

F-4B/N, F-100A, or RF-4B Airframe Backdate

Cutting Edge

MODELWORKS

For the Hasegawa NEW TOOL (engraved panel lines)
F-4J OR the new Hasegawa RF-4B kits



General Notes:

- This is a complicated and sophisticated conversion set and MUST NOT be attempted by casual modelers. It requires cutting the existing model kit as well as fitting resin parts and sanding/trimming various parts. If this is too much for you, please return it for refund rather than drive yourself nuts or screw up an expensive model kit and conversions. We won't tell anybody!
- Your Cutting Edge set provides the parts needed to convert the NEW TOOL (engraved panel lines) Hasegawa F-4J kit back to a F-4B, F-4N or USAF F-110A, or converting the new Hasegawa RF-4B kit back to the early (and MUCH more common) "thin wing" RF-4B. The F-110A was essentially a F-4B loaned to the USAF, so follow all instructions for the F-4B if you're building a F-110A. DO NOT start with a Hasegawa F-4S, as that kit has leading slats, which were NOT applied to any F-4Bs or F-4Ns! This set will NOT work with the Monogram/Revell F-4C/D or any other manufacturer's kits, and is NOT intended to be used on the old Hasegawa F-4J kit with the raised panel lines.
- This is a complicated and sophisticated set, so BE SURE to read and understand the instructions before you start!
- CERTAIN PARTS ARE DELICATE! Please be careful with the slender parts. Our special strong gray resin will stand up to far rougher handling than the standard tan resin used by most companies.
- Dry fit all parts first. Measure twice and cut once!
- Use super glue (cyanoacrylate) for resin parts.

CONSTRUCTION

F-4B and F-4N Configuration Notes

1. General Airframe Configuration (Navy)

a. Radome. The F-4B used the early radome shape with the prominent IR sensor fairing below the nose. All F-4Bs and F-4Ns had this style radome. As part of the AN/APR-32 system installation, the IR sensor fairing was modified by the addition of a large "horn" antenna on the bottom.

c. Cockpit. Cutting Edge is in the process of preparing super detailed F-4B and F-4N cockpit sets. The Hasegawa NEW TOOL F-4J cockpit is not too bad for a kit cockpit, however. The F-4B was built with the Martin Baker MK-H5 ejection seats, available separately from Cutting Edge. The Navy's changeover to the Martin Baker MK-H7 ejection seats was not complete until 1971, so the F-4B carried the H5 for the vast bulk of its time in Vietnam. The F-4N carried the H7 seat for most of its career.

2. Initial Production Configuration. Although this section could go on for pages and pages, we will limit this description to a few basic elements. F-4Bs up through Block 25 (in early 1966) were manufactured with the UNSLOTTED stabilizers. Their flaps did not droop as on later versions, and the main landing gear was of the slightly skinnier configuration WITHOUT the bulged fairing on the top wing directly over the MLG attachment point.

3. Mid-life Airframe Upgrade.

a. Approximately in the middle of F-4B production a series of improvements resulting from fleet experience were implemented on the production line.

b. These improvements included the substitution of SLOTTED stabilizers, drooped flaps (as on all subsequent Phantoms, including the Air Force versions), and a major landing gear upgrade.

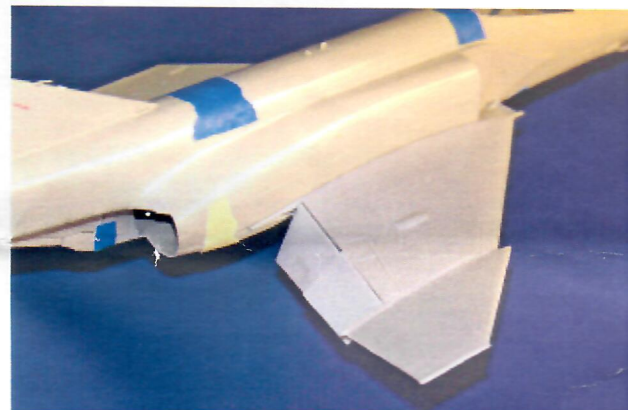
c. The upgraded main landing gear struts were beefier and required a hole to be cut in the wing top skin to accommodate the beefier attachment point. This hole was covered with a fairly primitive bulged cover directly over the attachment point as portrayed in our resin wing tops. Please note especially that the fairing does not "fair" into the wing top surface particularly well! This is modeled correctly on our parts, so don't go back and try to smooth it into the wing! This fairing plate was almost primitive in its attachment to the top wing, although I've seen several museum Phantoms with so many coats of paint that it begins to almost look "faired in."

d. These improvements were implemented on the production line from Block 25, and retrofitted to most Block 25 and earlier aircraft as time and circumstances permitted. Aircraft in this configuration were first delivered to the Navy in April 1966, but of course not all aircraft were modified, and even those that were, were not necessarily quickly modified. However, by late 1971 or early 1972 it would have been rare to see a F-4B without these modifications, except perhaps in RAGs or Marine reserve units.

4. ECM.

a. What follows is not a full description of the various ECM suites carried by the F-4B/N over the years but rather a simplified guide for modelers' quick reference to model parts.

b. Initially the F-4B had the simple IR sensor fairing under the nose radome and no RHAW antennas on the fin cap or under the wing.



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c. Beginning in 1966, some F-4Bs were fitted with the AN/APR-32 RHAW, which included a horn antenna on the leading edge of the fin cap and the horn-shaped addition to the bottom of the standard IR seeker fairing fitted under the radome. (If you are modeling an earlier F-4B without this "horn" antenna, just cut it off our resin radome-this is very simple to do.) These antenna fairings have frequently been misidentified as a part of the AN/APR-30 system in many publications, but the APR-30 was installed in the F-4G (the original, modified USN F-4Bs) only. The APR-32 leading edge antenna was probably initially applied alone, without a fin cap trailing edge antenna. Photos of this configuration are rare, to say the least. The shape of this APR-32 leading edge antenna is pretty complex, and we've put quite a bit of time into getting it right for you.

d. The AN/APR-25 "flat football" style trailing edge antenna was soon installed on most F-4Bs. The trailing edge antenna has also been frequently misidentified as part of the AN/APR-30 system. If the leading edge AN/APR-32 antenna was already installed, it was normally not removed and remained on the jet until the end of its service life (even if it was later converted to F-4N configuration).

e. An irrefutable identification point of the F-4B/N is the AN/ALQ-126 horn antennas with LONG raceways mounted on the upper shoulders of the engine air intakes of later aircraft. These antennas are the same as on the F-4J, and mounted in the same location, but due to cable routing issues the large external wiring raceways are MUCH longer, extending almost all the way back to the panel line that separates the intake from the main fuselage. "Wait! Dave! You're wrong! These long AN/ALQ-126 antennas were only on the F-4N, so they're an infallible identification point of the F-4N!" Ah, not so fast, grasshopper! In fact, this upgraded ECM was not specifically part of the F-4N upgrade program, per se, and some late F-4Bs are documented as receiving this ECM fit. Conversely, some early F-4Ns can be seen in photos without the AN/ALQ-126 fit. When the AN/ALQ-126 shoulder antennas were mounted, the four small AN/ALQ-126 antennas (included in the basic Hasegawa F-4J kit) were also mounted under the wing.

5. There are many sources for detailed information on the configuration of F-4s, and I urge you to seek them out if you're interested in this aspect of the aircraft. We do not have room here to give a complete history, and this is really not the right venue anyway. Enjoy your exploration!

Rear Fuselage Extension

1. Because the Hasegawa F-4J kit is designed for the slightly larger J79-GE-10 engine nozzles, the rear fuselage and lower wing must be extended slightly in length for the proper sizing for the earlier J79-GE-8 engines carried in the F-4B and F-4N.

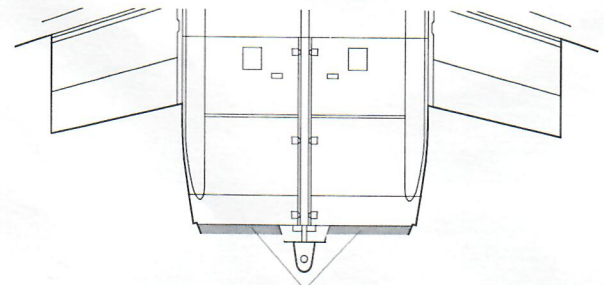
2. The fuselage resin extension parts are very straightforward to apply. Simply remove them from the casting sprue and glue in place per the photos.

Lower Wing Extension

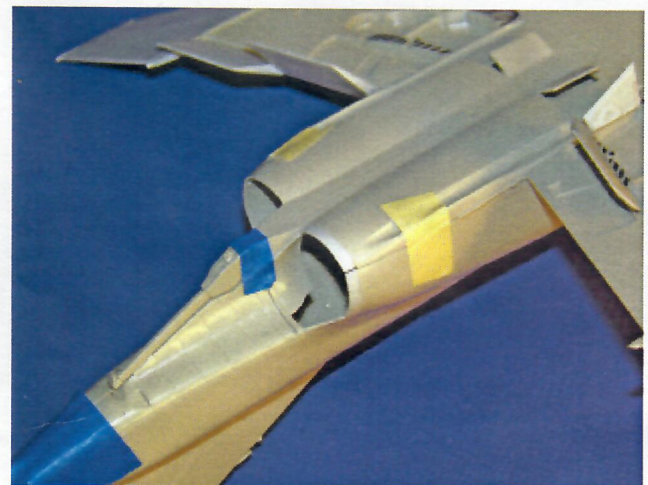
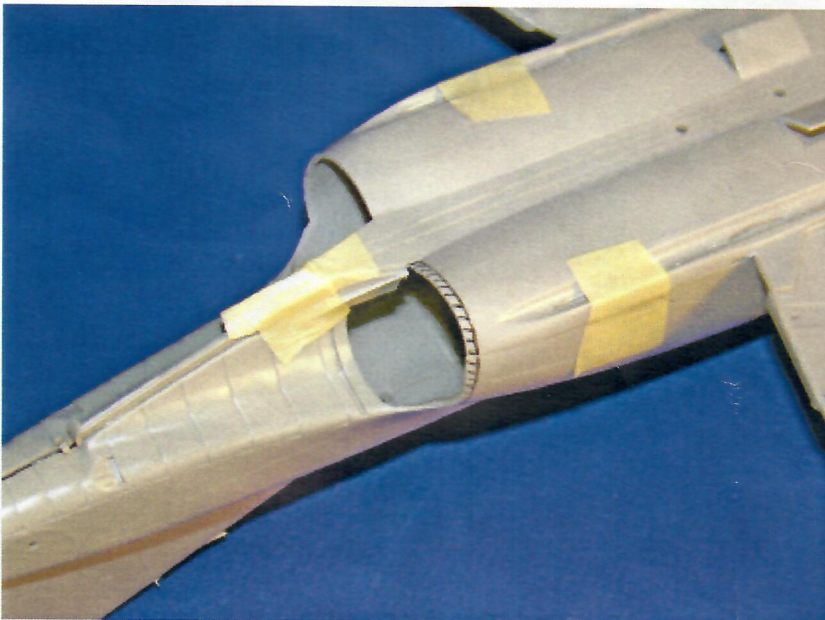
1. The lower wing extensions are no more complicated than the fuselage extensions.

2. Mark the Hasegawa kit panel lines along which you will make the four simple cuts required to install the resin extensions. The photos and drawings clearly show which panel lines to mark. Be sure to cut on the INSIDE of these marks and DO NOT remove too much styrene. MAKE SURE you understand how this works BEFORE you start cutting plastic.

3. Glue the extension parts in place.



Remove shaded areas



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Slotted Stabilators

1. Late F-4Bs and all F-4Ns had slotted stabilators. As originally built, up through Block 25, the F-4B had Unslotted Stabilators, and these are included in the Hasegawa F-4J kit and may be used as-is. Note that Block 26 and higher F-4Bs left the factory with Slotted Stabilators. However, late in its service life nearly all Block 25 and earlier F-4Bs received Slotted Stabilators to significantly reduce landing approach speeds—a very important issue during carrier landings. All F-4Ns had the Slotted Stabilators (as did, of course, all F-4Js).

2. If you're modeling a B/N with the Unslotted Stabilators, you'll need to remove the existing Hasegawa kit stabilators and glue the resin Unslotted Stabilators in their place. I recommend you use 5-Minute Epoxy for this procedure rather than superglue.

"Flat" Inboard Wing Tops

1. Our conversion set provides you with the parts necessary to create the "flat" wing tops as well as the most difficult-to-make underside parts. The Hasegawa F-4J kit has the bulged landing gear bay area on both the top and bottom of the wing (correct for all F-4Cs and later), so our resin parts will "delete" these raised areas.

2. We provide you with completely new "flat" inboard upper wing sections; just be careful when you separate the parts from the casting sprues and you'll be OK here. Our resin parts are complete replacements for the Hasegawa wing tops.

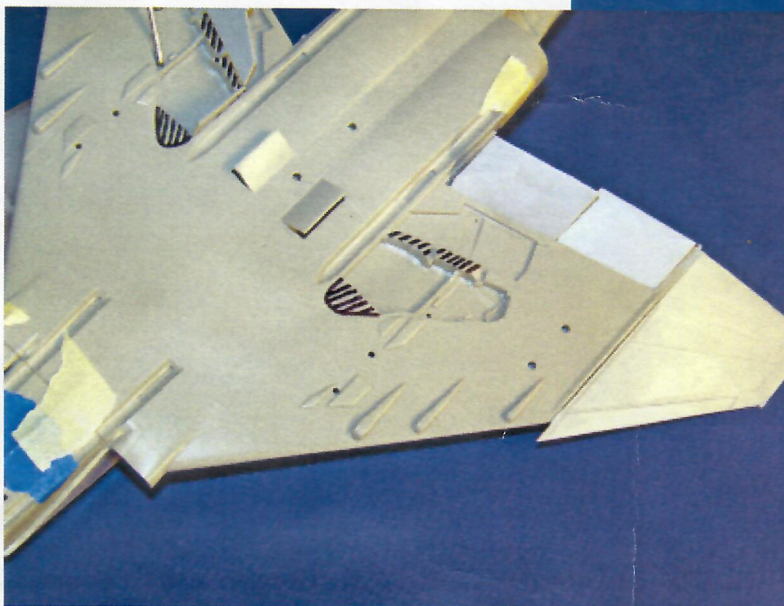
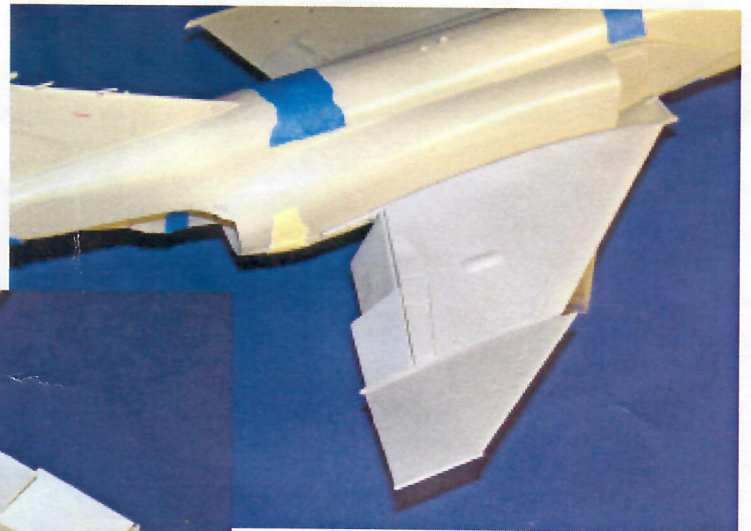
3. The curved fairings on the wing tops directly above the main landing gear attachment points were installed on F-4Bs starting in 1966 and certainly were carried on all F-4Ns. If you're modeling one of the early F-4Bs without this humped fairing over the MLG attachment point, you'll have to sand the bump off our resin wing. This is pretty trivial, and much easier than trying to get a separately molded resin fairing placed in the exact position and alignment on the wing top. We took care of the difficult part; it's easy for you to undo if you need to. Note the discussion above in the Configuration Notes section.

"Flat" Lower Wing Modifications

1. Be careful when you're working on this section, as inadequate preparation will cause you a bunch 'o extra work later!

2. We've provided you with "flat" main landing gear doors and speed brakes, which are direct replacements for the Hasegawa kit parts.

3. The simplest way to create the "flat" area on the bottom of the wing surfaces is to scrape the "bulged" areas down in the areas we've shown in black cross-hatching in our photos. We looked at several ways to remove this bulge, but it is easier and makes more sense to cut down the kit (the plastic is plenty thick enough) than to cut out a section of the lower wing and replace it with some sort of resin insert. Although you'll want to be careful, this is actually a pretty easy task. We've taken care of the major problem areas; you are well able to fix this one small area yourself. If it's too much for you—seriously—please return the set to Meteor for a refund.



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ECM Alternatives

1. Select the correct IR sensor fairing for the aircraft you're modeling. We've cast the prominent AN/APR-32 "horn" antenna on the bottom of the IR sensor (oh, and by the way, we corrected the shape discrepancies on the very old Hasegawa F-4B/N kit radome). If you use our resin antenna with the "horn," be sure to remove the small triangular casting plate (the cross-hatched area) at the aft end of the "horn." DO NOT remove the thin plate between the horn and the main IR sensor fairing! This portion was actually a part of the real antenna. It's very easy to cut the horn off the bottom and sand the surface smooth; again, if this is too much for you to handle, PLEASE return this kit to Meteor for a refund.

2. If your aircraft had them, CAREFULLY attach the long AN/ALQ-126 antennas to the shoulders of the engine air intakes. Look carefully at the photo; we've precisely aligned the antenna and raceway (cast as one part) on our sample model. These antennas will fit both the Hasegawa kit air intakes and the Cutting Edge SIGNATURE Series Seamless Intake (set CEC48476, available separately from Meteor Productions).

3. If your aircraft had the AN/ALQ-126 shoulder antennas, it will also have the four small resin AN/ALQ-126 antennas on the lower wing. Use the antennas included in the Hasegawa F-4J kit.

4. If your aircraft had it, use the resin fin cap with the AN/APR-32 horn antenna on the leading edge. If you're modeling an aircraft without the APR-32 antenna, keep the Hasegawa F-4J fin cap. If you're modeling an early jet without RHAW, it's extremely easy to cut the football antenna off the trailing edge of the Hasegawa kit fin cap.

Landing Gear, Flaps, & Speed Brakes

1. The F-4B was built with much narrower tires and rims than the rest of the Phantom line from the F-4C on. These smaller wheels (which are why the wings did not require the huge bulges to accommodate the fatter tires of later variants) were also used on the F-4Ns. We provide you with new resin main wheels appropriately sized according to a MCAIR technical document I have in my collection.

3. Technically, the main landing gear struts were a bit thinner and the yoke area was slightly different on the F-4B/N compared to the struts Hasegawa provides in their kits. There was not that much difference and because you need the strength of the original Hasegawa parts we decided to not provide different struts. If you're a stickler, you're on your own; however, on my own kits I've replaced the Hasegawa landing gear struts with struts from the Monogram F-4 (F-4C/D or F-4J) as the detail on the Monogram (Revell these days) is much better. You may need to slightly reduce the length of the Hasegawa main gear strut axles when fitting the resin wheels.

4. Please don't get caught up in the "bulged wheels" crap regarding Navy F-4s! When aboard ship, the main tires were inflated to 300 psi (I forget what the nose tire inflation was, but it was equivalent) and the nosewheels had no bulge! The main tires bulged an extremely small amount (when shipboard) and this is incorporated in our resin wheels. Also note that when ashore the tire pressures were reduced considerably, which is why you see Air Force Phantom tires with a bit of bulge in the main wheels (but that is a different discussion).

5. We provide you with separate inboard and outboard flaps. You may glue them in any position you wish.

The remainder of the kit is assembled per the instructions in the Hasegawa kit instructions.

RF-4B Issues

The Hasegawa RF-4B kit is converted using the steps as outlined above. Check your photos of the original aircraft you're modeling to ensure the antenna fit, etc., is appropriate for your bird. Otherwise, the construction steps are the same.

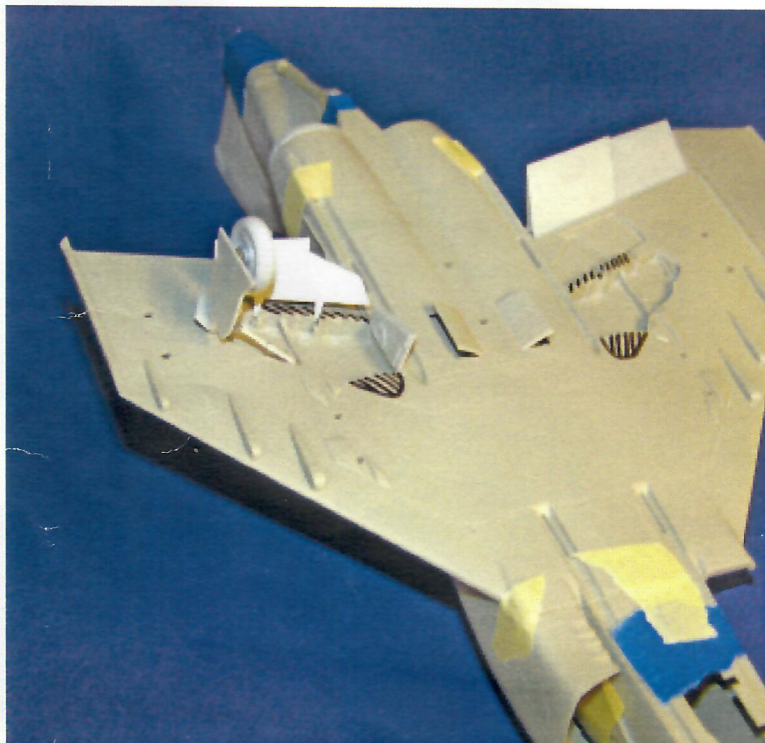
Other Related Sets Available from Meteor Productions:

BlackMagic™ Precut Painting Masks

CEBM48342 F-4B/C/D/E/F/G/J/N/S Canopy & Wheel Hub Masks for Hasegawa
CEBM48577 F-4 Fuselage Top & Wing Walkway Masks for all F-4 kits

Cutting Edge Resin Conversion/Correction Sets

CEC48167 Martin Baker H5 Ejection Seats (2) WITH belts for early F-4s
CEC48476 F-4J/S/RF-4 Seamless Intakes for Hasegawa F-4J/S/RF-4 kits



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