.5 at near space altitudes, while having an exceptionally low cross-radar signature that would make it almost impossible for the Soviets to spot.

TITANIUM STRUCTURE

The CIA created several cover-up companies that were used to purchase the required Titanium for the construction of Blackbirds from the Soviet Union - quite ironic considering a lot of missions consisted of relaying Intel about the country that the materials were purchased from.

Before the Blackbird, titanium was only used in high-temperature exhaust fairings and other small parts directly related to supporting, cooling, or shaping high-temperature areas on aircraft. The Blackbird however was constructed mainly out of titanium (~85%) and the rest were high-end composite materials.

PRODUCTION IN THE 1960'S

Because this aircraft was way ahead of its time, many new technologies had to be invented specifically for this project - some still in use today. One of the biggest problems that engineers faced at that time was working with Titanium. Kelly Johnson explains, "We produced 6,000 parts, and of them, fewer than ten percent were any good. The material [Titanium] was so brittle that if you dropped a piece on the floor it would shatter. Also to withstand heat, the main gear tires had been impregnated with aluminum and are filled with nitrogen."

Ordinary drills were rendered useless because after about 17 rivet holes the drill would be destroyed. During the welding process, an extremely rare and expensive argon shielding gas had to be used to eliminate oxygen from the metal to ensure the highest quality of welds.

FLYING THE BLACKBIRD

Crews flying at altitudes of 80,000ft (24,000m) face two main survival problems: maintaining consciousness at high altitudes and surviving a possible emergency ejection. Major Brian Shul - the author of *Sled Driver*, a book about his experience as a pilot of the SR-71 - said that wafting along at Mach 3.5 flew by so fast, that you can cover several countries in the Middle East in mere minutes.

Pilots required pressurized flight suits to cope with the low atmospheric pressure and lack of oxygen at high altitudes.

Because computerized equipment was non-existent during the design and construction of Blackbird (late 1950s - early 1960's), the cockpit was unsurprisingly analog.

MACH 3.5+ FLIGHT

At full velocity, the airplane surface heats up to temperatures of 260 °C+ (500 °F). Things inside the cockpit would heat up to 120 °C if the airplane didn't have a proper air conditioning system.

Following the landing, there were "cool-off" periods, when the ground crew and pilots had to wait for the surfaces of the airframe to cool off.

SECRET MISSIONS AND SPY EQUIPMENT

A total of 3,551 mission sorties were flown to spy on military installations, troop movements, and nuclear silos during the cold war with the Soviet Union.



The airplane's spy equipment allowed it to survey 100,000 square miles (260,000 km²) per hour of the Earth's surface from an altitude of 80,000 feet (24,000 m). *The camera on the Blackbird was so advanced that when it took a photo of a car on the ground that was 80,000 feet below it and the plane traveled at over 2,000 mph, the license plate would be visible in the photo.*



LOOKS A BIT LIKE A "BLACK WIDOW" HERE

Many missions were flown over conflict countries in the Middle East, Asia, and a large part of Europe. The sheer size of the aircraft was a fundamental part of the design; in the 1960's there was no computerized equipment and all of the required gear was large and needed sufficient space to fit. *All pilots and maintenance personnel were required to be married.*

STEALTH AND THREAT AVOIDANCE

The unique shape, combined with materials used to coat the airframe, gave the Blackbird an impressively low radar signature. The SR-71 was one of the first aircraft to get a hugely noticeable difference in its ability to stay "invisible" to radar.

A total of 12 out of the 32 aircraft built were lost. The important thing to take note of is that none of the Blackbirds were lost due to enemy military retaliation. All SR-71 crews had to do upon a missile launch, was to increase the throttle and watch the missile get further and further away from striking distance. Special paint that further reduced the aircraft's radar signature was used to coat its titanium shell.

UNSOLVED DESIGN PROBLEMS

Without a doubt, the Blackbird was an airplane ahead of its time, and due to the lack of technology in the early '60s, several design "flaws" (so to speak) were left unsolved.

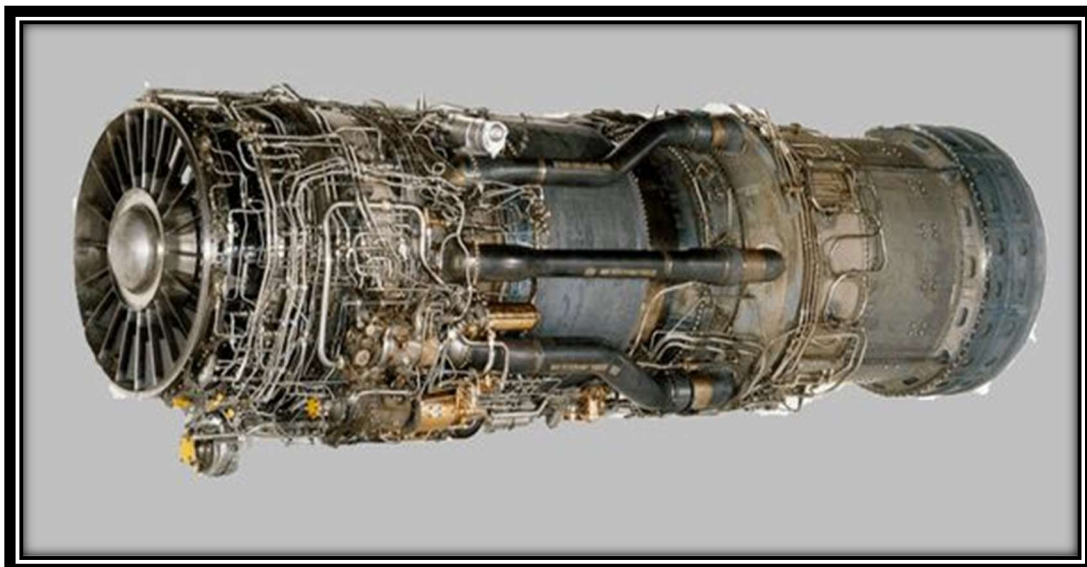
A big complication for the designers was the creation of fuel tanks (fuel cells). Since there were no materials at that time that would make it possible to withstand the extreme temperature differences of a normal flight of the aircraft, Lockheed ended up designing the cells in such a way that once the airplane surface was hot enough they would expand, sealing the leaking fuel.

The below photograph captures some of this fuel loss (on the wings) quite clearly.



To decrease take-off load, and therefore stress on the titanium airframe, SR-71's fuel cells were only partially filled. Crews also had to use two different mixtures of fuel: one to start the aircraft, and the other to fly it. *SR-71 had to be immediately refueled once it was airborne from a KC 135 tanker.*

THE SR 71 POWERHOUSE



J-58 ENGINE DESIGNED BY PRATT AND WHITNEY AIRCRAFT DIVISION



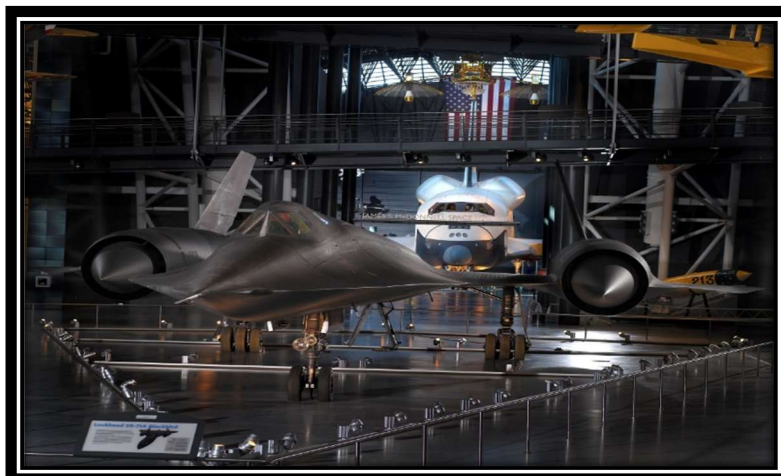
The J58 engine was developed in the 1950s by Pratt and Whitney Aircraft Division of United Aircraft Corporation to meet a U.S. Navy requirement. The engine was designed to operate for extended speeds of Mach 3+ and at altitudes of more than 80,000 ft. The J58 was the first engine designed to operate for extended periods using its afterburner, and it was the first engine to be flight-qualified at Mach 3 for the Air Force. Two J58s power the SR-71 as well as the YF-12A and most of the A-12s. In July 1976, J58 engines powered an SR-71 to a world altitude record of 85,069 ft. and another SR-71 to a world speed record of 2,193 mph.



MATCHING THE J-58 TO THE SR-71

PUTTING THE "BLACKBIRD" ON DISPLAY

The SR-71 Blackbird was stored in a shed at Washington Dulles International Airport for several years before September 30, 2003, when it was moved to the Boeing Aviation Hangar. It is one of the first aircraft visitors see.



Shown in this 2006(above) photo are two of the most popular artifacts at the Steven F. Udvar-Hazy Center: the Lockheed SR-71 *Blackbird* (foreground) in the Boeing Aviation Hangar and Space Shuttle *Enterprise* (background) in the James S. McDonnell Space Hangar. *Enterprise* was replaced by Space Shuttle *Discovery* in 2012.

The Astroinertial Navigation System helped an SR-71 Blackbird crew set a coast-to-coast speed record. On March 6, 1990, while delivering the aircraft to the Museum, the crew flew across the United States in only 68 minutes. You can see that record-setting SR-71 at the Museum's Steven F. Udvar-Hazy Center in Northern Virginia. (See above picture)

The Blackbird project was finally (and permanently) retired in 1998. Two last flyable Blackbirds were given to NASA which flew until 1999. All but two SR-71s (the ones given to NASA) are now in museums for people to see.

No reconnaissance aircraft in history has operated globally in more hostile airspace or with such complete impunity than the SR-71, the world's fastest jet-propelled aircraft. The Blackbird's performance and operational achievements placed it at the pinnacle of aviation technology developments during the Cold War.

This Blackbird accrued about 2,800 hours of flight time during 24 years of active service with the U.S. Air Force. On its last flight, March 6, 1990, Lt. Col. Ed Yielding and Lt. Col. Joseph Vida set a speed record by flying from Los Angeles to Washington, D.C., in 1 hour, 4 minutes, and 20 seconds, averaging 3,418 kilometers (2,124 miles) per hour. At the flight's conclusion, they landed at Washington-Dulles International Airport and turned the airplane over to the Smithsonian.



The coin commemorates the 50th anniversary of the first SR-71 flight in 1964, along with an enameled rendition of the official Mach 3+ shoulder patch earned by crewmembers.

RECAP: QUESTIONS/ANSWERS AND THOUGHTS ABOUT THE "BLACKBIRD"

Extracted from: <http://www.wvi.com/~sr71webmaster/srqt~1.htm>

HOW FAST DOES IT FLY?

Well, it exceeds Mach 3 or three times the speed of sound. Mach 1 is 330 m/s or 741.4 mph, the speed of sound. Mach 2 is twice this; Mach 3 is three times this. It out-flies the sun. You can have breakfast in New York; fly to Los Angeles (in a Blackbird), and have another breakfast (time-wise) before you leave New York. The SR-71s fly at 33 miles per minute or 3,000 feet per second. It flies faster than a 30-06 bullet.

IS THE X-15 THE FASTEST AIRPLANE

The X-15 is the fastest airplane and was rocket-powered. The SR-71 is the fastest air-breathing jet in the world.

HOW HIGH DID IT FLY

The SR-71 flies more than 85,000 feet (16 miles up). The curvature of the Earth has been said to be visible.

WHAT WAS THE PURPOSE OF THE AIRCRAFT?

It is an unarmed global strategic reconnaissance spy plane

HOW MUCH DID IT COST TO BUILD ONE SR-71?

At the time, each SR-71 cost 33 million to build and after becoming accepted by the U.S. Air Force the **price tag went to 34 million per airframe.**

WHAT MATERIALS WAS IT CONSTRUCTED WITH?

It was the first true Stealth aircraft. It is composed of Titanium and Composite (plastic) materials. **The landing gear is the largest piece of titanium ever forged in the world.** The United States did not have enough Titanium to build the fleet and ironically, we bought the needed Titanium from Russia.

HOW HOT DID THE AIRCRAFT GET WHEN FLYING AT MACH 3+?

From 600 to 900+ degrees Fahrenheit on the airframe. Temperatures on the J-58 engine exhaust reach 3200 degrees.

HOW MANY BLACKBIRD AIRFRAMES WERE BUILT?

50 Blackbird airframes of **various designations**. The dies or molds were destroyed as directed by then Secretary of Defense McNamara to prevent any other nation from building the aircraft. **NOTE: 32 of these airframes were used to build the SR-71s.**

HOW GOOD WERE THE CAMERAS USED ON THE SR-71?

They can photograph a golf ball on the green from 80,000 feet. The cameras can survey 110,000 square miles of the Earth's surface per hour. Each roll of film was 5" wide and 2 miles long.

WHY WAS THE SR-71 PAINTED BLACK?

It flies 75 degrees Fahrenheit cooler than an unpainted airframe and also the black paint has some radar absorbing qualities.

HOW MANY SR-71S WERE SHOT DOWN BY UNFRIENDLY FORCES?

In 1981 Kelly Johnson announced that the SR-71 had had over 1,000 missiles launched against it, but none successful.

DID THE SR-71 PILOTS LOSE WEIGHT DURING A MISSION?

Yes, Pilots in a pressure suit can lose up to 5 pounds in a four-hour flight

I HAVE HEARD THAT THE NICKNAME OF THE SR-71 IS 'HABU'. WHAT DOES THAT MEAN?

The nose of the Blackbird, the Okinawans claimed it looked like a Habu snake. Thus the nickname. Additionally, SR-71 Crewmembers are called Habu's.

WAS THE SR-71 DESIGNED BY A COMPUTER?

No, every aspect of the aircraft was designed with a Slide Rule!

WHY DID THE US AIR FORCE QUIT FLYING THEM?

Costs to operate were a minimal factor in the actual decision to cancel the SR-71's. There was a variety of reasons, **but in the end, it boiled down to politics in the Pentagon.** 9th SRW Commander Colonel Richard Graham's book "SR-71's Revealed" details the reasons for the cancellation of the SR-71 Program. There are no Blackbirds designated for flights. The remaining Blackbirds are all currently in Museums or are awaiting disposition to a Museum.

HAS ANY WOMAN OR ENLISTED MAN EVER FLOWN THE SR-71?

Yes, Congress-lady Beverly Byron, who took a ride in the B model in November of 1985. Additionally, in October 1991 Marta Bohn-Mayer became the first Female Pilot on the SR-71 at Dryden Flight Research Center. No enlisted man ever flew on the Blackbird to my knowledge. Those fortunate enough to ride in the 2-seated trainer model received a Mach 3 pin and patch stating "I flew three times the speed of sound". **See the article directly below.**

MARTA BOHN-MEYER (18 AUGUST 1957 – 18 SEPTEMBER 2005) WAS AN AMERICAN PILOT AND ENGINEER.



MARTA BOHN-MEYER

Marta Bohn-Meyer served as chief engineer of the NASA Dryden Flight Research Center. Bohn-Meyer was involved in a variety of research projects at NASA — she was the first female crewmember assigned to the Lockheed SR-71, serving as navigator during studies of aerodynamics and propulsion that used the SR-71 as a testbed. She was also a project manager in a study of advanced laminar flow wing design using the General Dynamics F-16XL aircraft.

Bohn-Meyer was an accomplished unlimited aerobatic pilot and was twice a member of the United States Unlimited Aerobatic Team. She also served as Team Manager in 2005.

Bohn-Meyer died while practicing for the 2005 U.S. National Aerobatic Championships when the Giles 300 aerobatic aircraft she was piloting crashed in Yukon, Oklahoma, near the Clarence E. Page Municipal Airport. The cause of the crash was deemed to be the catastrophic failure of the front hinge of the canopy - which incapacitated her and led to the crash.

She is survived by her husband Robert R. Meyer, Jr., a project manager and flight test engineer at Dryden.

HOW MANY PEOPLE HAVE FLOWN THE BLACKBIRDS AND HOW MANY CREWMEMBERS HAVE BEEN KILLED?

Over the years 478 total people have flown the Blackbirds. More people have climbed to the top of Mount Everest than have flown this aircraft. Although a few Lockheed crewmembers were killed during the testing stages of the Blackbird, the U.S. Air Force never lost a man in the entire 25 years of active service. The SR-71 flew for 17 straight years (1972-1989) without a loss of plane or crew. Considering the environment the Blackbirds flew in, that is an enviable safety record.

ADDITIONAL INFORMATION

Because of its speed, the turning range of an SR-71 was 100 miles. The SR71 could burn 80,000 lbs. of fuel in 90 minutes. The faster the SR71 goes, the less fuel is used.



THE REAL REASON WHY THE SR-71 WAS RETIRED



Exactly 30 years ago a potent new combat aircraft appeared in the skies over Russia. Without firing a shot in anger, the MiG-31 achieved what Soviet air defense had been attempting for years - **send the SR-71 spy plane into early retirement.**

From its first flight in 1972 to its retirement in 1989, the SR-71 Blackbird was the highest-flying and fastest air-breathing aircraft in operation. Flying at Mach 3.3 (4042 kph) the CIA-operated SR-71 initially flew unchallenged over trouble spots such as Vietnam and the Middle East, and also conducted highly provocative flights close to the Soviet Union's borders, spying on submarine activity in the Arctic seas.



The Russian MiG-35 Fox Bat multi-role fighter is a successor to the MiG-29

Although the Mach 3.2 MiG-25 Foxbat could in theory have shot it down with its air-to-air missiles, in reality, the **Foxbat could not sustain a Mach 3 chase for long.** Early in the year 1982 the Mikoyan-Gurevich bureau started deliveries of a new combat aircraft to the Protivo Vozdushnoy Oborony or PVO - the Air Defense Forces of the Soviet Union. This new aircraft was the multi-functional MiG-31- an airborne weapons platform with the principal task of hunting down US Strategic Air Command (SAC) bombers and stealthy, low-flying air-launched cruise missiles (ALCMs). According to the authoritative defense website, Air Power Australia, the Foxhound's unique ability to sustain supersonic cruise up to 722 km, increasing to 2200 km with in-flight refueling, "is a capability with no equivalent in the West."

The premature retirement of the SR-71 seems mysterious but not if you look at the MiG-31's record against it.

However, Western military commentators have said the SR-71 became redundant after the arrival of powerful spy satellites.

This argument has no legs. Satellites have orbital limitations and it may take up to 24 hours to position a satellite over a certain area, whereas spy planes can be brought into play quickly and repeatedly.

Also, as strange as it sounds, spy planes are stealthier than satellites as orbital information is freely available on the internet so the enemy can hide assets when they know the satellite is overhead. Indeed, the limitations of satellites were exposed when the U2 was brought out of retirement to operate over Iraq.

BLACKBIRD LOSSES

The below figures show the number of SR71s built and those that were lost with a brief explanation of the cause. At the time, each SR-71 cost 33 million to build and after becoming accepted by the U.S. Air Force the price tag went to 34 million per airframe.

	SR-71A	SR-71B	SR-71C	COST
BUILT	29	2	1	32 SR-71'S @ 34 Million per plane = 1 billion, 88 million US \$
LOST	11	1	0	12 SR-71'S @ 34 Million per plane = 408 million US \$

Cost & Loss = 1 Billion 496 Million US \$

CURRENT STATUS OF THE 32 SR-71S THAT WERE MADE: BY TAIL NUMBER

REDTAIL NUMBER – LOST

BLUE TAIL NUMBER - ON DISPLAY

(61-7950)

The prototype SR-71 was lost on 10 January 1967 at Edwards during an anti-skid braking system evaluation. The main undercarriage tires blew out and the resulting fire in the magnesium wheels spread to the rest of the aircraft as it ran off the end of the runway. Lockheed test pilot Art Peterson survived.

(61-7951)

On display at the Pima Air Museum in Tucson, Arizona. Displayed outdoors, but under a canopy

(61-7952)

This aircraft disintegrated on 25 January 1966 during a high-speed, high-altitude test flight when it developed a severe case of engine unstart. Lockheed test pilot Bill Weaver survived although his ejection seat never left the plane! Reconnaissance System Officer (RSO) Jim Zwayer died in a high-G bailout. The incident occurred near Tucumcari, New Mexico.

(61-7953)

This aircraft was lost on 18 December 1969 after an in-flight explosion and succeeding high-speed stall. Col. Joe Rogers and RSO Maj. Gary Heidelbaugh ejected safely. The specific cause of the explosion has never been determined. The loss occurred near Shoshone, California.

(61-7954)

This aircraft crashed on 11 April 1969 under conditions similar to 61-7950. New aluminum wheels and stronger tires with a beefed-up compound were retrofitted to all SR-71s because of the crash. Lt. Col. William "Bill" Skliar and his RSO Maj. Noel Warner managed to escape uninjured.

(61-7955)

On display at the Air Force Test Center Museum at Edwards AFB in Rosamond, California. The museum has been closed to the public since 9/11.

(61-7956)

On display at the Kalamazoo Air Zoo in Kalamazoo, Michigan. This is the last surviving original two-seat trainer. Formerly used as a trainer at the NASA Dryden Flight Research Center @ Edwards AFB in California.

(61-7957)

This aircraft was the second SR-71B built and the only B model to crash. It crashed on approach to Beale AFB on 11 January 1968 when instructor pilot Lt. Col. Robert G. Sowers and his "student" Capt. David E. Fruehauf was forced to eject about seven miles from Beale after all control was lost. The aircraft had suffered a double generator failure followed by a double flameout (caused by fuel cavitations) and impacted upside down in a farmer's field.

(61-7958)

On display indoors at the Museum Of Aviation in Warner-Robbins, Georgia

(61-7959)

Lockheed SR-71A Blackbird (61-7959) on display in front of the Air Force Armament Museum on Eglin AFB, Florida. This SR-71 is also known as "Big Tail" since in 1975 a 9-foot extension was added to the rear of the aircraft to house a new set of sensor equipment. This is the only "Big Tail" in existence.



SR-71 TAIL # 61-7959 "PIGTAIL"

(61-7960)

On display outdoors at Castle Air Museum in Atwater, California at the site of the former Castle AFB.

(61-7961)

On display indoors in the new museum of the Kansas State Cosmosphere & Atrium Space Center in Hutchinson, Kansas

(61-7962)

On display indoors at The American Air Museum in Duxford, UK. Moved indoors to the new American Air Museum in late 2002/early 2003. Was outdoors at the Imperial War Museum and previously in storage at AF Plant 42 in Palmdale, CA.

(61-7963)

On display outdoors at the Beale AFB Museum in a restricted area near the flight line at Marysville, California

(61-7964)

On display at the Strategic Air Command (SAC) Museum in the new museum building atrium just off of I-80 in Ashland, Nebraska. Formerly was outdoors at The SAC Museum at Offutt AFB.

(61-7965)

This aircraft was lost on 25 October 1967 after an INS platform failed, leading to incorrect attitude information being displayed in the cockpit during a night flight. There were no warning lights to alert pilot Maj. Roy L. St. Martin and RSO Capt. John F. Carnochan. In total darkness, with a steep dive and no external visual references available, the crew had little alternative. They were able to eject safely. The loss occurred near Lovelock, Nevada.

(61-7966)

This aircraft was lost on the evening of 13 April 1967 after it entered a subsonic, high-speed stall. Pilot Capt. Earle M. Boone and RSO Capt. Richard E. "Butch" Sheffield ejected safely. The incident occurred near Las Vegas, New Mexico.

(61-7967)

On display since Dec 2003 at the 8th Air Force Museum in Shreveport, Louisiana. Formerly in storage in California.

(61-7968)

On display outdoors at the Virginia Aviation Museum in Richmond, Virginia. This plane holds the world record for endurance flying, set on April 26, 1971, with a 10-hour, 15,000-mile non-stop flight.



TAIL # 7968

(61-7969)

This aircraft was lost on **10 May 1970** during an operational mission from Kadena AB, Okinawa against North Vietnam. Shortly after air-refueling, the pilot, Maj. William E. Lawson initiated a normal full-power climb. Stretching before him was a solid bank of clouds containing heavy thunderstorm activity which reached above 45,000 feet. Heavy with fuel, the aircraft was unable to maintain a high rate of climb, and as it entered turbulence both engines flamed out. The RPM dropped to a level too low for restarting the engines. Lawson and RSO, Maj. Gilbert Martinez ejected safely after the aircraft stalled. The plane crashed near Korat RTAFB, Thailand.

(61-7970)

This aircraft was lost on **17 June 1970** following a post-tanking collision with the KC-135Q (59-1474) tanker. Lt. Col. Buddy L. Brown and his RSO Maj. Mortimer J. Jarvis ejected safely although the pilot broke both legs. The SR-71 crashed 20 miles east of El Paso, Texas, but the KC-135 limped back to Beale AFB, California with a damaged refueling boom and aft fuselage.

(61-7971)

On display, as of 2003, at the Evergreen Aviation Museum in McMinnville, Oregon. This plane formerly to NASA as tail # 832

(61-7972)

On display in the new National Air & Space Museum Annex near Dulles International Airport, the Steven F. Udvar-Hazy Center in Washington, DC. **This aircraft set four (4) new, still existing, speed records on its retirement flight on March 6, 1990.**



TAIL # 7972

(61-7973)

On display (outdoors) at the Blackbird Airpark in Palmdale, California

(61-7974)

This aircraft was lost on **21 April 1989** over the South China Sea and is the last loss of any Blackbird. Pilot Maj. Daniel E. House said the left engine blew up and shrapnel from it hit the right-side hydraulic lines, causing a loss of flight controls.

House and RSO Capt. Blair L. Bozek ejected and came down safely into the ocean. They had been able to broadcast their position before abandoning the Blackbird, and rescue forces were immediately on the way. However, the crew was rescued by a native fisherman.

(61-7975)

On display outdoors at the March Field Museum on March AFB in Riverside, California

(61-7976)

On display at the USAF Museum in the Cold War Gallery at Wright-Patterson AFB in Dayton, Ohio

(61-7977)

This aircraft ended its career in flames by skidding 1000 feet off the end of runway 14 at Beale AFB, California on **10 October 1968**. The takeoff was aborted when a wheel assembly failed. Capt. James A. Kogler was ordered to eject, but pilot Maj. Gabriel Kardong elected to stay with the aircraft. Both crew members survived.

(61-7978)

Nicknamed "Rapid Rabbit," this aircraft was written off on **20 July 1972** during the rollout phase of its landing at Kadena AB, Okinawa. The pilot, Capt. Dennis K. Bush had practiced a rapid deployment of the braking parachute. A go-around was initiated after the chute was jettisoned. On the next landing attempt, the aircraft touched down slightly "hot," but had no chute to reduce the aircraft's speed. The pilot was unable to keep the plane on the runway. The aircraft suffered significant damage. The pilot and the RSO, Capt. James W. Fagg escaped without injury.

(61-7979)

On display outdoors on the base parade grounds by the History & Traditions Museum at Lackland AFB in San Antonio, Texas

(61-7980)

On display at the NASA Dryden Flight Research Center marked as NASA tail # 844 at Edwards AFB in Rosamond, California. Due To 9/11, this Area is not open to the general public.

(61-7981-Only SR-71C)

Hybrid trainer aircraft from salvaged parts of YF-12A, 69-6934 (rear half) and functional engineering mockup of the SR-71A forward fuselage. Displayed in the museum 18long.. at Hill AFB Museum at Hill AFB in Ogden, Utah.

BUILDING IT



PUTTING IT ALL TOGETHER AT THE LOCKHEED PLANT IN BURBANK, CALIFORNIA



AFTER THE BUILDING OF THE SR-71 IT THEN HAD TO BE TRANSPORTED OVERLAND TO AREA 51 FOR FLIGHT TESTING



THE ENTRANCE PLAZA AT THE "SKUNK WORKS" IN PALMDALE, CALIFORNIA

THE "SON OF THE BLACKBIRD" LOOMS IN THE FUTURE

THE LOCKHEED SR-72 DRONE PROTOTYPE

<http://www.lockheedmartin.com/us/news/features/2015/sr-72.html>



INITIAL COMPARISONS (FACTS)

1. The SR-71 Blackbird flew faster than any other production plane.
2. Its successor, the SR-72, will go twice as fast.
3. A demo version of the SR-72 could be ready by 2018.
4. The new aircraft will blaze across the sky at around Mach 6.

5. The plane would perform high-altitude intelligence, surveillance, and reconnaissance missions but also be capable of carrying out strikes on target
6. Developers at Lockheed Martin say the plane could be operational by 2030.



Born in the spy-vs.-spy cauldron of the Cold War, the **iconic SR-71 "Blackbird" remains the fastest air-breathing military aircraft the world has known**. It flew so high and so fast that enemy defenses were powerless to intercept it. Eventually, satellite technology and advanced radar eroded its advantage. In 1998, the U.S. Air Force retired it. Now, with regional threats growing and portable surface-to-air missiles evolving, engineers have once again set out to build the fastest military jet on the planet.

This time, it will take the form of a 4,000-mile-per-hour reconnaissance drone with strike capability. Known as the SR-72, the aircraft will evade assault, take spy photos, and attack targets at speeds of up to Mach 6. That's twice as fast as its predecessor.

Aeronautical engineers at Lockheed Martin and Aerojet Rocket Dyne have been designing the SR-72 at their Skunk Works black site in California for the past several years. It will require a hybrid propulsion system: a conventional, off-the-shelf turbo jet that can take the plane from the runway to Mach 3, and a hypersonic ramjet/scramjet that will push it the rest of the way. Its body will have to withstand the extreme heat of hypersonic flight when air friction alone could melt steel. Its bombs will have to hit targets from possibly 80,000 feet. Lockheed says the craft could be deployed by 2030. Once it is, the plane's ability to cover one mile per second means it could reach any location on any continent in an hour—not that you'll see it coming.

Additional information on the SR-72 is available at the following links:

<https://www.youtube.com/watch?v=tyrsASVs0x0>

<http://www.nbcnews.com/science/son-blackbird-meet-sr-72-lockheeds-planned-new-hypersonic-spy-8C11528419>

https://en.wikipedia.org/wiki/Lockheed_Martin_SR-72

<https://www.youtube.com/watch?v=njRs2yWr4jl>

In November 2018, Lockheed Martin said that a prototype of the SR-72 was scheduled to fly by 2025. In addition, the company stated that the aircraft is to be equipped to fire hypersonic missiles. **The SR-72 could enter service in the 2030s.**



THE SR-71:THE END OF AN ERA



THE MOVIE VERSION



THE NEW SR-72 ???????

DISCLAIMER

PLEASE UNDERSTAND THAT THIS INFORMATION HAS BEEN GATHERED FROM WEBSITES THAT APPEAR TO BE AUTHENTIC WITH CORRECT INFORMATION, HOWEVER, I CAN NOT GUARANTEE THAT THE DATA IN THIS ARTICLE IS COMPLETELY ACCURATE AND CORRECT