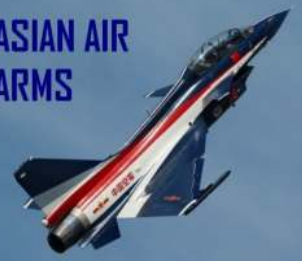




ASIAN AIR ARMS Newsletter 39

Issue No.1, 2024

ASIAN AIR
ARMS



Serving Asian Air Arm enthusiasts and modellers in 60 countries

Gulfstream in Japan



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Introduction & New Kit Releases - 2024

In keeping with our 'traditions' for the first newsletter of the New Year of 2024, I have decided to forego my usual musings for this edition and focus mainly on a brief coverage of some of the brand new or revised kit releases that we can look forward to during the forthcoming year. First and foremost, however I should like to extend a belated Happy New Year or Kong Hei Fat Choy to our readership!. This is, traditionally, the time when hobby companies first announce their new releases and 2024 is no exception with the likes of Airfix, Eduard, ICM and Kinetic providing an indication of what the modeller can look forward to. This short introduction is not intended to provide a comprehensive list of new arrivals, rather to focus on those that may be of interest to our readers in the short- to medium-term. I plan to make this news item, space permitting, a semi-regular feature of the newsletter. Some of those items listed here are already well-known; others are not, and I think it is also fair to say that fans of 1:48 scale kits will be the most pleased since these do appear to continue to dominate the marketplace right now. First up is Airfix, who have not produced as comprehensive a list of new releases as in previous years; They did, of course, surprise us last year with the release of a brand-new 1:48 scale kit of the Westland Sea King (AX11006) which is used by the Naval Air Arms of both India and Pakistan, and backed up this release with that of the Fairey Gannet AS.1/4 (AX11007), a review of which features in this newsletter. The 2024 release programme from Airfix promises little in the way of Asian Air Arm subjects, although a new-tool P-51D Mustang in 1:72 scale could be used to reproduce post-war examples from China, Indonesia and the Philippines amongst others. The excellent AFV Club Northrop F-5E Tiger II is set for an early re-release in 2024, under the Eduard banner. Eduard are planning a F-5E 'Freedom Tiger' Edition (EDK11182) in their popular 'Profipack' series, so you can expect the kit to come with some resin and photo-etched parts, and I note that the decal options include examples operated by the Royal Thai Air Force and both the North and South Vietnamese Air Forces. Eduard have also announced the first in a series of new-tool 1:72 P-51D Mustangs and 1:48 Mikoyan MiG-15s, and I have little doubt that future releases of both of these kits will include examples operated by Asian Air Arms. ICM have announced a new Sikorsky SH/MH-60 family of helicopters in 1:48 scale which will be welcomed by many, given the wide range of Air Arms that operate the various sub types, and Kinetic have promised new boxings of their ever popular 1:48 F-16 family every month during 2024 to celebrate the 50th Anniversary of the type's first flight in 1974. I feel sure that some of these re-releases will include Asian variants to compliment the recent KF-16U 'ROKAF' release (K48-153) and the forthcoming F-16V 'ROCAF' (K48-101) and F-16A/B Block 20 'ROCAF Anniversary' (K48-160) kits that were announced in late 2023. We are still waiting on news from Ukrainian kit manufacturer, Dora Wings, who were planning the long-awaited release of a newly tooled DHC-2 Beaver (DW48-2022D), which was previously operated by at least 10 Asian Air Arms, including Laos, Indonesia, South Korea and Taiwan. Turning once again to the smaller scale, GWH will no doubt add to their family of Mikoyan MiG-29 Fulcrums in 1:72 scale, and Platz are also planning an extensive release of their single-seat F-15J Eagle in a host of JASDF special schemes, such is the popularity of the kit. Aurora, a name that is new to me, have announced the forthcoming release of a 1:72 Nanchang CJ-6 basic trainer, and Modelsvit will also re-release their Sukhoi Su-17/22 (MV72058) with new parts/decals during 2024. Long term Czech kit manufacturer, Kovořávodny Prostějov, have also announced a new-tool kit of the LET 410 Turbolet twin-engined 'commuter' airliner. A military version of this kit (KPM0437) is also promised with the prototype previously operated by Bangladesh and Indonesia. Finally, for now, Valom are planning to release a long-awaited 1:72 scale kit of the late model Avro Anson C.19 (VAL72164), which was operated by the post-war Royal Afghan Air Force. I have little doubt that there will be more surprise announcements throughout the year so there is plenty to keep those modellers among you busy for another year.

A brief word on other Asian Air Arm SIG business. We have been very encouraged with the offer of articles from contributors new and old during this first Quarter of 2024 so I will review the current plan for the year and investigate the feasibility of increasing the frequency of publication for the newsletter. As of now, we will stick to a Quarterly but there may be scope, if we continue to attract new contributions, to introduce at least one more edition throughout the year.

Now an apology, and this concerns the Asian Air Arms Website. As some of you will be aware, since we discussed this topic during Scale Model World 2023, it is the one area of concern for me right now. No-one has made a specific complaint but there have been some observations in recent months that the site needs some serious updating if it is to remain relevant. I know that many of you rely on the regular discussion that appears on our very healthy Facebook pages, and the frequent posting of images which all prove extremely useful for research, but many others prefer, or rely on, the information posted on our website, since you may not be a regular Facebook user. Greg and I, within the means and capabilities afforded to us by our full-time jobs, will now endeavour over the coming months to update the website, but in the meantime, I apologise to those that may have expected more from this potentially valuable resource. In addition, if there is anyone who would be willing to help us with an update of the website, Greg and I would be very happy to hear from you.

In closing I would also like to include a short notification regarding a new Special Interest Group that may be of interest to some of you. The founder of this new Group is our very own Brian Griffin, former Asian Air Arms SIG Leader, who has now established an 'Airborne Police and Security Forces Special Interest Group'. Brian has now met the basic criteria to establish the new Group, but is obviously keen to generate as much interest as possible for the new SIG since he is considering a display at Scale Model World 2024 at Telford in November. Anyone interested in joining should contact Brian direct at brianmgriffin1@outlook.com.

Mark ATTRILL – February 2024

More news overleaf...

Hot off the Presses, and by the Skin of his Teeth...



David Thomas, our Deputy SIG Leader, was in attendance at the Yorkshire Model Show held in Leeds on February 11th, and has sent a selection of photos from that event for inclusion in this edition of the Newsletter. A more in-depth article will follow in the next edition.



Readers will recall that there was no photo of SIG member Peter Shanley with his prize-winning model of a JASDF 'Sabre-Dog' in the last 'SMW Special' newsletter. This was due to the fact that Peter was not present when the presentation took place. This omission can now be corrected, as he WAS present in Leeds, so here are photos of Peter and his prize-worthy model.



Xtradecal Reviews



X72-351 – Westland Sea King in Worldwide Service

X48-247 – Westland Sea King Collection Part 5

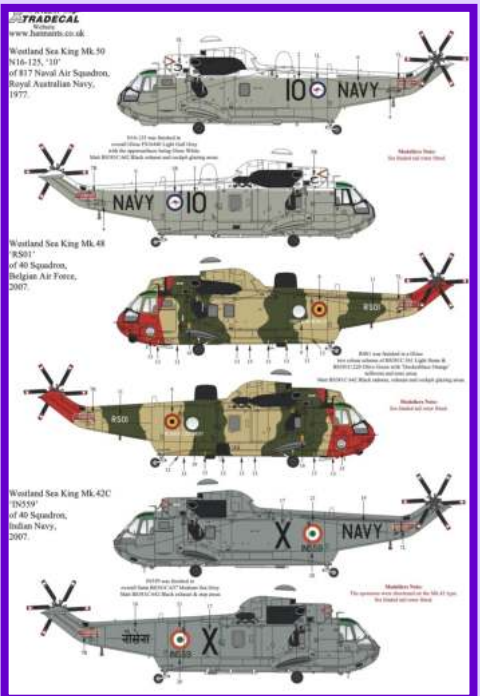
X48-248 – Westland Sea King Collection Part 6

X48-237 – Fairey Gannet COD.4/AS.4/T.2/T.5 Collection



Hannants, the UK Mail Order specialist that produces a prolific range of decals under their Xtradecal trade name, have been particularly busy in recent months with the release of several decal sheets catering for some of the older and newer kit releases from Airfix, which will be of interest to Asian Air Arms fans. The recent surprise release of a brand new 1:48 scale Westland Sea King from Airfix, which we first reported in the SMW'23 Show Special, has prompted Xtradecal to produce no less than six new decal sheets in 1:48 scale whilst also taking the opportunity to add to their coverage of the type in 1:72 scale with a single release covering worldwide operators and aimed at use with the fairly recent Airfix 1:72 scale kits.

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Of course, all of these sheets could also be used with the older 1:48 scale kits from Hasegawa/Revell or, in 1:72 scale, from Fujimi and Revell. In spite of the popularity of the Westland Sea King among fans of rotary-wing models, I cannot recall too many decal sheets being previously released for this license-built version of the Sikorsky SH-3H Sea King, and most of those that have previously been released largely cover the type in service with the Fleet Air Arm and Royal Air Force. Xtradecal have now addressed this shortfall with a very nice decal sheet covering no less than 9 different options, although only two are for Asian specimens. The two schemes in question are, however, unusual and attractive; the first is for a Westland Sea King Mk.42C of 40 Squadron of the Indian Naval Air Service, sporting an attractive overall medium sea grey colour scheme with full colour national markings. It should be noted that care should be taken with research into this particular option since many of the Indian Mk.42Cs in service are equipped with a Bendix radar housed in a distinctive 'thimble' nose, which does not feature on the colour side profile for this particular option, so check your references. The second example is for a Westland Sea King Mk.45, which in spite of a lack of reference in the decal placement instructions (DPis), is almost certainly operated by 111 ASV/ASW 'Arabian Sharks' Squadron of the Pakistan Navy. This aircraft features an overall RAF blue-grey colour scheme with the revised, slightly more complex, Pakistan Naval roundels that have been applied to aircraft in recent times. The same two decal options appear on the



larger 1:48 scale sheets (X48-247 Part 5 and X48-248 respectively). As an added bonus for 1:48 scale modellers, X48-247 also features an additional Pakistan Navy Mk.45, sporting the same overall gloss RAF blue-grey colour scheme with the earlier version of the Pakistan Navy roundel and a different style of serial number.

TRADECAL X48237

Fairey Gannet COD.4/AS.4/T.2/T.5 Collection

For the best results these decals should be applied to a gloss surface such as provided by either Xtracolor or Xtracrylic paints. Cut out the decal required and soak in warm water until the decal is released from the backing paper. Wet the area to be decalced with MICRO SET which will help to eliminate air trapped under the decal and position the decal.

After 5 or 10 minutes wet the decal with MICRO SOL which will soften the decal and ensure that it settles down over any surface detail. Allow the decal to dry for at least 12 hours. During this time some wrinkling of the decal may occur, this is normal. Do not touch the decal at this time.

Carefully check for small air bubbles and if there are any prick with a needle and apply a drop of MICRO SOL. After all air bubbles have been eliminated and the decals are dry wash the entire model with water to remove any excess decal adhesive.

When completely dry the whole model should be sprayed with a coat of Xtracolor or Xtracrylic Flat, Satin or Gloss varnish depending on the finish required.

Store in a cool dry place, avoid sunlight, dampness or extremes of temperature and/or humidity.

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Phone +44 1502 517444
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www.hannants.co.uk

TRADECAL

Fairey Gannet T.2
XAS14, '879' NW
Royal Australian Navy,
based at Nowra,
Australia,
1960s.

Fairey Gannet T.5
XAS14, '879' NW
Headquarters Flight,
Royal Navy,
based at RNAS Culdrose,
UK,
November,
1964.

Fairey Gannet AS.4
UA-112
of RNO 3,
Federal German Navy,
1960s.

Fairey Gannet AS.4
LA-01, '111'
of Indonesian Naval Air Arm,
based at Monkonkembangan AB,
Suzabaya,
Indonesia,
1960.

The other major 1:48 scale release from Airfix in 2023 was the rather ungainly looking Fairey Gannet carrier-borne Anti-Submarine Warfare aircraft that went on to fulfil other roles during its long service with the British Fleet Air Arm, and the aircraft enjoyed a limited amount of export success, including an order for the Indonesian Naval Air Arm. Once again, Xtradecal were quick off the mark with their own aftermarket decal release for this kit, which included, much to my surprise and delight, an Indonesian option. The aircraft in question (LA-01/111) sports the standard FAA Extra Dark Sea Grey over Sky colour scheme with a red spinner, with the distinctive Indonesian pentagon national insignia and ANGK LAUT titles on the fuselage and wing surfaces. Unfortunately, Xtradecal sheets suffer from occasional issues with their accuracy and this is a case in point; as our resident expert on Indonesia, Mick Burton, pointed out in Issue 37, LA-01 was actually a T.5 variant and the '111' codes included with this sheet never existed on an Indonesian Gannet. Fortunately, it will be easy to adjust the codes and this option certainly would make an attractive alternative to the multitude of Fleet Air Arm models that I anticipate seeing in 2024 and beyond.

As I have mentioned previously, Xtradecal have built up a very good reputation for the accuracy and quality of their decal sheets, which are the result of a long partnership with Microscale of the United States. My only reservation is with their rather sparse decal placement instruction sheets, which often make it necessary for the dedicated modeler to conduct further research since they are also prone to some inaccuracies.

I have little doubt that these recent releases will be hugely popular and I compliment Xtradecal on producing many interesting variations with which to complete more recent and older kit releases.

Highly recommended - **Mark ATTRILL**

December 2023



Airfix 1:48 Fairey Gannet AS.1/AS.4



If it had been suggested three years ago that a mainstream kit manufacturer would produce a modern state-of-the-art 1:48 scale kit of the rather unconventional looking Fairey Gannet carrier-borne Anti-Submarine hunter killer aircraft, many would have been quite sceptical at this prediction. The only previous kits to be released in 1:48 scale was the Dynavektor mixed-media kit, centred around a vacuform airframe, and the limited run Classic Airframes kit, first issued in 2007, which commanded very high prices on the internet and second-hand market due to its relative rarity. So Airfix surprised and delighted many when it announced in early 2023 the inclusion of a new Fairey Gannet kit in its catalogue, since this is one of many aircraft that really lends itself to being recreated in the larger scale and it also filled a significant gap in the list of Post-War carrier borne aircraft types.

The vast majority of Fairey Gannets were produced for the British Fleet Air Arm, but the aircraft achieved modest export success. Australia, West Germany and Indonesia have all operated variants of the aircraft, hence my interest in producing a short review to accompany that for the recent Xtradecal decal release that includes an Indonesian example (see the previous article). At this stage I would also like to remind readers that Mick Burton, our resident expert on Indonesian military aviation, recently wrote a comprehensive article on the Fairey Gannet in Indonesian Service. This article can be found in Issue 37 (July 2023) of the newsletter and included several very useful reference photographs, and there have been other modelling articles on the Indonesian Gannets in previous issues which may also prove useful to prospective modellers of this aircraft.

The kit is presented in the now familiar bright red Airfix box, which features attractive artwork of a Fleet Air Arm aircraft in the standard extra dark sea grey/sky colour scheme adopted in the post-war era for many Royal Navy aircraft. Inside the box, the modeller is presented with eight sprues containing around 320 finely moulded parts in the now standard dark grey plastic which is noticeably harder than the light grey plastic found in most pre-2022 Airfix kits, with a further sprue containing 13 clear parts. The various options provided with this kit, including folded or unfolded wings and the several variations of weapons loads, account for the relatively large parts count, and it was nice to also see the return of crew figures with the Fairey Gannet. Not surprisingly, the decal sheet includes markings for three Fleet Air Arm aircraft, all sporting the same basic colour scheme but with a variation in markings, including one example with the black/white (some say yellow/black) stripes associated with the Suez Crisis of 1956. The full set of comprehensive and clear assembly instructions, which also include full colour camouflage and marking diagrams, have been further improved by the Airfix graphics department and now include some additional colour coding to assist with the assembly process, making Airfix a frontrunner in this important area of kit production and marketing.



In keeping with the prototype, assembly is rather unconventional and starts with the superbly detailed forward undercarriage and weapons bay, which also incorporates a neat main wing spar arrangement which appears to be *de rigueur* in all of the larger kits recently released by Airfix. The two bays feature nice bulkhead and sidewall detail, and this assembly sequence also includes a small tray in which to place the first of the weights (not included), which will be needed to prevent the model from becoming a 'tail sitter'. Assembly of the cockpit and crew compartments finally starts at stage 8, with an impressive set of detailed parts, including full sidewall detail embellished with appropriate instruments and placards presented in decal form. This comprehensive assembly is then neatly sandwiched between the main fuselage halves, at which point several decisions need to be made regarding the various options that are available with this kit, but not before remembering to add more weight to the forward fuselage, ahead of the cockpit bulkhead. The first of these decisions relates to the position of the ventral radome, containing the



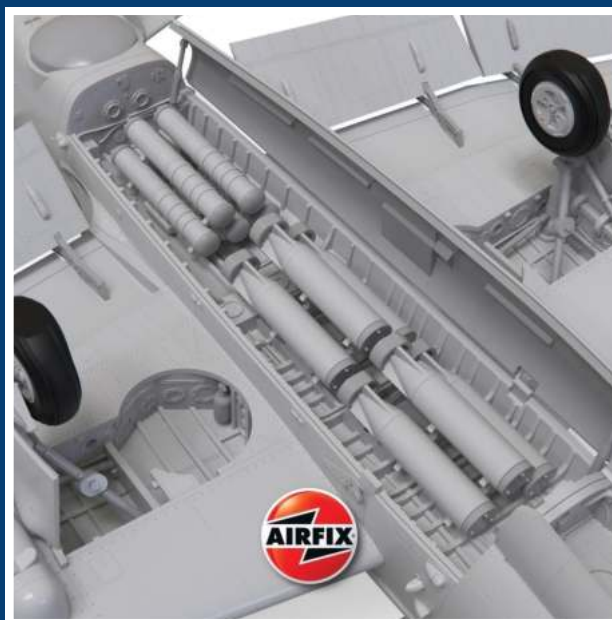
search radar, which can only be displayed in the extended position if the model is portrayed in 'flying' mode.



The assembly sequence then focuses on the completion of several small sub modules, mainly associated with the undercarriage and flying control surfaces, and this is where one comes across one of the recent changes in the assembly instructions, with the identification of certain parts in purple (Parts E2/38), to indicate that they should be utilized but not assembled at this stage. In this respect, Airfix have anticipated some issues with the final fitting of some of the main undercarriage doors and they recommend test-fitting and adjusting at this early stage, such is their attention to detail in helping the modeler with the overall construction of the kit. The next stage of the assembly sequence focuses on the wings, with large sections of the kit instructions omitted depending on whether the modeler opts to display the main wings in the deployed or folded position. The comprehensive wing fold mechanisms, designed to allow the wing to fold into three rather than two components to fit the smaller lifts found on British aircraft carriers of the era, are all faithfully reproduced. Care needs to be taken with assembly at this point to make sure the right parts are employed, although this may not be necessary for those opting to reproduce an Indonesian machine since it is understood that these particular aircraft were not equipped with the wing-fold mechanism. All of the flying control surfaces, including the rudder and flaps, are moulded separately so that they can be positioned in a way which adds interest to the

finished model.

In keeping with the rest of this kit, the undercarriage units are nicely detailed and relatively simple to assemble although I have a small concern about their robustness, taking into account the amount of weight that needs to be included in the forward fuselage. Apart from the contra-rotating propellers, another distinctive design feature of the Gannet, and the cockpit canopies, most of the remaining stages of construction relate to the aforementioned stores configurations offered with this kit. Several combinations of torpedoes and/or depth charges can be fitted to the large weapons bay and there is also



provision for wing mounted stores pylons and 60lb Rocket Projectiles (RPs) for at least one of the decal options. It should also be noted that there are two sets of bomb bay doors to



cater for the closed or open option. Other nice touches are the inclusion of a jig (Part H7) which is designed to aid with the drilling of holes for the aerial fit which features on two of the three marking options and two different styles of windscreen to allow for the possible fitting of an aftermarket supplied photoetched windscreen wiper part. Final assembly includes the arrestor hook, exhausts and the completion of the folded wing option, with the appropriate jury struts also supplied in the kit.

This is a welcome release of an aircraft type that has been high on the wish lists of many 1:48 scale aircraft modellers for some time. Airfix are to be congratulated on producing a model that, despite the complexity of the prototype, appears relatively straightforward and easy to build, with some neat features including the presentation of the folded or unfolded wings, separate flying control surfaces, comprehensive weapons fit and the crew figures. The basic kit will provide a nice replica, but I have little doubt that several of the more enterprising aftermarket manufacturers will be quick off the mark with some modest improvement sets to further embellish your model.

Highly Recommended
Mark Attrill – February 2024

Images courtesy of Airfix website



Building a Chengdu F-7EB in 1:32

The Chengdu J-7 originated as a license-built version of the Soviet Mikoyan-Gurevich MiG-21, a classic Cold War supersonic interceptor which excelled at high-energy maneuvers and quick-climb intercepts, but was limited to these uses. The Chinese introduced some improvements in an effort to strengthen its capabilities, and while the original J-7 had some advantages over the MiG-21, it also had several disadvantages. These included extremely short intervals between engine maintenance or overhauls, inadequate low-speed maneuverability, large turning circles, and progressively antiquated avionics. In order to counter these, the Chinese government decided that some reverse engineering should be carried out.

The Chengdu Aircraft Company (CAC) started working on the J-7E in 1987, and the aircraft had its first flight in May 1990. There were big alterations, with the wing being the most noticeable.

The delta shape of the former MiG-21/J-7 wing had a 57-degree sweep from root to tip. The revised wing was designed as a "double delta," with the outer wing having a reduced sweep of 42 degrees and the inner wing measuring 57 degrees. This results in a substantially larger surface area and a significant boost in lift when combined with a three-foot increase in span over the previous wing. Furthermore, auto-maneuvering flaps have been added to the leading and trailing edges, with the leading edge's bumps and bulges.

As a result, the takeoff run has been shortened by 25%, the turn rate at 5,000 feet has been decreased by 33%, and the turning rate at 20,000 feet has improved by 66%. Furthermore, the F-7PG, the Pakistan military's version of the EB, has successfully flown this maneuver at 600 km/h, whereas the previous J-7's lowest safe speed for a high-alpha slow speed loop was 800-900 km/h.

Titanium alloys are also included in the compressor blades of the WP-13 engine. This has caused the duration between engine overhauls to increase and the acceleration time to decrease by 25% in the range from 500 to 1,100 km/h.

Additionally, the MiG-21's previous three-position nose cone has been replaced with a variable-position cone manufactured in China. The avionics have undergone a major update, including the use of Russian and Israeli technology. The Marconi Super Sky tracker or the Italian FIAR Grifo-7, which is developed under license for Pakistani F-7s, is the fire radar that provides the J/F-7E family with good track-while-scanning and look-down-shoot-down capabilities. The Pakistani version can mount up to four AIM-9L/P Sidewinders as well as unguided air-to-ground iron bombs and rockets.

The CAC J-7EB

The J-7 EB version has enhanced flight control systems and removes all weaponry, making it a purely aerobatic aircraft. The 81st Aerobatic Team of the PLAAF, flies the aircraft with their "August 1st" aerobatic display.

The squadron, which uses nine J-7EBs in its shows, is still relatively obscure in the west. Though it's rather ridiculous to think that an airshow demonstration in one of the older J-7s could be feasible, the significantly improved maneuverability of the new wing makes it possible.



The team has worn two different color schemes: the much more appealing white with two blues (as above), and the red and white combination seen on the Trumpeter box art.



The kit

I made a sincere effort to thoroughly assess the kit and the quality of the time spent constructing it.

The kit arrives in the standard heavy-duty Trumpeter package with all major assembly visible on seven sprues. Each sprue is packaged individually, as are the clear plastic pieces on a separate single sprue.

Three rubber tyres, six screws, an acetate sheet for the instrument panels, three metal landing gears, and a photo-etched fret for the rear-view mirrors are all included in an extra bag.

Every part features expertly carved panel detailing, remarkably similar to its original counterpart.



< Front section of fuselage

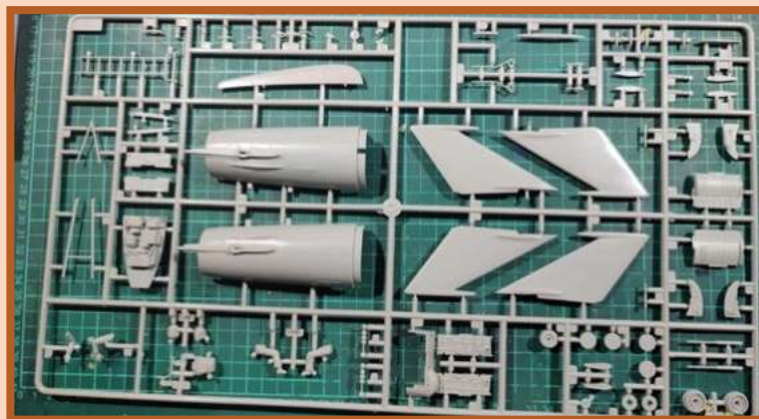
The fuselage

The fuselage of this Trumpeter model is divided into four main sections, as is typical with many of them. This enables you to remove the aircraft's tail and show off the kit's engine.

Included are the numerous scoops and inlets that stud the fuselage, as well as positional air brakes that can be used in either an open or closed configuration.

Both the rudder and the vertical stabilizers are separate. The horizontal stabilizers are movable.

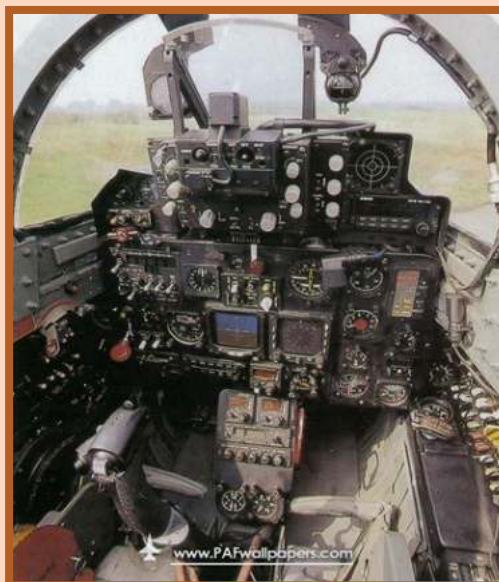
Furthermore, even if Trumpeter had provided a metal shock cone, the finished model would still be tail-heavy, and it requires additional weight to prevent a tail-sitter.



Aft section of fuselage >

Cockpit

As with most Chinese aircraft; it's very difficult to get the exact cockpit layout of the original aircraft, but according to the photo seen here, an accurate cockpit is provided in the kit.



< PAF F7-PG Cockpit

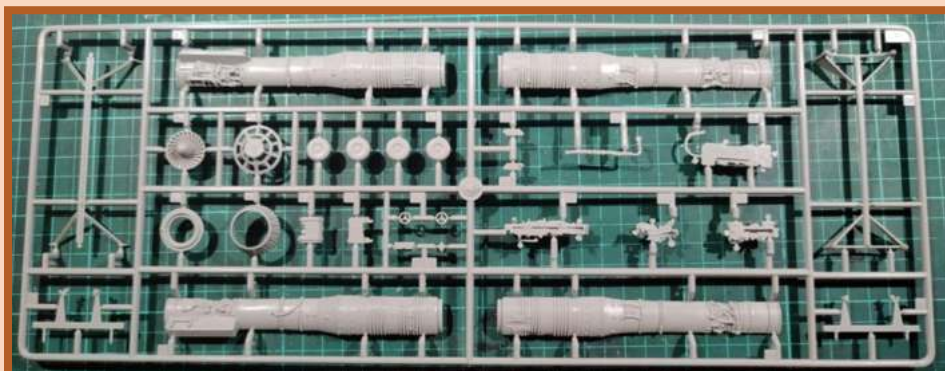
There is a rather basic seat, which ought to be swapped out for a resin one in my opinion. I had originally intended to install a scale version of the Martin Baker Mk.10 resin seat, which is utilised in the F-7PG by the Pakistan Air Force, but I was unable to identify which seat is used in the Chinese EB type, so I ended up sticking with the seat that was provided. You could swap out the seat for a resin one if you could figure out which variant, but where would you locate one?

I used Tamiya X-19 as the primary color for the Chinese cockpit.

The engine

The engine, which is the largest flaw in the Trumpeter MiG-21 series, is also included in this kit, and for some reason was moulded in four lengthwise sections. This makes construction problematic and getting rid of the seams even more difficult.

Since there is no way to see if the engine is painted or not after installing the forward and aft fuselage sections, I just assembled and placed the engine in the fuselage without painting it.



The WP-13 engine



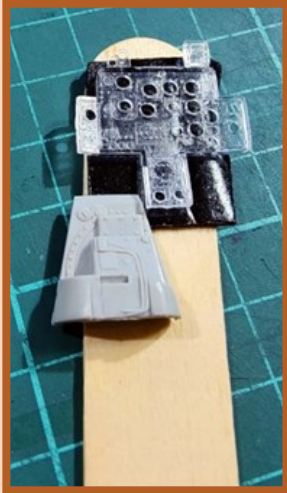
The wings

There is an option to drop the leading and trailing edge flaps during the construction of the wings. This actually seems to be rather correct from what I initially saw about the lowered flaps structure. I used four-minute clear epoxy to create a strong bond because the landing legs are made of metal and are challenging to attach to the wings. The rubber tyres have a stunning appearance.

Painting

You have two options from the same aerobatic team: the traditional red and white pattern or the new white and two-blue scheme. Since I haven't seen any models online wearing this color scheme, I decided to settle with white and blue; nonetheless, the details seem a little thick and a little soft. It may seem easy at first, but managing the two tones of blue and white is a really challenging job. I used Tamyia X4 and Ammo Mig Marine Blue for blue, and Vallejo white for the white areas. After that I applied 2 layers of Vallejo polyurethane gloss varnish. After applying the decals, I added another coat of clear gloss varnish, followed by satin varnish coat as the last coat.

Pictures





ASIAN AIR ARMS NEWSLETTER 33

Sharjeel Ahmad, November 2023

Gulfstream U-4 (G.IV)

Japanese Air Self Defence Force



The JASDF's U-4 Multi-Purpose Support Aircraft is a Gulfstream Aerospace Corporation's GIV-SP business jet that has been refurbished to Japan Air Self-Defence Force specifications. These aircraft are mainly used to for personnel and light cargo transport and training.

The U-4 was introduced to the JASDF in 1995 as a successor to the reciprocating twin-engine Beech B-65 aircraft which had been used for communication duties and personnel transport, and as a Multi-Purpose Support Aircraft. In addition to the usual boarding door, the U-4 has been fitted with a large cargo door on the right forward fuselage for transporting emergency cases and goods, and the aircraft is also fitted with a rapid –change interior. The conversion of the locally-designated U-4 was carried out by Marshalls Aerospace at Cambridge Airport, England. The base GIV-SP aircraft utilises its flight stability at high altitude and cruise speed of Mach 0.80 for liaisons in military operations. Thanks to the quietness and comfort of the aircraft, it is also used to carry important personnel to remote areas in Japan in the event of disasters such as earthquakes, volcanic eruptions and torrential rain. Initially two aircraft were procured and subsequently modified to U-4 status in 1996. Approval for increasing the fleet size was authorised and the procurement of 1 aircraft in 8th fiscal year (1998), 1 aircraft in 9th fiscal year (1999), and 1 aircraft in 10th fiscal year (2000) has brought the fleet to 5 aircraft.

While VIP transport is one of its roles, the U-4 has only been used as an international prime ministerial aircraft once, by Yasuo Fukuda, to travel from Beijing to Nagasaki at short notice when the 747 was unavailable.

All five U-4s are base at Iruma Airbase and are operated by the Air Defence Command Headquarters Flight Squadron and 402nd Tactical Airlift Squadron. The 402nd Tactical Airlift Squadron has operated the U-4 for over 20 years, since January 1998, the type's operational testing having commenced in February the previous year. Recent examples of VIP utilisation include taking Prime Minister Shinzo Abe to Oita and Fukuoka prefectures to inspect the extent of the damage caused by Typhoon No. 3 in July 2017. On December 14, 2017, a U-4 was used by high-ranking officers when visiting their counterparts in the Vietnam Air Force.

The fleet consists of 5 aircraft.

75-3251 / 251 Gulfstream IVSP (U-4) C/N: 1270 JASDF Del 6 Jan 1997 (as U-4)

75-3252 / 252 Gulfstream IVSP (U-4) C/N: 1271 JASDF Del 6 Jan 1997 (as U-4)

85-3253 / 253 Gulfstream IVSP (U-4) C/N: 1303 JASDF Del 6 Feb 1998

95-3254 / 254 Gulfstream IVSP (U-4) C/N: 1326 JASDF Del 21 Feb 1999

05-3255 / 255 Gulfstream IVSP (U-4) C/N: 1359 JASDF Del 18 Jan 2000

Main specifications

Classification	Multipurpose support aircraft
Crew	3 crew + 18 pax
Width	23.72m
Length	26.29m
Height	7.57m
Engines	2 Rolls Royce RB183 Tay 611-8
Maximum speed	Mach 0.88 (900km/h)
Cruising range	Up to 6,575km

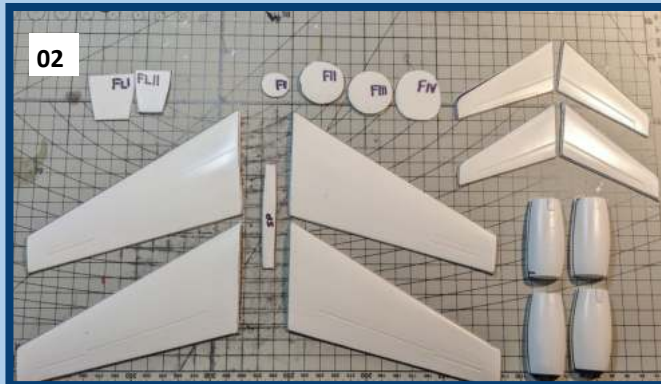


The Build



The Welsh Models 1/72 Gulfstream IV is a multimedia kit consisting of vacform fuselage, flying surfaces and engine pods, resin engine components, winglets and main gear doors and white metal landing gear, wheels and cockpit components [00 & 01]. The kits comes supplied with decals for a USAF and USN aircraft. In 2021 Draw Decal in the USA released a decal sheet for JASDF U-4s which I snapped up. I have built a couple of other Welsh vacform kits and did not think I would have too many issues.

As with all vacform kits, the parts have to be cut from the sheet they are moulded from, I outline the parts and scribe the plastic until the sheet can be broken away. Each part must then be sanded down to remove the small thickness of plastic the width of the sheet still on the part. A typical kit of this type includes bulkhead parts which help to reinforce the build [02]. The fuselage is quite large compared to your average 1/72



fighter [03]. After cutting and sanding the main parts were brought together for a test fit [04]. I had initially decided to include the cockpit, but in the past have had trouble with the way Welsh supplies the clear parts. I thought I could manage them this time, so the cockpit was assembled and painted [05] and cockpit windows cut out by chain drilling and then tidying up with a knife and files. The engine parts were assembled and some putty was

required to fair the resin intake and exhaust, I suppose I took too much material off when sanding [06 & 07]. The wings and horizontal stabs were next and went together with the aid of superglue for the winglets and putty to hide my poor sanding and parts alignment [08]. The main gear well doors in the wings were also removed prior to gluing the parts together.



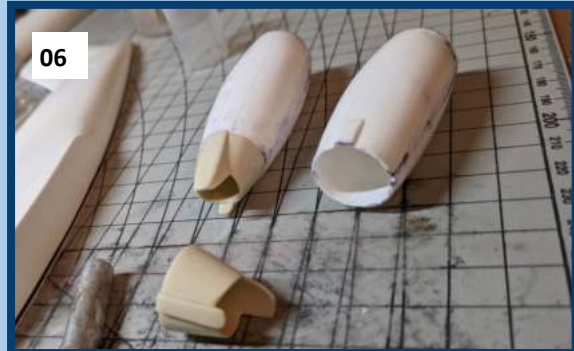
Again I had failed to master the Welsh clear parts so I removed the cockpit parts and filled the openings with miliput [09]. You can also see the nose gear leg



installed. Welsh tells you to cut out the gear doors and fit the leg to the roof of the now created wheel well. The nose gear leg was designed to be fitted to the bottom of the fuselage even though the instructions tell you to create a wheel well so the struts had to be lengthened, I did this with K&S brass tubing sections. Another issue with the nose wheel well was that the scribed location was 4mm too far forward, so it had to be moved back when removing the doors. The major



subassemblies were glued together ready for the first of many rounds of sanding [10] making sure enough nose weight was included before sealing the fuselage up. I might add at this stage

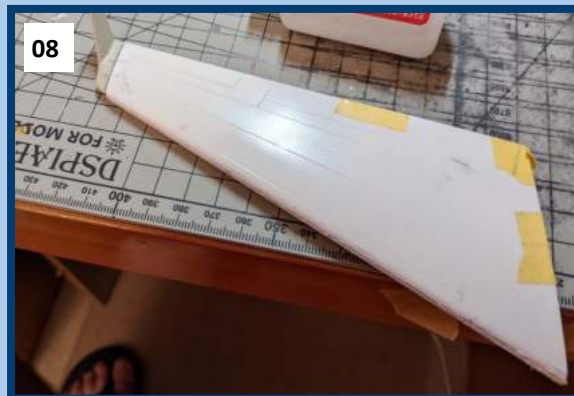


that I add plenty of reinforcing during the build, plastic tabs are added along the fuselage seams where there is space and I use brass tube pins to reinforce the wing to fuselage and horizontal stab to fuselage joins. Once the parts were together, seams filled and sanded it was time for some exterior detailing. Things



I added included a scratch built APU exhaust, the supplied detail was a small divot with a little nipple sticking out of it, various blade antennas were made as well as the prominent fairing atop the vertical stabiliser. The locations and sizes of these protrusions were determined from reference photos [11 & 12]. The engine pods were also secured to the fuselage, seams sanded and primed and then the model was ready for paint.

It took a couple of attempts to get the paintwork right, the first time I was not happy with the lower fuselage colour which is a painted aluminium colour, the mix I used was too grey. There was plenty of complex masking due to the cheat line demarcation and leading edges. Stripping and repainting occurred, with a more favourable lower fuselage colour going down this time. Finally, the decaling was nice and straight forward without any problems applying them, and the process taking surprisingly less time than I had expected. I got there in the end and am happy with the final result. I completed my model as 95-3254 while it was operating with Air Defence Command Headquarters Flight Squadron (Sotai Shireibu Hikotai) of the 2nd Tactical Airlift Group. It also wears JASDF 50th Anniversary markings of the period.



Ray Seppala
Adelaide, South Australia



10



11



12





The Boeing 737 in Indonesian Service

ASIAN AIR ARMS NEWSLETTER 33



The first three Boeing 737's in TNI-AU service were three 737-2X9 *Surveillers*, fitted with APS-135 SLAMMER (Side-Looking-Multi-Mission-Radar) delivered between May 1982 and October 1983. They carried the serial numbers AI-7301 to AI-7303, and wore a striking scheme of white upper cabin over light grey with black-outlined yellow patches on the fin, tailplanes and outer wings, both top and bottom. Between the grey and white there is a thin black cheat line, and the engine nacelles are polished metal. The legend *TNI ANGKATAN UDARA* is carried on the upper front fuselage with *INDONESIAN AIR FORCE* in smaller characters underneath. The national red and white pentagon is worn on the rear fuselage, upper wings and lower left wing, with TNI-AU on the opposite lower wing. The squadron badge is displayed under the cockpit on both sides, with the last two digits of the serial in front of it.



Other versions of the 737 were delivered as personnel transports:



A-7304 (also carried AI-7304 initially), a 737-2Q8A, delivered June 2016, now stored after an accident, wore a similar scheme to the *Surveillers*.



A-7305 and A-7306, both 737-4U3's, delivered March 2011



A-7307, a 737-5U3, delivered December 2015





A-7308, a 737-4Y0, delivered October 2016



A-7310, a 737-800, delivered Jan 2024, as ZS-ZWE, scheme as '09

Although the transports '05 to '08 carry a similar colour scheme to the *Surveillors* there are differences with the yellow tail marking, it being a band across the empennage instead.



A-001, a 737-8U3 BBJ2, delivered 10th April 2014, used as a Presidential transport as *Indonesia Air Force Zero One*. Although owned by the Ministry of State Secretariat, it is flown by the TNU-AU and maintained by Garuda. Originally in a sky blue over white with flowing red cheat line scheme, A-001 now carries a more appropriate red over white scheme with a gold cheat line. No pentagons are worn, but the tail carries a large national flag, plus the title *Republik Indonesia* and a national emblem above the forward passenger windows. Under the cockpit the presidential marking of a gold star is displayed. The original blue colour was apparently for enhanced safety and security reasons, but was replaced by red after public criticism in 2021.

The Boeings are operated by Skadron Udara 17 based at Halim Perdanakusuma AFB near Jakarta. The early airframes are now over forty years old and no doubt due for replacement in the near future.



The Indonesian Police also operate the Boeing, a 737-8MC(WL) serial number P-7301, in a fetching white and blue colour scheme with red-orange trim, obtained from the Russian airline Probeda in March 2023 (previously RA-73233 and VP-BQY).

Mick Burton,

January 2024

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Fine Molds - 1:72 Scale McDonnell-Douglas F-4D Phantom II "IRIAF"



The legendary McDonnell-Douglas F4 Phantom II has featured in many kit catalogues or ranges over the years and I have little doubt that, for many modellers, the announcement of yet another new kit could be greeted with some dismay; 'What, another Phantom? How many more do we need?' To be fair, this is a 1:72 scale kit and there have been fewer recent releases in this scale than in the larger 1:48 scale. For those that may not be so familiar, the Japanese firm of Fine Molds is not as prominent as the likes of Fujimi, Hasegawa or Tamiya and in the past they have limited their output to a number of World War II-era Japanese and Luftwaffe types with the odd foray into post-war Japanese manufactured or licence-built aircraft, such as the McDonnell-Douglas F-15J Eagle and Mitsubishi F-2. In 2020, the firm announced the first of new range of 'long-nosed' F-4EJ Phantom kits, no doubt capitalising on the imminent retirement of the type from JASDF Service, and these were greeted with some enthusiasm, given the company's well deserved reputation for producing high-quality kits that are very nicely detailed and easy to assemble. To the delight of many more modellers, Fine Molds then announced that the range would be extended to include the short-nosed F-4C/D and F-4J variants amongst others. In all of the years that I have been buying kits, I had never previously invested in a Fine Molds kit, but I decided to take the plunge with one of the specially-marked JASDF F-4EJs and an Iranian themed F-4D, which is featured here since it could also be finished as an aircraft operated by the Republic of Korea Air Force (ROKAF), with suitable markings sourced from the aftermarket. If I recall correctly this is the first new 1:72 scale kit of an F-4D variant to appear since Hasegawa produced their kits in the early 1990s, and while these kits can still produce a nice model, a newer kit was long overdue.



The Fine Molds kit comes in a standard box with some attractive box art illustrating an Iranian aircraft releasing its bomb load over a target, which is slightly deceptive given the box contents but more on this later in the review. The kit is presented on ten Medium Grey sprues, a one-part slide moulded rear main fuselage and two clear sprues containing two canopy options. Since Fine Molds, like many other contemporary manufacturers, are looking to obtain as much out of their moulds as possible, this kit is also modular in construct, hence the relatively high number of individual sprues. On the positive side, they have obviously looked closely at the latest trends in the manufacture of the more recent and larger 1:48 scale kits, and have invested in the provision of a slide-moulded one piece main/rear fuselage, full air intake trunking, separate exhaust area panels and a one-part upper spine, which avoids the tricky issue of filling and re-scribing panel lines on this prominent part of the F-4 airframe. There are a number of parts identified on Page 1 of the instructions as surplus to requirements, with closer inspection indicating that these are the parts that would be needed to complete a ROKAF example, including the AN/APR-26 RHAW antenna under the nose radome and the intake mounted fairings that house ECM equipment on later versions of the F-4D. The clear parts trees provide an option for both open and closed canopies although the latter option is still presented in two parts. A nicely presented 20-page Instruction booklet, together with a decal sheet offering markings for three different aircraft, completes the package.

As expected, the parts are all nicely detailed and offer a range of options for use. For example, two sets of instrument panels are included, to accommodate the kit supplied decals or to be finished with paint and dry brushing. The five-part Mk.7H ejection seats are also nicely detailed although they lack any seat belts, which must be sourced separately. Other nice features are the full length air intakes and exhaust nozzles, complete with deep intake vanes and afterburner rings; little of this detail will be seen on the finished model of course, but it does prevent 'daylight' being seen through the airframe. The wheel wells also provide



some excellent detail and a nice degree of depth. Initial construction follows the traditional route for post-war jet aircraft, although the design of this particular kit does allow the modeller to begin the airframe painting process earlier in the build, suggesting that this could begin after step 13 and prior to the assembly of the tail surfaces, due to the separate moulding of the distinctive exhaust section, although I would suggest the fin could also be fitted before the main camouflage pattern is applied. Kit construction would then recommence at step 14, with the assembly of the aforementioned exhaust section and nozzles, together with the main and nose undercarriage. The next stage of construction focuses on the relatively simple stores loadout that is provided with the kit, and which is limited to the centreline and wing mounted drop tanks together with the inner wing pylons and missile rails. As I alluded to at the beginning of this short review, the kit provides absolutely nothing in the way of offensive armament, all of which has to be sourced from Fine Molds own 'Detail Up' range or other suitable aftermarket suppliers. This was one of my minor reservations with the kit, although I do understand Fine Molds marketing philosophy which mirrors that of other Japanese companies, although most normally provide AIM-7 and AIM-9 and air-to-air missiles as a minimum. Fine Molds do offer no less than four different 'Detail Up' sets for this F-4 Phantom variant, including a US Aircraft Missile Set (Item FP44), US Aircraft Bomb Set (Item FP45), which includes the Triple- and Multiple-Ejector Racks (TER/MERs) called out in the kit instructions, together with the Mk-82 Snakeye bombs illustrated on the box art.

Final construction involves assembling and fitting the aforementioned ejection seats and the cockpit canopy, all of which can be further embellished with more 'Detail up' parts including a seatbelt set (Item NA10) and rearview mirrors and formation 'slime' lights (Item NA15).

One of the most distinctive features of Iranian F-4D Phantoms in the 'Asia-Minor' camouflage scheme, with which they have operated since entering service over 50 years ago, is the comprehensive application of safety and maintenance stencilling and markings, with no less than five pages of the instruction manual dedicated to the provision of very detailed decal placement instructions. Individual aircraft serial numbers, national markings and titling are provided to allow the modeller to finish the model in Imperial Iranian Air Force markings from the early 1970s or one of two aircraft operated by the 71st Tactical Fighter Wing of the Islamic Republic of Iran Air Force during the long Iran-Iraq War of the 1980s. Although, on initial inspection, the decal sheet appears to be quite a daunting prospect, a fair number of the individual stencil markings are grouped on one decal so a good gloss finish over the camouflage scheme and a judicious use of decal setting solution will be necessary to prevent any silvering. It should also be noted that the decal sheet does include decal versions of the formation 'slime' lights should the modeller want to avoid the application of aftermarket photo-etched versions. The semi-gloss decals are typical of Japanese kit examples, nicely printed with good register and colour density although they do appear a little thick.

The Fine Molds family of 1:72 scale F-4 Phantoms are now acknowledged to be the best kits of this aircraft in this scale, and my initial observations for this review would bear testament to this assertion. That said, they are not cheap, and the lack of any ordnance in particular is a little disappointing. On the plus side, the quality of the parts and engineering is on a par with that of Tamiya, and they do score heavily over the Hasegawa offerings, with a superior level of detailing in the cockpit and undercarriage bays and those very nice full-length air intakes and exhaust nozzles. The provision of alternate parts, which also includes the larger 600 Gallon centreline tank found on ROKAF F-4Ds, will allow the modeller to build a ROKAF example out of the box, although alternative markings would need to be sourced. AAA SIG Member Diego Rogoz includes these decals on his Hi-Line Decal sheet (Item Number HDL72-055), which also includes alternative decals for other IIAF/IRIAF F-4Ds should the modeller wish to avoid those included in the Fine Molds kit.

In spite of my reservations over the lack of some detail parts, including seat belts for the ejection seats and any offensive ordnance, this kit still comes highly recommended to any fan of the McDonnell-Douglas F-4 Phantom in Asian Air Arm Service.

Review Sample courtesy of my wallet

Mark Attrill

January 2024





JMSDF HSS-2A Sea King



This HSS-2 Sea King started life as a Sikorsky SH-3D Sea King, marketed as a toy by a company called Newray in their 'Sky Pilot' range and was one of several similar toys that appeared in several boxings with USN markings. The toy was marketed in 1/32 scale but is actually closer to 1/35 scale. I had purchased it with a view to modifying and improving its toy-like features, and this process began with an almost full disassembly since the main fuselage was held together by small screws. As one would expect with a toy, the main cockpit was finished in plain black plastic so I repainted it in a slightly more accurate rendition with several custom colours, and based on reference photographs. I then spent some time researching potential exterior colours for early variant SH-3D machines and saw the attractive Antarctica scheme applied to the Mitsubishi manufactured Japanese Maritime Self Defence Force (JMSDF) HSS-2 variants that support the exploration of this vast continent from the Japanese Antarctica Observation Ship SHIRASE. I elected to finish my model in the overall Medium Grey colour scheme, which contrasts nicely with the large International Orange panels and colourful markings applied to these particular machines. In preparation for the application of colour, I re-assembled the model with screws and glue, during which I also treated and filled the prominent fuselage seams and the original screw holes.



The main fuselage was finished in Tamiya Dark Grey (XF-24), while the International Orange was sourced from the Testors range (2022/FS12197). The majority of decal markings were homemade, with the exception of the Hinomaru roundels, which were obtained from a 1/48 F-4 Phantom kit. I then determined the meaning of the Japanese 'JMSDF' characters on the tail using Google translate (!). In order to make the text white, I painted a scrap of plasticard in the Tamiya Medium Grey, to make the background colour, which was then scanned into the PC. This enabled me to copy and paste the characters onto the grey background, and select a white colour for the text, this was then printed onto white decal paper.



Since this toy had no fuselage windows, I used a Hasegawa 1:48 scale Sea King to measure the windows and determine their placement, before using Microsoft Paint to draw and then print them onto clear decal paper





for application to the fuselage sides.

I had originally planned to display the completed model at SMW 2020, until the COVID-19 pandemic struck. The completed model was then put into storage, during which time it was badly damaged. A week before SMW 2023 I discovered all of the broken parts and, suitably motivated, commenced a programme of repairs. Among other things, this involved repairing the split fuselage and 3D printing a new rotor shaft. I also had to replace the tail wheel with one from the ubiquitous spares box.



My aim was to prove that sometimes even toys can be turned into a respectable replica, and I believe that this was achieved since I received many accolades during the recent SMW'23 event.

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James Carr
December 2023

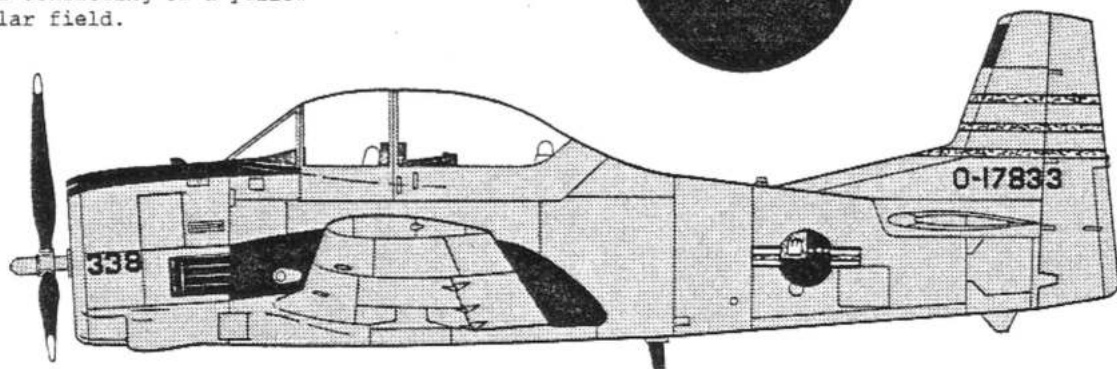
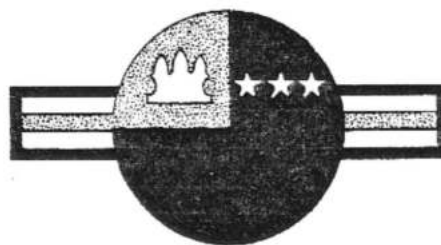
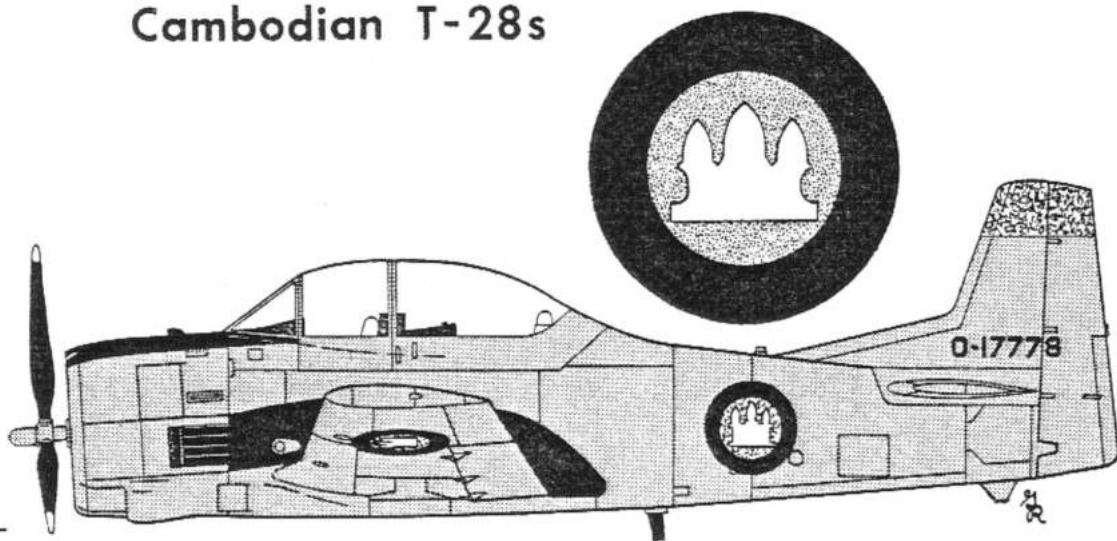


S.A.F.O. Extract - October 1980

Cambodian T-28s

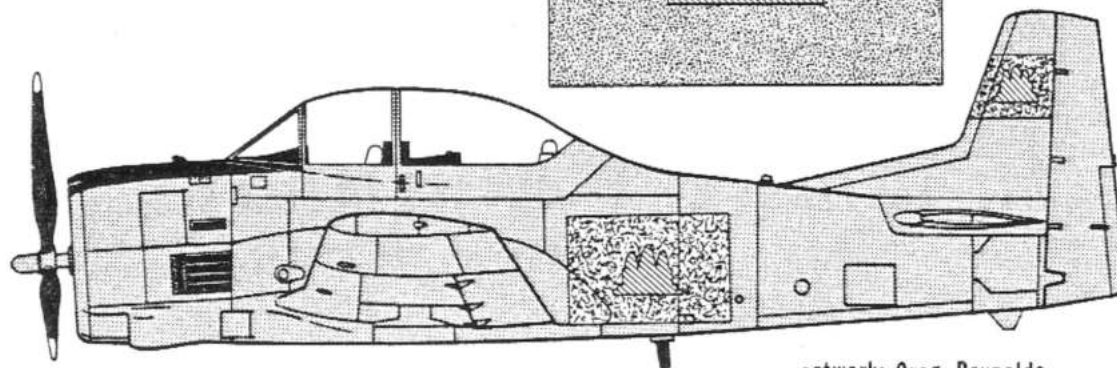
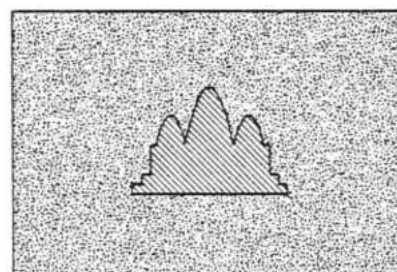
The recent history of the tormented land once known as Cambodia is represented here by the succession of insignia carried by the aircraft of its air force: (1) Upon achieving independence from France in 1955, the aircraft of the Aviation Cambodienne carried a representation of the temple at

Anghor Wat in white on a red disk surrounded by a blue ring. (2) After the overthrow of the "neutralist" government in 1970, the Aviation Nuhinak Khmire adopted an insignia imitative of the USAF. It consisted of a horizontal, blue bordered, white bar with a red stripe along the middle flanking a blue circle with 3 white stars in the upper right and a white Anghor Wat on a red field in the upper left. (3) In April 1975, after the victory of the Khmer Rouge, the Armie Revolutionnaire du Kampuchia used an insignia consisting of a yellow Anghor Wat on a red rectangular field.



The Institute of Strategic Studies' MILITARY BALANCE 1967-68 reports 15 T-28's in Cambodian service. This increased to 40 in their 1973-74 summary. The 28 August issue of FLIGHT reports that over 70 T-28's were in service at the time of the Khmer Rouge victory, but that some 50 were flown to Thailand. Many of these were returned and 17 T-28's are reported to have been destroyed by USAF strikes during the Mayaguez Incident.

All aircraft shown are overall light grey with red stripes on vertical fin and black exhaust areas and antiglare panels. References: (1) Photo from AIR PICTORIAL January 1968. (2) Photos from AVIATION NEWS. (3) Seen on the color T.V. program "Kampuchia Democrahque".



artwork: Greg Reynolds

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CAMBODIA

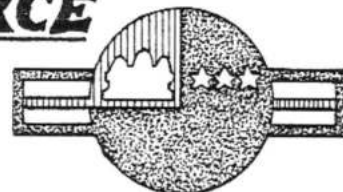
[កម្ពុជា
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AIRCRAFT
UNIFORM

INSIGNIA

KHMER AIR FORCE

(l'Armée de l'Air Khmère)

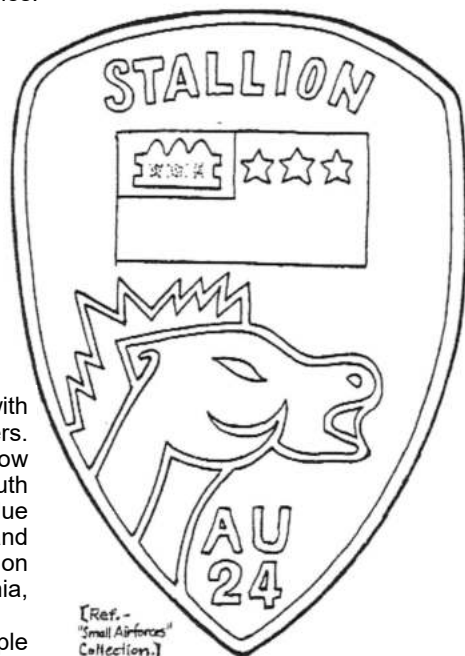


KAF (AAK) insigne
1970-1975



Although the aircraft depicted here shows no evidence of unit markings (at least on the view available), it is entirely likely that at least one of these unit emblems, worn by "Stallion" personnel, appeared on the aircraft, too - as that was the case with other KAF machines.

[AT LEFT] Emblem of (armed!) reconnaissance unit, embroidered on a pale orange material. Bird and border in blue; black and white eye; yellow beak and feet. Black binoculars with white outlines. White arrow (?) with black outline and green tip [ref. "Small Airforces" collection]. Below that, variation, reportedly on salmon-coloured silk. Other colours similar; no outlines.



[Ref. - "Small Airforces" Collection.]

[AT RIGHT] Light blue shield, with yellow border, letters and numbers. Horse's head is white with yellow outline/details; eye, nostril and mouth in red. The flag of the Republic is blue with red 1/4 segment, white temple and stars. The same symbols appear on the disc of the national insignia, superimposed on U.S.-style 'bars'. ((Representations of the temple towers of Angkor Wat have appeared on the flags and emblems of the Kingdom of Cambodia (pre-1970), the Khmer Republic (1970-1975) and the current Democratic Kampuchea)).

[RIGHT] Variation from a Cambodian illustration - colors same as on cloth emblem.

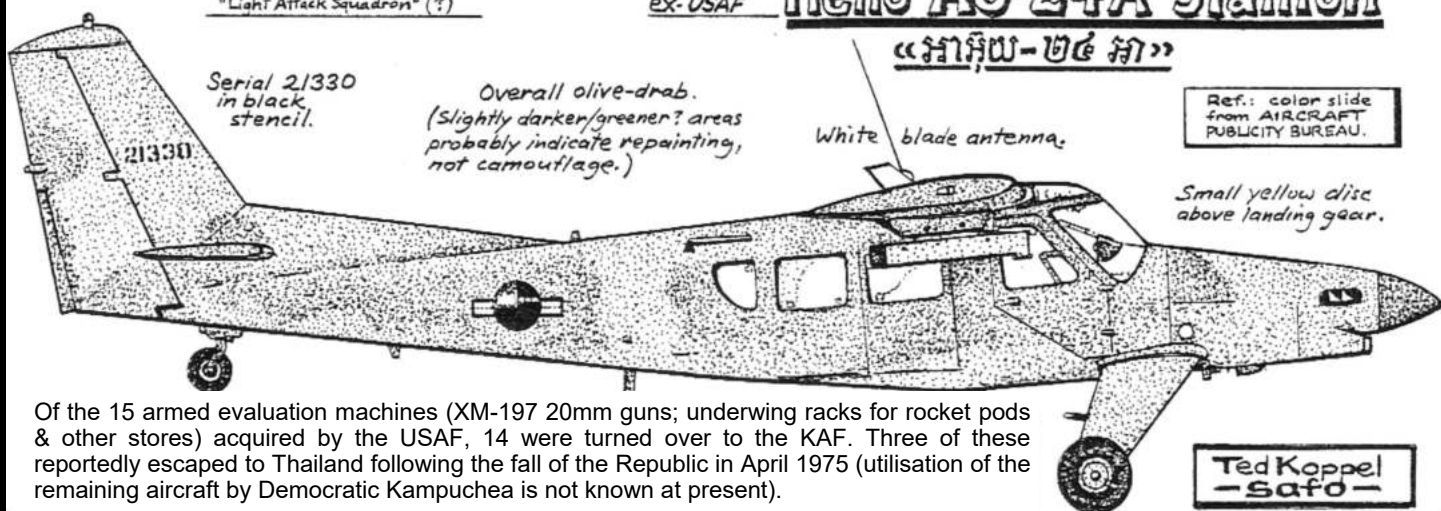


ARMED RECONNAISSANCE GROUND ATTACK

ex-USAF

Helio AU-24A Stallion

«កម្ពុជា-២៤ អ៊ី»



Serial 21330
in black
stencil.

Overall olive-drab.
(Slightly darker/greener? areas probably indicate repainting, not camouflage.)

White blade antenna.

Ref.: color slide from AIRCRAFT PUBLICITY BUREAU.

Small yellow disc above landing gear.

Of the 15 armed evaluation machines (XM-197 20mm guns; underwing racks for rocket pods & other stores) acquired by the USAF, 14 were turned over to the KAF. Three of these reportedly escaped to Thailand following the fall of the Republic in April 1975 (utilisation of the remaining aircraft by Democratic Kampuchea is not known at present).

Ted Koppel
-safe-

Eduard Models – 1:72 Scale

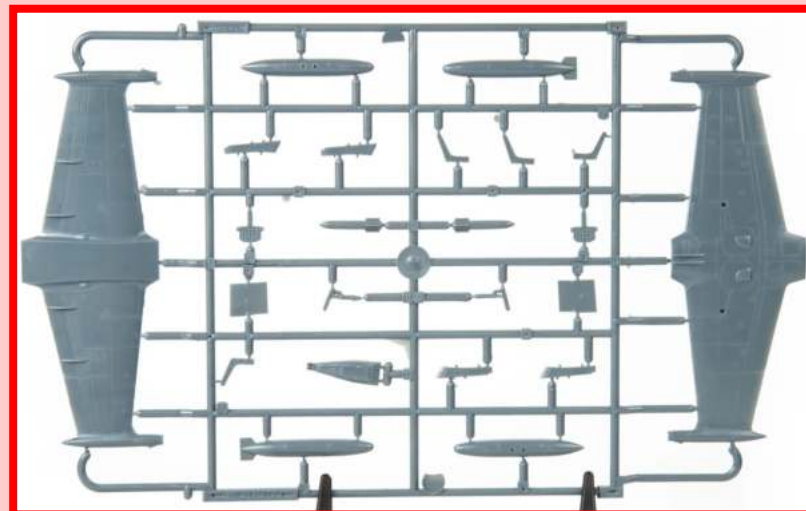
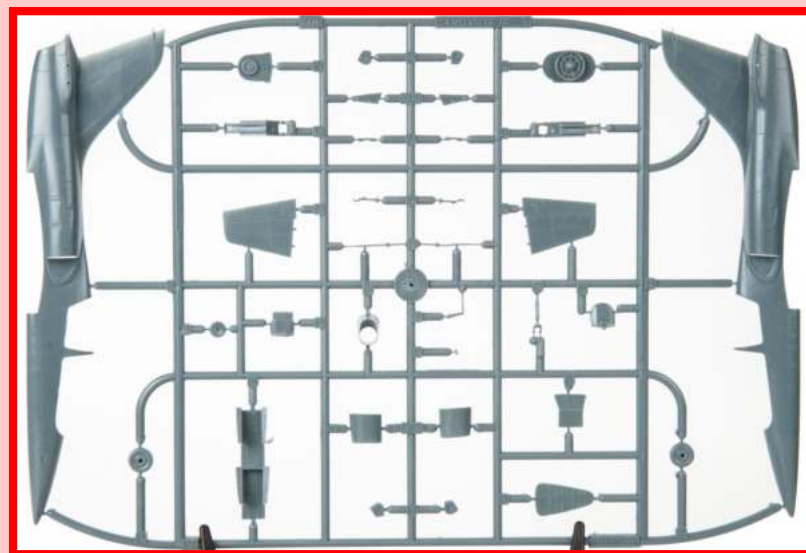
Aero L-39C/CM/ZA/ZO Albatross

ASIAN AIR
ARMS



The Eduard 1:72 scale Aero L-39C Albatross is not a new kit but it has recently been re-issued in the company's popular 'Dual Combo – Profipack' series, which provides two complete kits together with a comprehensive array of photo-etched parts, two sets of masks and a host of decal options, befitting this two-seat single-engine advanced training aircraft that has enjoyed considerable export success, and which has, of course, included several Asian Air Arms. I was attracted to reviewing this kit since we had not featured one in previous editions of the newsletter, and fellow SIG member Nils Treichel presented one for display on the SIG tables during the recent Scale Modelworld 2023 event at Telford. The eye-catching box art, which features specially marked Czech and Slovak Air Force examples, together with the inclusion of optional parts and markings to complete a Royal Thai Air Force L-39ZA/ART Albatross, also attracted my attention.

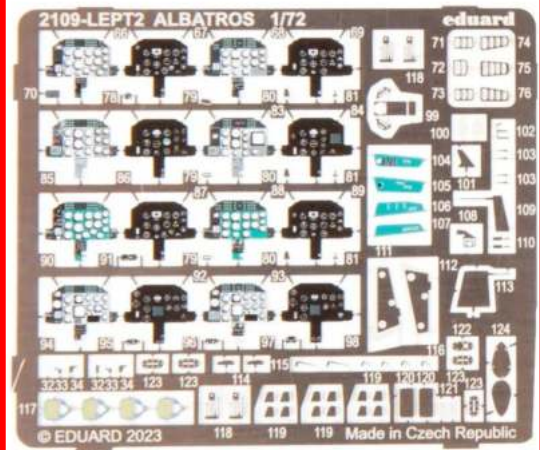
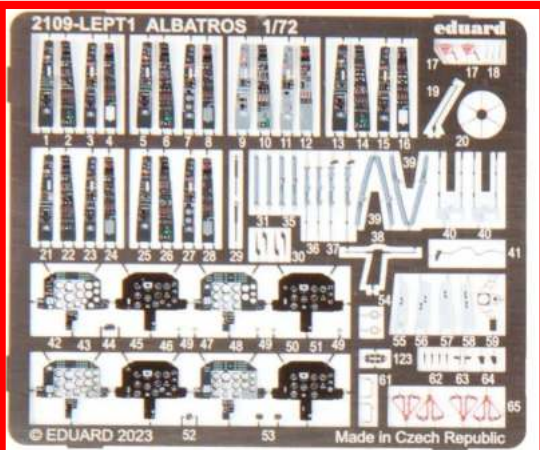
The basic kit is relatively simple, with 56 medium grey parts presented on two sprues with a further 9 clear parts, including one-piece and multiple part canopies. As previously stated, there are two sets of sprues. The plastic parts are all crisply moulded with fin engraved panel lines and the prominent canopy parts are crystal clear. There are two sets of colour photo-etched parts for each model, most of which are for cockpit details, including a multitude of multi-part instrument panels to cater for the different variants, and a sheet of clear film to complete the Head-Up Displays for some of the variants. As with most kits, construction begins with the cockpit, and almost immediately the modeller has to choose which variant is to be completed. Care will need to be taken with identifying the particular configuration of instrument panel, side consoles and other fittings, since the instruction sheet is quite crowded. Once the fuselage is assembled, attention turns to the ejection seats, which are a combination of injection-moulded plastic parts, embellished with photo-etched seat belts and other fittings. The rest of the main airframe comes together quite quickly; the undercarriage on the L-39 series is very simple since the main and nose doors close up after the undercarriage has been deployed. In keeping with the opportunity to complete multiple variants, the kit does include some of the stores pylons, drop tanks and fuselage mounted gun packs that are a feature of some aircraft and these are detailed at this stage of construction. There are also a host of photo-etched parts to cater for the various aerial fits found on the L-39 series and, once again, the modeller will have to take care in following the instructions. The final assembly culminates with a decision about open or closed canopies.



This particular boxing includes no less than ten decal options including several 'specials', although only one for an Asian aircraft, albeit a very attractive example operated by the Royal Thai Air Force and featuring a four-colour blue/grey camouflage scheme with very nice tail markings. The good news is that several aftermarket decal companies, including Armycast and Linden Hill, have released decal sheets that cover a multitude of Asian Air Arms that have operated the Aero L-39 series of aircraft in the past or currently, so there should be no shortage of options for the second kit!

All in all, a very nice package from Eduard that provides all of the material necessary to produce a brace of nicely detailed 1:72 scale models of this popular Czech-manufactured aircraft.

ASIAN AIR ARMS NEWSLETTER 33



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Highly recommended
Mark Attrill
December 2023





This is a short article on my experience of building the Academy RoKAF T-50B "Black Eagles" kit in 1/48th scale (Kit no 12242). Other scales and other variants of the KAI T-50 are available, details of which can be found at Scalemates: https://www.scalemates.com/search.php?fkSECTION%5B%5D=All&q=kai+t-50*

The origins of the Black Eagles

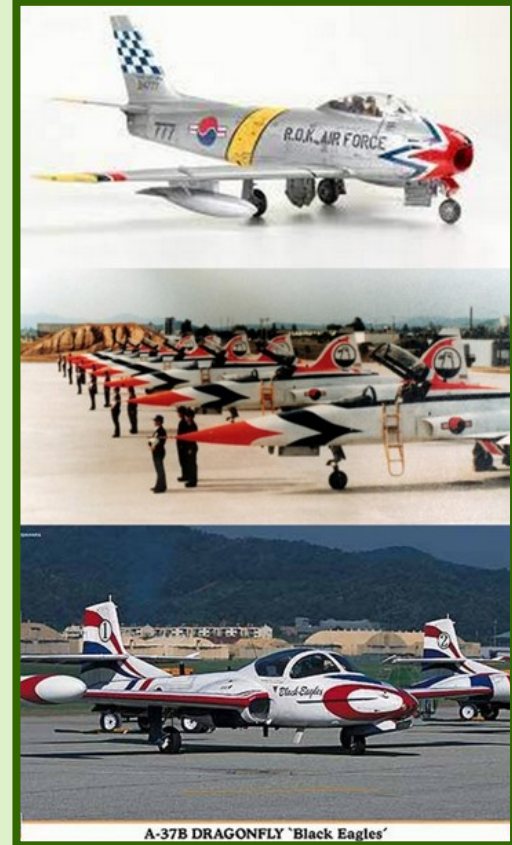
The Aerobatic Teams website (<https://aerobaticteams.net/en/teams/t1/Military-Aerobatic-Teams.html>) currently lists 51 teams flying with 31 different air forces, illustrating the importance to those services of presenting their capabilities to their own public and that of other countries. The aircraft manufacturers whose aircraft are involved also use the opportunity to promote their products. Among these, the Republic of Korea has arguably one of the most respected aerobatic teams in the world, the Black Eagles.

The Republic of Korea Air Force's (RoKAF) has had several iterations of aerobatic team before the establishment of the Black Eagles and their current aircraft. These were:

- * 1953-56: a 4 aircraft team flying P-51 Mustangs
- * 1956-59: "T-33A Show Flight Team" flying the T-33A
- * 1959-67: "Blue Sabres" flying F-86 Sabres
- * 1967-1978: "Black Eagles" flying the Northrop F-5A and RF-5A Freedom Fighter
- * 1994-2007: "Black Eagles" flying the Cessna A-37B Dragonfly

Following the retirement of the A-37 from service, the team was temporarily disbanded before transitioning to the KAI T-50 "Golden Eagle" jet trainer, which was being introduced into service by RoKAF. In September 2009 the Black Eagles resumed flying with an airshow over the capital to commemorate the 60th anniversary of RoKAF. In April 2013 the team became a separate, independent unit as the 53rd Air Demonstration Group under the direct control of RoKAF Headquarters. The unit is based at Wonju Airbase.

The team fly the KAI T-50B variant, essentially a standard T-50 but with an internal smoke generation system, cameras for in-flight video and lights mounted in the wingtip smoke winders for those head-on crowd entry shots. And, of course, a different paint scheme from the standard squadron aircraft.



A-37B DRAGONFLY 'Black Eagles'



ROKAF T-50B Black Eagles



- Marking of "Black Eagles", the aerobatic team of R.O.K. Air Force
- Fully engraved panel lines & rivet details
- Highly detailed cockpit & landing gear
- Lifelike two pilot figures included
- 'Cartograf' premium quality decal included



The KAI T-50B in 1/48th scale

There are two different kits which include the decals to make a Black Eagles jet – one from Academy and one from Tori Factory (kit no TF8001). More on the Tori Factory kit below.

The Black Eagles kit has the same sprues as the base Academy kit of the T-50 (Kit No 12231), differing only in the decals and

painting instructions. In terms of the build, the Black Eagle version requires the use of the modified 'smoke winders' with the nose-tip lights instead of the basic smoke winders in the T-50 kit. The centre-line mounted fuel tank appears to be used by the Black Eagles only for transit flights' and is not used during aerobatic performances. For details of the construction of the T-50, I would refer you back to Jon Byron's excellent build notes of his kit (Newsletter #33, pages 5-19) which is going to tell you more than I will ever know.

I built this kit in early 2021 and didn't record notes during its construction, painting and finishing. What I recall from memory is:

- The kit is very nicely presented in a smart box
- The build instructions were easy to follow and it's nice to have sprue diagrams where you can read the part numbers.
- Black plastic is not ideal when dealing with small parts in my opinion and I would have preferred grey
- I don't recall using much filler or having to do major surgery to get parts to fit.
- The major challenge was with the application and alignment of the decals, sometimes requiring a few to be kept wet and moveable to ensure you had the right alignment. If I recall correctly, I wasn't always impressed with the placement instructions. There are over 100 to apply in total.
- Whilst it's nice to have the consistency of using decals for all the yellow and white parts of the markings, applying 8 individual decals to the smoke winder fins is a bit tiresome as they are a little thicker than some decals you get in kits these days.



As you can see from the photographs, I used one of the two included pilots and built the aircraft as an in-flight model – surely the best way to display aerobatic team aircraft. Therefore I cannot comment on the complexities, or otherwise, of the undercarriage and undercarriage bays.

In between all the decals, I brush-painted Hataka's Blue Line black acrylic paint and used Winsor & Newton Galleria matt varnish



as the finish. I'm sure some more enterprising modellers than me would use the decals as masks and paint the white and yellow areas- the decals support this process if used. All-in-all an enjoyable build, and the model is a nice tribute to one of the world's leading aerobatic teams.



What then is different about the Tori Factory version? Well, as far as I'm able to establish, it's the same plastic but with some "enhancements" including replacement ejection seats, two standing pilot figures (Eggplane style) and static display ground equipment (see photos below). The other major difference is the use of the ROKAF 70th anniversary commemorative tail markings. Paint masks may well be included. They also have a Black Eagles Pilot Team set to go with the kit comprising 8 figures. A recent search (June 2023) for both these items found no stock, anywhere.

ASIAN AIR ARMS NEWSLETTER 33



Graham James,
June 2023





DHC-4 (C-7) Caribou in VNAF Service



The DHC-4 Caribou is a twin-engine, high-wing, specialised cargo aircraft with short take-off and landing (STOL) capability that saw widespread service with several Air Arms around the world and is still in use, in small numbers, as a rugged transport aircraft, mainly in the vast wild regions of Alaska, Canada and Latin America. The DHC-4 was developed and manufactured by de Havilland Canada in the mid-1950s and first flew in July 1958. It was the company's third STOL design and a big step up from their previous single-engine DHC Beaver and Otter aircraft. The aircraft was, from the outset, designed as a military tactical transport, although it could be adapted for commercial use. The United States Army expressed interest in the type at an early stage and ordered over 150 examples in 1959, taking first deliveries in 1961 to become the largest single operator of the type. Production of the DHC-4 ended in 1968 by which time just over 300 examples had been completed. In US Army Service the aircraft was initially designated the CV-2 Caribou, and was subsequently re-designated as the C-7 when the aircraft were transferred to the US Air Force in June 1967. By this time, the Royal Australian Air Force also operated the DHC C-7 Caribou and both nations used the aircraft extensively in Vietnam, particularly where larger transport aircraft such as the Fairchild C-123 Provider and Lockheed C-130 Hercules could not land on the shorter landing strips.

The introduction of the DHC-4 C-7 Caribou to VNAF Service occurred during the height of the so-called 'Vietnamisation policy' set by the US Government in the early 1970s, and followed much the same pattern as that of the Fairchild C-123 Provider. During the summer of 1971, experienced VNAF pilots were drawn from existing transport and liaison squadrons and sent to Dyess AFB, Texas for conversion training, together with a cadre of co-pilots that had moved directly from US-based undergraduate pilot training. Once the Stateside training was complete, the pilots were assigned to the USAF C-7 Transport Wing at Phan Rang for advanced tactical training, joining the co-located VNAF maintenance personnel being trained at the local US-sponsored maintenance school. On completion of their training, the VNAF crews were initially assigned to operational USAF C-7 Squadrons at Cam Ranh Bay to further build up their knowledge of the aircraft. The first VNAF C-7 Squadron, the 427th TS, was formed at Phu Cat in March 1972, by which time the VNAF maintenance personnel had also been relocated to the airbase. Over the next four months, the US authorities

transferred a total of 56 aircraft to the VNAF to form another two squadrons, the 429th and 431st TS. During this very short period of time, the USAF agreed to second a number of pilots and maintenance personnel to the new VNAF units to ease the transition process.

The more experienced pilots on the VNAF C-7 Squadrons had, in many cases, previously flown the classic C-47 Skytrain and they found their new charges quite a novelty. The C-7 had, by comparison, a modern cockpit, was very responsive and agile and full of power. Furthermore, it had the ability to land and take-off on very short runways or airstrips, with a practical payload of three tons or 27 fully equipped soldiers. The rear loading ramp permitted the carriage of small utility vehicles or light artillery pieces, providing the ARVN with some additional flexibility in the rapid deployment or re-deployment of field forces. In time, and following a consolidation of VNAF air transport assets, the three C-7 Squadrons were initially relocated to the 33rd Tactical Wing at Tan Son Nhut AB near Saigon. Shortly after this, it was decided to re-deploy one Squadron, the 427th TS, to the 41st Tactical Wing at Da Nang AB, in order to support the ARVN in Military Region 1. The Caribou's very specific capabilities meant that it was in heavy demand, particularly in support of the more remote locations 'up country' that were also high-risk areas. The aircraft regularly came under small arms fire when landing and taking off and it was to the crews' credit that they did not lose any aircraft during these initial operations in support of the ARVN. Although



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the C-7As were now home-based at either Tan Son Nhut or Da Nang, in practice they operated throughout the country, maintaining detachments at Forward Operating Bases (FOBs) in order to sustain the ARVN Ranger outposts the length and breadth of South Vietnam. The three squadrons maintained high tempo operations throughout 1973 and into the following year but these activities led to a steady decline in the availability of aircraft. The Caribous began to experience engine problems, and this, combined with a lack of spare parts, corrosion issues and some structural cracks meant that by the end

of 1974, only a third of the original fleet was operational at any one time. At the same time, the VNAF had taken the difficult decision to deactivate 10 VNAF Squadrons and place many of its aircraft into storage, which included all of the remaining DHC C-7 Caribous. There can be little doubt that the aircraft's poor serviceability rates had contributed to this decision and the subsequent use of the Boeing CH-47 Chinook to undertake the hazardous missions to re-supply the ARVN outposts. In the case of the C-7 Caribou, the storage plan does not appear to have been fully implemented. There is evidence to suggest that weeks later, and despite the associated technical issues with the aircraft, those airframes previously operated by the 429th and 431st at Tan Son Nhut were hastily taken out of storage and utilised during the last weeks of the VNAF's operational existence. At least one aircraft operated by the 427th TS was also returned to service. All of these aircraft, to a greater or lesser extent, were used to supplement the dwindling C-130



Hercules fleet as the South Vietnamese sought to fight a rearguard action in early 1975, re-deploying ARVN units throughout the southern part of the country or evacuating civilians from combat zones. Many of the images from the last weeks of the war reveal the parlous state of the VNAF C-7 Caribou fleet with over a dozen engineless aircraft abandoned at Da Nang AB. North Vietnamese troops finally stormed the vast Tan Son Nhut AB complex near Saigon on 30 April, after it had been defended by ARVN special forces and the VNAF with contemporary images once again revealing a large number of C-7 Caribous in aircraft revetments. Some VNAF C-7As did manage to escape in the last hours of the Vietnam War, with at least six recorded examples subsequently handed over to the Royal Thai Air Force. The North Vietnamese reportedly captured 33 intact airframes although none of these appear to have ever re-entered service with the NVAF.



VNAF de Havilland DHC-4 (C-7A) Caribou Colours and Markings



By the time that the C-7A Caribou entered service with the VNAF, the vast majority of USAF and VNAF transport aircraft in Vietnam had adopted the standard 'South East Asia' camouflage scheme. The camouflage consisted of Dark Green (FS34079), Green Olive Drab (FS34102) and Tan (FS30219) for the upper surfaces with Light Grey (FS36622) for the lower surfaces. Despite the adoption of a less conspicuous colour scheme, the aircraft retained the Type F national insignia, together with full-



VNAF C-7B 63-9738



sized national flag, large white two-letter unit locator codes and the aircraft serial number, in yellow, on the fin. In keeping with those transport types that entered service with the VNAF in later years, none of the C-7 Caribous ever appeared to wear either a unit or wing insignia.

VNAF de Havilland Canada DHC-4 (C-7A) Caribou Units/Identification Codes – 1971-74

Unit	Variant	Air Base	Tail Code	Notes
427 th Transport Squadron	C-7A	Phu Cat*	Y	Operational Mar 72 – Jun 74
429 th Transport Squadron	C-7A	Phu Cat*/**	P	Operational Jul 72 – Jun 74***
431 st Transport Squadron	C-7A	Phu Cat**	G	Operational Aug 72 – Jul 74***

*Subsequently re-located to Da Nang

**Subsequently re-located to Tan Son Nhut

***Taken out of storage in February 1975

The de Havilland DHC-4 (C-7A) Caribou in Miniature

Coverage of the DHC-4 (C-7A) Caribou in kit form has, over the years, been patchy. In the most popular of scales, Hobbycraft have been the predominant force with a first release of their 1:72 scale kit (HC1343) in 1997, which did include markings for a VNAF aircraft operated by the 427th TS. This was a typical product for this Canadian manufacturer; deemed to be rather simple but generally accurate and offering engraved panel lines, it could be made into a nice replica. Like many of the company's products, this kit has been the subject of some pirating over the years with Idea and Kitech both re-issuing the original kit but all of these are now very difficult to find and command high prices on the pre-owned market. The only other kits of the C-7A that have appeared are in 1:144 scale. Ozmods of Australia produced a kit (OMKIT14401) that actually predates the Hobbycraft kit described above but was deemed to be a very nice example. Since then A-Model of Ukraine produced a kit (AM1412) in 2013, which should still be readily available.

Rather curiously, Caracal decals released a very nice sheet (CD72-051) for the DHC-4 (C-7A) Caribou in 2017, which includes markings for an aircraft operated by the 431st TS. Caracal do not normally produce decals for kits that are not readily available so this remains a bit of a puzzle since the aforementioned 1:72 scale kits have absent from the market for some time.

Mark ATTRILL





Hasegawa's 1/72 F-15DJ Eagle Aggressor

This project took a few left turns. I had secured two Hasegawa F-15C kits over the years, either from eBay or from vendors at model shows. A few years back I bought a DMX decal set for Japanese F-15 aggressors, as the color schemes really stood out to me, and I love unique or different schemes.

As I got started, I realized that there were a couple of parts missing - namely the lips of the intakes of one of the C's. I decided to secure another full kit, and when I went online, found an F-15D/DJ from Hasegawa. It was an older version of molds, which I didn't realize until I opened it up - more toy-like, less detail, raised panel lines, etc., BUT it was the 2-seat DJ version that the aggressors flew, as opposed to the single-seat C's I had started with. (I didn't realize when I got started that the Japanese aggressors that I could find reference photos for were all 2-seaters!).



So, to make a long story (and build project!) short, I started with the fuselage and vertical tails of the DJ (sanded and completely re-etched), attached the wings and horizontal tails of the C, opened up the intakes of the older kit and created the intake trunking and compressor blades (printed paper) and married the intake interior sections to the older kit, and added some of the other details from the C kit, such as the Sparrow clamps, the fuselage strakes, the pitots and AOA probes, and the exhaust nozzles. Not everything was a perfect fit, but I'm happy with the outcome.



Paintwork took forever. I first had issues with the two shades of Ghost Grey. I used AK Real Colors paints (I've been having good luck with them), and as I always do, I lightened both shades with an equal amount of

white paint to achieve scale effect. I blackbased the model and laid down the light ghost grey, but when I laid down the dark ghost grey, there was absolutely no contrast! I assumed this was probably due to the lighter coat I had used on the light grey to retain some of the mottling of the blackbasing/marbling. So I lightened the light grey, sprayed again, then tried the dark grey again. Still not enough contrast. On the third try I got close enough that I decided to live with it, knowing most of it would be covered by the aggressor scheme.



Then the masking for the 3 colors of the aggressor scheme took some careful planning and lots of tape and time! First there was a lot of "pre-masking" to do, because the aggressor scheme didn't cover over many of the panel lines (airbrake, control surface joints, etc.). Once I had that done, I printed out a scale diagram and used that to draw patterns, then lay the tape on the patterns and cut them out to use on the model. First time I've tried that technique, and it worked pretty well. In the end I only had a couple of spots to touch up.

The decals were up next. Whew! Those Japanese love to number every panel, and basically print the operating instructions all over the skin of the airframe! Similar to the F-4EJ Kai I had built recently. Took me a couple of weeks working a few hours at a time to get it done.

The ECM pod and air-maneuvring probe were from a couple of Hasegawa weapons sets, and I matched what I saw in reference photos.

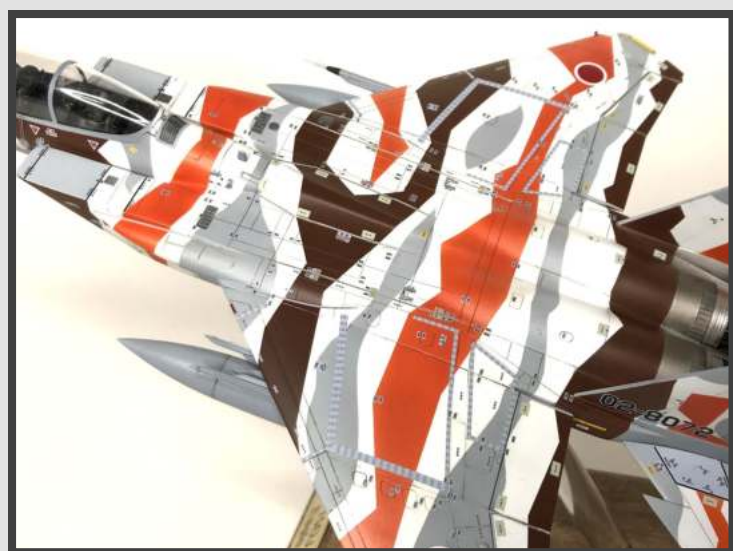
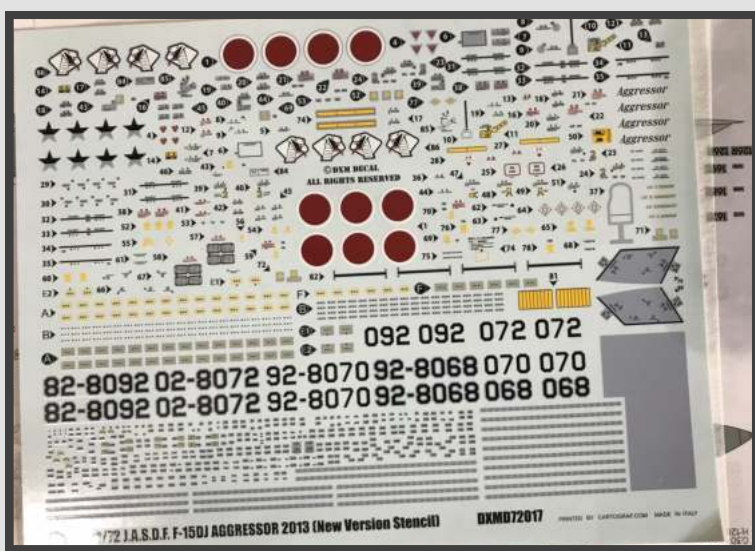


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The only letdown of the project occurred after I removed the canopy masking. Even though I used static wipes on the canopy, there were still some small pieces of plastic and grit that got stuck up in the cockpit coaming. Also - and this is a first - there was some sort of haze on the inside of the canopy. I don't know if some paint fumes drifted down through the mounting hole I drill in models to mount them, or what. I tried to pop the canopy off as I had glued it down with Gator Grip glue, but I applied as much pressure as I dared and couldn't pry it loose. I decided to live with it, even though to me it is an eyesore - probably my biggest disappointment for a modeling project in years, after having put so much effort into this.

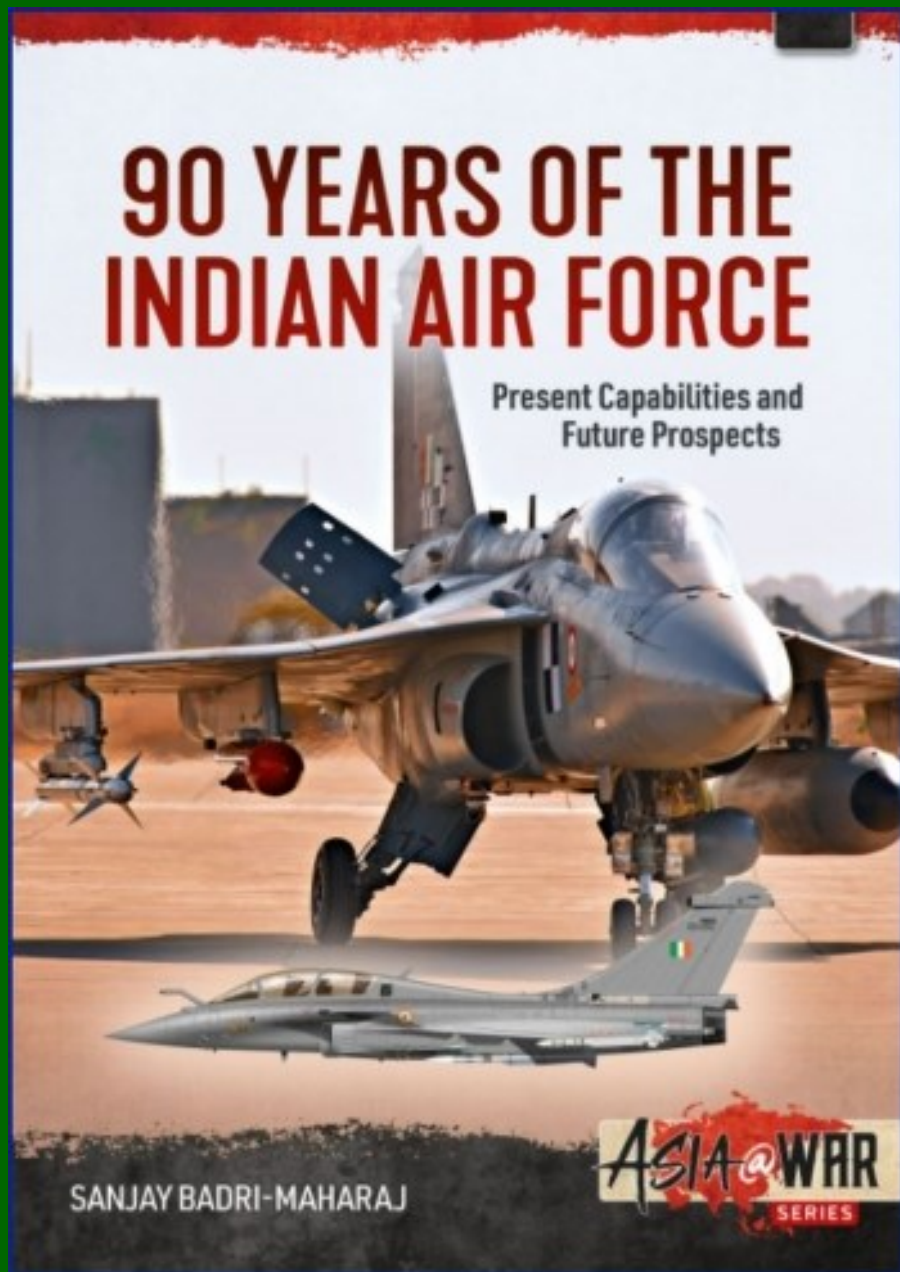
The last photo is of the real bird.



Greg Kittinger,

June 2023

Book Review – 90 Years of the Indian Air Force – Present Capabilities and Future Prospects



In recent months I have renewed my interest in the Indian Air Force by virtue of the fact that I am researching for a number of modelling projects, so this book's arrival on my desk has proved to be timely. That said, I will provide one caveat from the very start in an effort to avoid any confusion or disappointment. This book will not provide very much in the way of deep historical content on the Indian Air Force – The sub-title implies this to be more of an academic read with a brief overview of how the Indian Air Force has reached the position in which it finds itself today. As long as this is understood by readers of this review, then it will avoid disappointment for those who may have thought this to be a potted 90-year history of the Indian Air Force, and, to be fair, the author, Sanjay Badri-Maharaj, does make reference to this early on in his preamble. That said, most of the first 15-16 pages of the book do provide a brief overview of the Indian Air Force's rich and challenging history, during which time it has found itself defending the nation from a range of conventional and non-conventional threats since Independence in 1947, although the birth of the Indian Air Force actually pre-dates this, as the title of the book indicates.

In keeping with previous titles in this excellent series of books, the author provides a very useful 'scene setter' with an overview of the early post-war history of the Indian Air Force as a truly independent Air Arm, drawing upon the experiences and lessons learned from the various Indo-Pakistani conflicts during the first 30 years or so following independence. Chapter two provides a comprehensive coverage of the doctrine related to the Indian Air Force, which makes interesting reading for the aviation historian since it is not an area that is often covered, but it serves to highlight Indian thinking in relation to its place in the world. Unlike many other emerging Air Forces, India has tended to limit itself to defence of the nation through its regular engagements with its immediate neighbours while limiting its exposure

further afield. There has been a noticeable shift in more recent times with regular deployments of combat aircraft outside of the country to Australia, the United States and Europe. This section is followed by a comprehensive look at the current Indian Air Force structure, inventory and infrastructure with tables listing bases, squadrons, aircraft types and overall numbers. It would have been extremely useful to have had a table that linked the individual units and squadrons to particular bases, although the regular changeover of units and perhaps some security restrictions have precluded this.

For the second half of the book, the author returns to the sub-title, with a detailed analysis of future prospects for this powerful Air Arm through upgrades to existing weapons systems and the introduction of new types to service. The Indian Air Force is going through an extensive re-equipment programme, particularly in terms of its support aircraft and rotary wing capabilities. In the front line, the Dassault Rafale and the HAL Tejas (which emerged from the Light Combat Aircraft (LCA) programme) have now entered service with a raft of upgrades, and the Air Transport Force has replaced many of its older types and at the same



time taken a quantum leap in global reach through the acquisition of aircraft such as the Boeing C-17 Globemaster III. The rotary wing element has also undergone significant change and a quantifiable increase in capability with the introduction to service of the AH-64 Apache and CH-47 Chinook together with the indigenous Light Combat Helicopter and Light Utility Helicopter that have finally replaced some of the 1950/60s vintage types such as the Cheetah and Chetak.



The author should also be commended for a masterful job in covering the IAF's ground-based Air Defence Systems, an area that is oft omitted from Air Force reviews, and for including a comprehensive analysis of India's emerging space technology, and how this is also informing and influencing the direction that the Indian Air Force wants to take as a leading defence player in the Asia-Pacific region. Furthermore, Sanjay does not shy away from the particularly sensitive issue of the Indian Air Force's role in the potential delivery of nuclear weapons. As the author is at pains to point out, much of India's capability in this area is shrouded in secrecy but he makes a sound attempt to assimilate what information is available with how the Indian Air Force may be called upon to utilise its assets in any event that threatens the overall security of the nation.



Again, in keeping with the other titles in this superb series of Helion books, this one also provides a liberal and extremely helpful number of maps and tables, along with some high-quality illustrations both in terms of photographic content and a comprehensive set of colour side profiles, to assist the reader with referencing the complexity of the subject. For the modeller and aviation researcher in particular, the inclusion of an excellent selection of aircraft CSPs, all expertly drawn and presented by Series Editor Tom Cooper and a new artist to me, Goran Sudar, is a definite highlight. Tom and Goran have not only tackled the well-known combat aircraft types in service with the IAF, but also some of the lesser known types that equip the current IAF. My only minor reservation with this title, and one which I recognise may be a very personal view, was with the inclusion of so many manufacturer's images, rather than photographs of aircraft and equipment 'in service'. I appreciate that, once again, security restrictions on the use of operational imagery may have come in to play here and this observation should certainly not overly influence one's choice of this title.



This volume was another great read and an extremely valuable addition to the Helion and Company Asia@War series where, once again, the Series Editors' have combined the written talents of a well-informed author with a host of previously unpublished imagery and a superb selection of colour side profiles, maps and tables to produce a high quality reference book on an contemporary subject that has earned its place as one of the predominant Air Arms in the Indo-Pacific region.

Mark Attrill

February 2024

AFV Club 1:48 Northrop F-5E Tiger II

'RoCAF with weapons' (Ref: AR48S12)

ASIAN AIR ARMS



The AFV Club 1:48 scale Northrop F-5E Tiger II is not a new kit; the Taiwanese manufacturer, more widely known for their AFV kits, released the first examples of this extensive family of second-generation F-5s in 2010. Since then, they have regularly re-issued the original kit with new or revised parts to produce the twin-seat F-5F operational trainer and the reconnaissance optimised RF-5E 'Tigereye'. Not surprisingly, given the origin of the manufacturer and the extensive use of the prototype in Taiwan, several of these boxings have included ROCAF decal options. The latest iteration, released in 2023, also covers the aircraft in ROCAF Service but now includes additional parts for the Martin-Baker Mk.16 ejection seat, which has replaced the original Northrop seat in an upgrade programme for the ROCAF, together with a comprehensive set of weaponry and new decals to reflect the latest camouflage scheme and markings applied to these aircraft, which are now entering the twilight of their careers.

This issue of the kit is presented in a sturdy box featuring attractive box art of a fully armed F-5E dropping ordnance on an unspecified maritime target. Inside the full box, the modeller is greeted with eight light grey sprues containing just under 200 parts, a separate rear fuselage and exhaust nozzles, a clear sprue with 9 parts, and a small, photoetched fret with several detail parts, including air intake grilles and cockpit mirrors and a set of soft plastic insert plugs, associated with the ordnance. In addition to the main kit parts, there are the two sprues related to the new ordnance supplied with the kit, which account for another 200 parts. Although the parts count appears to be very high for this diminutive single-seat fighter-bomber, a large percentage are optional; for example, there are a considerable number of parts associated with the various modifications made to the F-5 airframe over the years and the weapons, including individual and optional fuses for each of the bombs. It should also be noted at this stage that the kit is, like many other contemporary products, modular in nature in order to allow AFV Club to market as many sub-variants as possible including the aforementioned F-5F and RF-5E. The kit also includes an attractive decal sheet with options for several ROCAF aircraft in the latest two-tone grey camouflage schemes with a second set of decal markings for the weapons set. The package also includes a well presented and clear full-colour instruction booklet together with a useful table of recommended colours from no less than four different paint suppliers, including GSI Creos, AV Vallejo, Humbrol and Lifecolor.

Like many aircraft kits, assembly is rather conventional and starts with a nicely detailed cockpit tub which now includes the 8-part Martin-Baker Mk.16 ejection seat. The main instrument panel and side consoles feature nicely rendered raised detail, which will benefit from some careful painting, dry brushing and/or the application of aftermarket 3D or standard instrument decals. Once assembled the cockpit tub is offered up to the forward fuselage, which forms one of the sub-modules at this stage. One curious inclusion is that of a separate gun bay cover for the port fuselage, which suggests that AFV Club may have been considering the inclusion of a 20mm cannon bay at some point in the design phase, but which never materialized! One nice option that AFV does include are the parts necessary to pose the canopy in the open or closed position. At this relatively early stage in construction, it will be necessary to decide which marking option will be utilized since the kit has the two versions of the radome fitted to ROCAF F-5Es, including the later 'Sharknose' version, and two different styles of leading-edge extension fairings. It should be noted that AFV Club suggest assembling the rear fuselage and wings as a separate module before marrying this to the forward fuselage at Stage 10. During a previous assembly of this kit, I opted to bring the forward and main/rear fuselage together after I had fitted the main wing but before assembling the air intakes. I also chose to omit fitting the rear stabilators until the end of the build since the interconnecting rod is rather flimsy and I was concerned about breakage. It also aids in painting the distinctive natural metal part of the rear fuselage adjacent to the exhaust nozzles. The join between the forward and main fuselage can be fraught with difficulties but in this case the assembled modules went together reasonably well, and omitting the air intakes until after these parts had been joined provided me with the access necessary to produce a good join. Care does need to be taken with fitting the lower rear fuselage (Part P7) since there is a potential 'step' in the join, although this is aided by the omission of the stabilator (Part H3). Another nice feature of this kit is the provision of separate leading-edge slats, flaps and ailerons all of which can be applied in a variety of positions to provide additional interest. The air intake fairings benefit from the inclusion of photo-etched grilles and my only reservation with assembly up to this stage is the rather 'see through' nature of these intakes, although this will not be as pronounced once the exhaust nozzles have been fitted. Some may prefer to blank off the forward fuselage with some plasticard and the modular nature of assembly would certainly facilitate this option.

AFV CLUB SCALE 1/48 AR 48S12

F-5E ROCAF

中華民國空軍 F-5E 非制式型號
ROCAF F-5E BOMBING ATTACK MISSILE

1970年二月美國空軍提出了一項國際戰鬥機計畫，要求民間飛機製造商競逐一款注重操作性能與低總成本的超音速戰鬥機。這項任務除了能執行日間空軍戰鬥任務外，也能滿足對地攻擊的需求，同時具備具備低廉的價格，讓它更能夠受到外國市場的青睞。

羅諾斯公司以F-5A戰機為基礎改良的F-5A-21，在採用功率更大的發動機，擴大了翼面積與採用最先進的航電設備後，在同年十一月裡贏得了這項競賽，取得了國防部的量產訂單，正式被賦予了F-5E的型號。

1973年F-5E進入量產，除了由羅諾斯公司製造之外，尚有授權其他國家生產，位於臺灣的航空工業發展中心在取得羅諾斯公司的授權之後，開始組裝生產產型F-5E與雙座型F-5F，持續生產至1986年，共生產了308架F-5E/F，再加上23架由美國羅諾斯公司生產的F-5E，使得中華民國成為全球第二大使用國。

在中華民國空軍的服役期間，F-5E搭載的雷達由AN/APQ-153升級至AN/APQ-159，攔截距離由37公里延長至65公里。隨著1990年代中後期RF-16A/B、幻象2000-SEI/II與RF-CK-1A/B進入服役，F-5E/F逐漸轉為訓練之用。1997年經F-5E委託新加坡字號公司(STAE)裝為RF-5E，取代服役多年的RF-104G。

截至2022年為止，仍有43架F-5E飛機仍在中華民國空軍服役，由於能繼續維持自行開發的彈射椅，並飛行距離不正確即可造成彈射失敗，因此空軍決定為這批F-5E購買了貝克(Martin-Baker Mk.16)彈射椅，預計將伴隨F-5E服役至2025年的最後降落時光。

In February, 1970 the United States Air Force proposed an international fighter aircraft competition, which requested airplane manufacturers to bid for the design of a low-cost, high-performance, light-weight, supersonic fighter. In addition to satisfying the requirements of daylight air superiority, it also needed to possess ground attack capabilities. The proposal also required the design to be low-cost with regards to manufacturing and maintenance making it suitable for the export market.

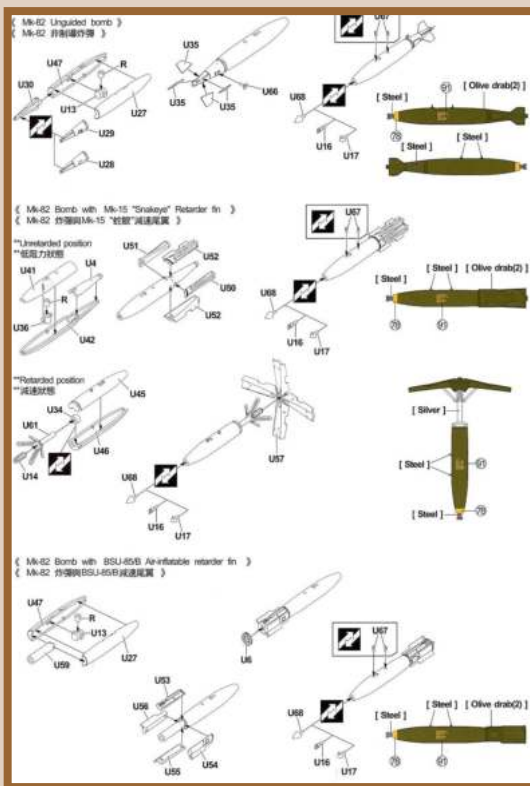
The upgraded F-5A-21, derived from the F-5A by the Northrop was given a much higher output power plant, increased wing area, and advanced avionics. In November of the same year, Northrop won the competition and was given production approval by the U.S. Department of Defense. The fighter was officially designated the F-5E.

The F-5E entered production in 1973. In addition to the Northrop production line, the F-5E were also licensed built by foreign allied nations. AIC in the Republic of China, Taiwan was authorized to produce the single seat F-5E and the two seat F-5F in quantities. A total of 308 F-5E/F aircraft were completed by the end of production in 1986. Adding 23 airplanes procured from Northrop, ROC was ROC the biggest operator of the F-5E/F fighters.

During its service in ROCAF, the radar was upgraded from the AN/APQ-153 to the newer AN/APQ-159, which increased detection range from 37km to 74km. As newer generations of fighters such as F-16A/B, Mirage 2000-SEI/DI, and RF-CK-1 A/B entered ROCAF service in the mid to late 90's, the F-5E/F gradually phased into training units. In 1997, 7 F-5Es were converted to RF-5E by STAE in Singapore to replace the aging RF-104G's in the ROCAF inventory.

By end of 2022, 43 F-5E remained in service with the ROCAF. All remaining F-5s will have the original Northrop ejection seat replaced by the Martin-Baker Mk.16 ejection seats. These 43 F-5s are projected to continue their active service to the year of 2025.

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the inclusion of a 20mm cannon bay at some point in the design phase, but which never materialized! One nice option that AFV does include are the parts necessary to pose the canopy in the open or closed position. At this relatively early stage in construction, it will be necessary to decide which marking option will be utilized since the kit has the two versions of the radome fitted to ROCAF F-5Es, including the later 'Sharknose' version, and two different styles of leading-edge extension fairings. It should be noted that AFV Club suggest assembling the rear fuselage and wings as a separate module before marrying this to the forward fuselage at Stage 10. During a previous assembly of this kit, I opted to bring the forward and main/rear fuselage together after I had fitted the main wing but before assembling the air intakes. I also chose to omit fitting the rear stabilators until the end of the build since the interconnecting rod is rather flimsy and I was concerned about breakage. It also aids in painting the distinctive natural metal part of the rear fuselage adjacent to the exhaust nozzles. The join between the forward and main fuselage can be fraught with difficulties but in this case the assembled modules went together reasonably well, and omitting the air intakes until after these parts had been joined provided me with the access necessary to produce a good join. Care does need to be taken with fitting the lower rear fuselage (Part P7) since there is a potential 'step' in the join, although this is aided by the omission of the stabilator (Part H3). Another nice feature of this kit is the provision of separate leading-edge slats, flaps and ailerons all of which can be applied in a variety of positions to provide additional interest. The air intake fairings benefit from the inclusion of photo-etched grilles and my only reservation with assembly up to this stage is the rather 'see through' nature of these intakes, although this will not be as pronounced once the exhaust nozzles have been fitted. Some may prefer to blank off the forward fuselage with some plasticard and the modular nature of assembly would certainly facilitate this option.



With the main part of the airframe now assembled, attention turns to the undercarriage, which is also nicely detailed with separate links, oleos and doors that can be posed in the open or closed position, together with the prominent air brakes and landing lights, both located under the central fuselage. Once final assembly of the main airframe is completed, the modeler can then focus on the ordnance fit and here, thanks to the inclusion of AFV Club's new 'Air to Ground Weaponry Set 'A'', which is also available separately (Item Number AR48107), one will find a very comprehensive array of stores/weapon pylons, drop tanks, missiles, rocket pods and bombs available to hang from your F-5E Tiger II. The original kit included a relatively modest weapons fit, limited to two AIM-9 Sidewinders and a trio of drop tanks fitted to the centreline and inner wing pylons. The additional weapons set provides a variety of bombs including the CBU-100/Mk 20 Rockeye II, Mk-82 unguided, Mk-82 with Mk15 Snakeye retarded fins, Mk-82 with BSU-85/B air-inflatable retarder fins, Mk-84, M117 750lb, M117 with MAU-103 strakes and LAU-3A/B rocket pods. Several of these options include weapons in a 'deployed mode', such as the Mk82/Mk15 Snakeye as shown on the box art or the individual LAU-3 rockets, which will allow the modeler to pose them being launched from an aircraft in flight or laid out for a ground display in an 'Air Show' diorama. The other novel feature with this weaponry set, and indeed the drop tanks supplied with the original kit, is that each item has been designed to incorporate a soft plastic insert, which then allows the modeler to swop ordnance around, utilizing the kit-supplied sway braces (Parts A25/26/27) designed for this purpose. The inclusion of a very comprehensive set of markings for these weapons, combined with the very useful F-5E loadout table provided by AFV Club in the instruction book, provides further evidence of the care that has been taken over the development of this Special edition kit.

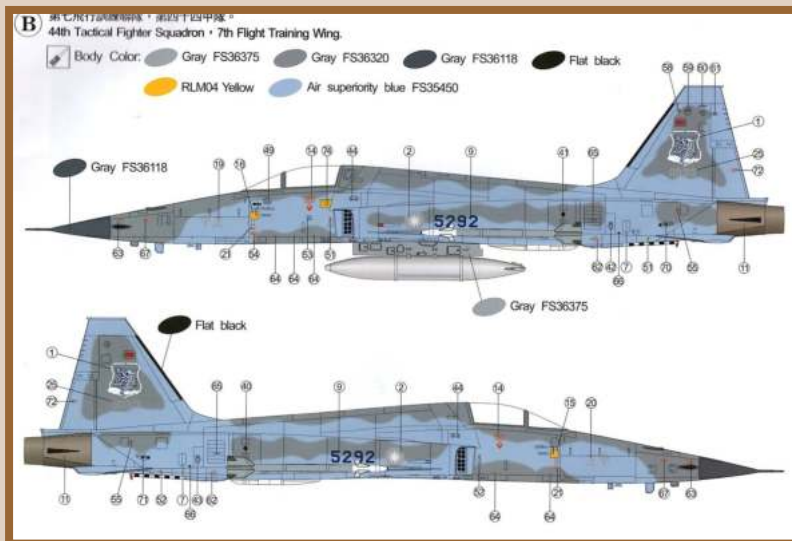
As previously mentioned the kit provides decal markings for several different aircraft, all from the last unit to operate the 40+ F-5 airframes that remain in service with the ROCAF in the advanced combat/aggressor training role, but featuring different airframe details and/or colour schemes.

Option	Type/Unit	Notes
1	F-5E Tiger II 80867/5265, 44 th TFS, 7 th FTW	Standard Radome – Two-tone Grey Scheme
2	F-5E Tiger II 00313/5292, 44 th TFS, 7 th FTW	"Sharknose" Radome – Blue/Grey Camouflage Scheme
3	F-5E Tiger II 80869/5267, 44 th TFS, 7 th FTW	Standard Radome – Two-tone Grey Scheme
4	F-5E Tiger II 00315/5294, 44 th TFS, 7 th FTW	"Sharknose" Radome – Two-tone Grey Scheme

The AFV Club F-5E Tiger II is one of a select few aircraft kits marketed by this Armour-orientated kit company. Fortunately, it is a very good kit with finely recessed panel lines and an overall excellent fit of parts, although caution should be exercised during assembly, taking account of the modular nature of construction. In my opinion there is little need for aftermarket items to embellish this kit, although it could be argued that the cockpit could benefit from the inclusion of a resin replacement 'tub' or 3D instrument panel/console decals, particularly if the canopy is posed open. In spite of the fact that this kit was first issued almost 15 years ago, it remains the definitive 1:48 scale kit of the second-generation Northrop F-5E Tiger II that has been instrumental in the development of several Asian Air Arms over the last 40 years, including the ROCAF.

Highly recommended

Mark Attrill
January 2024



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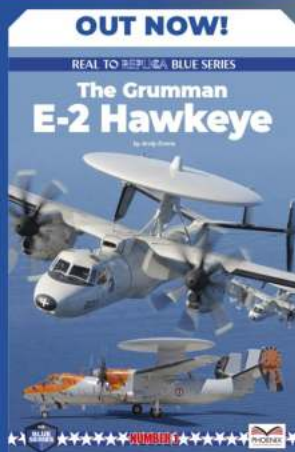
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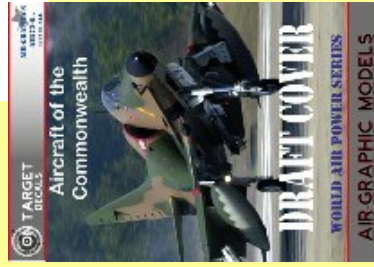
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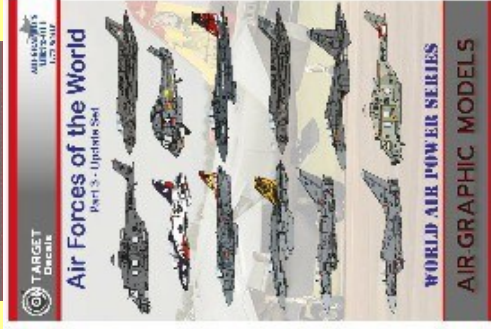


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