

# EDITORIAL

## 'Kelly' Johnson's Tour de Force

The Lockheed Mach 3.5 A-11 special-purpose aircraft created by "Kelly" Johnson and his gifted crew in the corporation's Burbank "Skonk Works" (see p. 16) is another fine example of how much the technical talent in the U.S. aerospace industry can accomplish when given a specific mission and a clear path unencumbered by bureaucratic red tape. Like its predecessor, the U-2, this Lockheed A-11 was designed to be optimized for a specific mission and was produced fast enough to stay a significant jump ahead of any counter-system that could be deployed against it.

This aircraft is a tremendously effective weapon in its particular specialized field for both cold and hot wars. In the cold war, this country's first line of military defense is reconnaissance, and technology has expanded capability in this field across a truly fantastic spectrum. Satellite reconnaissance has been doing a remarkable job for both the U.S. and USSR. But the reaction speed and operational flexibility of aircraft are required to supplement satellites. The A-11 was designed specifically as a highspeed, high-altitude, long-range reconnaissance aircraft that could penetrate the Iron Curtain at will and help protect this country from any unpleasant military surprises. The Soviets are also using a long-range twin-jet reconnaissance aircraft called Mandrake (AW June 3, p. 26) in Asia and Europe. Its performance is better than the U-2, but falls far short of the A-11.

### Boost to U. S. Prestige

Because the A-11 design was optimized for its principal mission, it cannot be expected to function as a long-range interceptor, a low-level strike bomber or a supersonic transport prototype. In fact, its tremendous performance for its specific mission is a powerful argument for the development of the specialized aircraft, rather than chasing the eternal mirage of the "all-purpose" aircraft on the often illusory grounds of economy.

As the first operational Mach-3-plus aircraft in the world, the A-11 will reflect considerable prestige on U.S. aviation technology at a time when it needs this badly. It is an interesting footnote to the supersonic transport race that, while this country has been flying A-11 aircraft for long periods of sustained Mach 3 flight for several years and is pushing its X-15 research aircraft even further into the hypersonic regime, the British are close to abandoning their research aircraft program at

Mach 2 (AW Mar. 2, p. 32). It is obvious that the combination of X-15 research and A-11 operational experience will produce considerable technical fall-out in materials, manufacturing, aerodynamics, subsystem development and operating techniques that will benefit all new U.S. supersonic aircraft programs. President Lyndon Johnson emphasized this in revealing the existence of the A-11, and particularly noted:

"One of the most important achievements in this project has been the mastery of the metallurgy and fabrication of titanium metal which is required for high temperatures experienced by aircraft traveling at more than three times the speed of sound.

"Arrangements are being made to make this and other important technical developments available under appropriate safeguards to those directly engaged in the supersonic transport program."

### Technical Briefings

Competing airframe and engine manufacturers in the supersonic transport competition have already been apprised of these technical developments and U.S. airline technicians will shortly be briefed on this subject in Los Angeles (see p. 30).

Great technical success is always preceded by a solid foundation on which it can be built, and a host of unsung heroes who fashioned those foundations. Among those who come to mind in reflecting on the A-11 history is Vice Adm. John T. "Chick" Hayward, who, as chief of Navy research and development, fought a long and bitter battle to keep the Pratt & Whitney J58 turbojet program alive as a succession of airframe projects were canceled out from under it. Adm. Hayward's philosophy in protecting the J58 program against the onslaughts of Pentagon economizers was that by the time engines in this power class were fully developed, an urgent need for them would appear. And so it was with the A-11. When its power requirements suddenly arose, the J58 was ready.

We paid our original tribute to "Kelly" Johnson for the A-11 performance on Dec. 24, 1962, when we noted in our year-end "Laurels for 1962:"

"Clarence (Kelly) Johnson of Lockheed Aircraft for his continued ingenuity in the Skonk Works."

Until President Johnson's announcement on Feb. 29, 1964, this was all we chose to publish on this project.

—Robert Hotz

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# A-11 Already Used to Spy, Journal Says

## Magazine's Report Draws Quick Denial From Government

Associated Press

An aviation trade journal said yesterday the A-11, the secret supersonic jet plane whose existence President Johnson disclosed eight days ago, "has already flown long-range reconnaissance missions over Communist territory."

The report was disputed almost immediately by a high Government official familiar with the A-11. Declining use of his name, he said

"The A-11 has not flown any reconnaissance missions over Communist territory."

Aviation Week & Space Technology, in its edition to be released today, says of the A-11:

"The Lockheed A-11 is a Mach 3.5 special purpose aircraft that has already flown long-range reconnaissance missions over Communist territory.

"During operations over the past two years it has proved its ability to out-fly any air defense system now in operational use."

The magazine did not amplify its references to "over Communist territory" and to air defense systems.

### Had Kept A-11 Secret

The trade journal, which Defense Department officials last week praised for keeping the secret of the A-11 after it had found out about the plane, said in an accompanying editorial that the jet is not a fighter-interceptor aircraft. It is designed mainly for long range, high altitude reconnaissance, the magazine said.

The article on the A-11, which is not attributed to Government sources, says the plane has hit top speeds of 2300 miles an hour and is the first military plane in the world to sustain a speed of about 2000 miles an hour.

Further, the story says, the A-11 has retained a speed of about 1400 miles an hour up to 100,000 feet in altitude although its maximum speed was reached at slightly above 70,000 feet.

President Johnson, in announcing the A-11 at his Feb. 28 news conference, called it an experimental aircraft which was undergoing tests to determine its capability as a long-range interceptor.

Secretary of Defense Robert S. McNamara also said, "The A-11 is an interceptor aircraft; it is being developed as such; and beyond that I have nothing further to say on its use."

### Same Designer as U-2

Aviation Week's story says that Lockheed California Co. won a design competition for the A-11 as successor to the high-flying U-2 reconnaissance plane built by the same firm. The journal said the A-11 was developed by Clarence L. (Kelly) Johnson who designed the U-2.

The first A-11 was trucked from Burbank to a secret Nevada base in 1961 and was assembled and flight tested there late in that year. At least eight have operated since then and a total of 50 are on order, the publication said.

The range of the A-11 was described as considerably more than the 4000-mile limit of its predecessor, the U-2. The U-2 has an altitude limit of about 70,000 feet.

It was the downing of U-2 pilot Francis Gary Powers in Russia in May, 1960, which revealed that the U.S. had been sending the planes on reconnaissance missions for four years.