

F-4EJ改 KAI PHANTOM II™

Go for it!! 301sq

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実機 諸元 / Real Aircraft Specifications

日本 航空自衛隊

F-4EJ改 ファントムII

F-4は、米マクダネル社によって開発された、アメリカ海軍初の全天候型双発艦上戦闘機で、その使い勝手の良さ大きな兵装搭載量を特徴としている。後にあらゆるレベルでの長略に対応できる戦術的柔軟さを備えた陸上機(空軍型)として生まれ変わったF-4は、ベトナム戦争を経て、F-4シリーズ初の機関砲搭載モデルであるF-4Eへと進化した。1968年11月から部隊配備され、全1,378機生産されたE型は、そのうち428機は輸出型として世界各国へと配備され、独自の進化を遂げながら長きにわたって世界中で活躍した。

中でも日本においては、航空自衛隊最初の主力機F-86Fの老朽退役が始まることから、1966年(昭和41年)の第2次F-X(次期主力戦闘機計画)より導入検討を開始。1967年(昭和42年)10月よりの選定でマクダネル・ダグラス社のF-4Eを始めとする9機種の名が候補に挙げられた。1968年(昭和43年)7月の第二次調査結果までに、F-4E、CL-1010-2、ミラージュF1の三機種までに絞られたが、CL-1010-2は実機が存在しないこと、ミラージュF1は導入経験のない欧州機だったことから、同年11月、F-4Eの導入を決定。翌年の1969年(昭和44年)1月10日の国防会議でF-4E(104機)の導入を正式決定し、閣議了承を受けた。こうして日本向けに、F-4Eから対地攻撃能力や空中給油能力を除去、さらに、データリンクを載せて要撃戦闘機タイプとしてF-4EJが誕生。以降、F-15Jが導入されるまで主力戦闘機として防空任務を担当した。

日本へのF-4E最初の導入は、米マクダネル社セントルイス工場製の2機を輸入。続いて12機分は部品のまま輸入し、三菱重工で組み立てるノックダウン生産が行われた。それ以降は同社によるライセンス生産が決定。これにより、世界で唯一日本だけがF-4のライセンス生産を許可されたこととなる。F-4EJは1981年(昭和56年)に最終の140号機を納入し生産完了。その後、国産機中90機を航空自衛隊の防空能力の向上・近代化の一環としてF-4EJの改修に着手。F-4EJ改として生まれ変わり、同年から6年間、試改修・実用試験を行い、量産改修された。主な改修箇所は、レーダー、FCS(火器管制システム)の近代化、航法、通信能力の向上、搭載ミサイルの近代化、爆撃機能の向上など、アビオニクス類が中心となっている。F-4EJとの外見上の差異は、胴体の上についているTACAN(戦術航法装置)のアンテナがVHF/UHF無線機用に大型化され、両主翼端や垂直尾翼上端に新型RWR(レーダー警報受信機)J/APR-6のアンテナが付き、コックピットの光学照準装置がHUDに変わった等が挙げられる。なお、J/APR-6のアンテナ追加により尾翼上端の尾灯に死角ができたため、機体尾端のポップアップドアにも尾灯が追加された点も見逃せない。

日本の戦闘機部隊で最後までF-4を運用していた第301飛行隊は、2020年内にその運用を終了し、F-35Aへの更新とともに三沢基地に移駐した。それに先立ち、2019年には退役記念塗装機“Go for it!! 301sq”を制作。使用された315号機は機体番号にちなんで「最期」「最高」の意味が込められた。2020年、同機は同飛行隊の436号機を使用したもう1機の記念塗装機“ファントムフォーエバー 2020”とともに最後のフライトを行い、その長い活躍の歴史に幕を閉じた。

SWSキットではさらなる進化を遂げたロングノーズタイプのF-4シリーズを完全網羅すべく、米空軍F-4Eから日本向けに改修されたF-4EJ改を徹底取材に基づき詳細に再現。後に続く各型との違いはもとより、ベースとなったF-4EJとの細かな差異まで抜かりなし。世界中に配備され、その国ごとに独自の進化を遂げた傑作戦闘攻撃機をSWSでコレクションする喜び。ショートノーズタイプと合わせて、じっくりとご堪能ください。

Japan Air Self-Defense Force

F-4EJ KAI Phantom II

The F-4 is a carrier-based all-weather twin-engine fighter jet developed by the American company McDonnell, the first of its kind to be developed for the U.S. Navy. It is famous for being an easy-to-fly aircraft and known for its high weapon carriage capacity. Later, the F-4 was reborn as a land-based aircraft (for the Air Force) with the tactical flexibility to withstand a variety of levels of attack. After its participation in the Vietnam War, the F-4 evolved to the F-4E, the first F-4 variation with fixed cannons, and it was deployed for service starting from November 1968. In total 1,378 F-4Es were produced. Of those, 428 were deployed overseas to countries all over the world as export fighters. The aircraft was active worldwide for long time, evolving to meet the unique needs of each location.

In Japan, when the F-86F, the first main aircraft of the Japanese Air Self-Defense Force (JASDF), was reaching retirement from service, discussions for the introduction of the second “F-X” (plan for the next main aircraft) began in 1966. In October 1967, nine aircraft including the McDonnell Douglas F-4E Phantom II were considered as possibilities. In July 1968, the selection was narrowed down to the F-4E, the CL-1010-2, and the Mirage F1 before the secondary selection process results. However, due to the fact that there were no pre-existing CL-1010-2 aircraft and the Mirage F1 was a European aircraft, which the JASDF had no experience with integrating, the F-4E was chosen in November of the same year. On January 10, 1969, the acquisition of 104 F-4E aircraft was officially announced at the National Defense Council and was approved by the cabinet. The F-4E was modified to fit the JASDF's needs, removing the ground attack and aerial refueling functions. A data link was added to make the aircraft an interceptor. This modified F-4E became the “F-4EJ” which would be the main fighter of the JASDF until the adaptation of the F-15J.

The first F-4Es to be brought into Japan were two imported aircraft produced at the McDonnell factory in St. Louis. After this, 12 whole aircraft's worth of unassembled parts were imported into Japan and the knock-down kits were assembled at Mitsubishi Heavy Industries, Ltd. Following their assembly, Mitsubishi began licensed production. Japan is the only country worldwide to receive permission for licensed production of F-4 aircraft. The 140th F-4EJ was produced in 1981, completing the production run. Of those aircraft produced in Japan, 90 were later selected to be refurbished to improve their aerial defense performance for the JASDF and to update them to meet modern standards. Reborn as the F-4EJ Kai (“kai” meaning “modified”), after six years of revisions and prototype testing, the modifications were made to all the applicable aircraft. The modifications were mainly to the avionics, including the radar, FCS (fire-control system) modernization, navigation, communication system improvement, missile modernization, bombing system improvement and more. The visible outward differences from the F-4EJ included the enlarged TACAN (tactical air navigation system) antenna for VHF/UHF transmission, the J/APR-6 antennas for the new RWR (radar warning receivers) on the wing tips and fin tip, and the cockpit's optical sight changed to a HUD. Also, the J/APR-6 antennas caused a blind spot for the tail light at the tip of the tail, so an additional tail light was added to the tailcone pop-up door.

The 301st Squadron was the final Tactical Fighter Squadron of the Japan Air Self-Defense Force to actively use the F-4. The aircraft was retired from service in 2020, and the squadron was relocated to a different air base as they updated to the F-35A. The “Go for it!! 301sq” special commemorative scheme was created in 2019 in preparation for the aircraft's retirement. The aircraft's number “315” is a play on words in Japanese, to signify both “final days” and “the best.” In 2020, the aircraft embarked on its final flight with the squadron's other F-4, number 436, which had its own “Phantom Forever 2020” commemorative scheme. That flight marked the end of the F-4's long and distinguished era of service in the JASDF.

SWS kits strive to comprehensively cover the evolution of the long-nose F-4 Phantom II aircraft, and the Zoukei-Mura development team researched the F-4EJ Kai extensively to replicate in detail all of the adjustments made to the USAF F-4E to fit the needs of the JASDF. Not only are the differences between the following variations included, the differences from the F-4EJ are also faithfully replicated down to the smallest detail. There is nothing like the joy of collecting the SWS kits displaying the unique evolution of this masterful aircraft as it varied for each country in which it served. Please enjoy the long-nose F-4 evolution along with the short-nose variations as well.



1/48 No.13

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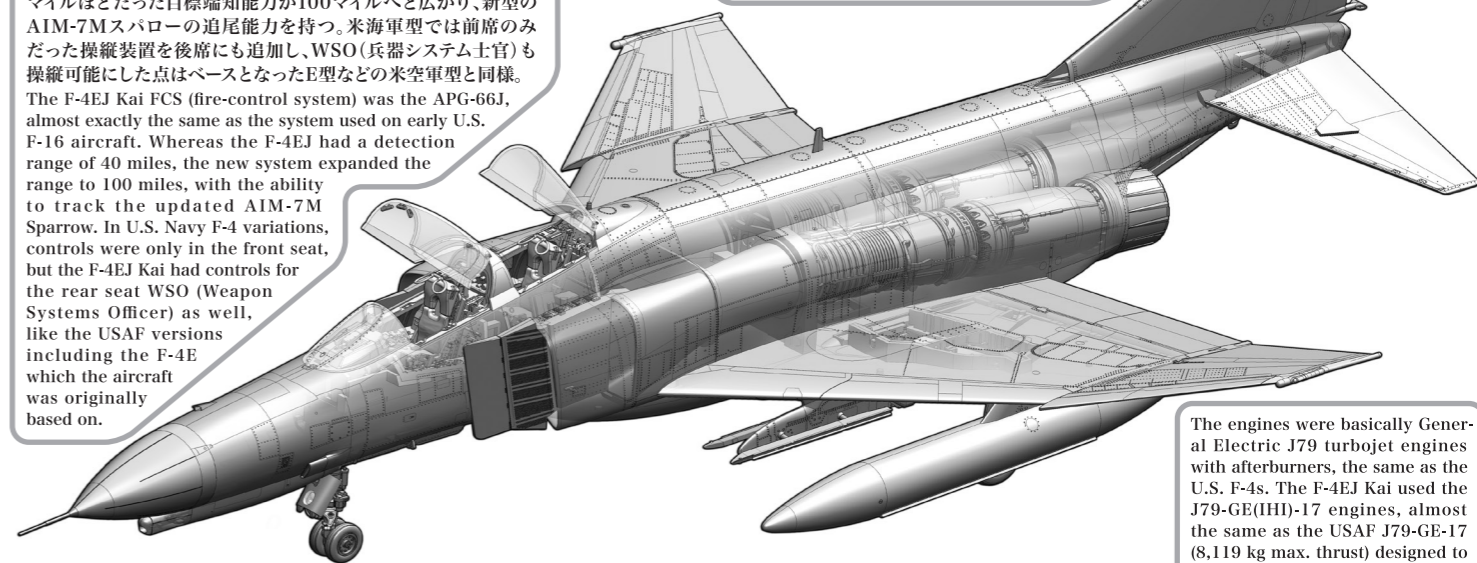
造形村・SWS
設計コンセプト
ZOUKEI-MURA SWS
Design Concept

説明書本文中にもSWSの設計コンセプトが書き込まれています。この項目がありましてご注目ください。The SWS Design Concepts can be found throughout this assembly manual. Please keep an eye out for headings such as the one above.

●コックピット / Cockpit

EJ改では、FCS(火器管制装置)は米軍機F-16の初期型が搭載していたものと同型のAPG-66Jに換装された。EJ型では40マイルほどだった目標端知能力が100マイルへと広がり、新型のAIM-7Mスパローの追尾能力を持つ。米海軍型では前席のみだった操縦装置を後席にも追加し、WSO(兵器システム士官)も操縦可能にした点はベースとなったE型などの米空軍型と同様。The F-4EJ Kai FCS (fire-control system) was the APG-66J, almost exactly the same as the system used on early U.S. F-16 aircraft. Whereas the F-4EJ had a detection range of 40 miles, the new system expanded the range to 100 miles, with the ability to track the updated AIM-7M Sparrow. In U.S. Navy F-4 variations, controls were only in the front seat, but the F-4EJ Kai had controls for the rear seat WSO (Weapon Systems Officer) as well, like the USAF versions including the F-4E which the aircraft was originally based on.

One 20mm M61A1 Vulcan cannon was mounted under the nose as a fixed armament. Other weapons could be equipped to the undercarriage missile bay and to the pylons under the wings.



The engines were basically General Electric J79 turbojet engines with afterburners, the same as the U.S. F-4s. The F-4EJ Kai used the J79-GE(IHI)-17 engines, almost the same as the USAF J79-GE-17 (8,119 kg max. thrust) designed to be started with a MXU-4/A gunpowder cartridge starter on frontline bases, while still maintaining the standards of the U.S. Navy's F-4J's J79-GE-10 (8,120 kg max. thrust). This SWS kit replicates the F-4EJ Kai's J79-GE(IHI)-17 engine in as few parts as possible while still maintaining the realistic dimensionality and abundant detail.

●F-4EJ改について / About the F-4EJ KAI

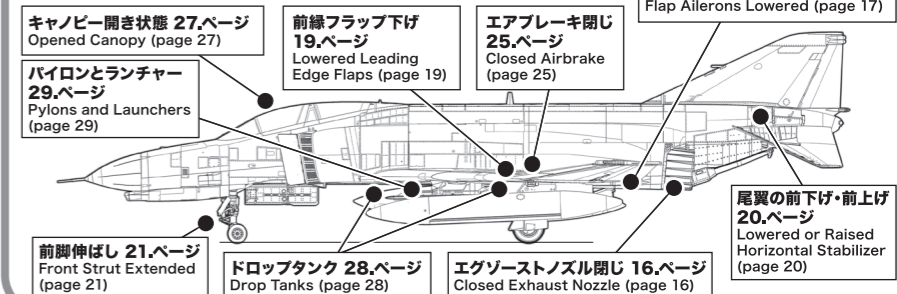
F-4EJ改は、日本向けに、米空軍のF-4Eから対地攻撃能力や空中給油能力を除去、さらに、データリンクを載せて要撃戦闘機タイプとして導入されたF-4EJの能力向上・近代化型である。主な改修点としてはレーダー、FCS(火器管制)システムの近代化、航法、通信能力の向上、搭載ミサイルの近代化、爆撃機能の向上が挙げられる。日本の戦闘機部隊で最後までF-4を運用していた第301飛行隊は、2020年内にその運用を終了し、F-35Aへの更新とともに三沢基地に移駐した。それに先立ち、2019年には退役記念塗装機“Go for it!! 301sq”を制作。使用された315号機は機体番号にちなんで「最期」「最高」の意味が込められた。2020年、同機は同飛行隊の436号機を使用したもう1機の記念塗装機“ファントムフォーエバー 2020”とともに最後のフライトを行い、その長い活躍の歴史に幕を閉じた。The F-4EJ was a modification of the USAF F-4E to fit the JASDF's needs, removing the ground attack function and aerial refueling. A data link was added to make the aircraft an interceptor. The “Kai” variation is a further modification to improve and modernize the F-4EJ. The modifications included the radar, FCS (fire-control system) modernization, navigation, communication system improvement, missile modernization, and bombing system improvement. The 301st Squadron was the final Tactical Fighter Squadron of the Japan Air Self-Defense Force to actively use the F-4. The aircraft was retired from service in 2020, and the squadron was relocated to a different air base as they updated to the F-35A. The “Go for it!! 301sq” special commemorative scheme was created in 2019 in preparation for the aircraft's retirement. The aircraft's number “315” is a play on words in Japanese, to signify both “final days” and “the best.” In 2020, the aircraft embarked on its final flight with the squadron's other F-4, number 436, which had its own “Phantom Forever 2020” commemorative scheme. That flight marked the end of the F-4's long and distinguished era of service in the JASDF.

●エンジン / Engines

エンジンは基本的に米軍機のF-4Eと同じくジェネラルエレクトリック製アフターバーナー付きターボジェットエンジン「J79」を採用。中でも、米海軍型が搭載したJ79-GE-10(最大推力8,120kg)と同規格ながら、前線基地での運用を考慮し、自力始動可能なMXU-4/A火薬カートリッジスターターが使用できる、米空軍E型が搭載したJ79-GE-17(最大推力8,119kg)とほぼ同型のJ79-GE(IHI)-17を搭載。SWSキットではEJ改の搭載したJ79-GE(IHI)-17を最小限のパーツ構成で立体的かつ密度感たっぷり再現。

フラップ・ダウンなどに挑戦! Try Out Different Positions!

各部の選択を組み合わせ、フラップ・ダウンなどの様々なF-4EJ改の状況を再現させてください。Recreate the F-4EJ Kai in a variety of positions by adjusting the flaps and other details.



詳しくは、各項目にて確認してください。
For details, see each paragraph.