The Lockheed SR-71 had performance to match its appearance.

The legendary SR-71 Blackbird, a Mach 3 aircraft, was a masterpiece of visionary engineering translated into history’s most advanced air-breathing system. It was an exotic reconnaissance aircraft. Even now, no other aircraft has come close to matching its performance, beauty, and operational efficiency.

The Blackbird—so named for its deep blue, almost black, heat-deflecting paint scheme—was designed at Lockheed’s “Skunk Works” by arguably the industry’s most talented engineering team. Late 1950s design studies backed by the CIA led to a larger single-seat progenitor, the A-12. USAF specified a two-man crew, resulting in the SR-71. Drag-induced surface heat of more than 1,000 degrees Fahrenheit at Mach 3 sparked a revolution in design. More than 90 percent of the Blackbird’s structure was titanium alloy, the rest composite materials. The Skunk Works also developed special hydraulic fluids, lubricants, and sealants. Special inlets allowed a Mach 3 cruise speed while air flowed into the turbojets at subsonic speeds. Created before the advent of modern computer-aided design, the SR-71 marked the acme of US aeronautical engineering.

The small fleet of A-12s flew missions over North Vietnam and North Korea, but it was retired in 1968. The Blackbird flew over these nations and other enemy territories with impunity, typically soaring above 85,000 feet at Mach 3 and faster. The sleek Air Force aircraft set numerous records for speed, altitude, and time between points. It also suffered 12 losses and four crew members killed, though none stemmed from combat. Enemy defense systems never touched it.

—Walter J. Boyne

In Brief
Designed, built by Lockheed ★ first flight Dec. 22, 1964 ★ number built 32 ★ crew of two (pilot, recce system operator) ★ armament none ★ Specific to SR-71A: two Pratt & Whitney J58 turbojet engines ★ max speed 2,200+ mph (Mach 3.2) ★ cruise speed 2,000 mph (Mach 3) ★ max range 2,900 mi ★ weight (loaded) 170,000 lb ★ span 55 ft 7 in ★ length 107 ft 5 in ★ height 18 ft 6 in.

Famous Fliers

Interesting Facts
Designed by dream team of Kelly Johnson and Ben Rich ★ code-named “Senior Crown” ★ grew several inches in flight due to thermal expansion of airframe ★ designed with stealth in mind but had large radar signature ★ required crew to use pressure suits ★ burned 40,000 pounds of fuel every two hours ★ evaded surface-to-air missiles merely by accelerating ★ used titanium acquired from the Soviet Union ★ nicknamed “Habu,” pit viper found on Okinawa ★ shut down for good Oct. 9, 1999 ★ renamed SR-71 (from RS-71) by USAF Chief of Staff Gen. Curtis LeMay.