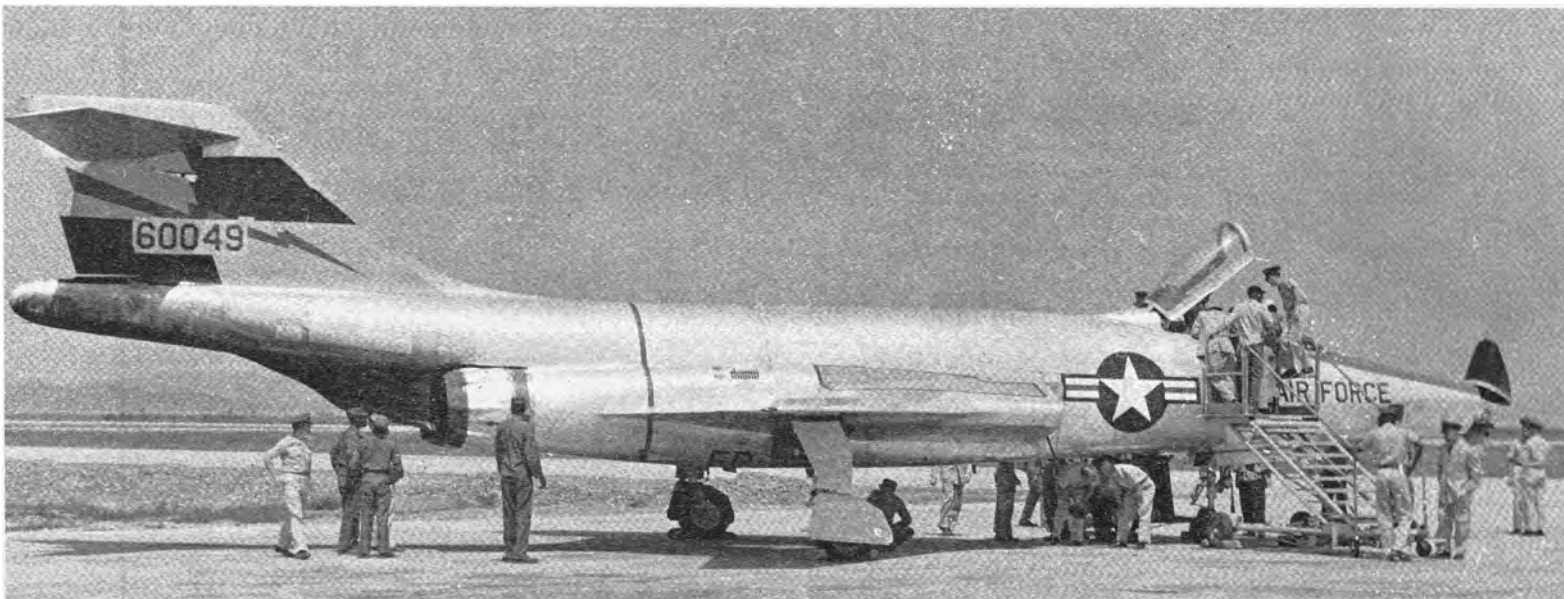




A newly arrived F-101C-60-MC at Osan AB, Korea, assigned to the 15th TRS, being given close scrutiny by USAF airmen, 19 May 1959. Tail markings yellow and black with red lightning bolt. (Photo — Unknown)

RF-101s IN - SOUTHEAST ASIA

By PAUL D. STEVENS

INTRODUCTION

As the F-101 airplane comes near the end of a long period of service, a review of its use over more than a decade reveals an airplane proven under very difficult circumstances. The pattern of its service life in the U. S. Air Force has changed with the times as the emphasis of air power shifted. Originally programmed to be a bomber escort/long range fighter, it became, in its chief role, a reconnaissance airplane. Originally requisitioned in relatively small number, the quantities were increased as economics would allow. As the need grew and new airplanes were unavailable, existing airplanes were modified and committed to action areas from other units. Originally armed with guns, this armament changed to missiles, and still later models had cameras only installed. Even though superseded in certain performance characteristics, it showed amazing strength in others that would not permit its withdrawal from Southeast Asian service. Though the airplane had an extreme stability problem, SEA Air Force units won the USAF Flying Safety Award in 1962 and 1963 and the Columbian Trophy for flight safety in 1963. No doubt more anomalies will come to light as its history develops in retrospect.

Four of the few RF-101As of Nationalist China Air Force. Second one can be identified as 54-1518. (Photo — China Air Force)

The author examines here the operational history of the F-101 in one of the most difficult assignments in military aviation, continued reconnaissance penetration in a conflict in which political decisions overshadowed tactical considerations. An airplane with a dubious future — in the hands of the most dedicated and skilled pilots — has turned in an outstanding performance.

The F-101 was an outgrowth of the F-88 Voodoo fighter and came into operational squadron use in 1957, with an apparent need for more than usual training, more than that usually required for a new fighter/interceptor during a transition period. As the new airplanes came to the squadrons, 1957 was largely spent in advance training and testing, with poor availability and consequent utilization.

During the next decade, tactical reconnaissance came into its own with innumerable developments in equipment, plus techniques which multiplied the effectiveness of reconnaissance efforts. Tactical Reconnaissance Squadrons stood by in Europe, in readiness for events which only threatened but did not transpire. At Shaw Air Force Base in

RF-101C, WIDOW MAKER II, of 45th TRS. This Squadron operated in SE Asia for over eight years. (Photo — David W. Menard)



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South Carolina, operational training went on preparing pilots for the uncertainties of world unrest. Squadrons at Bergstrom AFB, Texas continued day to day assignments. The F-101 community in those days was small enough to be on a first name basis throughout most of the units.

United States defense-in-depth planning required the support of other national efforts as the need arose. It arose again, late in 1957, as the first overseas deployment was made in support of the Nationalist Chinese government. Six RF-101 As of 17th TRS departed from Shaw AFB, S.C. on 12 November 1957, and island-hopped to Formosa with the aid of inflight refueling. This flight and subsequent F-101 endurance tests set the stage for routine trans-Pacific RF-101C delivery flights to the 45th TRS at Misawa AB, Japan and the 15th TRS at Kadena AB, Okinawa in August 1958.*

The information, that RF-101s were being delivered to the Nationalist Chinese Air Force, was released by U. S. Military officials during a Taipei news conference on 29 October 1959. They indicated that high-altitude RF-101 flights conducted over international waters parallel to the Communist Chinese coastline would produce photos of Red military installations along a 100-mile strip of China.

The "coastal" flights soon turned inland and large portions of Communist China which were within aircraft range were extensively photographed. Few details of the surveillance flights have been divulged but it is obvious that they were successful because they continued for more than five years, and were only curtailed after a Communist Chinese pilot by the name of Kao Chang-Chi reportedly downed an RF-101 over eastern China during March of 1965.

There were thought to have been between 6 and 9 RF-101 As supplied to Nationalist China. Operational losses and accidents have claimed most of these. Communist China claimed to have downed an RF-101 on 2 August 1961, to have damaged another RF-101 which crashed on Formosa during 1962 and to have captured a Nationalist pilot, Major Hseih Hsing-ho, after his aircraft was downed during December of 1964 in addition to the March 1965 loss.

Thailand was next in Southeast Asia to see the Voodoo. During June 1960 12 RF-101s deployed to Don Muang and Tao-Yuan Airfields in Thailand for exercise "Mobile Yoke." A composite force of F-100 fighters, RF-101 reconnaissance aircraft and supporting transports completed over 120 simulated operational missions during the exercise which lasted less than two weeks.

Then four RF-101s arrived at Tan Son Nhut Airfield near Saigon, South Vietnam on October 22, 1961 at the

*Four of the RF-101As made a record return flight on 3 December, it was 3,850 miles in 6 hrs. 35 mins., Tokyo to Honolulu, made by Capt. Martin J. Barnard, and Lts. Raymond C. Ramsey, Harold J. Severtson and James G. Waugh.

Operational attrition and combat losses greatly reduced the available RF-101 fleet in Southeast Asia. Hulks at Udorn were cannibalized for usable spares. (Photo — Courtesy of Roy Lock)

same time former Army General Maxwell D. Taylor and other officials were reviewing conditions in Vietnam for President John F. Kennedy. A U.S. Embassy spokesman stated that the airplanes had been flown in for exhibition during the celebration of South Vietnam's October 26th National Day. This had been cancelled days in advance but the further statement was that the RF-101s would remain "just to log some flying time." North Vietnam delivered a protest to the chairman of the International Supervisory and Control Commission during November, demanding the removal of the new American air force units.

The Associated Press and Chicago TRIBUNE followed up on this story with an article dated November 12th which quoted South Vietnamese "informants" as saying the RF-101s were being used to provide intelligence data on Viet Cong installations and movements for the South Vietnamese government. The disclosure followed South Vietnamese press reports of a series of successful raids by Vietnamese Air Force aircraft against Viet Cong structures, sampans and troops.

The RF-101s remained in Thailand and South Vietnam and have provided photo reconnaissance missions continuously since 1961. Four RF-101 squadrons, the 15th, 20th, 29th, and 45th TR Squadrons were involved, having been deployed from their original home stations: 15th from Kadena AB, Okinawa; 20th and 29th from Shaw AFB, and the 45th from Misawa AB, Japan.

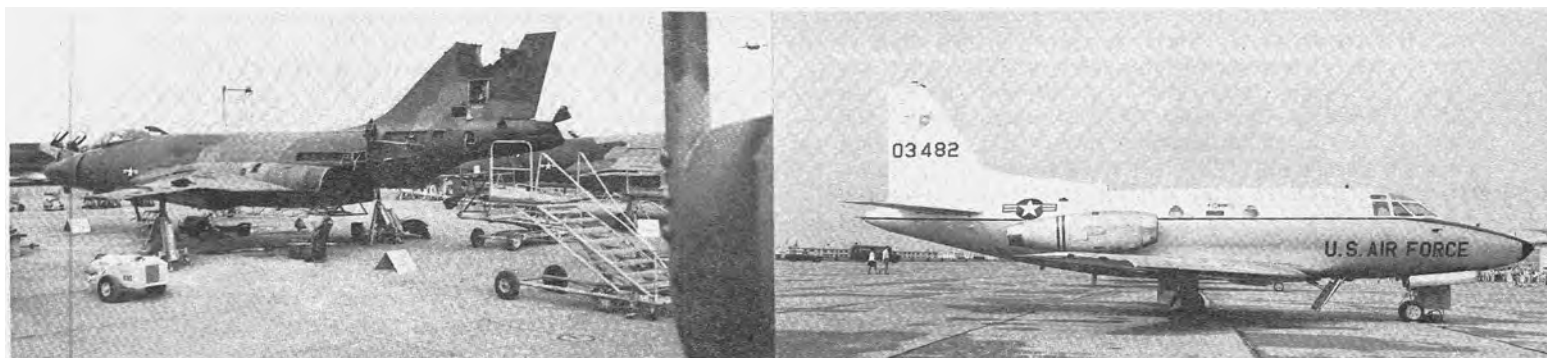
The 15th and 45th TRS' were primarily responsible for flights between October of 1961 and August of 1964 due to their strategic locations. Awards and citations received by the units and individuals involved give a few details and document the actuality of these flights.

The 45th TRS was presented the Outstanding Unit Award for operations in the period from 8 November 1961 through 10 May 1962. The citation accompanying the award read, in part: "... professional airmanship ... by all members ... performed its primary mission under exceptionally difficult circumstances in an outstanding and exemplary manner, which contributed significantly to the security of the United States and the free World ..." (It was the second time for the 45th: a decade before, the decoration had been given for performance between December 1952 and May 1953.) Then, late in 1963, 14 pilots were given Air Medals for missions flown over South-east Asia between January 1962 and July 1963.

In mid-1964 twelve pilots of the 45th were presented the Air Medal or Oak Leaf Cluster, for additional operations, during a formal review at Misawa Air Base.

At the same time the 45th TRS compiled an enviable safety record by flying upwards of 13,000 accident-free hours in the months between August 1961 and the end of 1963. They were awarded the USAF Flying Safety Awards for both 1962 and 1963 as well as the Columbian Trophy for 1963, a presentation by the Republic of Columbia.

North American T-39s were used for courier flights to convey the photographic results of reconnaissance missions to the using agencies. T-39A-1-NA, 60-3482. (Photo — Paul D. Stevens)



WINTER - 1969

Another Squadron, the 15th TRS, likewise won an Outstanding Unit Award and numerous individual pilot Air Medals during 1963. The 20th TRS was given the Presidential Unit Citation in May 1968 for heroism and outstanding professionalism during the period 1 April to 31 December 1966.

In their surveillance of Viet Cong activities the RF-101s were wide ranging. Reconnaissance flights over Laos ended during July of 1962 with the signing of an agreement which guaranteed the neutrality of that strategically located Southeast Asian nation. An International Control Commission was established to help maintain Laotian Neutrality but Communist-backed Pathet Lao military forces became active late in 1963 and they refused to allow the ICC force to move about Laos in an effort to police the Geneva agreement. This situation steadily worsened during the spring of 1964 and Premier Souvanna Phouma asked the United States to conduct reconnaissance flights over Laos in an effort to learn the "intentions and disposition" of attacking Pathet Lao forces.

Pathet Lao forces were operating in the Plain of Jars along Route 7 which created a range problem for both the USAF and Naval Squadrons. USAF RF-101s of 15th TRS apparently took over full responsibility for Laotian flights after the Navy had lost an RF-8A reconnaissance airplane on June 6th and an F-8 escort June 7th. The flights were suspended briefly on the 10th after USAF F-100s had made retaliatory raids against anti-aircraft positions which had downed the Navy aircraft but were resumed June 12th after a "clear understanding" had been reached with Souvanna Phouma. A Washington spokesman later indicated the reconnaissance flights with armed escorts would continue over Communist held areas of Laos whenever it was deemed necessary but that there would be no further official disclosures relating to them.

Most Laotian reconnaissance flights were accompanied by F-100 escorts which were used to silence anti-aircraft batteries whenever they fired on the flights. These tactics were effective but F-100s gave way to Republic F-105s on later flights since the latter carried a much heavier weapons load and more than matched the RF-101s in speed and range capabilities.

The Gulf of Tonkin incident in 1964 and subsequent August 5th retaliatory raids on North Vietnam brought an influx of aerial reinforcements into South Vietnam more RF-101s from Shaw AFB. A command post was established to coordinate "out-of-country" reconnaissance flights and Shaw airmen aided their PACAF brothers in the monumental task of gathering intelligence data on Communist activities throughout Southeast Asia for Washington officials.

As the crisis expanded, and became a full-scale war instead of the "frontier action," the reconnaissance activities greatly increased, now coming to the practice of "before and after raid" reconnaissances to observe enemy positions and survey damage. Though the RF-101s were joined by specialized types of reconnaissance airplanes, including those with electronic surveillance devices, the great speed and range of the RF-101s kept them as the only USAF tactical reconnaissance aircraft employed in this capacity over North Vietnam until November of 1965 when the 16th TRS began operations, equipped with RF-4C airplanes. The 16th flew most of its missions at night and RF-101s continued to carry a heavy load of daylight missions throughout 1965 and 1966. Later RF-4C units, arriving in Southeast Asia in 1966 and 1967, initiated an increasing number of daylight missions. RF-101s continued to operate extensively over North Vietnam until October of 1967 when they were withdrawn from missions to Route Pack 5 and 6 due to heavy losses. Route Packs 5 and 6 consist of the heavily defended Hanoi-Haiphong and Red River Valley areas of North Vietnam. RF-101s were not



RF-101C, 56-085 of the 45th TRS with blue and white markings on nose and tail! Barely discernible tiger over national insignia, and kangaroo below "U.S.AIR" suggest visits to Australia and Thailand.

(Photo — David W. Menard)

entirely withdrawn, however, until the next year, and airplanes of 45th TRS continued to operate over the panhandle area of North Vietnam at least until the bombing halt of November 1, 1968.

RF-101 units had operated in Southeast Asia on a temporary rotating basis until late in 1965 when realization of the war brought permanent assignment of units to their bases. Individual personnel were rotated thereafter on a 12-month or 100 mission basis, whichever occurred first. The 15th and 29th TR Squadrons were the last RF-101 units to complete temporary tours. The 20th and 45th TRS' were subsequently assigned to extended tours of duty.

In February 1966 the variously designated reconnaissance task forces at Tan Son Nhut were elevated to wing status and designated 460th Tactical Reconnaissance Wing. The 45th was redeployed to Tan Son Nhut a short time later where they replaced the 20th TRS which moved to Udorn AB, Thailand. The 20th served as a part of the 432nd TRW until they were withdrawn from service and inactivated on November 1, 1967. The Squadron was allowed to decrease in size through attrition of rotated personnel and airplane losses until only 10 airplanes remained. Their Presidential Unit Citation came after deactivation.

Pilots of the 20th TRS at Udorn usually completed 100 missions over North Vietnam within 6 to 7 months. Capt. Robert E. Patterson went home after two months in Thailand with 89 missions and a broken leg incurred after injecting from his second RF-101! Capt. Patterson is one of the few American pilots who have been twice rescued from Communist territory.

RF-101 Squadrons are characterized by several conditions relatively peculiar to reconnaissance units. Most reconnaissance activities were conducted by small detachments which had unusually high aircraft availability and utilization rates.

The 12 RF-101s stationed at Tan Son Nhut reportedly averaged a 96% combat readiness rate during 1965. MSgt. George B. Caron and a hard-working crew of maintenance men initiated several innovations to keep RF-101s in the air instead of on the ground. They greatly reduced turn around times and eliminated the grounding of aircraft for periodic inspections by conducting phase inspections during scheduled maintenance work.

The ingenious maintenance men became very adept when it came to repairing battle-damaged aircraft. Relatively minor damage was repaired at Tan Son Nhut but airplanes with major damage were given temporary repairs and ferried to Taiwan for permanent repairs.

One RF-101 returned after receiving a direct hit in the right engine bay area which ripped the engine from its



RF-101C-60-MC, 56-044, illustrates some of the changes which have been made in the camouflage patterns. These and older schemes such as on the RF-101 in background, with large national insignia, have been superseded. (Photo — Norman E. Taylor, March 1966)

mountings and tore fist-sized holes in the tail and wings. An engine was salvaged from another battle-damaged airplane and attention was turned to patching shrapnel holes for the flight to Taiwan. The men ran out of sheet metal for patches on a wing flap, a situation was remedied by using metal salvaged from discarded soft drink and beer cans to repair the holes. The lucky RF-101 made it to Taiwan — with the labels out, thus providing some unsuspecting brewers with free advertising.

MISSION TACTICS

Four basic types of missions were performed by the Tactical Reconnaissance Squadrons: Surveillance, Pre- and Post-Strike, and SAM site searches. The surveillance flights were over routes of communication such as roads, rivers and railroads, plus some enemy activities regularly observed. In pre- and post-strike missions the target areas were compared before and after to assess battle damage. The Surface-to-Air Missile search missions became vital after mid-1965.

The TR units did not encounter extremely serious threat from ground fire over South Vietnam or Laos until 1964. These early missions were mostly flown at altitudes of 10 to 15 thousand feet, above the effective range of small arms fire, but low enough to produce high quality photographs. As resistance built up, aircraft speeds were increased and the number of photo runs decreased.

The appearance of SAMs in North Vietnam in mid-1965 caused a drastic change in tactics. The missiles were capable of destroying their targets from low-medium to high altitudes and their primary success was in forcing fighter bomber and reconnaissance airplanes to lower altitudes where the more conventional anti-aircraft guns are most effective, with the side effect of reducing airplane speeds and endurance. Thus RF-101s were forced to fly at minimum altitudes to their assigned mission areas, “snap up” high enough to secure target coverage, and then dash for home base, again at minimum altitude.

RF-101s had an important equipment advantage over the RF-4C which undoubtedly explains why they continued to fly many of the tough daylight missions over North Vietnam even after RF-4Cs were available.

The RF-4C and updated RF-101s were both equipped with KS-72 cameras for low-altitude photography but RF-101s retained the older KA-1 camera equipment, designed for high altitude work. An RF-101 with two KA-1 split vertical cameras could obtain photos at 18,000 feet to the same scale an RF-4C with KS-72 equipment would obtain at 10,000 feet, thus covering a much broader area. At the same time they were more vulnerable to missile fire at their “snap up” altitudes of 15 to 30,000. KA-1 camera performance begins to equal aircraft speed at about 30,000

feet and this altitude apparently represented the airplane's optimum performance capability.

These conditions indirectly lengthened the combat career of the RF-101 type; lesser areas were photographed, resulting in additional sorties for already overtaxed units. Pilots were encouraged to exploit their individual skills and ingenuity, and for a time maximum expression was found in the method of approach to low altitude photo runs. The pilots developed three basic formations, with variations, since size and disposition of the target areas determined the approach and type of formation. The “pinpoint trail” placed the wingman behind the lead airplane for duplicate photo coverage, sometimes with one airplane much higher to obtain broad coverage and the low man to obtain detail coverage of a small area. The “pinpoint left or right” formation placed the wingman to either side of the lead airplane and provided photo interpreters with forward, side and straight down views. The “area spread” formation consisted of two airplanes on parallel courses over the same area to obtain coverage of maximum area at low altitude. These methods produced high quality photographs, but lead the way to aircraft losses as communist anti-aircraft fire became heavy and forced curtailment of multiple photo runs. RF-101 units suffered heavy losses in the Spring of 1966.

Col. Edward Taylor, a veteran RF-101 pilot with photo reconnaissance experience dating back to World War II, was named to command the reconnaissance task force at Udorn AB, Thailand. Col. Taylor convened a board of experienced pilots and intelligence officers to study RF-101 tactics and make recommendations aimed at reducing losses. Experience indicated that Communist gunners usually fired at the lead RF-101 but their slightest lag in “leading” the first aircraft placed the trailing wingman in the heaviest concentration of fire. Heavy losses were being incurred by RF-101 wingmen and one of the recommendations approved by Col. Taylor was to eliminate the two man RF-101 reconnaissance flights.

After June 1966 virtually all reconnaissance missions were being flown by single RF-101s in the classic “Alone and Unafraid” tradition. Loss rates were reduced considerably; pilots were able to maneuver freely without the fear of colliding with a wingman. Flying alone also gave RF-101 pilots an improved chance of going undetected but at the same time virtually guaranteed a trip to the Hanoi Hilton if a pilot were fortunate enough to survive the downing of his airplane over Communist territory. Rescue forces were unable to aid a downed airman without the knowledge of his location.

There were no official figures available for publication relating to the number of RF-101 combat sorties flown in Southeast Asia or of the number of airplanes lost; an approximate figure of 40 is a best estimate. Captains Burton L. Waltz, Norman P. Huggins, Robert E. Patterson, Major Paul P. Curtis and Lt. Col. James C. Ketcham were among those rescued from inside Communist territory after their aircraft went down. A few RF-101 pilots are known to have been killed in action, a few are known to be Hanoi Hilton prisoners but the fate of several others has not been established and they are listed as missing in action.

In summarizing the deployment of *The RF-101 in Southeast Asia* during its service life in the last twelve years it appears as a classic description of a weapon created for a first use, cast in a different role and thrown in to meet new crises, and exploited to the fullest for its optimum characteristics while its deficiencies were minimized by the skill and intelligence. That the RF-101 performed so admirably in spite of its limitations is a tribute to brave men. This article is dedicated to them, and particularly to those American airmen fallen in combat in Southeast Asia.

THE AIRPLANE:

The McDonnell F-101 Voodoo was build and modified in variants F-101A, RF-101A, F-101B, TF-101B, F-101C, RF-101C, F-101F, TF-101F RF-101G, and RF-101H. The TF-101B was the trainer version of the two-seat interceptor while F-101F and TF-101F were early airplanes from the F-101B interceptor series. RF-101G was modified from the F-101A and RF-101H was modified from the F-101C. Disposition of the airplanes to squadrons and groups when new was as follows:

F-101A

27th TFW (Bergstrom AFB, Texas)
481 TFS, 522 TFS, 523 TFS, 524 TFS
81st TFW (England)
78 TFS, 91 TFS, 92 TFS

RF-101A

363rd TFW (Shaw AFB, S.C.)
20 TRS, 29 TRS

F-101B

2, 13, 15, 18, 49, 60, 62, 75, 83, 84, 87, 98, 322,
437, 444, 445 Fighter Interceptor Squadrons

RF-101C

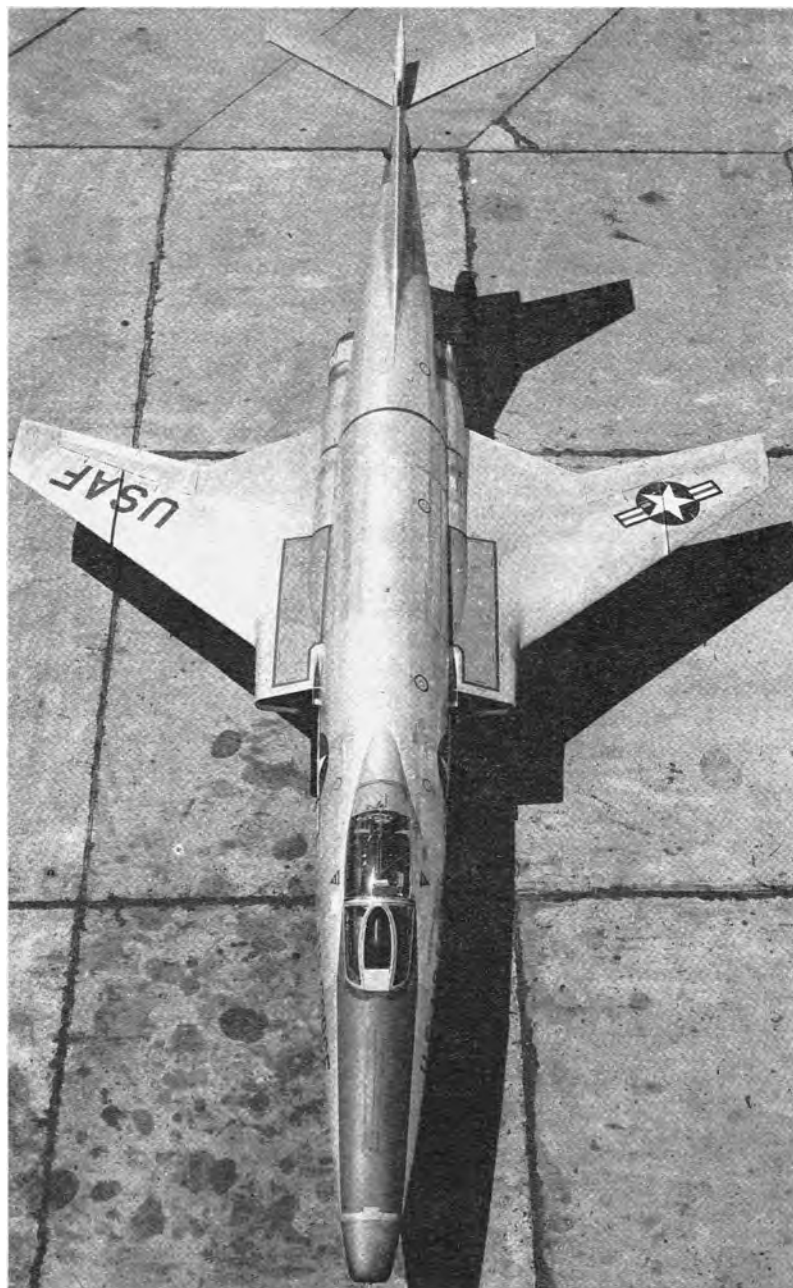
15 TRS, 45 TRS

F-101s were procured in quantities by serial number as follows:

F-101A - s/n 53-2418 thru 53-2446	19 airplanes
F-101A - s/n 54-1438 thru 54-1485	47
RF-101A- s/n 54-1494 thru 54-1521	27
F-101B - s/n 56-232 thru 56-328	97
F-101B - s/n 57-247 thru 57-452	206
F-101B - s/n 58-259 thru 58-342	84
F-101B - s/n 59-391 thru 59-483	93
F-101C - s/n 54-1486 thru 54-1493	8
F-101C - s/n 56-001 thru 56-039	39
RF-101C- s/n 56-040 thru 56-135	95
RF-101C - s/n 56-162 thru 56-231	70
Total	785 airplanes

Physical and performance statistics are available from numerous sources and are not repeated here, however, certain flight characteristics which had an important bearing on operational use of the airplane in Southeast Asia, particularly with the advent of the Surface-to-Air Missile in 1965 are discussed.

It was possible to execute all basic combat maneuvers in the F-101, but aerobatics are not for the novice pilot. Maneuvers requiring high "g" loads and high angles of



Above—McDonnell YRF-101A-10-MC. "A" and "C" models used Pratt & Whitney J57-P-13 engines, "B" used -55 engine with longer, smooth tailpipe. (Photo—McDonnell D4E-71874). Below left — F-101B-95-MC. J.O.683 on fin is inhouse job number. (Photo—Dean S. Engelhardt). Right—RF-101A-30-MC of B/Gen. Stephen B. Mack, C.O. of 363rd TRW, Shaw AFB, S.C. (Photo USAF courtesy of author).





RF-101Cs of 20th Tactical Reconnaissance Squadron at Myrtle Beach AFB, S.C. 56-166 nearest. (Photo — Norman E. Taylor)

attack, or ones which greatly reduced airspeed, required relatively slow and deliberate stickwork by the pilot. The F-101 was restricted from “snap” type maneuvers. This limited the airplane’s ability to conduct violent evasive tactics such as for avoiding anti-aircraft fire and SAMs. Pilots reported that it was very responsible to control and surprisingly maneuverable despite the “pitch up” phenomenon. It was stable at high speed and could be trimmed for hands off flying at supersonic speeds.

Being only a single-seat airplane, it placed a heavy burden on the pilot, who had to be a master at navigation and photography as well as an expert pilot. The airplane was red-lined at Mach 1.57 or 700 knots IAS above 25,000 feet, whichever is lower. Although RF-101s were capable of sustained supersonic speed at high altitude, they lacked the necessary speed and maneuverability to elude expert MiG-21 pilots at lower altitudes. One of the last RF-101s lost over North Vietnam was downed by a MiG fighter.

Many of the evasive tactics used in combat involve rapid turns or changes of altitude producing high “g” loads. The F-101 was particularly sensitive to high “g” in maneuvers involving excessive angles of attack. The aerodynamic phenomenon known as “pitch up” sometimes occurred if the pilot exceeded an arbitrary angle of attack limit. If permitted to “pitch up,” the F-101’s nose would rise

RF-101A-20-MC from 4414th CCTS of Shaw AFB, S.C., is first of the camouflaged F-101s to come to Davis-Monthan AFB for storage. Horizontal bulges on tailpipe are fairings over the afterburner controls. (Photo — Taylor, 9 Jan. 1969) At right — RF-101C landing, Shaw AFB, everything extended. Camouflage patterns were similar but not identical from airplane to airplane. (Photo—Jim Sullivan)

rapidly, uncontrolled, to pitch angles of 60 to 80 degrees. The unusual attitude resulted in aerodynamic braking, rapidly bleeding off airspeed and the airplane would eventually enter a steady-state spin, from which recovery was extremely difficult unless the pilot promptly initiated the correct recovery procedure. Pitch up is the result of loss of longitudinal stability and control, caused by excessive wing downwash, and blanketing out the horizontal stabilizer’s positive lift, thus allowing the nose to lurch upwards.

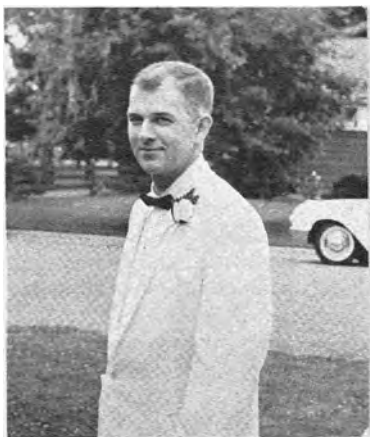


Above — the RF-101C, 56-187, among the last batch of 70 procured, with an impressive array of photographic equipment posed for this USAF publicity photo. The open nose doors show radar installation and side-viewing cameras. These and the cameras shown on the ground could be variously installed to suit the needs of specific reconnaissance missions. (Photo — USAF)



Recovery from a pitch up is effected by applying full nose down stabilizer and neutralizing the rudder and ailerons. As the airplane reaches the top of a pitch cycle, the dragchute is deployed, below 200 kt. IAS, and the stick is brought back to neutral as soon as negative "g" is sensed. The parachute brings the nose down into the relative wind. Pilots were instructed by the Flight Manual to maintain neutral controls until after the dragchute induced the airplane into a dive to build up airspeed for recovery. A pitch up recovery usually involved a loss of altitude of 15,000 feet or more, and was never completely assured.

An electronic Pitch Control System (PCS) was developed to warn the pilot as he approached a critical angle of attack. His first indication was an audible sound in the headset. If he allowed the angle of attack to exceed a predetermined limit, a "pusher" physically moved the control column forward. A pilot could ignore the horn and over-ride the pusher, but at the risk of pitching up. F-101s were also retrofitted with a pitch boundary indicator to give the pilot a visual measurement of the angle of attack compared to tolerable limits for any given situation.



Major Hallet P. Marston, Jr., USAF, of Miami, Florida, is typical of the RF-101 pilots, the skilled professional airmen, associated with the reconnaissance efforts in Vietnam. RF-101 pilots repeatedly pressed on against tense and dangerous situations, many times damaged, to complete their missions knowing that a fellow pilot would be exposed to the same dangers if his mission were aborted. Major Marston received the Silver Star and the coveted David C. Schilling Trophy for successfully completing one of the most difficult reconnaissance mission of the Vietnam War. His flight over the Hanoi petroleum storage area, after its being heavily damaged by bombers of 29 June 1966, is exemplified by Lou Drendel's painting on opposite page. (Photo — USAF, number 97915)

THE ARTIST

"Fast In and Fast Out"

Lou Drendel, whose painting of Gen. Robin Olds' F-4C was shown on the inside rear cover of the Winter 1968 Journal (Vol. 13, No. 4), worked with Author Paul Stevens on "F-101s in Southeast Asia" and selected the episode by Major Marston for his illustration. The painting on the opposite page shows the RF-101C in a typical mission, a

As of mid-1969 many of the F-101 types had been sent to Davis-Monthan AFB for cocooning until further disposition was made. Some were scheduled to go to the 123rd TR Wing which included squadrons of the Air Guard, 154th TRS at Little Rock, Ark., 165th at Louisville, Ky., and 192nd at Reno, Nev. 66 of the F-101B and F airplanes had gone to the Royal Canadian Air Force after delivery to the USAF.

BIBLIOGRAPHY:

"A Survey of Aerial Reconnaissance." *Interavia*. 2/1964, pp. 180-185.
 "The Photo Squadron in Action." *interavia*. 2/1964, pp. 186-189.
 "Reconnaissance Wings Face New Strains." *Aviation Week & Space Technology*. (AWST), Oct. 7, 1968.
 "Needs Outpace Strong Viet Reconnaissance Gains." *A WST*, March 13, 1967.

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ABOUT THE AUTHOR: Paul D. Stevens is an avid collector and photographer of aviation subjects with, "Several thousand 616 negatives and a few hundred slides of just about everything seen from EAA homebuilts to U-2's." Paul spent more than five years on his particular project, the F-101, which led him to become the Aircraft Specialist for the airplane. He was in the USAF from 1957 to 1961, primarily as a radar operator, had been a track man in school, now lives in Aurora, Illinois with wife, Mary Eileen, and two young aviation buffs, Paul D., Jr. and Richard Douglas, ages 6 and 3. He is employed by All-Steel Equipment Co., of Aurora. In bringing the accompanying article to fruit he obtained the enthusiastic support of many photo collectors whose work is shown here, and Lou Drendel, who provided the paintings.



high speed run over the target area to provide battle assessment damage (BDA). Although the particular airplane shown is numbered among those assigned to the 45th TRS, the serial number may not be that one flown by Major Marston on 29 June 1966.

Lou has done many works to illustrate the Vietnam War, including some for the *Chicago Tribune Sunday Magazine* and for his own book, *The Air War in Vietnam*, published earlier this year by Len Morgan in the "Famous" series.

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