

~~TOP SECRET~~

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11/4/88

TAGBOARD CODEWORD CONSIDERATIONS

TAGBOARD is a codeword, issued under the authority of the Director of Central Intelligence, for the purpose of providing extraordinary security protection to an intelligence collection program.

Codewords, by themselves, are unclassified. That is, the name TAGBOARD is not classified. But when TAGBOARD is associated with its program, mission, hardware, military organization, contractors, funding, etc, it is classified within the BYEMAN Control System. The association of any aspect of the program with the codeword is a BYEMAN fact.

There are other BYEMAN codewords in existence to protect ongoing intelligence collection programs, the revelation of which is highly undesirable from a security standpoint.

From time to time the codeword pertaining to a particular program which has been terminated has been decompartmented and been linked, at a collateral security classification, with the program mission. This is a decision of the Central Intelligence Agency. This decompartmentation, however, does not cause any information to be released outside of classified channels. The TAGBOARD codeword has not been considered for decompartmentation.

The fact that a BYEMAN codeword such as TAGBOARD has appeared openly, through a security compromise, does not cause any information about the program to become unclassified or associated with the codeword.

The D-21 drone vehicle is the reconnaissance vehicle developed and used in the TAGBOARD program. The unused vehicles were decommissioned and sent to the Military Aircraft Storage and Disposition Center in 1976, where they are visible to the public. At that time, the National Reconnaissance Office authorized a very few statements which could be released in response to direct public query about the drone vehicle. These specifically declined to comment about denied area overflight missions.

The CIA "Studies in Intelligence", Volume 15. No.1, Winter 1971 issue carries an article titled "The OXCART Story", at the SECRET level. Although this would be a logical place to discuss the interface between the OXCART and TAGBOARD programs, the article does not contain any reference to the D-21 or TAGBOARD. (See article attached.)

Attached are excerpts from three books, each of which shows photos of the D-21 drone (with credits for releasing them going to Lockheed or the Air Force, depending upon which book you

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read). Each excerpt contains some facts, and some information which is not factual. No reference in published literature was found to the name "TAGBOARD": neither could the CIA Office of History pinpoint any open reference to the codeword.

There are long-term international implications to revelation of national reconnaissance missions which collect intelligence from overflight of sovereign territory during peacetime. The fact that the TAGBOARD Program did conduct overflights of a foreign nation on more than one mission is extremely sensitive, and public acknowledgement could result in precluding our ability to conduct denied area drone reconnaissance in the future. Acknowledgement about any aspects of the TAGBOARD program could embarrass the United States Government; unlike a military weapon system program that, when compromised, can often be declassified, the policy for intelligence collection programs is to neither confirm or deny their existence even after their conclusion.

ATCH: Article
3 Excerpts

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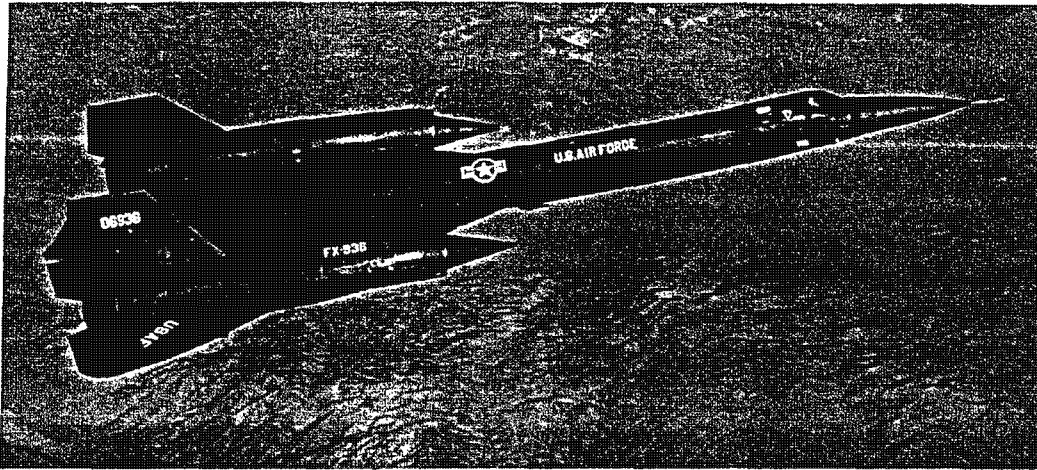
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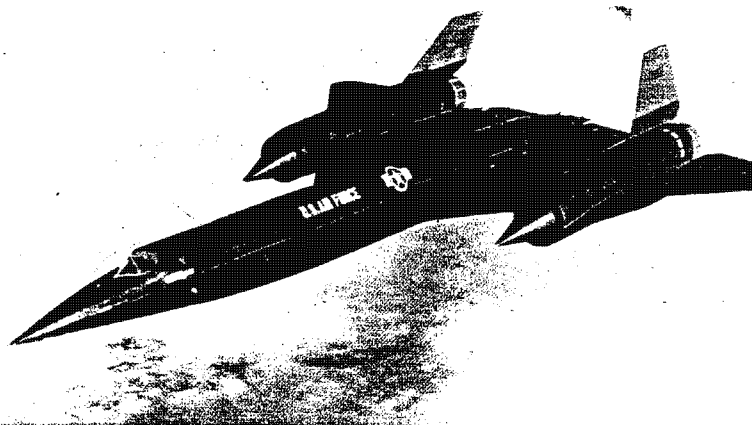
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US Air Force (two) page 13: MacClancy Collection page 14: US Air Force page 15:
via Bruce M. Bailey page 16: US Air Force (two) page 17: US Air Force page 18: via
Jon Lake (two), via Robert L. Lawson page 19: US Air Force, via Jon Lake page 20:
US Navy (two) page 21: via Jon Lake (two) page 22: US Air Force (two) page 23:
Bruce M. Bailey page 24: Bruce M. Bailey, via R.L. Ward, Bruce M. Bailey page 25:
Bruce M. Bailey, Boeing, US Air Force page 26: US Air Force (two) page 27: US Air
Force (two) page 28: Lockheed, US Air Force page 29: Lockheed page 30: VF-102/
US Navy page 31: Lockheed page 32: US Air Force (two) page 33: US Air Force
page 34: Lockheed, US Air Force (two) page 35: US Air Force, Bruce M. Bailey, US
Air Force page 36: Bruce M. Bailey (two), via Jon Lake page 37: via Jon Lake (four)
page 38: via Jon Lake, US Air Force page 39: RAF Wyton page 40: US Air Force
(two) page 41: US Air Force page 42: US Air Force, Lockheed (two) page 43:
Lockheed (two) page 46: Lockheed, Bruce M. Bailey, via David Donald page 47: US
Air Force, Bruce M. Bailey, US Air Force page 48: via Jon Lake, via Robert F. Dorr,
Peter R. Foster page 49: US Navy (two) page 50: Lockheed page 51: Lockheed page
52: ECPA page 53: Bruce M. Bailey, US Air Force page 54: Bruce M. Bailey (three)
page 55: Bruce M. Bailey (three) page 56: Bruce M. Bailey (four) page 57: US Air
Force page 58: US Navy (two), US Marine Corps, Jerry Edwards via René J.
Francillon page 59: US Navy, Lockheed page 60: via René J. Francillon, US Air
Force, US Army (two) page 61: US Air Force (two), 100th SRW via David Donald
page 62: 100th SRW via David Donald, Bruce M. Bailey, 100th SRW via David
Donald page 63: Bruce M. Bailey (two), US Air Force page 64: Bruce M. Bailey

(three) page 65: Bruce M. Bailey, Lockheed, Bruce M. Bailey (three) page 66: Bruce
M. Bailey (two) page 67: Ryan, 100th SRW via David Donald page 68: Lockheed,
Bruce M. Bailey (two) page 69: US Air Force page 70: via René J. Francillon page 71:
Royal Navy page 72: US Air Force page 73: US Navy page 74: US Navy, Associated
Press, VF-102/US Navy page 75: Department of Defense, US Navy, Ministry of
Defence page 76: Swedish air force, US Navy page 78: US Air Force (two) page 79:
Associated Press, Chris Pocock page 80: Bob A. Munro, Lockheed page 81: US
Navy page 82: Terry Senior (two) page 83: via René J. Francillon, Terry Senior page
84: Terry Senior, Swedish air force, via Jon Lake page 85: via Jon Lake, Terry Senior,
Robin A. Walker, Terry Senior page 86: Peter R. Foster, via Jon Lake, Peter R.
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Foster, Paul A. Jackson page 89: Cpl Matt Trim, Swedish air force page 90: US Air
Force, US Navy, Grumman page 91: US Air Force, Department of Defense, US Air
Force page 92: via Jon Lake (two) page 93: US Navy page 94: Lockheed page 95:
David Donald page 96: David Donald, via René J. Francillon, Terry Senior page 98:
David Donald, 17th Reconnnaissance Wing, US Air Force page 99: US Air Force (two)
page 100: Lindsay Peacock, David Donald page 101: David Donald (two),
Lockheed, Jilly Foreman page 102: Jon Lake, Lockheed, David Donald page 103:
David Donald, Grumman page 104: Tass, Royal Norwegian Air Force, US Navy
page 108: US Air Force page 106: US Navy (two) page 107: US Navy, via V. Flintham
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Left: Three A-12s were developed as YF-12A interceptors, with fire control radar in a large radome, and infra-red sensor balls in the forward chines. Despite a lengthy evaluation, the fighter version was relegated to NASA high speed trials flights.



Above: The single seat cockpit, short tailcone and slender nose profile identify this as an A-12, used operationally before the SR-71A took over the mission. Sensors were carried largely in the chine area.

late 1950s, and work was soon progressing rapidly on the A-12 design to the extent that it was complete by January 1962.

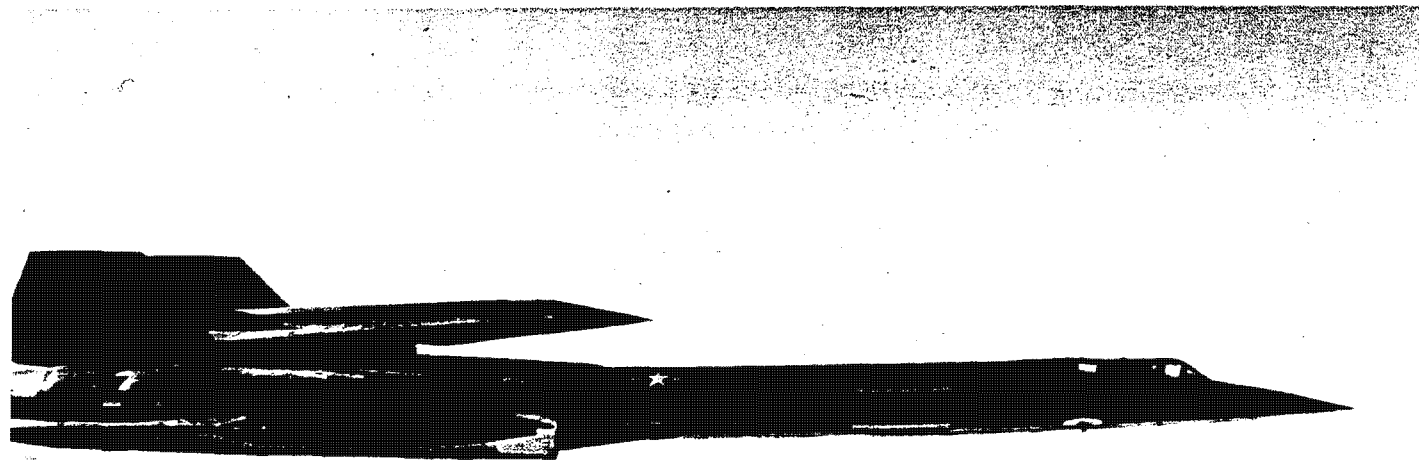
Transported by road to the Groom Lake facility in Nevada that had seen the major part of the U-2 flight test programme, the A-12 was assembled and readied for its first flight. This occurred unofficially on 24 April during a high-speed taxi run, with the official full first flight taking place two days later with Lou Schalk at the controls. The A-12 was an impressive machine by any account. Basically a delta, two huge engine nacelles were faired into the wing with streamlined chines, and these features were incorporated into the basic cylindrical fuselage structure. The fuselage chines blended into the leading edge of the wing, giving the A-12 the appear-

ance of a demented sea monster rather than an aeroplane. Two giant angular slab fins sat on top of the engine nacelles, canted inwards to complete the radical look of the secret aircraft. Initial flight tests showed no major aerodynamic problems, yet the proposed Pratt & Whitney J58 turbojets were not yet ready, so the A-12 flew for the first months powered by two J75 engines. Eventually the J58 was fitted, and a myriad of problems surfaced which dogged the A-12 programme for many months. Chief among these was the propulsive system, each engine requiring superfine control of the airflow by several rows of inlet and outlet doors, together with careful positioning of the giant inlet spike, which travelled forward and aft throughout the flight regime for optimum positioning of the huge shock wave which built up in front of the inlets at high speeds.

A-12 into service

Despite these problems the CIA quickly put the A-12 into use on reconnaissance missions, but virtually nothing is known of their activities. It is believed that they were operated over China and Vietnam and remained in service until 1967-68, by which time their missions were taken over by the SR-71. The basic A-12 was a single seater, and carried its sensors in the nose section, chine areas and a Q-bay behind the cockpit. Fifteen were built for the CIA, of which at least six were thought to be lost in accidents. One aircraft incorporated a second raised cockpit for training

Below: Two A-12s were converted to carry the Mach 4 Lockheed D-21 drone, with a central pylon and a second cockpit for the launch control officer. Note the black painted nose, chines and leading edges of the A-12.





Definitive expression of the 'Blackbird' concept is the SR-71A, which replaced the A-12 in service. Serving from the outset with the US Air Force, the SR-71A removed most of the problems associated with the earlier A-12. Here the giant braking parachute is deployed. Note the three-wheel main landing gear.

SR-71s went into service with the 4200th SRW at Beale AFB in California (soon renumbered as the 9th SRW). This example banks over Beale, showing the specialist sheds for 'Blackbird' operations and two of the Boeing KC-135Q tankers.

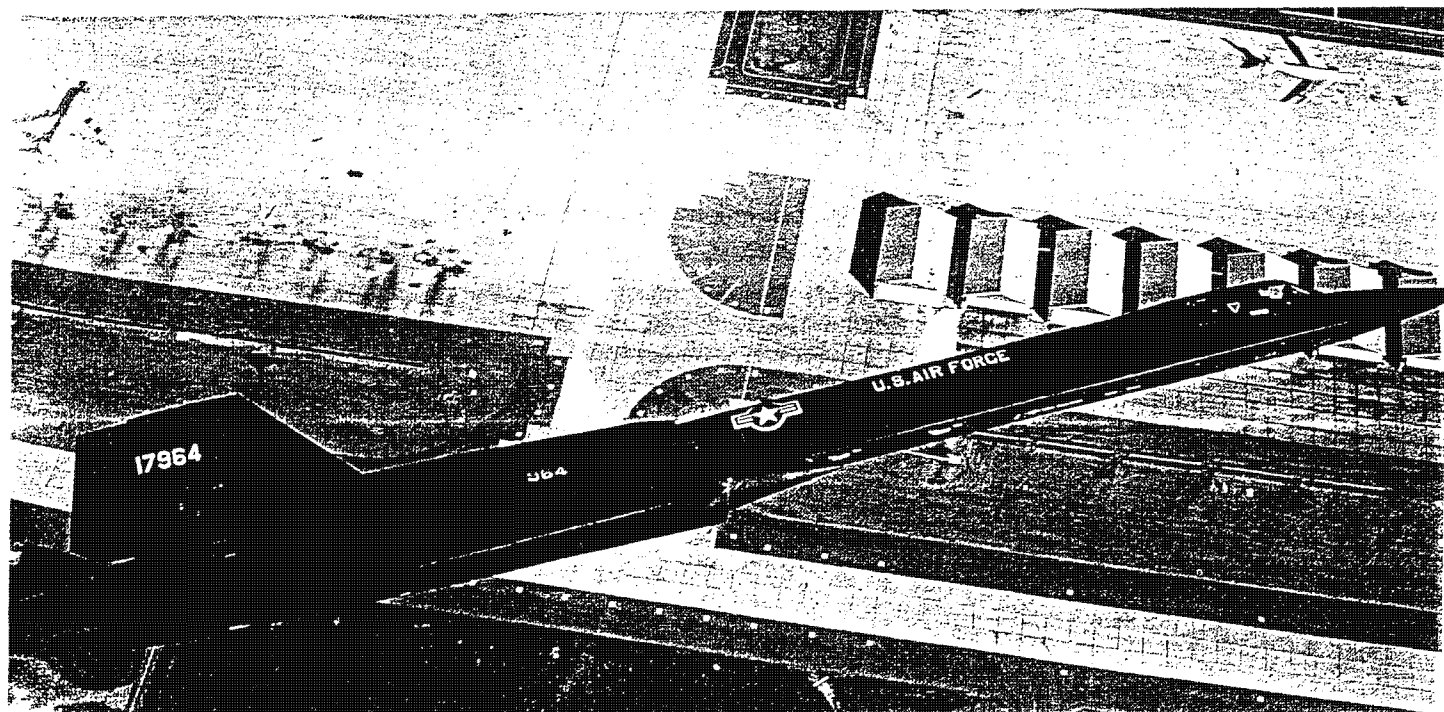
purposes, and two aircraft were configured for the even more secret D-21 drone programme. The D-21 was a Mach 4 ramjet-powered drone which borrowed aerodynamic features from the A-12, a bat-shaped aircraft resembling a winged A-12 engine nacelle. It was carried on a special pylon mounted on the rear fuselage spine of the A-12 and launched at speed and altitude to begin its penetration of extremely hostile airspace, after which it ejected a canister containing the gathered intelligence before being expended. Control during launch was provided by a second crew member stationed in a cabin immediately behind the A-12's pilot. The A-12 period of the D-21's history seems to be an unhappy one, with one of the aircraft being lost during a drone launch when the D-21 flew back into the A-12. Subsequent testing was accomplished from the underwing pylons of Boeing B-52H bombers serving with the 4200th Test Wing at Beale AFB in California, and this combination probably

saw limited operational service over China and Vietnam in the mid- to late-1960s. What degree of success was obtained by the D-21 remains hidden in the vaults of the CIA, and the programme terminated before reaching any large scale use.

Fighter derivative

Second in the 'Blackbird' line was the YF-12A, which was a fighter derivative of the A-12 with a long-range Hughes radar in the nose and associated forward-looking infrared sensors. AIM-47 missiles were carried in fuselage bays and a second cockpit was added for the Weapons Systems Officer. Although considerably slower than the A-12, it was a YF-12A that was used to set world records for speed and altitude. Widely tested, the YF-12A programme amounted only to three aircraft, and these were relegated to general high altitude trials at Edwards AFB and then with NASA.

Despite its phenomenal performance the



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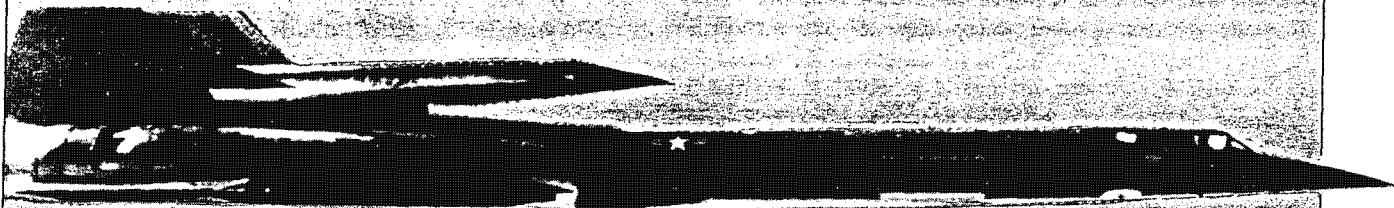
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Was the D-21 spying too?

The mystery surrounding the Lockheed A-12 acquired a new dimension with the sudden appearance of the aircraft at the MASDC — desert storage at Davis-Monthan AFB for redundant Lockheed GTD-21 drones. These unmanned aircraft were of the same general shape as the A-12/SR-71, and appeared to have been equipped with a space in the belly for aerial reconnaissance cameras. *Aviation Week* wrote in 1977 that the 40-foot long D-21 (later called the GTD-21B) served from 1964 to 1967 as an interim reconnaissance platform in combination with the A-11 (actually the A-12, but this was unknown at the time). The Lockheed Skunk Works in Burbank apparently manufactured 38 D-21s in great secrecy. Just like the A-12 espionage aircraft, D-21 drones in 1968 went into 'operational reserve' as possible replacements for the SR-71 Blackbirds of the USAF. At the end of 1976 and the start of 1977, the remaining A-12s were made redundant and transferred to the Lockheed plant in Palmdale, where they were parked in the open (and immediately observed). Quite coincidentally, in the same period 17 D-21 drones were displayed under the sunny skies of Arizona. What did the D-21 have to do with the CIA's A-12 spy plane?

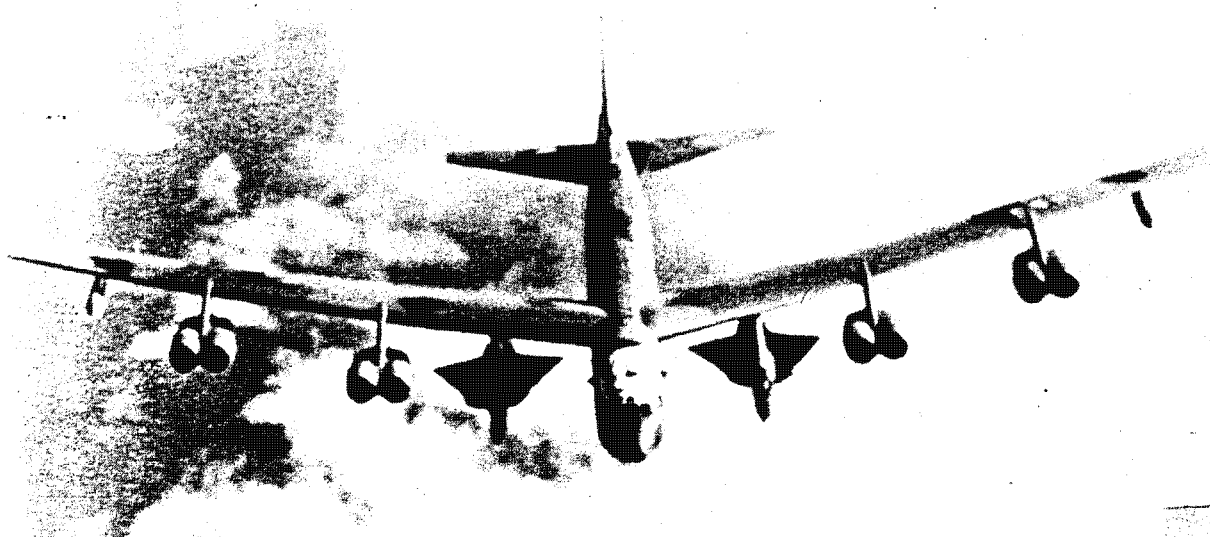
A complete answer cannot yet be given, but it has been established that two A-12 aircraft (60-6940 and 60-6941) had been modified by Lockheed to carry a D-21 drone on top of the fuselage between the two engines. In the space at the rear of the cockpit, normally containing reconnaissance equipment, room had to be made for a second crew member, a Launch Control Officer, who was to be in charge of the launching of the D-21.

This immediately raises a question: has this combination of A-12/D-21 actually been used for an aerial espionage operation? There is some evidence of

limited operational use (Cyprus and Kadena?) between 1964 and 1967. Limited because the whole concept was too advanced for that time, and involved many technical problems. One of the two D-21-carrying A-12s crashed in the United States due to faulty launching of the reconnaissance drone.

The first official admission of the existence of the D-21 came as late as April 1982, when the USAF, through Lockheed, released for publication two photographs on which the drone could be seen piggy-back on an A-12 and — to deepen the mystery still further — two D-21s under the wings of a B-52 bomber. Later still, eye-witnesses stated that an obscure USAF unit, called the 4200th Test Group, had been operating between 1968 and 1971 under top-secret conditions from the remote Beale Air Force Base in California. The 4200th Test Group on Beale (at that time also home base for the SR-71 Blackbirds) was equipped with two Boeings B-52H bombers, which had large pylons fitted between the fuselage and the in-board engine nacelles to carry two D-21 drones. Has *this* combination, B-52/D-21, been used for aerial espionage? And if so, where? Has this pilotless spy flown over the Soviet Union at more than four times the speed of sound at unheard-of heights? All these questions will remain unanswered unless and until the CIA reveals its rôle in the secret American aerial espionage activities in the sixties.

Two photographs of the mysterious D-21 espionage drone — on top of a Lockheed A-12 (above) and under the wings of a Boeing B-52H bomber. The pictures were taken in the sixties, but only released in April 1982 (Lockheed).



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The Author

MIKE SPICK has had a lifelong interest in military aviation, and is author of several technical books and articles in aviation magazines covering various aspects of the subject. One of his leisure pursuits, wargaming, led him to a close study of air warfare, combat aircraft and the evolution of air combat tactics, on all of which he has written extensively.

Contents

Chapter 1:	
Introduction	3
Chapter 2:	
Lockheed U-2	5
Chapter 3:	
U-2 Variants	11
Chapter 4:	
Colours and Markings	16
Chapter 5:	
Performance	19
Chapter 6:	
The U-2/GR-1 in Service	21
Chapter 7:	
The Lockheed A-12/YF-12/SR-71	35
Chapter 8:	
Production and Service	40
American Strategic	
Reconnaissance Units	48

Reconnaissance military aircraft has played this role as time is obvious, spectators on the ground doing and, indeed, been widely used in abreast of development or even a friend certain technical developments. In the late 1930s this practice spread, classic examples being the Lufthansa airliners over the airfield at Biggin Hill over Germany in his the final two months relevant to the present made up the East coast frequencies and emissions.

Col

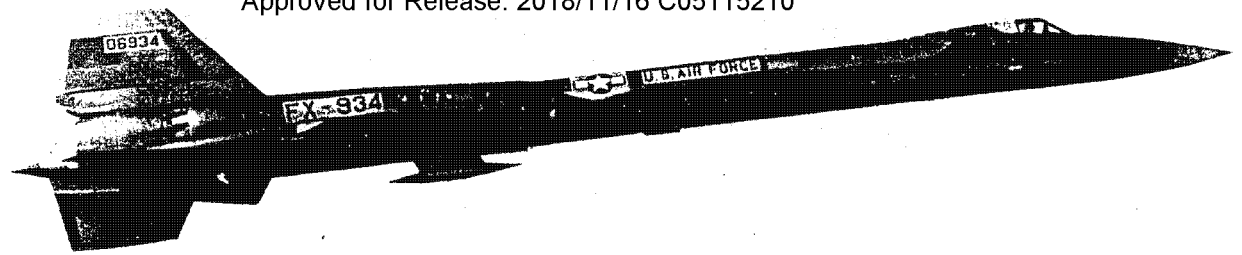
With the outbreak of intelligence by aircraft rather than a covert degree of effectiveness brought with it a relevant attitude of the which brought about War—ensured that entirely cease. The emotional mistrust saw shooting down of a B airliner over Berlin doing little to help.

The so-called Iron effectively cutting the time, the West was weapons and the me Union had neither, t

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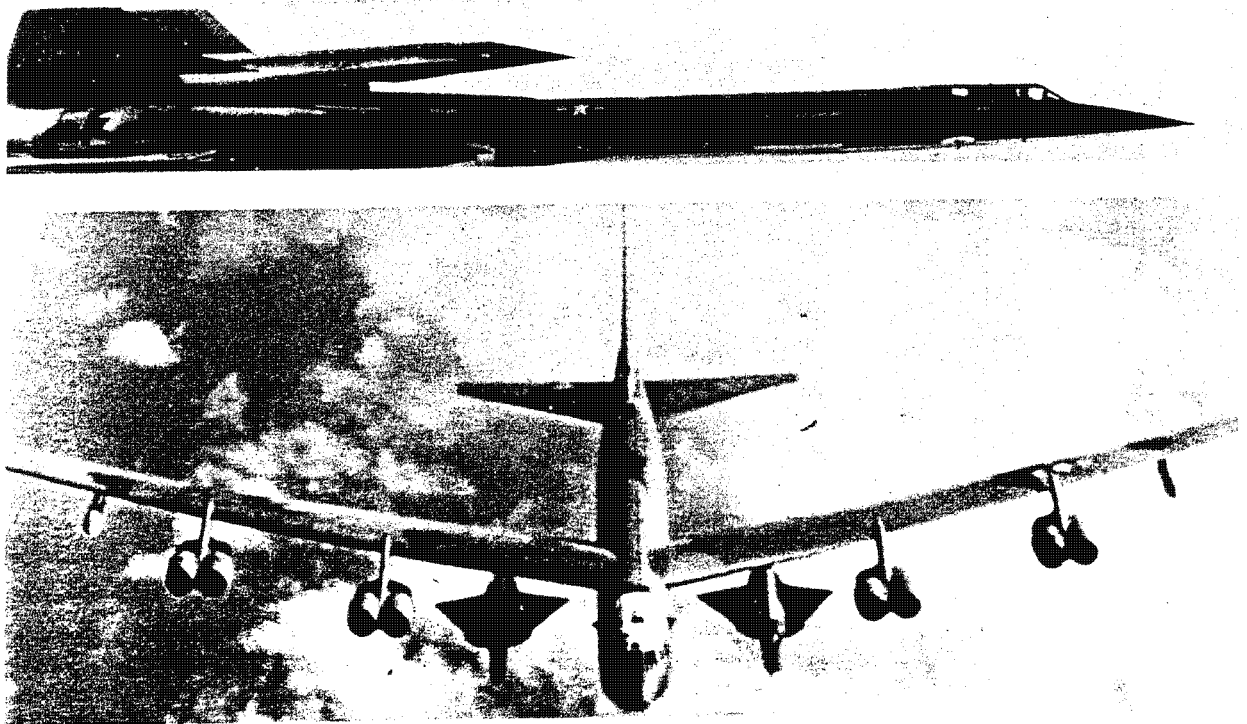
Twin fins are mounted on top of the engine nacelles. These are unusual in that they have a fixed stub portion, while the entire top section is movable. An all-moving fin is more effective in supersonic flight than a fixed fin and rudder, while at high Mach numbers a low aspect ratio fin, such as that on the Blackbird series, is to be preferred. The fins are canted inwards at about 15 deg, which acts to reduce the rolling moment generated by sideslip. There is a spin-off effect to this in that a 90 deg radar reflecting angle with the nacelle is avoided, and the radar signature is thus reduced. One danger with such widely spaced engines arises from asymmetric thrust, which would occur in the event of engine failure or loss of thrust on one side. If this happens, a large amount of rudder is fed in automatically, to counter the resulting yaw which could if unchecked take the

Above: One of the first pictures released portrayed YF-12A 06934 in the black and silver finish that was initially applied. The YF-12A's folding ventral fin is also clearly visible.

aircraft beyond structural limits, with disastrous results.

The U-2 series was limited in range more by pilot endurance than by fuel. This is not the case with the Blackbird, which is a thirsty beast and which has been configured from the outset for in-flight refuelling, a receptacle being located in the centre fuselage section behind the cockpit. The high landing speed also makes a braking parachute necessary and this is housed in a dorsal compartment set towards the rear.

Below: "Mother Goose and chick". One of the two A-12s that served as a mother ship for the GTD-21 drone is seen in flight with a drone attached. Bottom: As far as is known, the A-12/GTD-21 pairing did not progress beyond the test stage although the drone was used operationally from the B-52H.



8

Production and Service

A total of 15 A-12s was built, with USAF serials 60-6924 to 60-6933, and 60-6937 to 60-6941. Few A-12 photographs have been released and those that have depict the aircraft in Air Force markings. In fact, programme secrecy was preserved until February 1964, when its existence was revealed by President Johnson, who referred to it as the A-11, thus starting that particular canard.

As with the U-2, it was found advantageous to have a two-seater training variant, aircraft number 60-6927 being produced with a second cockpit raised above the line of the first and occupying space normally taken by the Q-bay. This aircraft was fitted with J75 engines and had no operational capability, its top speed being just Mach 1.2.

Although the A-12 was plagued with technical problems for the first two years of its flying career, CIA pilot training started in about mid-1963. Details of the missions flown are virtually non-existent but it

is known that the type operated from Groom Lake and from a CIA enclave at Kadena AB, Okinawa. In all, six of the 15 A-12s built fell victim to accidents but only one could truly be described as an operational loss, this disappearing soon after departure from Kadena in June 1968 and bringing that particular operation to a sudden halt. Nonetheless, the A-12 had the best performance of any member of the Blackbird family, reportedly being capable of attaining Mach 3.6—about 2,065kts/3,827km/hr and 95,000ft (28,995m).

The final two A-12s were modified to carry the GTD-21B drone, a second crewman being carried in the converted Q-bay, while the drone was mounted on a pylon above the rear fuselage. In this configura-

Below: The first of two purpose-built SR-71B two-seat trainers, and, incidentally, the only surviving example, 17956 has logged well over 1,000 sorties since it entered service with the 9th SRW at Beale AFB, California in the mid-1960s.

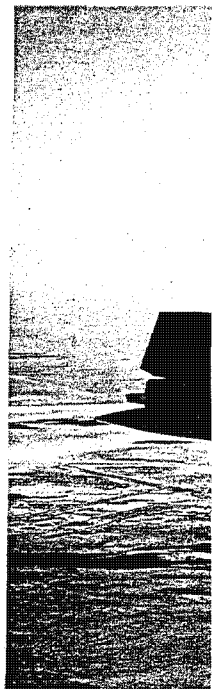
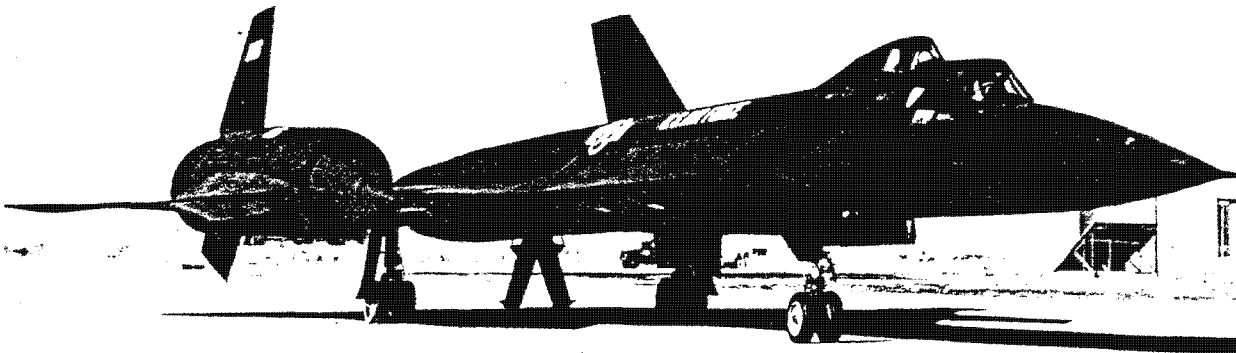
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The GTD-21 capable, reconna flight missions. altitude platform pre-programme this in a special predetermined p ified C-130. The GTD-21/M-12 c ing the loss of (launch. The GT. operationally in “mother-ship”.

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Below: Production o kicked off with 1795 western USA. SAC h aircraft is believed to



tion, the A-12 became the M-12, although it was probably better known by those associated with the programme as "Mother Goose".

The GTD-21B was a ramjet-powered, Mach 4 capable, reconnaissance platform for high-risk over-flight missions. Launched from a high-speed, high-altitude platform such as the M-12, it would fly a pre-programmed course, gathering data and storing this in a special package which would be ejected at a predetermined point for retrieval by a suitably modified C-130. The drone itself was expendable but the GTD-21/M-12 combination was abandoned following the loss of 60-6941 in July 1966 during a test launch. The GTD-21 may, however, have been used operationally in concert with the B-52H as a "mother-ship".

A Blackbird interceptor

In September 1959, the North American F-108 Rapier Mach 3 capable fighter had been cancelled, mainly due to lack of funds. However, the requirement remained and it was decided to explore the possibility of using an A-12 variant as an interceptor.

Below: Production of the SR-71A for Strategic Air Command kicked off with 17950, seen here in flight somewhere over the western USA. SAC has always been coy about figures but this aircraft is believed to be one of several which have crashed.

This duty emerged as the YF-12A, three examples of which were built. Given the serial numbers 60-6934 to 60-6936, the first of these made its maiden flight from Groom Lake on 7 August 1963 and it differed from the A-12 quite considerably.

For a start, at 101.67ft (30.99m) long, the fuselage had been slightly extended whilst it was also a dedicated two-seater, with a weapons system officer ensconced in a flush-faired cockpit behind the pilot. The nose had been redesigned to house the Hughes AN/ASG-18 radar, originally developed for the North American F-108.

The ASG-18 was the first coherent pulse Doppler radar to be designed for fighter use and incorporated the travelling wave tube instead of the magnetron. This, allied to recent advances in digital computer technology, bestowed look-down capability, a feature absent from earlier radars. The radar range was around 100 naut. miles (161km), and the weapon adopted, also developed for the F-108, was the Hughes GAR-9 (later AIM-47A) which was capable of Mach 6 and which possessed a range capability matching that of the radar. Three AIM-47As were carried in internal weapons bays.

The nose chines were cut back clear of the radome and infra-red sensors were installed in the chine leading edge on both sides. The nose modifications resulted in reduced stability which was compensated

