

—Wide World Photos

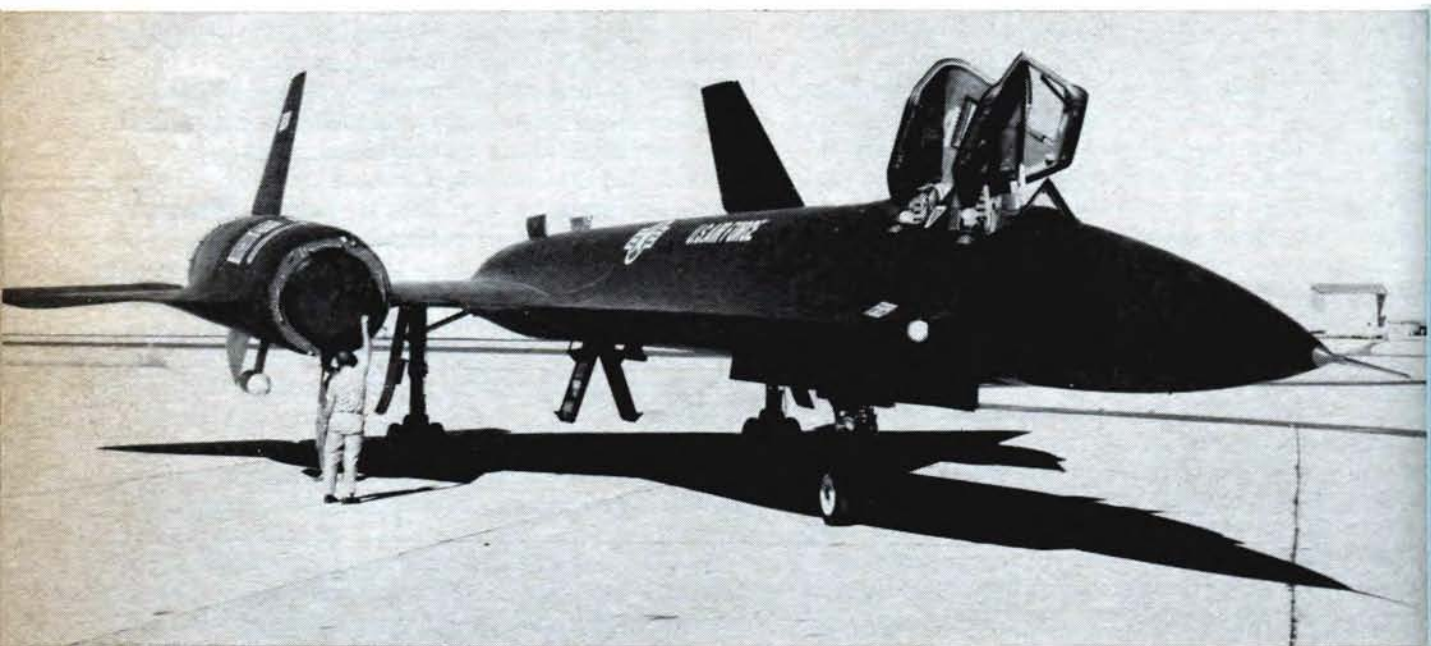
USAF-Lockheed YF-12A was shown for the first time last month at Edwards AFB, Calif. Two aircraft were used in low and slow fly-by demonstrations and a third was available for hangar inspection. Lt. Col. Robert Stephens, USAF, and James Easthan of Lockheed piloted the fly-by aircraft. A big airplane by current fighter standards, the YF-12A is about 100 feet long with a wing span of about 50 feet. Maximum gross weight is between 150,000 and 200,000 pounds.



Hatches for the pilot and fire-control officer positions are shown open above. Two missile bay doors also are open beside the nose gear. Large electronics bay, more than ten by three by three feet is just behind the nose gear.

Combination of extremely long range, Mach 3 cruising speed, and highly advanced airborne detection and fire-control system makes it possible, says USAF, for Lockheed's revolutionary YF-12A interceptor to cover the same territory as nine F-106 fighters . . .

NINE TIMES BETTER



Structure on the YF-12A is conventional skin-stringer design, and titanium is the predominant material. Some steel and aluminum are used. Missile bay doors, landing gear doors, and the inner structure visible during the hangar inspection at Edwards were made of relatively thin gauge material. The over-all impression is that the structure is relatively light, has been designed for low dynamic pressures, and would not withstand maximum fighter-type maneuvering loads of 6Gs.

Pratt & Whitney J58s, rated at more than 30,000 pounds of thrust, power the YF-12A. The external configuration of the J58 shown at Edwards varied considerably from the model shown at the AFA Convention in 1959. One major change was a series of large manifolds which appeared to pipe air from the compressor straight to the afterburner, bypassing the combustion chamber and turbine section.



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YF-12A PERFORMANCE DATA

SPEED: Mach 3

RANGE: 3,500 to 4,000 mi.

CRUISE CEILING: 70,000 to 80,000 ft.

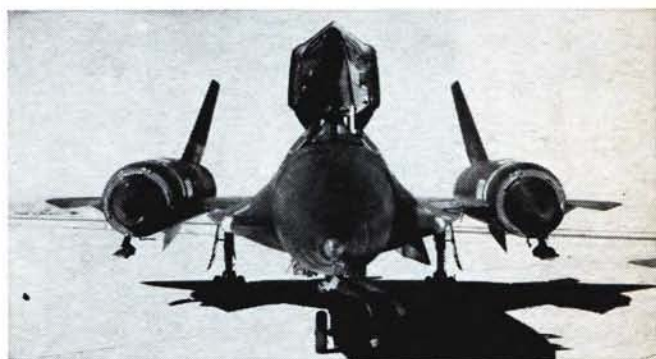
ARMAMENT: 2 to 4 Hughes AIM-47A nuclear-tipped missiles

WEIGHT: 150,000 to 200,000 lbs.

LENGTH: 100 ft.

SPAN: 50 ft.

HEIGHT: 18 ft.



Two infrared sensors are visible on the wing leading edges just beside the pilot's compartment. Heavily insulated radome on the nose made of Pyroceram-type material houses a large radar antenna more than two feet in diameter.

EDWARDS AFB, CALIF., SEPTEMBER 30

THE extensive military potential of Mach 3 cruise airplanes was revealed more clearly than ever at the unveiling of the Lockheed YF-12A. USAF briefers estimated that one YF-12A could cover the same territory as nine F-106 interceptors. Highly advanced on-board infrared, radar, navigation, and computer systems plus a Mach 6 nuclear-tipped missile with 100-mile-plus range also make this aircraft the first to be able to defend effectively against aircraft and air-launched missiles *without* ground-tracking assistance. These systems plus cameras and other sensors could make the YF-12A effective for long-range reconnaissance and simultaneous strike against small ground targets.

The YF-12A is a first-generation Mach 3 cruise airplane and must stay near its optimum altitude to achieve maximum range, so its missile, the AIM-47A, has been given great maneuverability. Launched from the aircraft at 70,000 to 80,000 feet, the AIM-47A can strike targets from the ground to about 95,000 feet. Search range on the aircraft's ASG-18 pulse doppler fire-control radar is several hundred miles ahead and to each side with vertical coverage extending from sea level to well over 100,000 feet. The missile and fire-control systems are built by Hughes Aircraft and were initiated in the middle 1950s for the long-cancelled F-108.



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Large wing area on the YF-12A, hidden in many camera angles, is visible above. Two dorsal fins are canted inboard slightly and are all-moving to serve as rudders. Single large ventral fin is retracted during takeoff and landing.

—J. S. B., JR.