

A Modeler's Guide to Early USAF Phantoms



F-110A to F-4C

By Jennings Heilig
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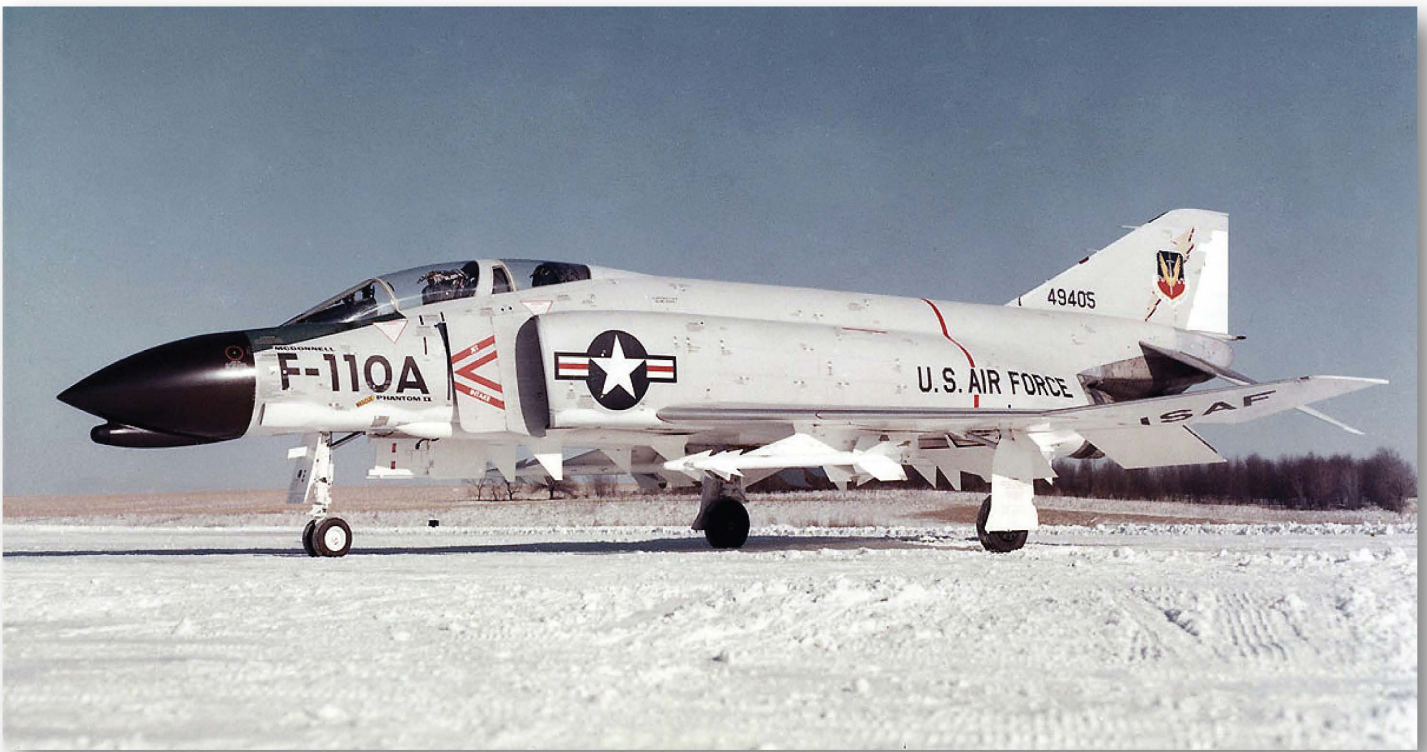
The first F-110A prototype, née F4H-1 149405, photographed on a cold, clear St. Louis morning in early January 1962. She is loaded with AAM-N-6a Sparrow IIs and AAM-N-7C Sidewinders. Note her green anti-glare panel, and the dark mustard yellow color of the lightning bolt behind the enormous TAC badge on the tail.

The U.S. Air Force's interest in the Navy's hot new F4H-1 Phantom II began even before the Phantom first took to the air in 1958. As the Navy's flight testing progressed, it quickly became evident to the USAF brass that the Phantom was superior to every other tactical and interceptor aircraft then in the Air Force inventory in terms of speed, acceleration, range, and load carrying capability, and they decided they needed to have some of them, pronto!

During 1961, the USAF began negotiations with McDonnell Aircraft about a specialized version of the Phantom to equip Tactical Air Command, and in line with the then-current USAF nomenclature system, it was given the Mission Design Series

(MDS) designation F-110A for the fighter version based on the F4H-1, and RF-110A for the reconnaissance version, based on the F4H-1P.

During 1961, McDonnell engineers began detail design of what would become the F-110A, turning the Navy's fleet defense interceptor into an Air Force tactical fighter. Among the changes made to the F4H-1, the F-110A would feature lower pressure, and wider main gear wheels and tires with new brakes, requiring a bulge in the wing to accommodate its bulk. The Navy's refueling probe mounted on the right side of the cockpit was replaced with a flying boom receptacle on the fuselage spine, and the probe illumination light below the right windscreen was eliminated.



The catapult bridle hooks under the wing leading edges were unneeded, so they too were removed. A cartridge start system was installed for the J79 engines. The Navy had purchased the AN/AAA-4 infrared search and track system, which was housed in the fairing below the radome on the F4H-1. The USAF tested it, and quickly found (as did the Navy) that it never worked as advertised, and didn't buy it for the F-4C. In its place was a rounded metal cap over the forward end of the now empty vestigial radome fairing. There were many other internal changes, and the F-110A's aft cockpit in particular was markedly different from the F4H-1.

A Small Side Bar

Despite the fact that literally everything you read about the F-4 says the USAF initially called the aircraft the Spectre, several decades of research on the aircraft has yet to yield a single USAF or McDonnell document that refers to it as anything but the Phantom II. There appear to have been a few scattered instances of the name Spectre associated with the F-110A in the popular press at the time, and as cool as it sounds, perhaps the name was considered at some point, but rejected by McDonnell and/or the USAF. But it is an absolute and indisputable fact that even before the USAF had taken delivery of a single F-4 of any kind, McDonnell had painted the name PHANTOM II prominently on the nose of the first airplanes to appear in USAF markings.

The Phantom joins the Air Force...

Once the USAF had decided it wanted the Phantom (and it *really* wanted the Phantom), it was anxious to get the type cleared for delivery of USAF conventional and nuclear weapons, and to get its aircrews and maintenance personnel up to speed on their new mount as quickly as possible. Since the first dedicated F-110As would not be delivered until well into 1963, the USAF initially borrowed a pair, and later an additional 27, F4H-1s (F-4Bs after September of 1962) directly from the McAir production line to get the ball rolling.

The first two F4H-1s, Navy BuNos 149405 and 149406, were duly towed into the paint barn in St. Louis, and by January 1962 they had been given full USAF markings over their standard Navy Light Gull Gray and white camouflage. The aircraft were absolutely standard F4H-1s in every way except for their Air Force markings and bold "F-110A" titles.

At the time of their handover to the USAF in late January 1962, production standard F4H-1s retained the early style flush wing tip navigation lights (see details on pages 16 & 17) and the fin mounted total air temperature probe, which fed data to the Mach meter. The latter was located about 15" up from the top of the fuselage on the leading edge of the fin. Later the navigation lights were changed to the now familiar 'bug eye' version, and the TAT probe was moved to a small stalk on the nose below the port side ECS inlet aft of the radome.

F-110A Colors & Markings

As noted above, the two borrowed F4H-1s retained their standard Navy camouflage of FS 36440 Light Gull Gray above and gloss white below, with gloss white control surfaces, and a black neoprene coated radome. The Light Gull Gray tended to be more of an eggshell finish rather than a matte finish as the FS 595 code would suggest.

As the USAF had not yet promulgated its own detailed markings tech order for the F-110A, it appears that McDonnell sort of “winged it” and applied markings they thought the USAF would like. As a result, the markings on these first two F-110As were unique among all USAF Phantoms.

were painted below the aft fuselage just forward of the exhausts. Note the narrow natural metal strips along the keel between the buzz numbers. This seems to have been common on some F4H-1s at the time, although it was not universal (see details on pages 4 and 12).

The aft fuselage was a combination of natural metal of varying shades, with the area above and aft of the horizontal stabilizers painted in the same semi-gloss silver Corogard anti-corrosion paint as was found on the leading edges of the wings, the vertical fin, and the intakes. The small triangular wedge above the exhaust nozzles, and the drag



F-110A 149406. Note the position of the USAF titles on the wings, as well as the relatively shiny silver Corogard paint above the horizontal stabs and on the tail cone. The TAT probe is just visible above the first “4” of the tail number. In common with every F-4 produced, the translating ring forward of the exhaust petals is painted glossy black. The lack of sooty black exhaust staining indicates the aircraft has very little flight time on her clock, or else someone at McDonnell spent a lot of time cleaning her up!

They carried fully Navy standard national insignias, maintenance stencil data, and most Navy style safety markings. Differences from standard F4H-1 markings included the 12” high Insignia Blue U.S. AIR FORCE on the aft fuselage, 25” high Insignia Blue USAF titles on the wings opposite the national insignias (see note on their placement on page 15), a unique double chevron style intake warning on the splitter plate, a red turbine warning stripe above the aft fuselage, a truncated “last-five” of the Navy BuNo in place of a USAF serial, and a giant TAC badge and lightning bolt on the fin, plus the prominent “F-110A” markings on the nose. In place of the Navy’s black anti-glare panel forward of the windscreen, these first two aircraft had it applied in FS 34092 green. Air Force style buzz numbers (FJ-405 and FJ-406)

chute door/tail cone were also finished in Corogard. Finally, as was common on every J79 that General Electric produced for the Phantom, the translating ring forward of the exhaust petals was painted glossy black.

The lightning bolts behind the TAC badges on the vertical fins of these two aircraft are of interest. It seems they are a different color in every photograph you find. Given the vagaries of dealing with 60+ year old images of unknown provenance, that have been reproduced countless times and by countless different methods, it comes down to some educated guesswork as to what they actually looked like. We believe that initially the bolts on both F-110A marked aircraft were a dark mustard yellow color. For reasons unknown (perhaps because the USAF had gotten around to writing it’s



This gorgeous shot of F-110A 149405 illustrates her USAF markings well. Note the natural metal strips along the fuselage keel between the buzz numbers. You can just make out the early style flush wing tip navigation light, indicated by the arrow. The 25" USAF wing titles on these early aircraft were located further outboard than the later standard. The dark yellow TAC lightning bolt is shown to advantage here.

F-110A markings tech order), it appears both aircraft had the dark yellow changed to a bright Insignia Yellow sometime in 1962. The lightning bolt motif was becoming standard on other TAC types around this time, and it was universally a bright Insignia Yellow on them as well.

The large F-110A titles on the noses of 149405 and 149406 required some minor changes to the stenciling normally found in those locations, particularly on the left side. The "M" in McDonnell protruded slightly into the FS 34092 green anti-glare panel, so a small wedge was cut out of the anti-glare to clear it. Some of the black stencil data was applied in white where it crossed over onto the black F-110A titles. The yellow and black rescue arrow was much smaller than the later USAF standard version, and pointed aft instead of forward as it would later. See details on page 10.

Other details to note are that the Navy did not use the NATO standard hoist symbols on the fuselage and wings at the time, and the F-110As also lacked these.

A small mystery...

The photo below is a still from a film showing 149405 in the paint hangar at McDonnell having her USAF markings applied. It was probably shot in January 1962. What makes this interesting is the obvious presence of the "PHANTOM II" title below the "F-110A". But then...



Testing, testing, testing

The two F-110A-marked aircraft only retained those markings for a few weeks, and by March of 1962, both had lost the F-110A titles on the nose and the small U.S. AIR FORCE lettering on the aft fuselage. Both gained 18" high Insignia Blue U.S. AIR FORCE titles situated further forward (the gap in the turbine warning stripe remained the same), and black 18" high buzz numbers on the aft fuselage forward of the exhaust nozzles.

Where the stencil data had been applied in white on the black F-110A titles, it doesn't seem to have been replaced, with the exception of the reapplication of the instructions on where to locate the emergency canopy remover system.

Through the summer of 1962, the aircraft thus marked engaged in crew and maintenance familiarization, as well as extensive weapons testing, much of which took place at Holloman AFB, New Mexico. They also appeared at at least one base open house (Langley AFB, Virginia) in order to show off TAC's hot new toy to the public.

F-110A 149406 is seen in March 1962 while undergoing weapons testing. Note the dark yellow lightning bolt, and the addition of the large U.S. AIR FORCE and buzz number on the fuselage. Both F-110As seemed to have their fuselage national insignias applied at a slight nose-down angle, quite visible in this photo. Also note the large red-on-white early Navy style ejection warning triangles, and the lack of silver Corogard paint on the leading edge of the inboard pylon.



... On a chilly 24 January 1962, McDonnell Aircraft CEO Sandy McDonnell, towering over USAF Colonels Gordon Graham and George Laven, is seen ceremonially handing over the "keys" to the first F-110A. So why is the PHANTOM II title below F-110A that was there before missing? It was there when the airplanes rolled out of the paint barn, and it was present during photography of the aircraft on the ground and in the air before hand over.

One would think if the USAF had indeed named the aircraft the Spectre it would have been painted on the airplane, but it wasn't - PHANTOM II was. And then it wasn't. Why? We have no ready explanation, so the mystery will probably remain.





Both F-110As airborne during weapons testing in the summer of 1962. Note the break in the turbine warning stripe where the U.S. AIR FORCE titles had originally been. By this point, Their markings remain unchanged from the spring of the year.

Was Bob MacNamara really confused?

A probably apocryphal story says that President John F. Kennedy's Secretary of Defense, Robert MacNamara, had become confused by the differing designation systems between Navy, Air Force, and Army aircraft. Whether that is *actually* true, or whether, as part of his crusade to reduce costs and complexity in the DoD, he simply saw a combining of the three different systems into one as a good thing, the bottom line is that effective 18 September 1962, the Navy's F4H-1 and the Air Force's F-110A became the F-4B and F-4C respectively. Going forward, the Navy and the Air Force would share the basic F-4 designation, with suffix letters (with the exception of the F-4G, used for totally different variants by both services years apart) being unique to each service.

The Air Force assigned proper USAF serial

numbers to the two borrowed F-4Bs it was now flying as testbeds for its upcoming F-4C program - and which it would ultimately keep. So BuNo 149405 became 62-12168, and 149406 became 62-12169. Tail numbers were changed, but remained in the same location on the fin, and buzz numbers were changed. Both aircraft received their McAir line numbers (122 and 123, respectively) in small digits on the vertical fin cap, in a lettering style not dissimilar to the RAF standard. Other markings remained the same as before.

At this point, the stories of the two F-110A marked prototypes start to wander a bit. 62-12168 was converted into the aerodynamic prototype of the RF-4C family as the YRF-4C (see page 20). It was eventually struck off charge in 1971. Its sister ship is reported to have become a JF-4B, and crashed near Holloman AFB, New Mexico on 8 March 1967 after an engine explosion.



Very few photos of the two F-110As with their later USAF serials exist. This one shows F-4B 62-12168 after September 1962. Note the small McAir line number 122 on the fin cap. Markings otherwise unchanged from the spring and summer of that year.



As noted above, photos of the two F-110A prototypes after they officially became F-4Bs and received their USAF serial numbers are very rare. But we found this superb shot of the second F-110A, now F-4B 62-12169, line number 123. Most likely taken near Holloman AFB during 1963 while she was deeply involved in weapons testing. She's loaded with a pair of early SUU-16/A 20mm gun pods (note the fully faired, tapered noses on the pods), and has a very draggy looking camera setup dangling from under both wing tips and on the fuselage. Note the air data boom on the nose. She appears to retain the dark yellow lightning bolt. This would make a fantastic looking model!

More borrowed F-4Bs

The USAF had selected MacDill AFB near Tampa, Florida as the home of its first F-4C unit, the 15th Tactical Fighter Wing. At the time, the 15th TFW was flying the Republic F-84F, so in order to get an initial cadre of F-4 pilots and ground crews trained up, the service stood up the independent 4453rd Combat Crew Training Squadron at MacDill on 22 October 1962 - right in the middle of the Cuban Missile Crisis.

On 4 February 1963, the first of an additional 27 F-4Bs was delivered to the 4453rd resplendent in a now more standardized USAF marking scheme. The Navy's Light Gull Gray and white camouflage was retained, but the USAF markings were reduced in size, except for the national insignias, which remained in the Navy's standard large size. The fuselage insignia was now centered on the

turbine warning stripe on the aft fuselage, with a 2" gap between the red stripe and the blue disk top and bottom. The Insignia Blue U.S. AIR FORCE titles were moved forward to just behind the intake lip, reduced to 12" high letters, and the black 12" high buzz number was applied between the two. Contrary to the information contained in T.O. 1-1-4 published in 1964 (the first version containing F-4 information), color photography proves conclusively that McDonnell applied the buzz number in black and not the specified blue. The serial number on the tail was now located higher up, and was moved aft to just forward of the rudder, leaving space on the vertical fin for the new smaller design TAC badge/lightning bolt motif to be applied. All of the maintenance and safety stencils and placards were now to the new USAF standard. This in-

cluded much smaller ejection warning triangles in red with white lettering, and the addition of a unique style of hoist point symbols seen, as far as we can tell, only on USAF F-4Bs and F-4Cs up through about 1965. The anti-glare panels reverted to black, and the 25" high USAF lettering on the wing was positioned further inboard. Buzz numbers were deleted from the belly, but the red turbine warning stripe still remained above the top of the wing only.

The real McCoy...

McDonnell began producing the F-4C during 1963. A trio of FY62 serial numbers, 62-12199, -12200, and -12201, were assigned to three aircraft that were a mixed bag. 62-12199 was the first true F-4C, but -12200 and -12201 were F-4Bs (with thin wings) modified into YRF-4Cs to test the new systems of the Phantom's reconnaissance configuration.

The first true F-4C, 62-12199, was assigned to the



F-4B-14-MC 62-12172 (Navy BuNo 150480), the first of 27 operational F-4Bs assigned to the 4453rd Combat Crew Training Squadron at MacDill AFB, Florida. Her markings are 100% standard, albeit lacking the TAC lightning bolt badge. Note the yellow hoist point markings now applied in the early USAF style, the black anti-glare panel, and her overall pristine appearance. She served a long career in the USMC, and was eventually converted to an F-4N, and retired in 1983. See photo on page 21.

The 27 borrowed F-4Bs were standard Navy aircraft, albeit with full factory-applied USAF markings. Some sources claim these aircraft were designated as F-4Cs, but we have found no evidence to support this claim. All carried the standard USAF style data block on the port intake shoulder, which read "U.S. AIR FORCE F-4B-xx-MC". All had a Navy BuNo assigned, and all went back to the Navy and Marines (reverting to their Navy BuNo), with many of them seeing combat in Southeast Asia, some serving into the 1980s with Navy and Marine squadrons. When initially delivered they lacked the TAC lightning bolt on the fin, but these were added by the 4453rd at MacDill, in line with TAC policy.

By the time these F-4Bs were delivered, the production standard 'bug eye' type wing tip navigation lights were fitted, and the TAT probe remained on the leading edge of the vertical fin up through the -15-MC production block.

AFSC office in St. Louis on 17 June 1963, but was engaged in test duties at Holloman AFB, New Mexico most of the time, along with former F-110A prototype 62-12169 (ex 149406). She remained at Holloman until her loss on 8 December 1967 when during a stores separation test, an SUU-13 struck her left stabilator, causing its failure and the loss of the aircraft. McDonnell test pilot Don Stuck ejected successfully.

YRF-4C 62-12200 ended her days as a test bed with the very confusing YF-4E designation. Research on these three enigmatic aircraft is ongoing.

The first F-4Cs delivered to the 4453rd CCTS at MacDill were 63-7415 and -7416, arriving on 20 November 1963. From there, F-4C deliveries proceeded apace, and as they arrived, the F-4Bs were gradually returned to the Navy. On 1 January 1964 the 4453rd CCTS became the 4453rd CCTG, and on 8 January 1964, it moved to Davis-Monthan.

Into the crucible...

These new F-4Cs were generally finished identically to the borrowed F-4Bs. Small detail differences based on the installed USAF equipment included a day-glow red-orange panel around the air refueling receptacle on the spine. The serial number initially remained in the same position as before - roughly half way up the vertical fin, just forward of the rudder, with the TAC lightning bolt motif forward of it. Eventually, the serial was moved back to the low forward position seen on the two F-110As, with the TAC lightning bolt centered on the fin behind it. The earliest serial on which we can positively identify this change is 63-7607. At some point prior to the introduction of camouflage paint in 1966, the TAC lightning bolt was eliminated entirely, with the other markings remaining unchanged. Physically, these F-4Cs were externally identical until F-4C-16-MC 63-7421, which was the first aircraft delivered with the TAT probe mounted below the port side ECS inlet behind the radome.

Tactical Air Command had planned for two full F-4C wings - the 12th and 15th TFWs - to call MacDill AFB home, and that would put a large strain on the available resources at the Florida base. Thus, in January of 1964, the 4453rd CCTS moved to Davis-Monthan AFB, Arizona. This both relieved MacDill of some of its overcrowding problem, and provided a location for teaching new F-4 troops the ins and outs of their new steed in the southern Arizona sunshine, with easy access to a huge amount of open desert for weapons practice.

When the two MacDill wings had reached operational readiness, the war in Vietnam was beginning to heat up in earnest, and in November of 1965, the 12th TFW was reassigned to Da Nang AB, Republic of Vietnam, taking the F-4C to war for the first time.

The F-4C went to war wearing its peacetime Navy colors, which were quickly determined to be all wrong for jungle warfare. By mid-1966, green and tan camouflage was the norm. The mighty Phantom was then beginning to create its lasting mythos as a combat machine, and this is where our story of its beginnings in USAF service ends.



Although of poor quality, we include this shot because it shows four of the borrowed F-4Bs in service with the 4453rd CCTS at MacDill during 1963. All have had the TAC badge and lightning bolt motif added forward of their serial numbers.



4453rd CCTS Operations at MacDill AFB, 1963



F-4B-15-MC 62-12187 of the 4453rd CCTS, showing what appears to be a yellow squadron colored fin cap. We are not certain of this, since the 4453rd was an independent squadron not attached to the 15th TFW. If the fin cap is yellow, it represents the only form of unit markings we have seen applied to any of the F-4Bs or F-4Cs assigned to the 4453rd during this period. They were all completely 'plain vanilla' otherwise.

This aircraft was eventually converted into an F-4N and ended her days as a QF-4N target drone.

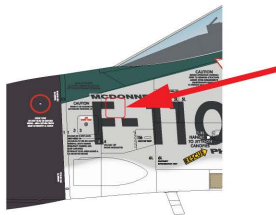
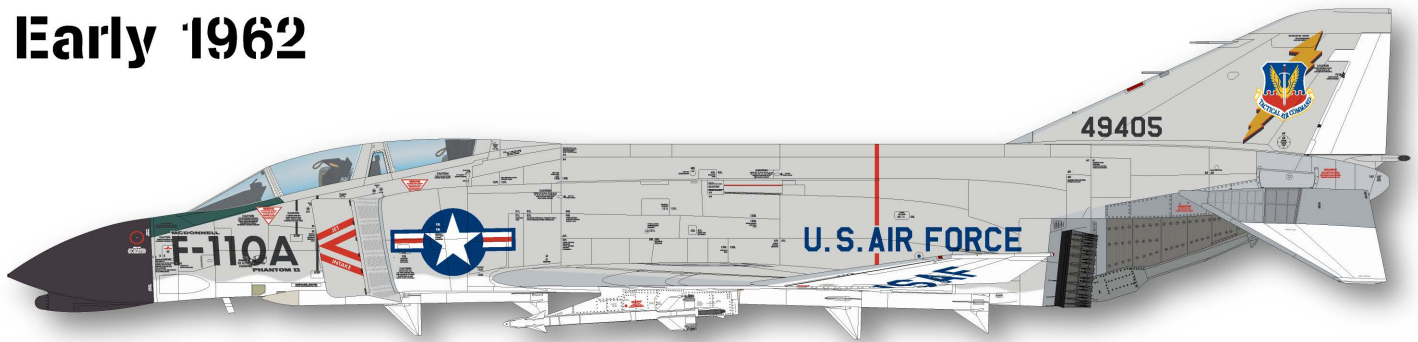
F-4C-15-MC 63-7418 leads a packed 4453rd flight line at MacDill AFB during 1963. Note the uniformity of the markings, the high/aft position of the serials, and the day-glow red-orange area on the spine surrounding the refueling receptacle. Also note the blackout shrouds inside the aft canopies - see page 19 for details.



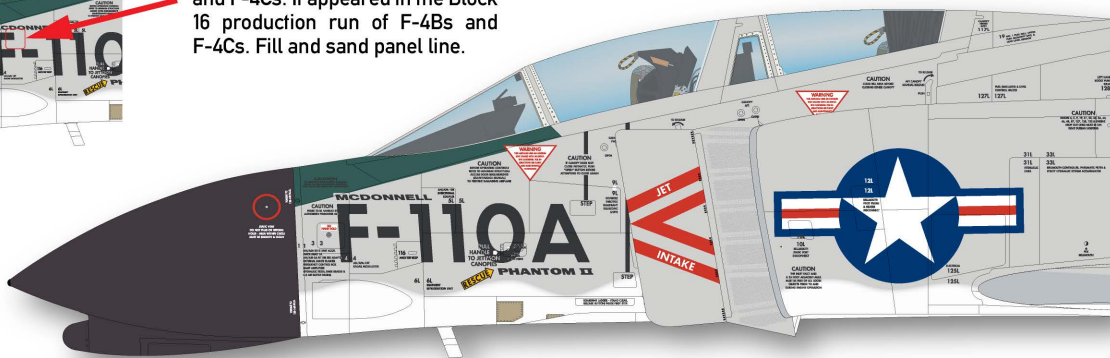
Profiles and markings details...

F-110A BuNo 149405

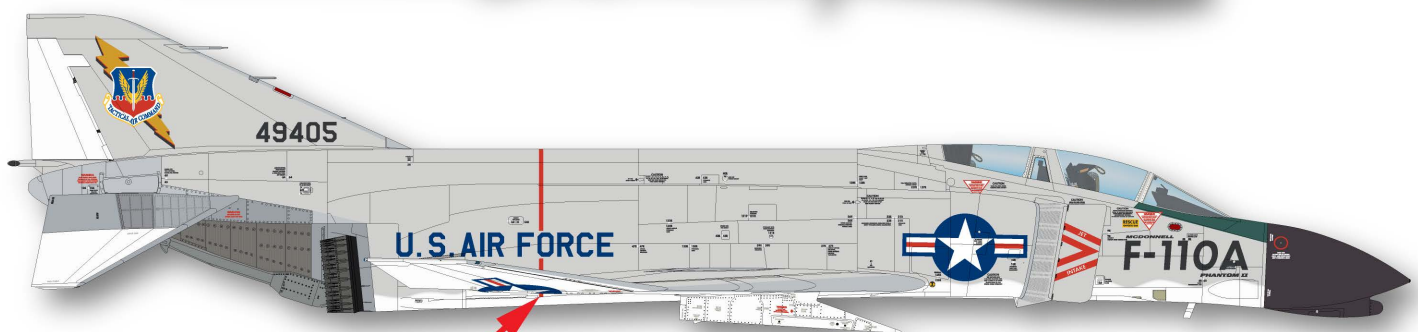
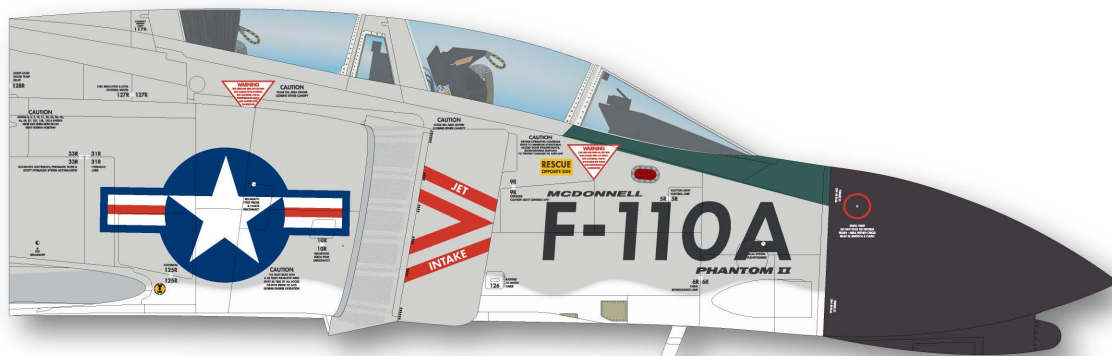
Early 1962



Note: Access Door 133 (shown in red) was absent on early F4H-1s and F-4Cs. It appeared in the Block 16 production run of F-4Bs and F-4Cs. Fill and sand panel line.



F-110A 149405 as she appeared in January 1962. In the top view she is loaded with dummy AAM-N-6a Sparrow IIs and AAM-N-7C Sidewinders. Note her FS 34092 green anti-glare panel, and the dark mustard yellow color of the lightning bolt behind the enormous TAC badge on the tail. In the detail views, note the relative positions of the McDonnell, F-110A, and Phantom II titles to the stencil data. On the left side several stencils were applied partially in white over the black titles. The rescue arrow is unique to the two F-110A marked aircraft - much smaller and pointing the opposite way vs. the standard USAF version used later. The intake warning is also unique to the two F-110As. Note the slightly nose-down angle of the national insignia on the intake on both aircraft. The small square cutout in the green anti-glare panel to clear the "M" was later filled in when the titles were removed in around March of 1962. 149406 was essentially identical in appearance. One small detail item that applies to all the aircraft shown here is that the metal cap on the tip of the radome was painted glossy black. It often wore to natural metal after aircraft had been in service and/or went through depot maintenance. As noted previously, by the time the two F-110A-marked aircraft were handed over to the USAF on 24 January 1962, the "PHANTOM II" titles had been mysteriously removed. The F-110A titles were removed within a relatively short time after delivery.



Note: The turbine warning stripe continues below the wing lower surface, but only as far as the sharp edge of the AIM-7 well.

Profiles and markings details...

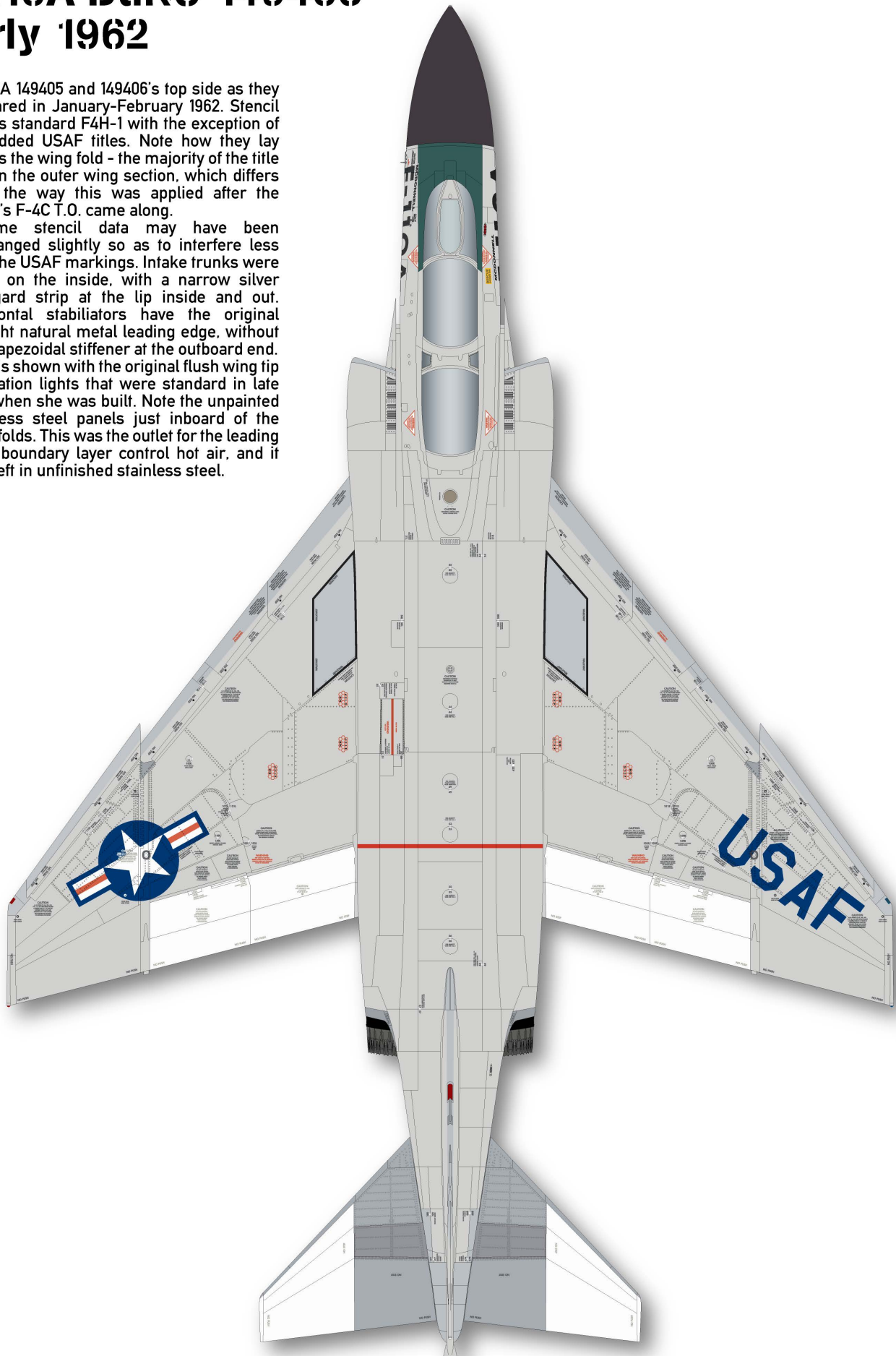
F-110A BuNo 149405

Early 1962

F-110A 149405 and 149406's top side as they appeared in January-February 1962. Stencil data is standard F4H-1 with the exception of the added USAF titles. Note how they lay across the wing fold - the majority of the title lies on the outer wing section, which differs from the way this was applied after the USAF's F-4C T.O. came along.

Some stencil data may have been rearranged slightly so as to interfere less with the USAF markings. Intake trunks were white on the inside, with a narrow silver Corogard strip at the lip inside and out. Horizontal stabilizers have the original straight natural metal leading edge, without the trapezoidal stiffener at the outboard end.

She is shown with the original flush wing tip navigation lights that were standard in late 1961 when she was built. Note the unpainted stainless steel panels just inboard of the wing folds. This was the outlet for the leading edge boundary layer control hot air, and it was left in unfinished stainless steel.



Profiles and markings details...

F-110A BuNo 149405

Early 1962

F-110A 149405's belly as she appeared in January-February 1962. Her stencil data is standard F4H-1 with the exception of the added USAF titles. Note how they lay across the wing fold - the majority of the title lies on the outer wing section, which differs from the way this was applied after the USAF's F-4C T.O. came along. Note the natural metal panels between the buzz numbers - something seen on a number of F4H-1s of this period.

Some stencil data may have been rearranged slightly so as to interfere less with the USAF markings. Intake trunks were white on the inside, with a narrow silver Corogard strip at the lip inside and out. Horizontal stabilizers have the original straight natural metal leading edge, without the trapezoidal stiffener at the outboard end. She is shown with the original flush wing tip navigation lights that were standard in late 1961 when she was built.

Both F-110As had this same appearance with the exception of the changed buzz numbers after 18 September 1962.



Profiles and markings details...

F-110A BuNo 149406 March - September 1962



F-110A 149406 as she appeared in March through September 1962. She is shown loaded with full external tanks as she appeared on her delivery flight to the USAF. The outboard 370-gallon tanks are the original McDonnell tanks. Note that the small wedge cut out of the green anti-glare panel has been touched up after the removal of the F-110A titles. The stencil data above the yellow rescue arrow has also been reapplied in the standard style. At this point she retains her flush style wing tip navigation lights. 149405 appeared identical during this time period, with the exception of her serial and buzz numbers.



Detail view of F-110A 149406 above. When the F-110A titles were removed, the stencil data that overlapped it was not reapplied, with the exception of the instructions for emergency canopy removal at Access Door 7. The small cutout in the green anti-glare panel to clear the "M" in McDonnell was touched up to make the lower line unbroken.

F-4B 62-12168 1963



F-4B 62-12168 as she appeared after the 18 September 1962 tri-service designation change. Her serial has been reapplied in the USAF style, and her buzz numbers changed to reflect the new serial. The McAir line number was applied on the vertical fin cap on both aircraft at this point. The lightning bolt on the tail is now bright Insignia Yellow. Her appearance is otherwise generally unchanged from earlier in 1962.

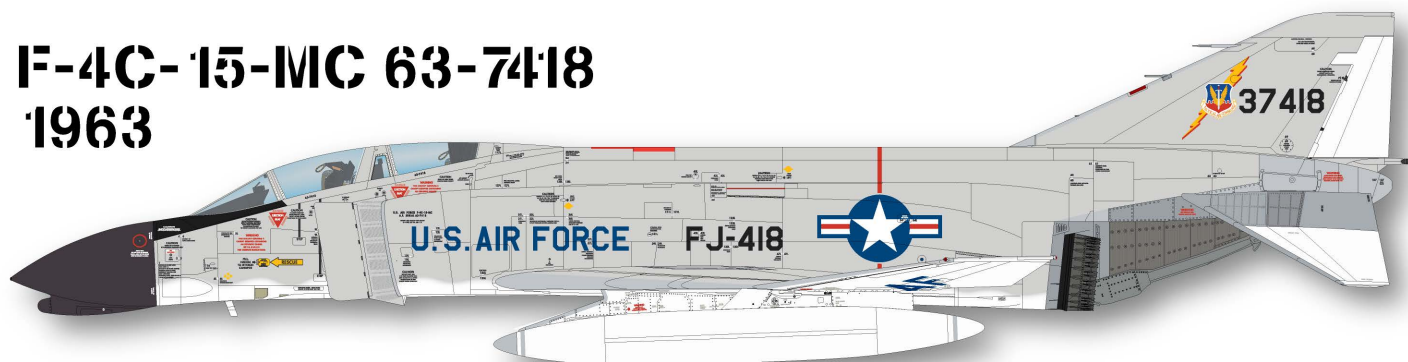
Profiles and markings details...



**F-4B-15-MC 62-12192
1963**

F-4B 62-12192 is representative of the 27 borrowed aircraft that got the 4453rd CCTS up and running during 1963. You have to look closely to see that she's really an F-4B in this profile view. The USAF markings applied in St. Louis are absolutely standard, and are basically identical to those applied to the F-4Cs that followed them down the line. Note the use of the 'salmon' pale red colored warning placards below the cockpit. These became common on USAF and export F-4C/D/E and RF-4C/Es, although not universal. There are photos of brand new aircraft from throughout production with both the pale and normal Insignia Red placards. Also note the application of the early USAF style hoist point symbols on the fuselage and wings (a yellow disk with a horizontal bar through it). One clue to her true Navy identity is the aircraft weight placard on the ECS inlet - only needed for catapult launches.

**F-4C-15-MC 63-7418
1963**



F-4C-15-MC 63-7418 (the 13th production F-4C) as she appeared during late 1963. She is absolutely factory standard in every way. The TAT probe is still mounted on the leading edge of the fin, although she is depicted with the later standard 'bug eye' nav lights, she may have been delivered with the earlier flush style. Period photos make it impossible to say with certainty. She has not had a red and white armament placard added below the rescue arrow as most aircraft in the 4453rd did later. As F-4Cs were delivered from McDonnell, the F-4Bs were gradually returned to the Navy.

Thoughts on models...

Building the F-110As in 1/72 and 1/48 is fairly straightforward - buy yourself an F-4B, shorten the front end of the radome fairing (all kits feature the longer APR-25 post-1966 version), and use Mk.H5 seats. In other scales you're on your own!

In 1/48 we can only really recommend the magnificent Tamiya F-4B kit, with the shorter radome fairing and Mk.H5 seats from Hypersonic Models.

In 1/72, Fine Molds extended their range with a gorgeous new F-4B in 2025. The previous kits in this series are outstanding as well.

We have tried to provide as much detail information as possible here, allowing you to build

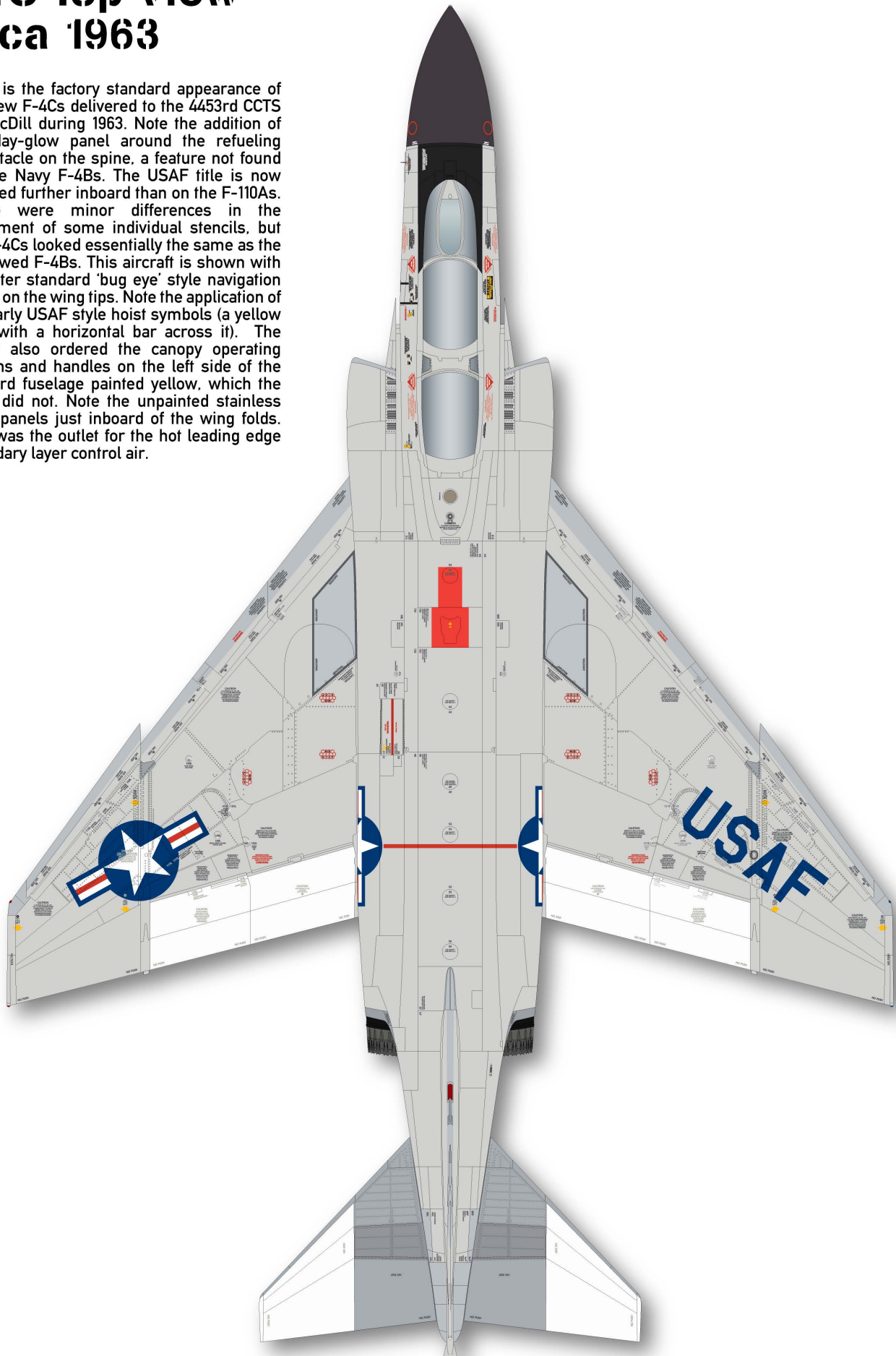
an accurate model of these historically important aircraft. As we have depicted them, they were brand new, and exhibited next to no weathering or hangar rash - they were extremely well cared for by their ground crews. F-4 engines were notoriously smoky, so some soot around the back end is appropriate for all but the newest, most lovingly cared for airplane, but don't overdo it! Likewise, cockpits would have been pretty clean, with only minimal chipping along the canopy sills. You don't really see much in the way of hydraulic leaks, oil stains, etc. The Light Gull Gray was more of an eggshell finish. The control surfaces and belly were glossy, and the silver Corogard was a semi-gloss finish.

Profiles and markings details...

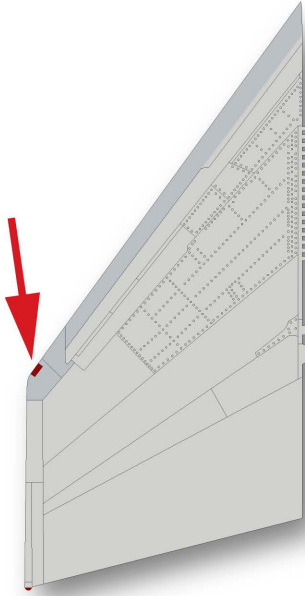
F-4C Top View

Circa 1963

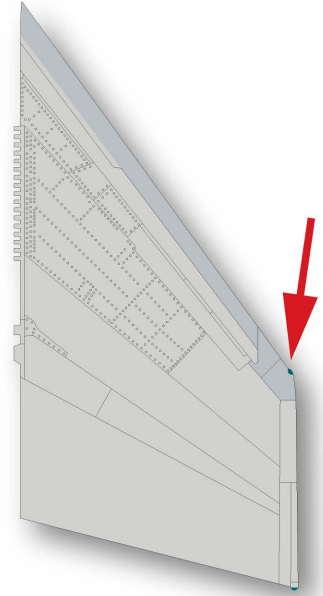
This is the factory standard appearance of the new F-4Cs delivered to the 4453rd CCTS at MacDill during 1963. Note the addition of the day-glow panel around the refueling receptacle on the spine, a feature not found on the Navy F-4Bs. The USAF title is now situated further inboard than on the F-110As. There were minor differences in the placement of some individual stencils, but the F-4Cs looked essentially the same as the borrowed F-4Bs. This aircraft is shown with the later standard 'bug eye' style navigation lights on the wing tips. Note the application of the early USAF style hoist symbols (a yellow disk with a horizontal bar across it). The USAF also ordered the canopy operating buttons and handles on the left side of the forward fuselage painted yellow, which the Navy did not. Note the unpainted stainless steel panels just inboard of the wing folds. This was the outlet for the hot leading edge boundary layer control air.



Wing Tip Navigation Lights



Phellow Phantomaniac Kim Simmelink (in his terrific Phantom Phacts blog: <https://phantomphacts.blogspot.com>) notes three distinct styles of Phantom wing tip lights. The first style (not shown here) seems only to have been fitted on the very earliest airframes before the second style (shown at left) appeared. This was found on F4H-1s as well as early F-4Cs. It appears the change to the 'bug eye' style lights took place somewhere during Block 6 production on the F4H-1, but the picture is still very muddy. Since the first actual F-4C (62-12199) was a Block 15 airframe, and we have photos of quite a few early F-4Cs with the original style flush light, we're at a loss to explain why that is. What we do know is that the 'bug eye' style was pretty rapidly retrofitted, and the older flush style seems to have disappeared, even on test birds, by somewhere around the end of 1964. This feature is often virtually impossible to discern in photos, but we have provided some below to illustrate the original style. For certain the two F-110As (BuNos 149405 and '406) as well as a significant number of early production F-4Cs had the early style when they rolled out of the factory. More reseach required!



Left: F4H-1 149405 Block 9, alias F-110A is seen shortly after roll out in Jan 62. She has the original flush style nav lights.



Right: F-4C-15-MC 63-7410 showing the flush style lights.

Wing Tip Navigation Lights



Above: F-4C-15-MC 63-7407 displays the flush style light shortly after roll out in July 1963.



Above: F-110A 149406 apparently with the new bug eye style lights. This photo dates from the summer of 1962 during weapons compatibility testing.

Below: F-4C-15-MC 63-7408 photographed during 1965, now with the 'bug eye' style nav lights.



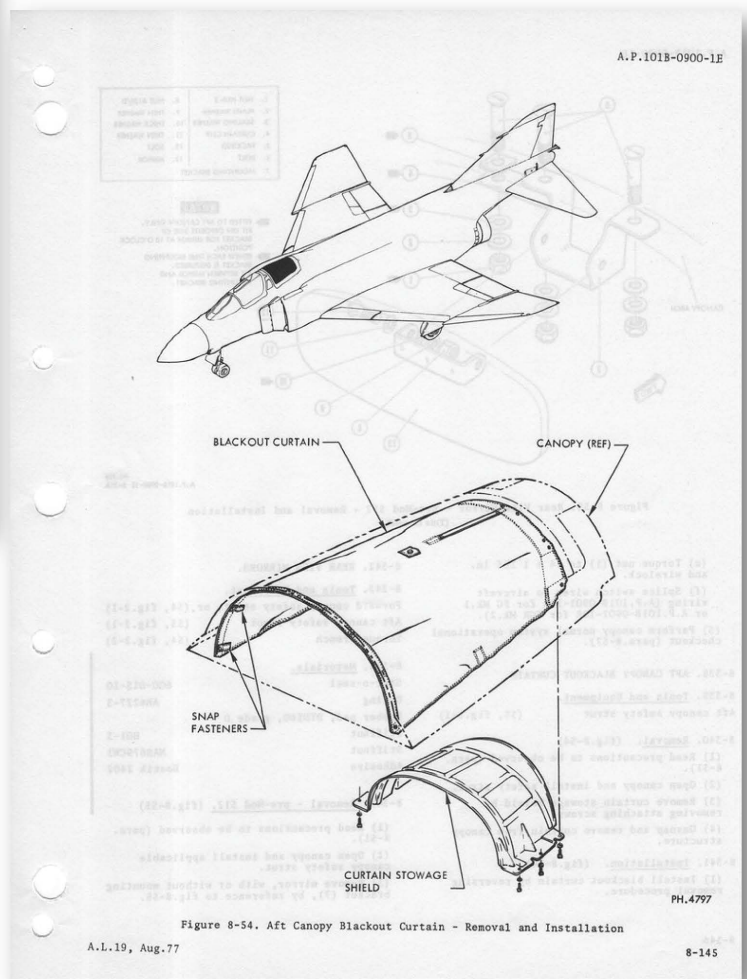
Below: F-4C-15-MC 63-7419, date unknown, also with the later style lights. Given that she's carrying a McDonnell wing tank and still looks fairly pristine, we believe this may be a 1963 photo.

Aft Canopy Blackout Shroud

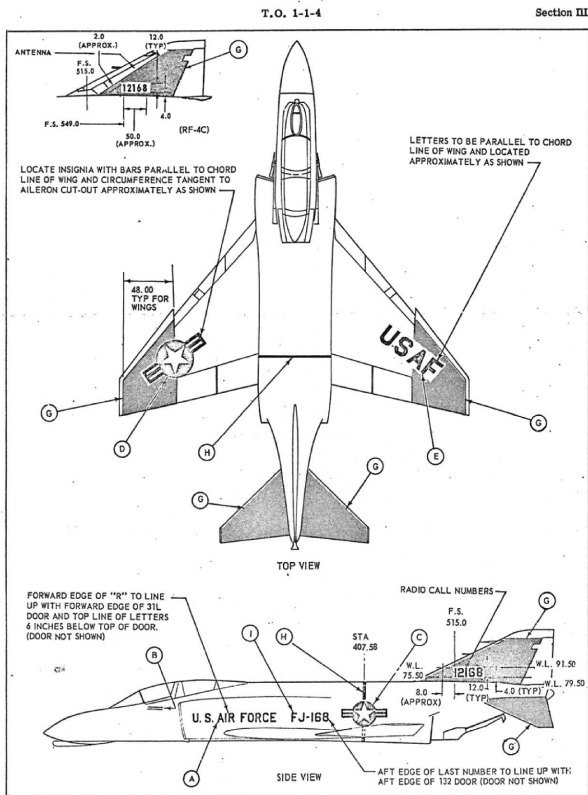


Every single F-4 built, from the first to the very last, left the factory with this canvas blackout shade installed on the aft canopy. The purpose was to darken the cockpit to allow the radar operator to better see his scope. In almost every case, the first thing an operational unit did when they got a new aircraft was remove it. Apparently it wasn't really needed, and was just something else to be in the way and require maintenance. They were originally a very dark grey, black, or green color (the actual color may have varied). Later ones were a light grey color.

The shroud is still visible in a lot of photos of these early F-110s, F-4Bs, and F-4Cs, so it makes a good addition to a model, and something you almost never see done.



T.O. 1-1-4



3-63

Two relevant pages from U.S. Air Force "Technical Manual 1-1-4, Exterior Finishes, Insignia and Markings Applicable to Aircraft and Missiles," dated 23 April 1964. This was the first revision of T.O. 1-1-4 that included material on the F-4, and predates the application of Southeast Asia camouflage. And in fact, it does not address the overall colors of the aircraft at all. The Conspicuity/Arctic markings were not found on any of the early F-110A/F-4B/F-4C aircraft covered herein, but were on many test F-4s later in their lives.

Despite the fact that the T.O. calls for the buzz numbers on the fuselage to be FS 15044 Insignia Blue, period color photos clearly show that McDonnell applied them in black, as was common on many other USAF types at the time.

Section III

T.O. 1-1-4

F-4 AIRCRAFT MARKING SPECIFICATION (SEE FIGURE 3-28)

1. MARKING	2. LOCATION	3. SIZE	4. COLOR
A. U.S. Air Force	Both sides of fuselage	Letters 12 inches high	-Code 15044
B. Model Designation, Aircraft Serial Number and Fuel Requirement	Left side of fuselage only	Letters and numbers 1 inch high	-Code 17038
C. National Star	Both sides of fuselage	30-inch star	Background, Border, -Code 15044, Stars, Bars - Code 17875, Stripes - Code 509.
D. National Star	On under surface of right wing, and top surface of left wing	45-inch star	Background, Border, -Code 15044, Stars, Bars - Code 17875, Stripes - Code 509.
E. USAF	On top surface of right wing, and under surface of left wing	Letters 25 inches high	-Code 15044
F. Call Numbers	Both sides of vertical stabilizer	Numbers 12 inches high	-Code 17038
G. Conspicuity/Arctic Markings	One inch clearance around all large insignia and markings		-Code 633
H. Jet Warning Stripe	Around fuselage	2 inches wide	-Code 17038
I. Identification Letters and Numbers	Both sides of fuselage	Letters and numbers 12 inches high	-Code 15044

3-62

Photos



Before and after. Hard to believe this is the same aircraft. Her history gets pretty murky after 1963, but she was converted into a YRF-4C aerodynamic prototype (note the painted camera windows). She was struck off USAF charge on 17 August 1971, and presumably scrapped.



Photos



Another before and after. As shown previously, F-4B-14-MC 62-12172 was BuNo 150480. After her service with the 4453rd CCTS, she was returned to the Navy and made her way into service with the USMC. Here she is as an F-4N in April of 1980 as the boss bird with VMFA-323 aboard USS Coral Sea. The deck crew are applying the red and black ID markings carried for Operation Eagle Claw, the ill-fated Iran hostage rescue mission.



Acknowledgements:

As ever, my friends and phellow Phantomaniacs Chris Mayer, Peter Greengrass, and Kim Simelink and his "Phantom Phacts" website made this work possible.