

fündekals :)

A BUNCH OF SPOOKS!

F-110As

F-4Bs

F-4Cs

Printed by...

cartograf

COPYRIGHT © 2021

ALL RIGHTS RESERVED

It's hard to imagine a time when the beloved Phantom was still the newest, hottest thing in the sky. The Navy had originally commissioned the Phantom as a fleet defense interceptor, but it quickly became evident that this amazing aircraft was going to become a jack of all trades, such was the excellence of its basic design.

The F4H-1 (later F-4B) went into widespread service with the USN and USMC, racking up an impressive combat record from the earliest days of the conflict in Southeast Asia, and continuing to serve in its upgraded F-4N form well into the 1980s.

After a fly-off against the F-106A that the F4H-1 won handily in every category, the USAF got onboard with the Phantom, ordering its own variant of the F4H-1 as the F-110A in 1961, with a dedicated reconnaissance version as the RF-110A. A number of changes were made to meet the Air Force's specifications, including improved air to ground capability, wider main gear tires (with a thicker wing), better brakes, avionics changes, and removal of dedicated Navy items like the refueling probe and other items related to carrier ops.

While McDonnell (which didn't become McDonnell Douglas until 1967) was busy engineering all the changes the Air Force

wanted, the USAF was eager to begin F-110A operations. It borrowed 29 brand new F4H-1s from the Navy in order to test out the Phantom in the Air Force operational environment, using Air Force weapons and Air Force equipment.

On 24 January 1962, the USAF accepted the first of these F4H-1s as the F-110A. Externally, they were identical to the Navy's F4H-1s, including the Light Gull Gray over white color scheme. Navy Bureau Numbers of the F4H-1s loaned to the USAF were 149405, 149406, 150480, 150486, 150493, 150630, 150634, 150643, 150649, 150650, 150652, 150653, 150994, 150995, 150997, 150999, 151000, 151002/151004, 151006, 151007, 151009, 151011, 151014, 151016, 151017, 151020, and 151021. These were temporarily assigned the USAF serials 62-12168/12196. Aside from the first two, both of which were marked as "F-110A" for a short time, all were eventually returned to the Navy, and most went on to active service, including in Southeast Asia, where several were lost in combat. Note that while in USAF service (after September 1962), these aircraft had data blocks that read "U.S. AIR FORCE F-4B-xx-MC" - the USAF did not officially call them F-4Cs (which they were

not), although crews apparently referred to them informally as such. A note here on the name of the aircraft - aside from references in the popular press of the time, we have found no example in any official USAF or McDonnell company document where the F-110A was referred to as the "Spectre." Prior to rollout on 24 January 1962, both aircraft had "PHANTOM II" applied below the "F-110A" titles on their noses. For reasons unknown, this lettering disappeared by the time of the ceremonial handing over of the keys, only to reappear later.

The aircraft were literally covered with stencil data (most of which is outside the scope of this decal). The anti-glare panels forward of the windscreen were FS 34092 (later changed to flat black on production F-4Cs). Note that when the "F-110A" titles were present, there was a small cutout in the green to accommodate the "McDonnell" lettering on the left hand side. This

was later touched up when the titles were removed during operational testing. Note that the USAF used different intake warnings from the Navy, and the position of the national insignias on the intakes is lower than the Navy standard.

The aft fuselage was finished in the now familiar multi-hued bare metal and Corroguard areas



149406 in flight showing the "Phantom II" titles below the "F-110A"

around the exhaust nozzles. Note that the Corroguard only touches the base of the vertical fin aft of the panel containing the elevator hinge plate. Forward of that there is a small strip of Light Gull Gray along the top of the fuselage at the base of the fin.

As was common on Navy aircraft at the time, all leading edges, including the intakes, vertical fin, wings, and the inboard pylons were painted with Corroguard aluminum paint.

Note that the black radome coating ends at the panel line just forward of the aft end of the radome itself - even with the aft end of the IR fairing underneath. While some of these markings have been done before, as with many of our decals, we weren't satisfied with any of them. There are myriad small details that made these aircraft unique. The TAC badge and lightning bolt on the fin are quite a bit more complicated than most references show, and many other markings are of a unique style that we have tried to portray accurately.



The markings applied to the first two F-110As evolved over time. Both carried identical "F-110A" markings when first delivered in January 1962. The Air Force continued to use their Navy Bureau Numbers as their serials during the service test period in 1962, and the tail numbers were applied as "49405" and "49406" (BuNos 149405 and 149406 respectively). Small "U.S. AIR FORCE" titles were carried on the aft fuselage, interrupting the red turbine warning stripe. The turbine warning stripe continued below the wing, but did not wrap around onto the belly of the fuselage proper on the two F-110As. The "FJ" buzz codes were applied in a very odd arrangement well inboard under the aft fuselage on these two aircraft, though not on any of the other F-4Bs.

Once the pair began operational testing at Nellis AFB and other locations, their markings were modified. In September 1962 the designation systems of all U.S. military aircraft were unified, so the F-110A became the F-4C and the F4H-1 became the F-4B. The "F-110A" titles were removed, and the small "U.S. AIR FORCE" titles on the aft fuselage were painted out and replaced by much larger titles carried further forward, with black buzz codes aft. All manner of air-to-air and air-to-ground ordnance was tested, so almost anything goes when building a model of them during this period.



Except for the first F-110A, all the rest of the surviving borrowed F-4Bs were returned to the Navy as production F-4Cs came online. BuNo 149405 (AF 62-12168) eventually became the prototype YRF-4C before being struck off charge in August 1971. BuNo 149406 (AF 62-12169) was taken back into Navy charge as an NF-4B, and crashed near Holloman AFB, New Mexico in March 1967.

The 27 later F-4Bs borrowed were assigned to the 4453rd Combat Crew Training Squadron based at MacDill AFB, Florida. They were used extensively during 1962 and into 1963 to train flight and ground crews on how to operate their new Phantoms. They retained their Navy style Light Gull Gray over white color scheme throughout their USAF service.

When F-4C deliveries began in 1963, they went to the 4453rd as well. Still finished in the Navy paint scheme, the F-4Cs had some markings differences. Notably, the green anti-glare panel was now flat black. The refueling receptacle on the spine (not present on the F-4B) was given a day-glow red-orange panel around and forward of it. As on the F-4Bs, initial F-4Cs had the five-digit serial centered vertically on the fin along with the Tactical Air Command emblem and



Photos this page: Top photo shows 149405 as she appeared during its handover to the USAF on 24 January 1962, wearing the "F-110A" titles but lacking "Phantom II" titles. The two lower photos show the appearance of these two aircraft during the service test program in 1962-63.

lightning bolt. Note that the latter was very different from the much larger one found on the F-110As, and that the lightning bolt itself was not outlined in red, but rather has a red drop shadow effect (not all decals have had this detail correct). Later F-4Cs had the serial moved to a position lower and more forward on the fin, like the F-110As, which became the standard until aircraft started to receive Southeast Asia camouflage at the factory. Full Futura stencil data was applied all over these aircraft.

As F-4C deliveries picked up, the F-4Bs were gradually returned to the Navy. With the coming activation of the 12th and 15th TFWs at MacDill, ramp space was set to become scarce, so in January 1964 the 4453rd was transferred to Davis Monthan AFB, Arizona, close to the vast range complexes scattered throughout southern Arizona. Colors & markings remained mostly unchanged during this period, with camouflage beginning to appear during 1965, and rapidly becoming virtually universal by late 1966.

On 1 January 1964, the 4453rd CCTS was reorganized into the 4453rd Combat Crew Training Group, with the 4454th, 4455th, 4456th, and 4457th Combat Crew Training Squadrons assigned. On 1 April 1964 the group was again upgraded to wing status, possibly the only time an Air Force unit has been upgraded from squadron to group to wing status while retaining the same numerical designator.

Subtle changes in the markings were evident on the production F-4Cs, including deletion of the Navy style



F-4B-15-MC 62-12187 of the 4453rd CCTS, showing what appears to be a yellow squadron colored fin cap. This aircraft was eventually converted into an F-4N and ended her days as a QF-4N target drone.



F-4C-20-MC 63-7607 showing the Air Force standard markings of this period. Note the addition of a red and white weapons loading placard, and the retention of the Navy style inboard pylon, plus McDonnell 370-gallon wing tanks with Corroguard trim. This aircraft was converted into an EF-4C Wild Weasel, and survived the ordeal in SEA, retiring to AMARG in 1991.

aircraft weight placard near the nose (used to calibrate the catapult for carrier launches), and the addition of a red and white weapons loading placard below the yellow rescue arrow on the left side of the nose.

The USAF's F-4Cs went into combat in Southeast Asia wearing this basic color scheme, although shortly after combat operations began in early 1965, the Air Force abandoned the use of the "buzz codes", and these were painted out locally using whatever color of grey paint that was handy. Several different shades can be seen in different photos from this period.

The 4453rd CCTW remained the USAF's F-4 "schoolhouse" at Davis Monthan through September of 1971, when training duties shifted up the road a few miles to Luke AFB near Phoenix, under the 58th Tactical Training Wing.

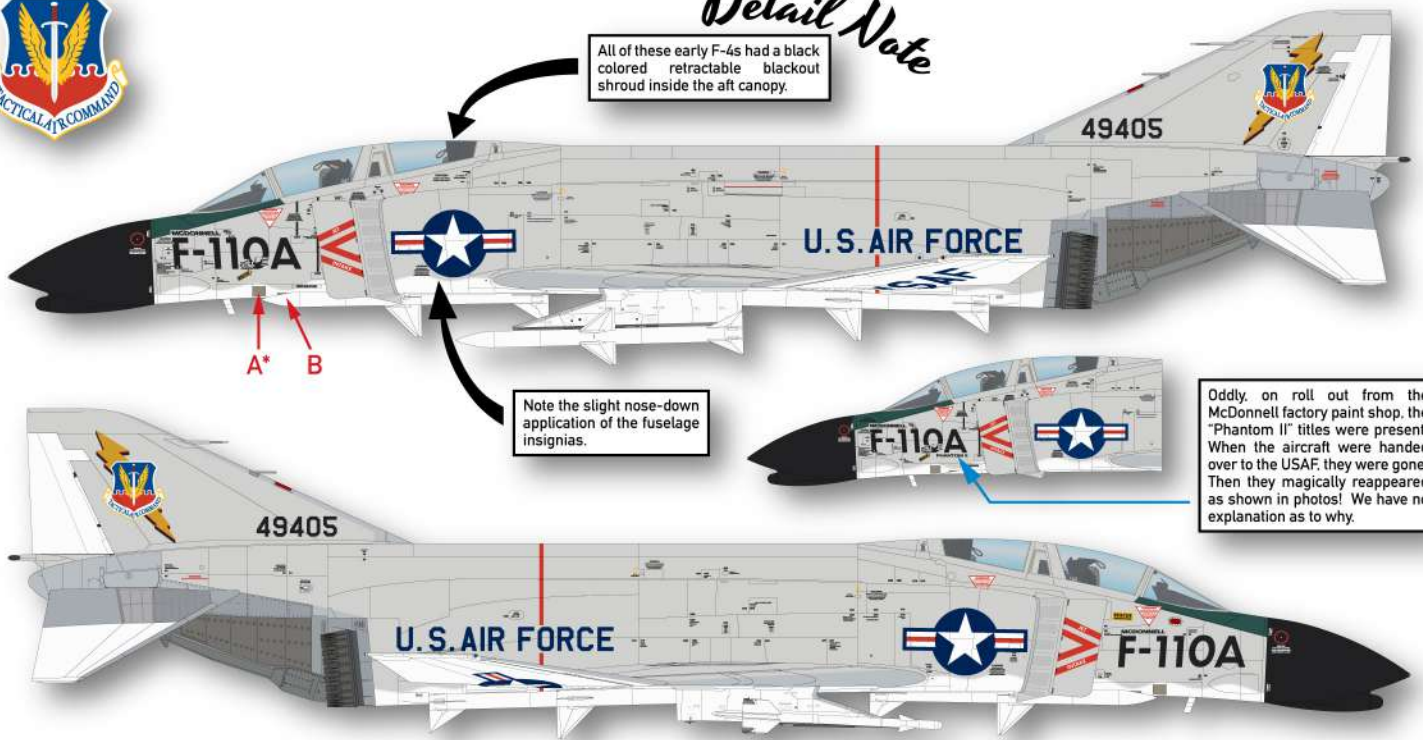


The 8th F-4C built, F-4C-15-MC 63-7418 leads a packed 4453rd CCTG flight line at MacDill AFB, Florida during 1963. Note the uniformity of the markings, the high/aft position of the serials, and the day-glow red-orange area on the spine surrounding the refueling receptacle. Our subject aircraft survived the Vietnam War and was retired to AMARG in 1987. Note the blackout shrouds inside the aft canopies - see profile pages for details.



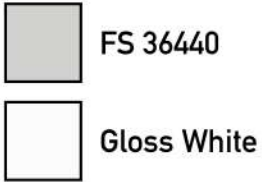
Detail Note

All of these early F-4s had a black colored retractable blackout shroud inside the aft canopy.



Note the slight nose-down application of the fuselage insignias.

Oddly, on roll out from the McDonnell factory paint shop, the "Phantom II" titles were present. When the aircraft were handed over to the USAF, they were gone. Then they magically reappeared as shown in photos! We have no explanation as to why.

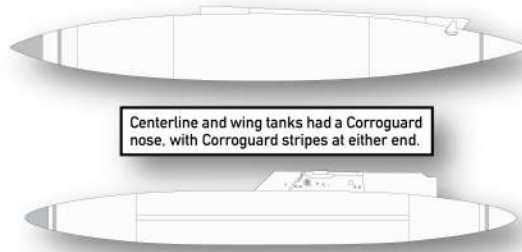


FS 36440

Gloss White

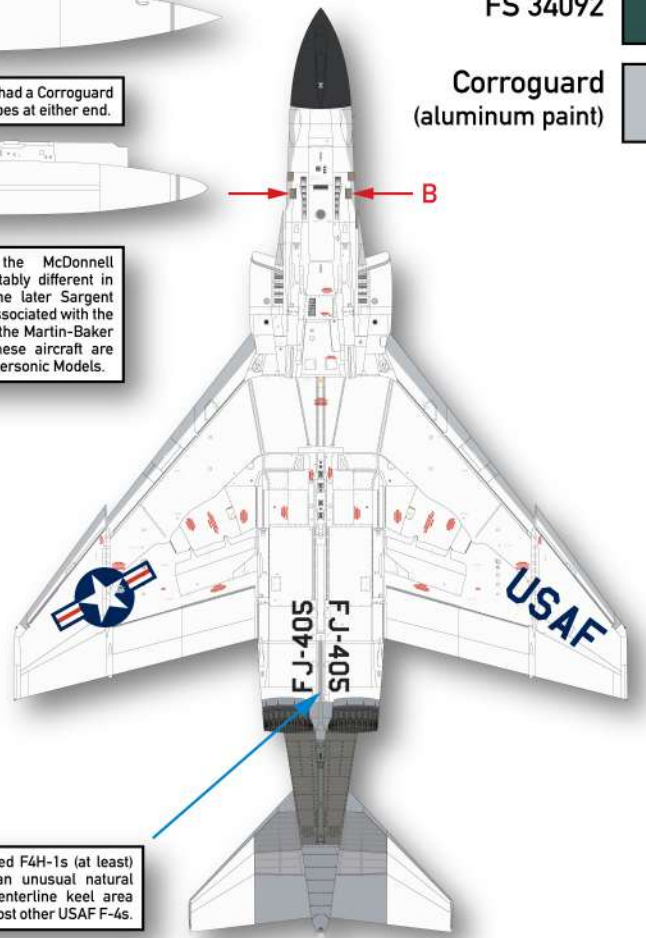
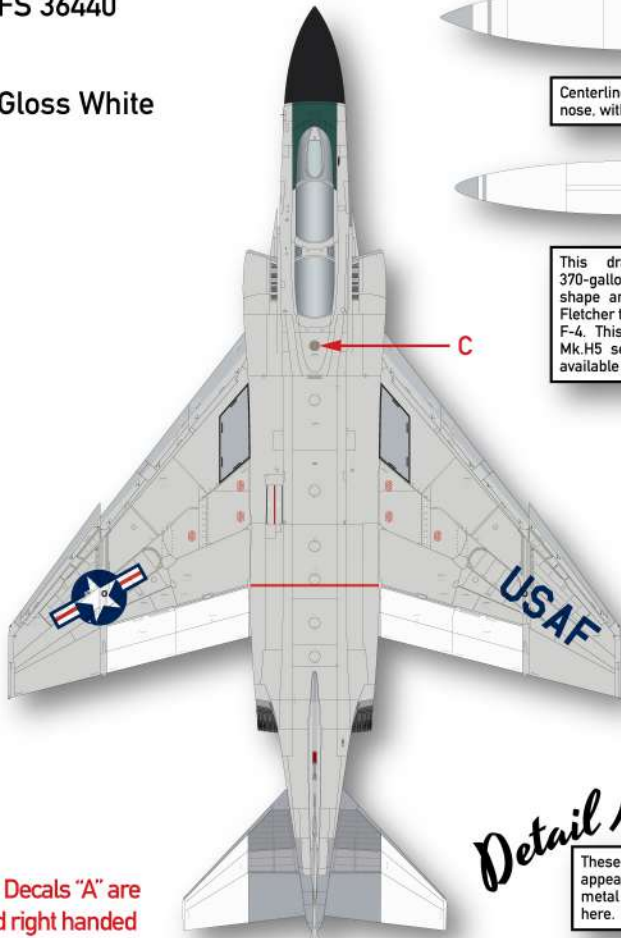
FS 34092

Corroguard
(aluminum paint)



Centerline and wing tanks had a Corroguard nose, with Corroguard stripes at either end.

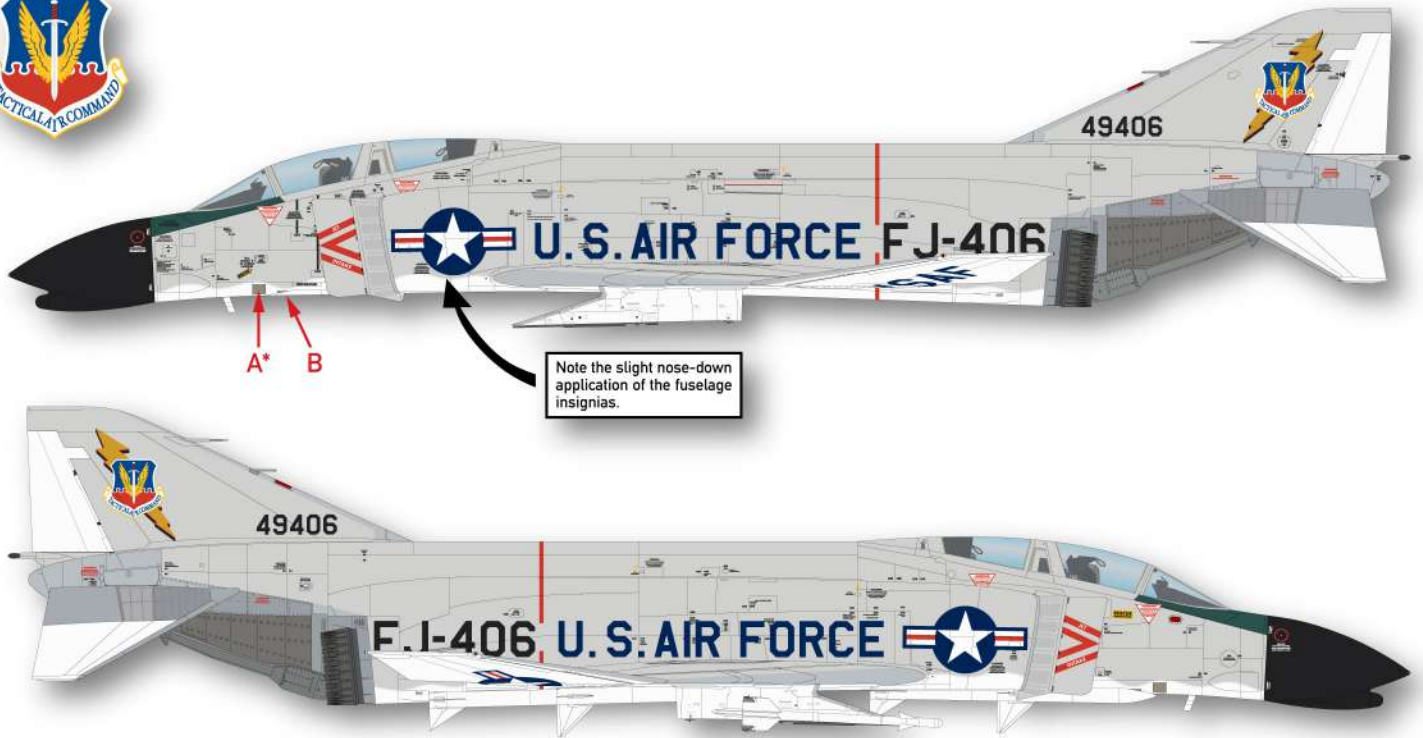
This drawing shows the McDonnell 370-gallon tank. It is notably different in shape and detail from the later Sargent Fletcher tank commonly associated with the F-4. This tank, as well as the Martin-Baker Mk.H5 seat carried by these aircraft are available in resin from Hypersonic Models.



Detail Note

These first two borrowed F4H-1s (at least) appear to have had an unusual natural metal panel on the centerline keel area here. Not present on most other USAF F-4s.

*Note: Decals "A" are left and right handed

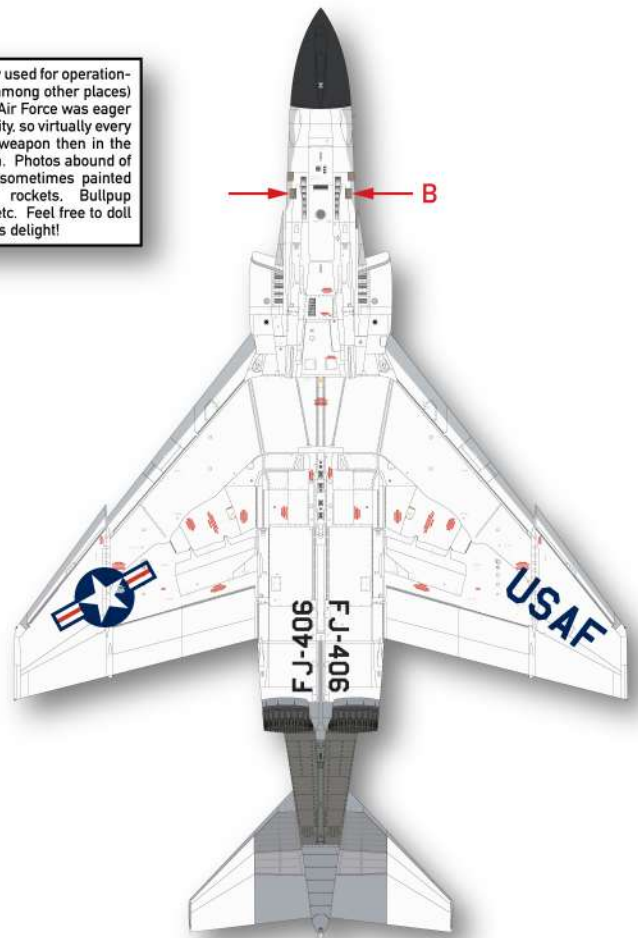
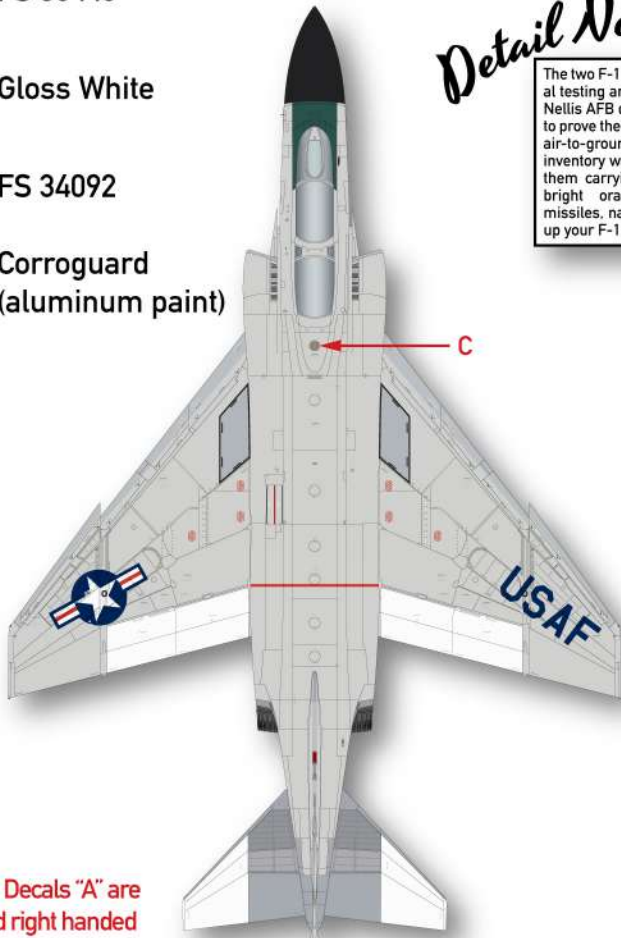


Note the slight nose-down application of the fuselage insignias.

-  FS 36440
-  Gloss White
-  FS 34092
-  Corruguard (aluminum paint)

Detail Note

The two F-110As were heavily used for operational testing and evaluation at (among other places) Nellis AFB during 1962. The Air Force was eager to prove the F-110's adaptability, so virtually every air-to-ground and air-to-air weapon then in the inventory was tested on them. Photos abound of them carrying iron bombs (sometimes painted bright orange), unguided rockets, Bullpup missiles, napalm canisters, etc. Feel free to doll up your F-110A to your heart's delight!

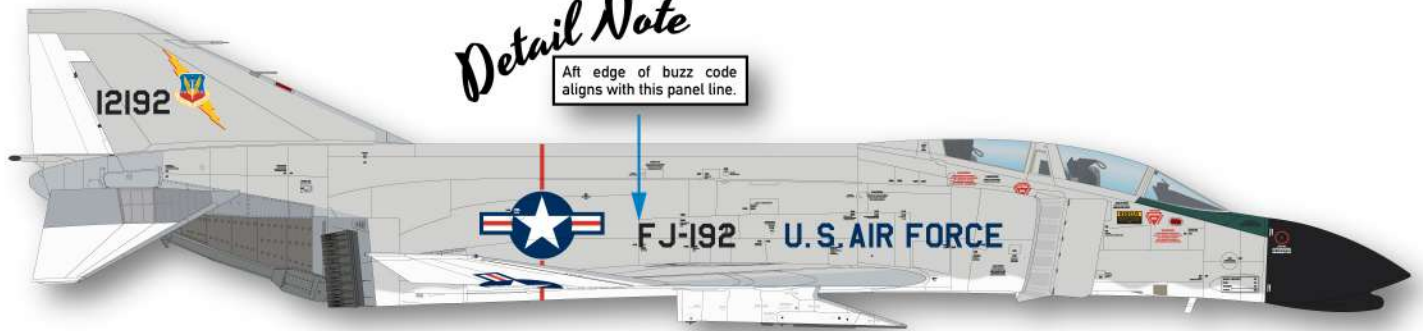


*Note: Decals "A" are left and right handed



Detail Note

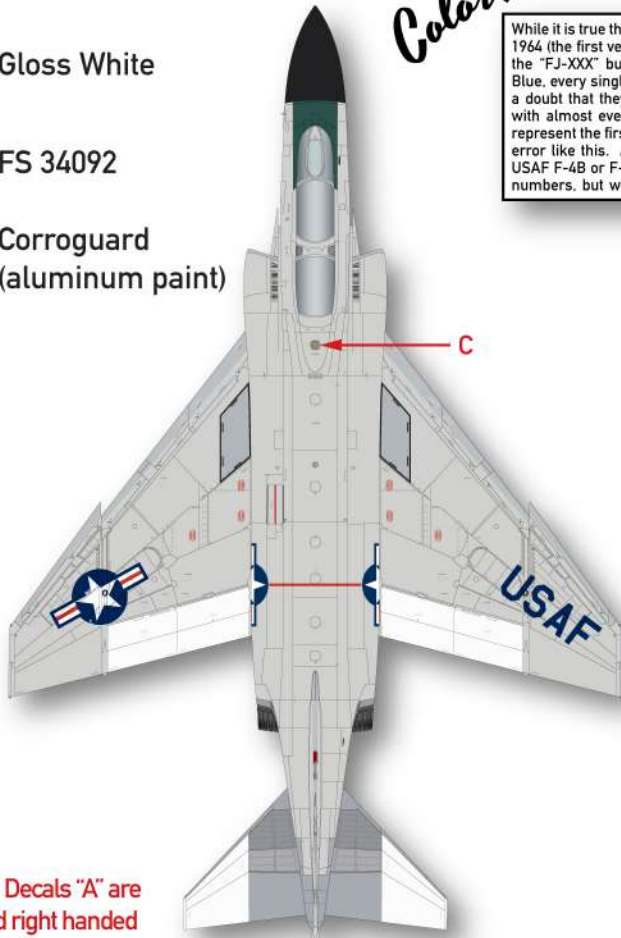
Aft edge of buzz code aligns with this panel line.



-  FS 36440
-  Gloss White
-  FS 34092
-  Corroguard (aluminum paint)




Color Note

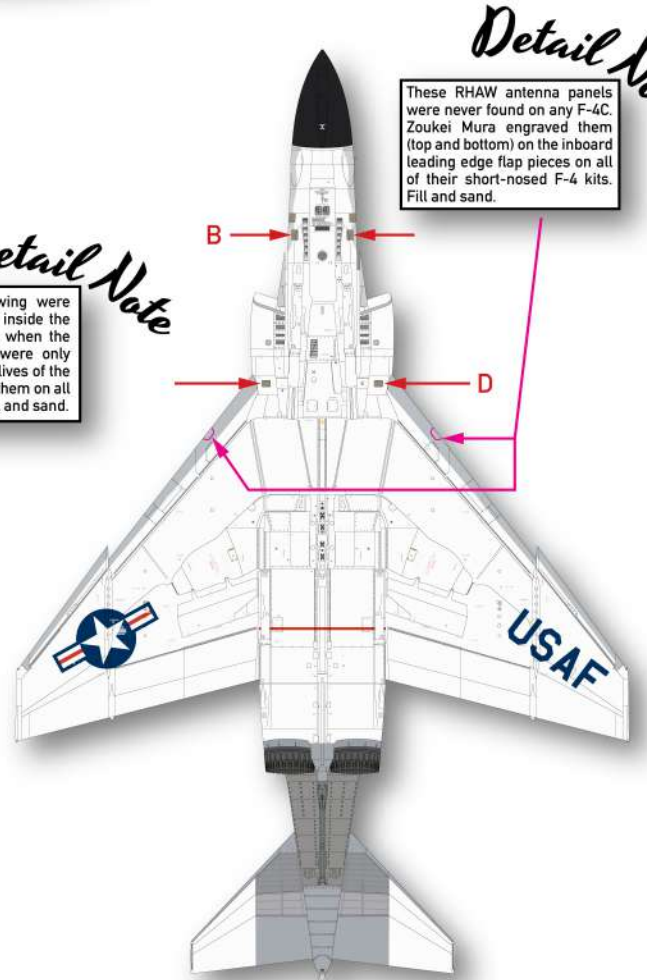
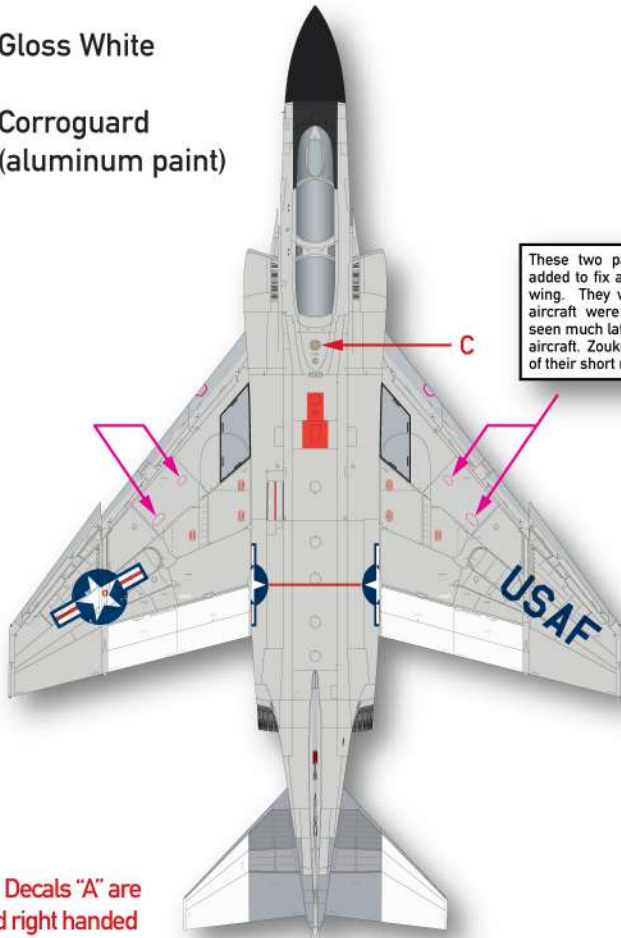
While it is true that Air Force Technical Order 1-1-4 of 23 April 1964 (the first version containing data on the F-4C) indicates the "FJ-XXX" buzz numbers were to be FS 15044 Insigna Blue, every single color photo we have found proves beyond a doubt that they were in fact applied in black, in common with almost every other TAC aircraft type. This would not represent the first, nor the last time a USAF T.O. contained an error like this. And while we can't positively prove that no USAF F-4B or F-4C in this paint scheme ever had blue buzz numbers, but we have yet to find any hard evidence for it.



*Note: Decals "A" are left and right handed



-  FS 36440
-  Gloss White
-  Corroguard (aluminum paint)



*Note: Decals "A" are left and right handed



Detail Note

Aft edge of buzz code aligns with this panel line.

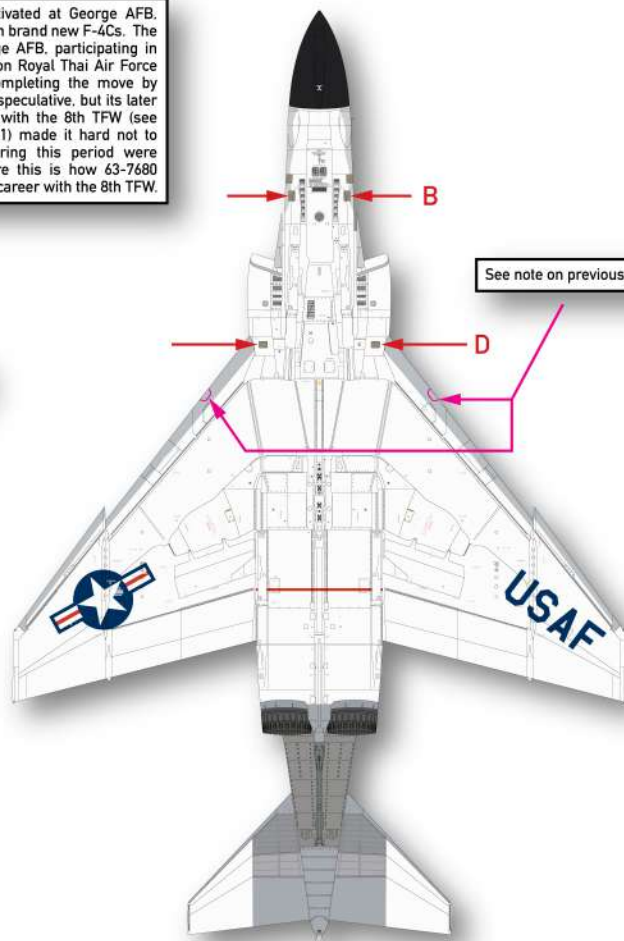
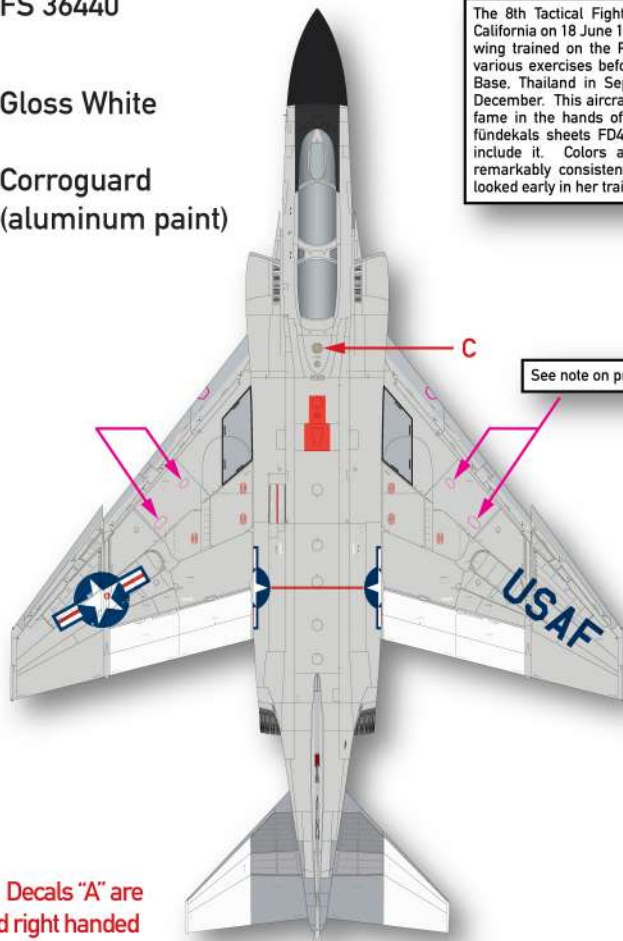
Detail Note

At some point during F-4C production during 1964 the position of the serial number on the tail was changed to the one shown here.



-  FS 36440
-  Gloss White
-  Corroguard (aluminum paint)

The 8th Tactical Fighter Wing was activated at George AFB, California on 18 June 1964, equipped with brand new F-4Cs. The wing trained on the Phantom at George AFB, participating in various exercises before moving to Ubon Royal Thai Air Force Base, Thailand in September 1965, completing the move by December. This aircraft is *somewhat* speculative, but its later fame in the hands of Col. Robin Olds with the 8th TFW (see fundekals sheets FD48032 and FD32011) made it hard not to include it. Colors and markings during this period were remarkably consistent, so we feel sure this is how 63-7680 looked early in her training and combat career with the 8th TFW.



*Note: Decals "A" are left and right handed

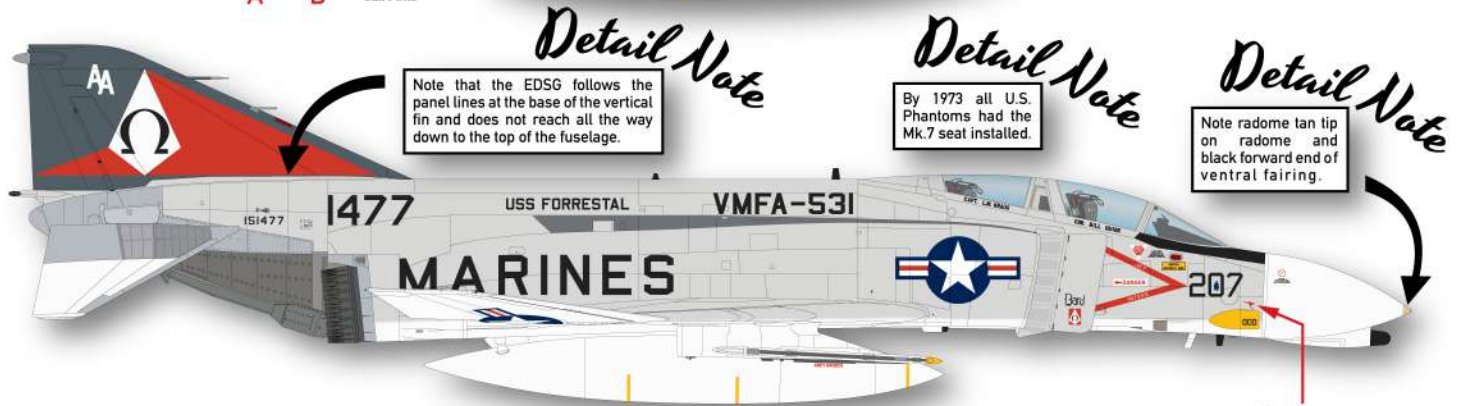
An Interesting Shot...



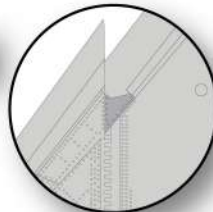
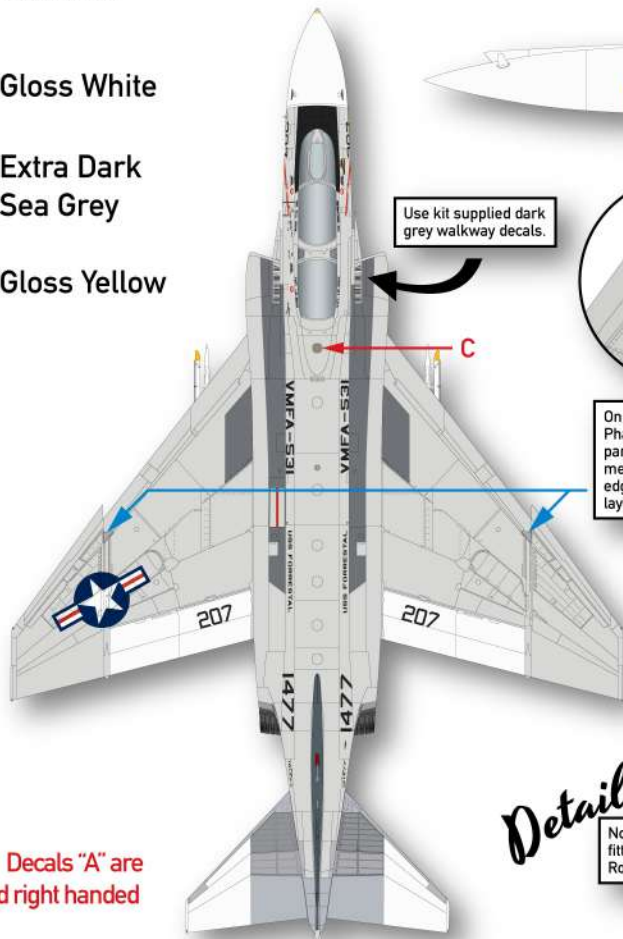
Fündekals collection

Here's a really fascinating shot of some early F-4Cs, fired up and about ready to taxi (note the anti-collision beacons on the vertical fin leading edges lit up). They were assigned to the 12th TFW at MacDill AFB, Florida, circa 1964. Two "triple" serials side by side: 63-7444 deployed to SEA with the 12th TFW, and was hit by ground fire over Laos on 5 December 1969. Her crew ejected safely, but one was KIA before rescue crews could arrive. Her triple sister, 63-7555 also went to war with the 12th, then went on to a long and distinguished career with the 15th TFW at MacDill, the 366th TFW at Da Nang, the 475th TFW at Misawa, the 4453 CCTW at Davis-Monthan, the 355th TFW at Davis-Monthan, the 58th TFW at Luke, the 35th TFW at George, the 159th TFG, Louisiana ANG, and finally the 114 TFS, Oregon ANG. She is currently on display at the Yankee Air Museum at Willow Run Airport near Detroit.

Things to note in the photo are the early McDonnell style 370-gallon wing tanks, the blackout shade in the aft canopy, the absolutely standard early TAC markings with full McDonnell style stencil data, and the early style horizontal stabilators. Interestingly, the third jet down the line, 63-7462, seems to have the earlier style forward location for the TAC lightning bolt motif as seen on the borrowed F-4Bs. '444 is further up the line, yet hers is in the later location. We know that the lightning bolt motif was permanently eliminated somewhere between 64-0713 and 64-0735, but we have no explanation for the earlier position on '462.



-  FS 16440
-  Gloss White
-  Extra Dark Sea Grey
-  Gloss Yellow



On many 'hard wing' Phantoms this small panel was left in natural metal. It is the leading edge flap boundary layer control exhaust.



Detail Note
No outboard fuel tanks or pylons fitted during the 1973 HMS Ark Royal cross-deck deployment.

*Note: Decals "A" are left and right handed

The F-4B and the Almost-Was International Incident!

F-4B 151477 secured to the deck of HMS Ark Royal as she maneuvers into the tight quarters of Grand Harbor. Note the brown craft paper covering her insignia and "USS FORRESTAL" lettering on her flanks.



Marine Fighter Squadron 531, the "Grey Ghosts," transitioned to the then brand new F4H-1 Phantom II at NAS Oceana, Virginia in July 1962. The unit soon moved to its permanent home base of MCAS Cherry Point, North Carolina, and began flying combat operations from Da Nang, Vietnam in 1965. It continued operating the F-4B through 1975, when it upgraded to the F-4N, before finally relinquishing its Phantoms for FA-18As in 1982.

In 1971, The Maltese elected the Malta Labour Party to power. It immediately abandoned Malta's long standing pro-western policies, eventually joining the Non-Aligned Movement in 1973. Malta became friendly with several radical Arab states, including Libya, and developed stronger ties with the USSR. Malta's historic ties with the UK ensured that the Royal Navy retained the right to use Maltese port facilities in the early 1970s, but

relations with the U.S. had turned decidedly chilly. The revised Defense Agreement of 1972 made it clear that Maltese bases could only be used by British forces, and that American and other NATO forces were not welcome.

In early 1973 several F-4Bs of VMF-531 aboard the USS Forrestal participated in a cross-deck exchange with 892 Squadron of the Royal Navy aboard HMS Ark Royal, both then on a Mediterranean cruise. While aboard the Ark, F-4B 151477 experienced some maintenance problems that took some time to rectify. During her down time, HMS Ark Royal was scheduled to put into port at Grand Harbor in Valetta, Malta.

Malta's soured relations with the U.S. presented 892 Squadron with a thorny problem. The F-4B was unable to be struck below deck on the Ark because her aircraft lifts were too small to



151477's plane captain was Dan Bard, hence the name above the 892 Squadron zap on the right hand intake ramp.

accommodate the F-4B. The RN's Phantom FG.1s had a different radome/radar storage system, and their fuel vent mast below the rudder was shorter than on American Phantoms for this very reason. Since she couldn't be placed out of sight, 892's clever maintainers simply tried to make her blend in with their own Phantoms. They repainted her entire vertical fin in Extra Dark Sea Grey, and adorned it with full 892 Squadron markings. Her U.S. Carrier Air Wing "AA" code was applied in small white letters in place of the Ark Royal's "R". To make the disguise a bit more complete, prior to putting in at Grand Harbor in Valetta, her national insignias and "USS FORRESTAL" wording were covered over with craft paper. We're not sure who might have been fooled by this ruse, since the word "MARINES" and "VMF-531" were still readily visible to anyone who cared to look!



Note the medium grey aft end of the RHAW bullet fairing on the trailing edge of the vertical fin, the black forward fairing on the fairing under the radome, and the tan tip to the radome itself.

Various shots of 151477 aboard Ark Royal. Items to note are the dark grey walkways (use the Academy F-4B kit decals), the "zaps" on the right hand intake ramp and inside the "O" of her "207" modex. The latter appears to us to be a VF-142 "Ghost rider" motif - which might make sense, since both squadrons had a similar mascot. Her ACS intake fairings as well as the forward end of the LAU-7 Sidewinder rails were yellow. She exhibited a relatively clean appearance otherwise, though it does appear she has some corrosion control touchup paint on the right lower outer wing area (see directly below).





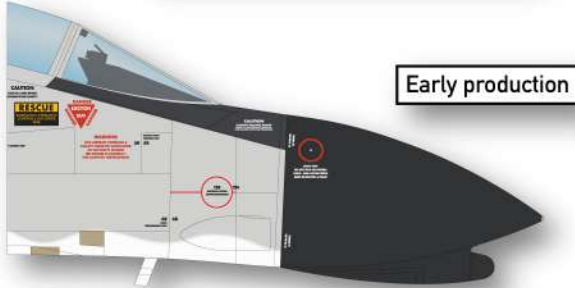
151477 "hidden" among her 892 Squadron cousins aboard the Ark while in port in Grand Harbor. Note the craft paper covering some of her U.S. markings, but oddly, not all of them.

Above and right: AA 207 was eventually repaired and prepared for launch back to her home base aboard USS Forrestal. She is seen here being towed into position and then bridled to the waist catapult on the Ark Royal. The catapult on the Ark was always marginal at best for an aircraft the size of a Phantom, but the Brits made it work! Royal Navy FG.1s had a double extension oleo nose gear strut to give them a higher angle of attack on launch, something no U.S. Phantom had, so launching from the Ark must have been exciting!



Left: Home at last! F-4B 151477 is seen back among her own kind aboard USS Forrestal on 6 March 1973, her sojourn ended. There were apparently no lasting repercussions in Malta-U.S. relations due to her presence aboard the Ark Royal.

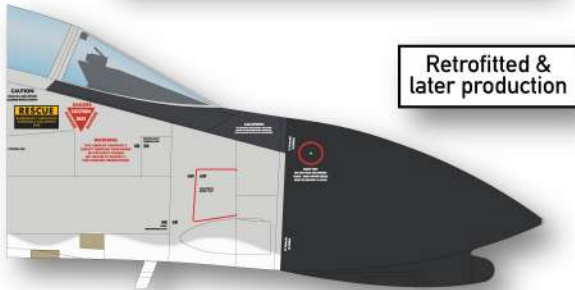
KY-28 Secure Voice System



Early production

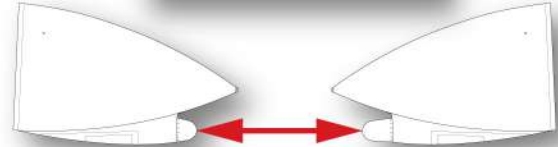
Detail Note

Early production F-4Bs and Cs lacked the KY-28 secure voice system. They had a circular panel (Panel 124) on the right side of the nose. When the KY-28 system was installed, the trapezoidal panel (Panel 629) replaced it. Aircraft produced after approximately mid-1967 had the KY-28 system installed on the production line, and most in-service aircraft had it retrofitted.



Retrofitted & later production

RHAW Radome Mods



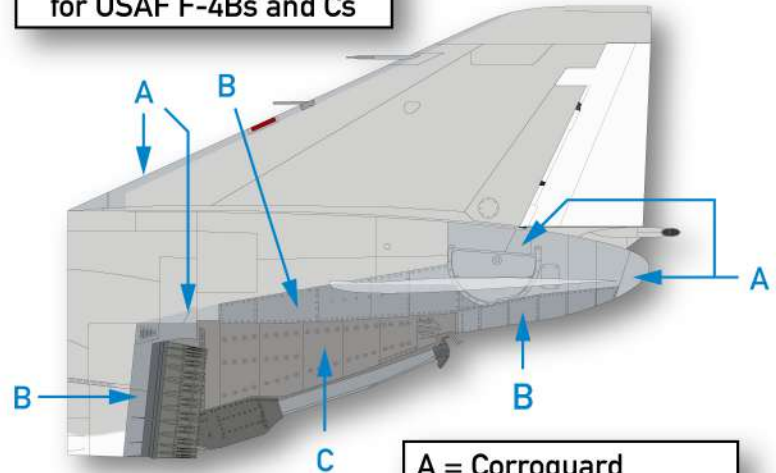
As originally produced, F-4Bs and Cs had the short hemispheric fairing on the forward end of theIRST fairing below the radome. This fairing gave the aircraft an "overbite" appearance. When RHAW gear was installed, a longer, more conical fairing was fitted. The later style is what modelers consider "standard" on the F-4B/N and F-4C/D. The USAF and USN used different RHAW equipment, but the fairings were identical.

Detail Note

We see very few models of short nosed Phantoms that show the metal cap on the tip of the radome, yet it was there on every single one of them in service! Here's a close up shot for you!



Aft Fuselage Finish Details for USAF F-4Bs and Cs



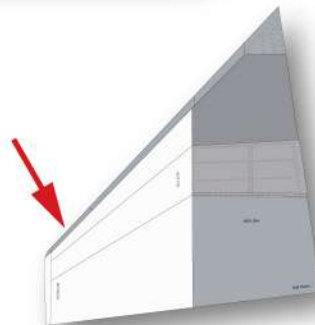
A = Corroguard
B = Dark Natural Metal
C = Titanium

A shout-out to our friends at Hypersonic Models (www.hypersonicmodels.com), who produce a superb range of 1/48 F-4 accessories, including the Martin Baker Mk.H5 seats and McDonnell style 370-gallon wing tanks that you will need for this project. Arigato gozaimasu!

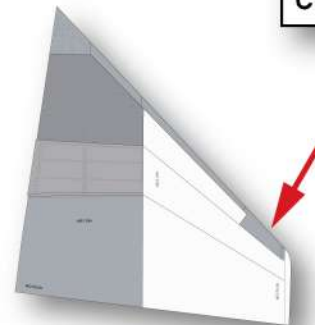
Horizontal stabilator changes

Detail Note

The original production horizontal stabilator lacked the now familiar extra reinforcement panel at the outboard leading edge. As produced, most early F-4Bs and F-4Cs had horizontal stabilators that looked like the one on the left. Sometime during 1965-66 it appears that the reinforcement panel was added on the production line. In-service aircraft continued flying with the original style for quite some time, and unless they developed fatigue cracks or received battle damage, they were left alone until the aircraft went through major depot level overhaul. If the stabilators required repair, both stabs plus the center carry-through structure on which they pivot were replaced as a complete unit. Repairs were conducted at depot level.



Early production



Late production



THANKS TO PHELLOW PHANTOM PHANATICS
SCOTT WILSON AND CHRIS MAYER PHOR
THEIR UNWAVERING SUPPORT AND EXPERTISE
IN THE RESEARCH AND DEVELOPMENT
OF THIS PROJECT!

SPOOK ON GUYS!

LATE BREAKING
NEWS!!

JUST AS WE WERE GOING TO PRESS ON THIS
PROJECT, TAMIYA HAS SHOCKED EVERYONE
WITH AN ANNOUNCEMENT OF A BRAND
NEW 1:48 F-4B KIT! THE DECALS
SHOULD WORK FINE ON IT, BUT WOW!