

The F-104A Starfighter with MB-1 Genie Missile



The place was Korea. The aircraft was the MiG-15. Lacking heavy armor, a radar gunsight, and all manner of heavy back-up systems, allied pilots were only able to defeat the aircraft by use of superior discipline and training. However, the consensus by combat pilots was that a stripped-down, high performance, lightweight fighter was needed to counter this threat.

C. L. "Kelly" Johnson of Lockheed was very much of this line of thought, as it had gained quite a few proponents in the higher echelons of the U.S. Air Force. He scaled and pared down the fighter designs he had in progress, optimizing them for a clear air mass, point defense intercept role. Armament would be a rotary cannon, the T-161 (later the M-61) Vulcan, guidance would be provided by a short-range radar/gunsight.

Designated the F-104, and named the Starfighter, the aircraft elicited the admiration of fighter pilots who wanted to "kick the tire and light the fire" rather than serve as "a back-up to a computer" as on such current interceptors as the F-86D or F-94. To extend its punch, the F-104 was also equipped with the Sidewinder infrared homing missile (which gave its best results in clear air).

By the latter part of the 1950's, the threat had changed. Hoards of Soviet bombers were believed to be poised, waiting to rain nuclear destruction upon the United States. All that was standing between "Them" and "Us" were the interceptors of the Air Defense Command. Under A.D.C.'s examination, the F-104 proved to be barely adequate. Admittedly, the Starfighter was fast, and its weapons were accurate... in clear weather. But, it was realized that a determined enemy would hardly pick good, clear weather to attack (or be intercepted) in. Night or bad weather would

be the more likely time to expect an attack. However, at these times the F-104 was out of its element, with its simple radar unable to share a data link with the huge ground based radars. Lacking radar guidance, the Starfighter could not always depend on the Sidewinder missile as atmospheric moisture (as found in clouds or rain and snow) would mask the infrared source for which the missile hunted.

To alleviate these shortcomings, many design and modification studies were undertaken. One that actually reached hardware status is shown in the accompanying photos. Basically, it is the marriage of the Starfighter and the M8-1 Genie missile. The Genie is the epitome of the "Dumb" weapon. Unguided, it is simply fired toward the target from a range of 5 to 7 miles and the resulting fireball from its low kiloton range nuclear warhead is assumed to do the rest.

The Genie was mounted on a swing arm which, when retracted, nestled close to the belly of the aircraft. (Even with this tight fit, ground clearance must have been impressively economical!) For launch, the missile and rail assembly swung down and away to avoid fouling the Starfighter's J-79 engine with rocket exhaust. In the photos above and right, F-104A 56-749 is seen at Point Mugu, a Navy Facility, for testing. It appears that the whole installation is attached to a centerline store hardpoint, with the sheet metal fairing attached to structural frames and fuselage skin as needed. It should be noted that the fairing continues onto, and fairs into the nose landing gear doors.

Any reader information and follow-up would be welcomed.

