

# ASIAN AIR ARMS Newsletter 34 September/October 2022



Serving Asian Air Arm enthusiasts and modellers in 60 countries



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# ISIAN AIR ARMS NEWSLETTER 33

# **Editorial Page**



# A welcome return to Telford and News for 2023

There are just over six weeks to go before the Asian Air Arms Special Interest Group makes a welcome return to Scale Model World, the biggest Scale Model Show in the world, at the appropriately named International Centre in Telford after a two-year absence during the COVID-19 pandemic. I know that many of our UK and European-based members, and indeed some from further afield, are now looking forward to renewing their acquaintance with this event, and I am extremely pleased that we have been able to formally commit to the event as a SIG. I am also very pleased to report that early indications would suggest that we will also have a large number of display models for our large stand and I am busy compiling the final list as I write this foreword. I am also busy trying to put the finishing touches to a couple of my builds in the hope that they will be ready for the show too. For those that are attending the event, I had hoped to have information on the location of our stand by this copy deadline but this is still being worked on by IPMS(UK) so I will publish it in a separate e-mail nearer the time.

I am also conscious that for practical or financial reasons much of our world-wide membership will be unable to attend the show, so, in keeping with our traditions from previous years, it is my intention to publish a comprehensive report on Scale Model World in the form of a Newsletter 'Special' shortly after the event, with all the latest news and comprehensive photographic coverage so as many SIG members as possible can gain at least some of the atmosphere from the show.

Turning to this particular newsletter, I am once again very grateful to our illustrious editor, Steve Komor, for putting together another bumper edition of the newsletter which I hope will continue to be of interest to the readership, and I am delighted that we are also continuing to attract new contributors. My recent request for some funds, primarily to maintain our website and minor expenses associated with our attendance at shows, was not only met with an encouraging and generous financial response from the membership but also generated some very kind words about the SIG and newsletter, for which I am also very grateful, since it indicates that we are still 'doing the right thing'. That said, I am not one for resting on my laurels and I believe we can further improve the experience for everyone, with some small changes in 2023.

As I alluded to in one of my most recent e-mails, we will be running a small model competition during Scale Model World, for which I have already secured some prizes, with the promise of more. It is appreciated that not everyone, for obvious reasons, can participate in this competition, so in order to make membership fair for everyone, we will be introducing some competitions within the newsletter from 2023, which will be open to everyone. I am hoping to provide more details, including the first competition, in the next standard newsletter, which should be published sometime in mid-January 2023, so watch out for this.

The other issue that I am conscious of is the imbalance between 'real aviation' and modelling articles that has crept into the newsletter in recent times. This is no-one's fault, and is simply down to the availability of suitable material at the time for Steve and I to include in the newsletter. I, for one, have simply not managed to find the time this year to continue my regular series on 'Aircraft of the South Vietnamese Air Force' but I hope to address this in the New Year, and I would encourage any other members who can contribute 'real aviation' articles to do so in order that we can better appeal and cater to the non-modellers among our extensive worldwide membership.

Until next time, happy reading and 'Stay Safe'!

Mark Attrill

Despite the fact that this is only a bi-monthly publication, the deadline always seems to come around much more quickly than that! However, I know from the feedback that continues to trickle in that the efforts of all concerned in its production are very much appreciated by our readership. And on that note, I would like to exhort all of you to think hard about whether you have something to contribute. Christopher Hitchens once quipped (although apparently he was not the first to iterate the sentiment) that, "Everyone has a book in them and that, in most cases, is where it should stay." Surely though, many of you must have at least one newsletter article in you! So come on, readers, get thinking and put fingers to keyboards!

In this issue, we feature the second mega-build by Jon Bryon, this time Taiwan's indigenous AIDC F-CK-1C Ching-Kuo fighter, based on, but very different from, the ubiquitous F-16 Fighting Falcon. There's another build by regular contributor Meindert de Vreeze, and articles by Mark Attrill, David Thomas and me. Yk Goh points out the modifications that would be needed to turn Airfix's 1/48 Airfix F.6 Hunter into a FGA.9. Finally, member Vincent Lim has provided his first feature, a beautiful build of the Academy 1/48 RoKAF T-50 'Black Eagle'.

I know it's not strictly Asia-related, but I really want to bring to your attention a **very** in-depth comparison of the various decal setting solutions on the market, conducted by Poland-based Exito Models. I found it very interesting and informative, and I am sure you will find it worth a read. It's so long that they have had to split it over two parts, and the links are here:

https://exito.site/test-of-decal-setting-solutions

https://exito.site/test-of-decal-setting-solutions-pt2

On the subject of video links, and in keeping with our cover feature, Gary Markham has sent a link to a Youtube video of the RoKAF Black Eagles - <a href="https://www.youtube.com/watch?v=L4WZJCWKKik">https://www.youtube.com/watch?v=L4WZJCWKKik</a>

Many of you will, no doubt, be getting very excited about attending the highlight of the modelling year, Scale Model World. For those of you who will be going, I'm sure it will be everything you hope for. For those of you unable to attend, as Mark has already mentioned, we will be featuring an extended article in a forthcoming edition, with plenty of photos.

In the meantime, happy modelling!

Steve Komor

# AFV Club 1/48 AIDC F-CK-1C Ching Kuo



An aircraft of the 7th TFG, 427th TFW, Republic of China Air Force, Taiwan, 2017, by Jon Bryon

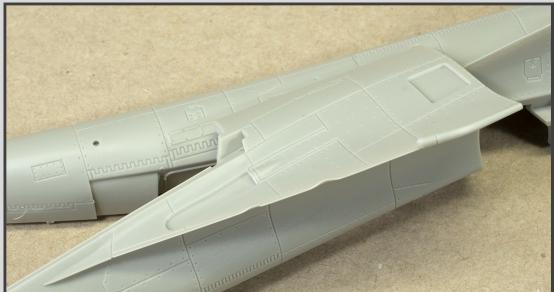


When John Chung makes a model of something, it's usually pretty much the definitive word on that subject in that scale. Everything else sits in its shadow. If you want to see this kit made to the highest possible standard, I recommend you seek out his build on the internet or in Military Illustrated magazine. If you want to see what an average modeller can do with it in a couple of months, read on...

The unfortunately named F-CK-1 is kitted by two manufacturers in 1/48: Freedom Model Kits and AFV Club. They're both pretty expensive in the UK and I only ended up getting this as it was being sold off a little cheaper by Hannants due to a damaged box. It turned out this was a bit of a false economy.

In the box the parts look quite nice at first glance. There is a small fret of photo-etch, which is not terribly useful and doesn't include parts really suited to the medium, like a HUD and seat belts, and a couple of pieces of resin to update the cockpit. The plastic has a fairly rough texture to it, which is par for the course these days, and would benefit from a thorough rubbing down after priming. I couldn't be bothered, but the finished article would have benefitted. The surface detail is quite chunky and fades significantly towards the edge of the moulds. The decals are printed by Cartograf, but look thick on the sheet, with a matt finish and a very wide margin of carrier film.

This kit only spent a couple of years in the stash before I pulled it out to conclude my 'F-16 and children' series. Opening the box revealed that was not all that was damaged. The LERX is moulded incredibly fine and is consequently very fragile; mine had split and warped in several places. The radar warning antennae, which lie at the LERX/wing root junction, had also split away from the fuselage and warped upwards. Finally, there was a hairline crack in the forward part of the canopy. There's nothing like an un-fixable problem to kill one's mojo, but we press on...



Damage to the port LERX and RWR. The plastic is paper thin at the leading edge.





Detail is nicely moulded. Note, however, the huge ejector pin towers. These plague a lot of parts, but are easy enough to remove.

A couple of parts are provided in resin, presumably to cater for the later -C model.





The canopy is very, very thin, which is probably why it was cracked and chipped. There's a significant mould seam to remove and a lot of sprue gates to clean up.

In essence, the detail in the kit, and the fit, are generally pretty good. I kept everything very basic and the only additions I made were to rebuild the pitot from sweat-soldered brass tubing and to add some generic photo-etched seatbelts. The seat is average, but the cushion did not fit at all at the correct angle into the frame. It also fouled the top of the canopy when closed, so I had to chop off the corners of the headbox for it to fit. I actually did not fit a fair amount of the cockpit detail (mirrors, internal framing) as I deemed it not worthwhile for a closed canopy.



The kit ejection seat, with cushion fitted with a gap at the top...

...and fitted with the gap at the bottom.

I decided to live with this.



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As with all the kits in this series, the main problem was dealing with the intakes. These are full length and one of the more complicated designs I've seen on a kit. I did spend a fair amount of time getting rid of the internal seams, but with the limited visibility and dark intake colour, it was a long run for a short skid. To assist with removing the seams, I ignored the instructions and actually completed the trunking with the main gear bays prior to installing the whole assembly into the lower fuselage.





I'd heard that using a dark coloured base for white paint produces a more vivid result. I found this not to be the case...

Masking for the front of the inner intakes.



The main fuselage is split horizontally, with the front section split vertically, and the fit is not bad. The intakes were less satisfactory and took quite a lot of sanding to blend in, leaving some difficult to restore panel line detail on the underneath.

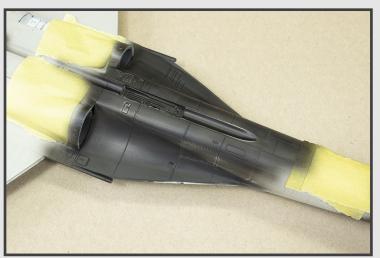


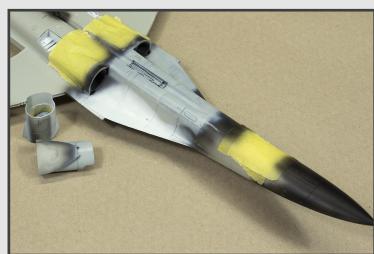




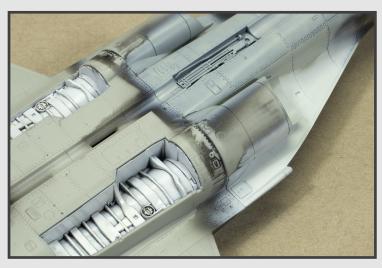


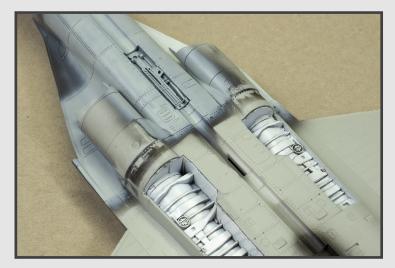
Beginning to address the damaged LERX/RWR areas (1) and nose to fuselage joint (2).





Painting the intakes prior to fitting to help get a smoother finish.





There's a circular kit piece on the upper fuselage. I followed AFV Club's instruction to paint it white, but I think it should be a light. There's another pale-coloured circular feature which AFV Club neglected to model, so I simply scribed it in and painted it an off-white colour.









My usual cursory effort with the cockpit. With a closed canopy, I never want to put too much effort in!



I inadvertently sanded this strip off during clean up, so I replaced it with some plastic card.







Starting the canopy masking. The die cut circles are from HiQ Parts.

AFV Club supply quite a few decal options – more than it would seem at first – and since I am a sucker for a bright red tail, I opted for the most colourful scheme. There are two such airframes, and I went for 1427. Some 'Googling' throws up loads of photos of this particular aircraft between about 2014 and 2019.

There are several ways one can approach the tail, and that is where I started. The first is to use the decal for the whole tail which includes the red background, blue and white sections and the white eagle's head and tail code. The second is to paint the red and use the separate decals for the other elements. The third, which I took, is to mask and spray all of it except for the tail number. This is more involved but gives, I think, a better result.



The first stage is to scan the decal sheet and trace the eagle outline using Inkscape. I then cut this out using a Silhouette Portrait 2 cutter. My settings are depth 2, force 2, speed 1 with 1 pass and an overcut of 0.01mm. This is for cutting into Artool Ultramask, which is a vinyl film that comes in a roll. Once cut (and I make several to allow for mistakes), the eagle head design is laid over the tail, which had been airbrushed with Mr Finishing Surfacer 1500 White. Doing that is the really tricky bit. I repeated this for the white and blue flash at the base of the rudder, and the star design at the base of the front of the fin.

After the mask was placed I mixed up a red from 75% Tamiya X-7 Red and 25% Gunze H14 Orange. I have found that these paints are much better to airbrush over vinyl masks than lacquers. Lacquers have a tendency to stick to the side of the mask causing flaking when the mask is removed. In this case, the red went down extremely well and the masked white was nice and sharp, but a spot of the white paint lifted from the plastic and had to be fixed later.





Masking removed from the eagle head design. You can see where the paint lifted on the port side

When it came to the blue, I didn't have any Tamiya acrylics to hand, and had to rely on a mix of Mr Color blue lacquer paints (80 and 322; it's a bit darker than it should be). Unfortunately, this paint did flake when the masks were removed and touch up was fairly tortuous since I had to respray the white, reapply the masks, and do the blue again. Still, once all was said and done, I was fairly pleased with the outcome.

With the tail out of the way, I made a start on the main camouflage scheme. It should be mentioned that the AFV Club diagram is not correct for 1427. Fortunately, the excellent photos online provide enough coverage for the correct pattern to be established (at least to my low standards). The model was black-based and the four-colour camouflage pattern airbrushed in a tight marble pattern or through various mottling masks, starting from the darkest shade through to the lightest. I used Mr Color C305 for the dark grey, C306 for the medium grey, C325 for the light grey, and C69 for the white (which photos show is clearly not white, and so Gunze's Off White is an excellent match). The nose cone and various aerials are C301.

I free-handed the scheme and then tightened up the demarcations using the rolled Blu-Tack method.

AFV Club recommend painting the top of the tail on the port side with FS36622, a very pale grey (C311). This did not look right to me at all, and I went with C306.



Masking the IFF aerials. This is always difficult as the shape is complex and small.

Oil washes, made of various Abteilung 502 colours (Sepia, Dark Mud, Faded Grey, Black, Neutral Grey) were applied to the recessed detail. The panel lines are mostly quite deep and rather wide, so the effect is somewhat over-powering – certainly when compared to photos of the real thing – but the effect is artistically pleasing enough in my view. I left the bright colours on the tail alone as this contrasts well with the more weathered greys.



I forewent a gloss coat and decided to apply the decals directly to the matt paint. I was sceptical about the decals as they were quite 'blobby' on the sheet. After soaking them very briefly in hot water, and floating them on a pool of Mr Mark Setter, I left them alone and they melted down into the detail perfectly well. Sadly, when using some masking tape to enable me to touch up the demarcation around the nose cone, I overestimated the strength of the bond between the decal and the paint and the 國經 marking on the starboard side of the nose lifted away completely. There was another I could use from the decal sheet, but it's the wrong colour as it should be black.

Close examination of some photos shows there are a lot of stencils missing from the aeroplane.

The engine exhausts are a bit weird. They are meant to attach to the full length engines within the fuselage, but these lack positive locating points and mine ended up seated too low. There's a significant lip where the exhausts meet the fuselage (as if the exhaust diameter is too small), but the parts seemed to be designed this way. Regardless, the way the exhausts attach to the fuselage is not pretty. They were tedious to mask, too.

I had built up the undercarriage early in the build, but not glued it into the bays so I could remove the units and paint them separately. They were extremely straightforward to fit prior to completion and resulted in nice and level wings. In my experience, it was one of the easier undercarriages to install, which made a nice change from the usual stress.

The final finish is mostly native Mr Color, although the decals, some panels and the tail were airbrushed with a couple of wet layers of VMS Satin Varnish, which is an awesome product.

The finished article is a bit of a catalogue of errors: the distorted LERX, lots of little cracks in the canopy, incorrect 經國 marking on the starboard side of the nose, misaligned tail markings, poorly attached engines, etc., but it looks striking enough to me from its shelf in the display cabinet. Not the most inspiring of kits, but the aircraft is much better looking in the flesh than I had supposed from photos, and it's a nice way to conclude this run of F-16-based aircraft from my stash.





# Brunei SIAI Marchetti SF-260



During the 1960s, the Italian aircraft company Aviamilano developed a light 3 seater sport and aerobatic plane, the first flight of which took place on July 15, 1964. Production was transferred to SIAI Marchetti, and the engine used was the Lycoming O-540 producing 260 hp. The SF.260 has been flown by civil users as well as by many military air forces. The SF.260M is a 2/3 seat military trainer, while the SF.260W is the "Warrior" trainer and tactical support aircraft. It has 2 under wing hard points for up to 300 KG stores. Length is 7.1 m, span 8.35 m, and normal take-off weight is about 1200 KG. Cruising speed is about 300 km/hr The SF.260TP uses the Allison-250 turboprop engine, with a different forward engine cowling and two under wing hard points. Over 900 aircraft have been manufactured and about 700 are still in use by dozens of air forces all over the world. Some data:

Recently, two 1/72 kits of this delightful little aircraft have appeared, by KP and Special Hobby. The Special Hobby offering has already appeared in three different boxings.

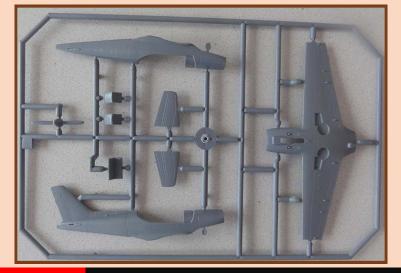


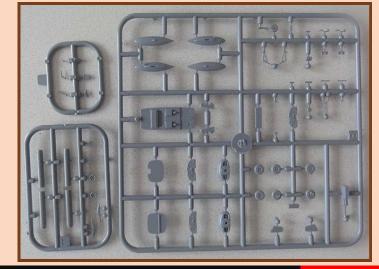


Special Hobby kit SH72418 is for the piston-engined version M/AM/W and has the standard cockpit hood. There are 4 frames in soft grey plastic and a transparent frame with the cockpit hood as a single piece. Small unguided rocket pods are also provided, and the small wing pitot is included in the kit. The wing upper and lower surfaces are one piece. The standard cockpit hood is one piece so if you want to set it open you'll have to saw it very carefully.



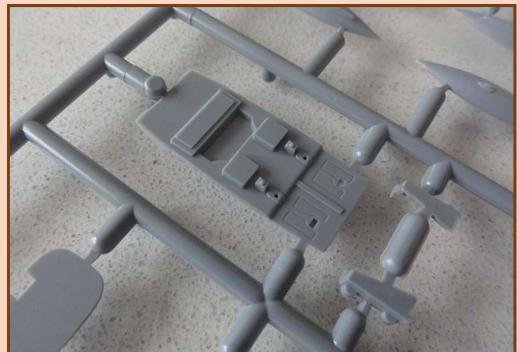




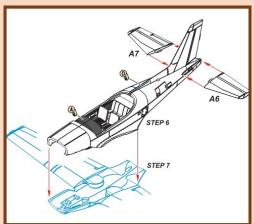


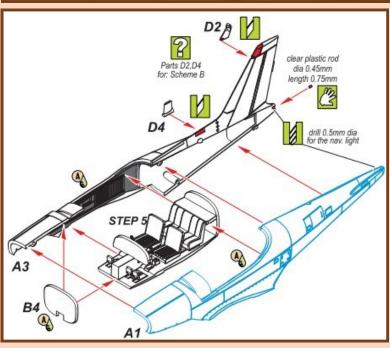
The parts are fine but short-run; it is best to separate these from the sprues with a fine razor saw. There are no locator pins, but there are engraved panel lines. Some parts are not used, these are for other Special Hobby SF-260 releases.





The cockpit interior is neat with nice instrument panels and seats. All should be installed on the wing, which is fortunately moulded in one piece.





You are supposed to make a number of small details such as lights yourself, as indicated in the instructions. This is understandable as this is a very small model.

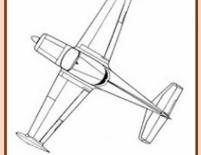
With this model it seems impossible to provide the nose with sufficient weight. To avoid a tail sitter a clear rod made of transparent stretched sprue was set in a finely drilled hole in the lower fuselage.

I decided to build my first SF-260 as a **Brunei** Air Force SF-260 WB aircraft. It has a gloss white scheme with red cheatlines.

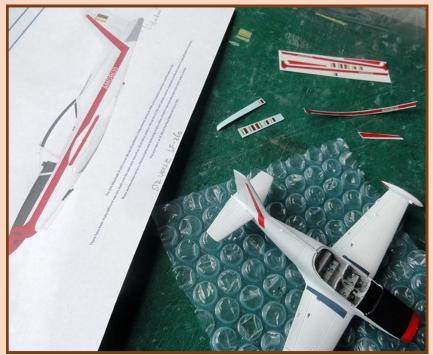
Assembly was as per the kit instructions. The overall white colour was airbrushed with Gunze Sangyo H1 white, but any white paint will do.

Some details were added in the cockpit, and decals are provided in the kit for the pilot and student straps. A few small antennas and parts B29 at the lower fuselage aft of the wing were set in place, along with a small antenna on the dorsal fin. On the lower fuselage antenna do not add D1 or D3. Add a transparent red light below the fuselage and paint the red and green anti-collision lights on wing tip tanks.











The Brunei markings had to be home-made and laser printed on decal paper. Using photos and drawings on the Internet as a guide, these were made as accurately as possible with a graphics program. It appears no roundels are used in the scheme, only the flag

The landing gear was installed along with the stretched sprue support below the aft fuselage to avoid a tail sitter. The canopy was painted by hand and glued in place Some white glue was needed to fill the gaps, and when dried again painted white.

The propeller was painted black at the rear and light grey at the front with white-light grey-white tips. It was fixed to the nose with white glue.

Finally 10 very tiny static dischargers at the wing tips, stabilizer ends and vertical tail were set made from small bits of stretched sprue.









Meindert de Vreeze, 2022

# Cessna U-17B Skywagon



The Cessna 180, which first flew on May 26, 1952, was developed as a complement to the lighter and less powerful Cessna 170, The 180 eventually came to be known as the Skywagon.

In all versions, 6,193 Cessna 180s were manufactured. In 1956, a tricycle-gear version of this design was introduced as the Cessna 182, which came to bear the name Skylane.

Then, in 1961, Cessna introduced the first production example of an even heavier and more powerful sibling to the 180. fitted with six seats, the Cessna 185. It is a high-winged aircraft with non-retractable conventional landing gear and a tailwheel. For a time, all three versions of the design were in production. Over 4,400 185s were built, with production ceasing in 1985.

The aircraft is basically a Cessna 180 with a strengthened fuselage. The main visual difference between the two aircraft is the larger vertical fin on the 185, Additionally, the 185 has the newer, more powerful 300 hp (224 kW) Continental IO-520-D engine. The Skywagon can be fitted with floats, amphibious floats, or skis, and it is also possible to fit a cargo pod under the fuselage that can carry an extra 300 lb (136 kg).

# **Military variants**

# **U-17A**

Military version of the Cessna 185E, powered by a 260-hp (194-kW) Continental IO-470-F piston engine. Supplied by the USAF to a number of countries under the Military Assistance Programme.

# **U-17B**

Military version of the Cessna A185E, powered by a 300-hp (224-kW) Continental IO-520-D piston engine. Supplied by the USAF to a number countries under the Military Assistance Programme.

# **U-17C**

Four-seat light utility aircraft, powered by a Continental IO-470-L piston engine.

As part of the United States Military Assistance Program, Cessna received a contract to supply the United States Air Force with the U-17A and U-17B variants of the Skywagon for delivery to many overseas air arms. Asian recipients of the U-17 were:

- Indonesian Air Force;
- Islamic Republic of Iran Air Force (185A);
- Islamic Revolutionary Army Aviation (185A);
- Royal Lao Air Force U-17s used as reconnaissance and observation aircraft for *Nokateng* Forward Air Controllers during the Laotian Civil War;
- Philippine Air Force (8 x U-17A, 9 x U-17B);
- Republic of Vietnam Air Force (About 100 U-17As and U-17Bs);
- Royal Thai Army Aviation (U-17B), and the Royal Thai Navy.

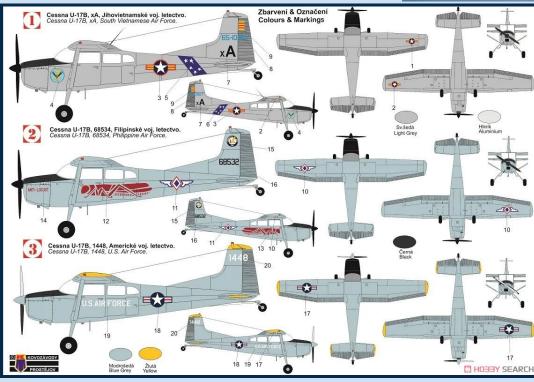
Over the last decade or so, the Czech firm Kovozávody Prostějov has been engaged in a programme of dramatic expansion, with a host of newly-tooled releases alongside reboxings of kits by other manufacturers. One of their most recent issues is a 1:72 kit of the Cessna 185 Skywagon, which has been released in four different boxings, each in a slightly different guise but with the same sprues, unused parts being denoted on the instruction leaflet. Each kit comes with markings for three different aircraft. This particular boxing, KPM0235, has decals for a U-17B of the South Vietnamese Air Force, an aircraft of the Philippine Air force, and one operated by the USAF. Mark, our SIG leader and resident Vietnam expert, has very kindly provided some details VNAF about the version. markings in the kit relate to the 110th Observation Squadron which, in June 1974, was part of the 41 Tactical Wing based at Da Nang. The unit also

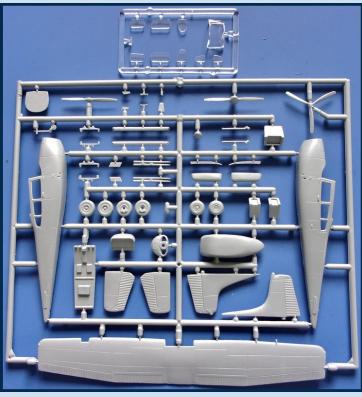


operated the Cessna O-1 Bird Dog and O-2 Skymaster. Deliveries to the VNAF started in 1962 and almost 100 were ultimately delivered, being used by 8 Observation Squadrons with individual examples also used by the 83rd Special Operations Group and 314th Special Mission Squadron. The Philippine version is particularly attractive (to me at least!) as it is finished in an overall blue-grey and features a large red locust motif on the fuselage sides, with an 'ANTI-LOCUST' logo on the nose.



The box contains 2 sprues, one in a medium grey plastic, and one containing the clear parts. There are no locating pins, so care will need to taken when assembling, particularly with the butt joints between the horizontal stabilisers and the fuselage. The surfaces feature very finely-engraved panel lines. It looks as though assembly should be very straightforward, apart from the afore-mentioned butt joints. However, some research will have to be carried out by the modeller, as alternative parts are provided for the wingtips, wheels, propellers and dorsal aerials, but there is nothing in the instructions to indicate which airframe they should be fitted to. I have tried to find photos of the Philippine variant online, so far without success, so I may well have resort to guesswork unless someone out there can help.







One very obvious omission is the bar (?) above the cockpit windshield which is apparent in all the photos I have seen, but it should be a fairly simple task to fashion one from plastic rod or stretched sprue.

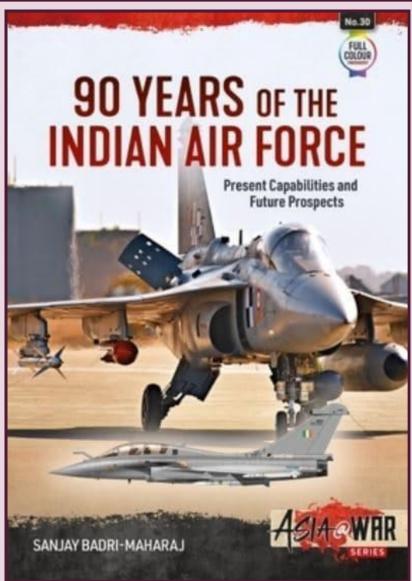
The decal sheet appears to be in perfect register, and all the decals have a gloss finish. Seat belts are provided as decals, as is the cockpit control panel, but there are no stencils., so these will have to be sourced elsewhere if required.

Now, I am no expert, but the pictures I have seen online of the completed model look fine to me. However, I have come across some comments on a certain modelling forum that suggest that the model is slightly under-sized when compared to scale drawings. Another complaint is that the under-fuselage pannier is the wrong shape but, as that part is not used in this particular boxing, it's not really a problem. As I've stated before, my mantra is "If it looks right, it is right", and, since we're very unlikely ever to have an injection-moulded kit of this aircraft from the likes of Airfix, Italeri, Hasegawa, etc., this is the only horse in town!

Steve Komor, August 2022

# 90 Years of the Indian Air Force -Present Capabilities and Future Prospects





Helping build on this understanding, the photos are accompanied by five pages of colour profiles covering fifteen different aircraft, produced by fellow AAA Research Group member Tom Cooper and his collaborator Goran Sundar.

I have long been interested in this air force as my father was seconded to what was then the Royal Indian Air Force between 1943 and 1946, so I was introduced at an early age to the existence of both this part of the world and its air force Over time my own interests have built on this early introduction, and I was happy to be asked to review this particular volume. It is a good, straight forward source of information and reference, enhanced by the quality and nature of the illustrations. It will be of interest to anyone interested in the growth of one of the world's major air forces and an invaluable aid to someone who, like me, is interested in modelling some of the most varied and significant combat aircraft in the region.

David Thomas, August 2022

This welcome and timely publication from Helion Publications, written By Sanjay Badri-Maharaj, is number 30 in the "Asia@War" Series, and one of the first to be produced in full colour. The Indian Air Force celebrates its 90<sup>th</sup> Anniversary in October of 2022 and this relatively slim 70 page volume covers those years in some detail, dealing with the organisational and technological changes in an effective and efficient manner. Eight chapters are concerned with the history of the service, in peace and war, from its foundation in 1932 with a few Westland Wapiti biplanes, to the modern fixed wing and rotary aircraft in use today.

The author points out early in the book that, impressively, most of the equipment used by this, the world's fourth-largest air force, is built in the country although the majority of the front-line aircraft are of non-Indian origin. He then continues to say that redressing this potential weakness is at the forefront of the modernisation programme as the Tejas combat aircraft and the Dhruv helicopter, amongst other developments across the whole of the Indian based aerospace industry, increasingly take their places in the order of battle.

The book covers the history and doctrine of the air force as well as detailing the nature of the current fleet and the varied efforts to modernise it. It also reviews the nuclear option and the space programme, as well as examining the important role of ground-based missile systems.

For me, however, as a modeller first and foremost, it is the large number of good photographs which really excited me about the book. All of the current fleet are covered, with photos that, in many cases, show aircraft carrying a typical weapons load for that type of machine. These are not only interesting in their own right, but they provide an invaluable guide to the modeller of virtually all of the current in-service Indian aircraft as to what weapons to add and where they actually fit, thus enabling them to produce a more accurate representation of the real aircraft.







These images are just a very small sample from this richly-illustrated book.





























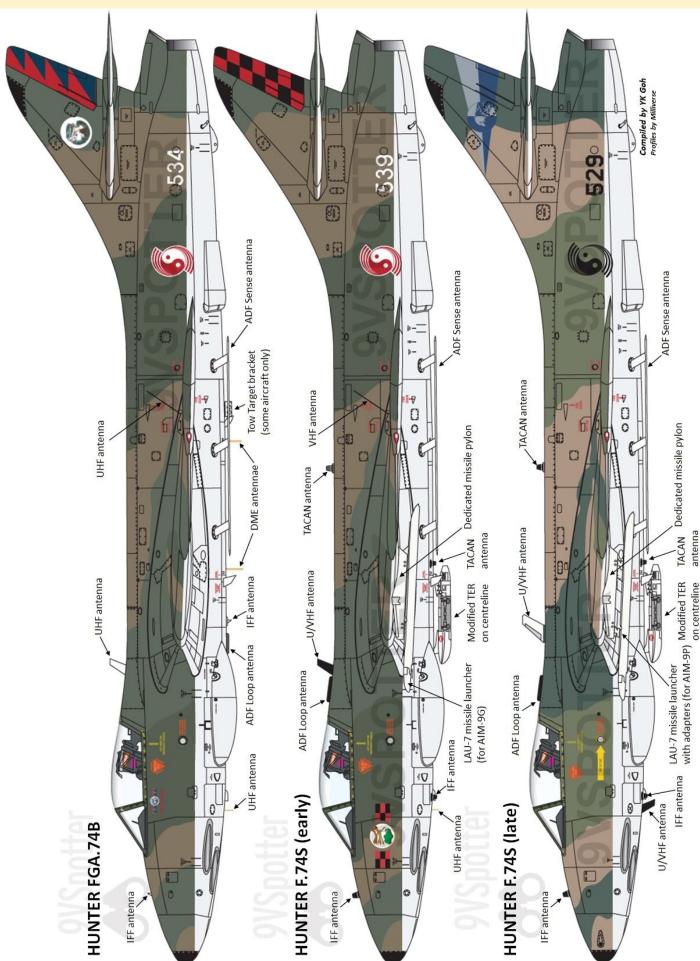






# Evolution of the Singapore Hunter F.74S





When first received, the RSAF's first fighter aircraft, the Hawker Hunter was a standard FGA.9 airframe with just 4 weapon stations. The Singapore upgrade which included 3 additional weapon stations and updated avionics transformed the basic strike aircraft into a more capable weapon platform. YK GOH An additional note for anyone relying on the Hunter F.74S 527 in the Singapore Air Force Museum for reference for the 7-weapon station configuration. DO NOT use the centreline weapon station brackets and the adapters on the outboard pylons fitted on this aircraft for reference! These are not the originals. They were fabricated for the museum without the correct drawings. For the correct shape and profiles, refer to the side profiles in the book "Tip of the Spear" (TOTS).



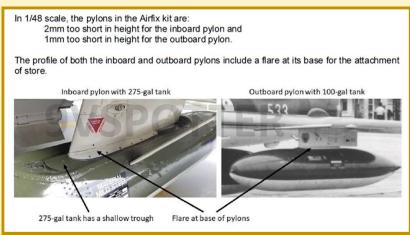
I was involved in the selection of aircraft for display for the museum during its set-up. When I wanted the Hunter to be armed with seven weapon stations, the original centreline brackets and outboard pylon adapters were not available as they had already been disposed of. In their place, simplified replacements were made by a vendor without the original drawings.

For the correct shape and profiles, refer to the photos of the actual centreline and outboard stations as well as the accurate profile drawings featured in TOTS and in the article posted below for reference.

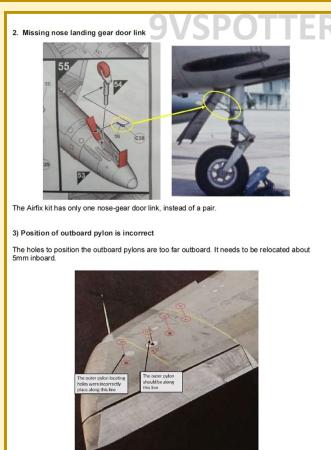
(YK GOH's article on the alterations needed to convert the Airfix F.6 to a FGA.9 is reproduced here in its entirety)









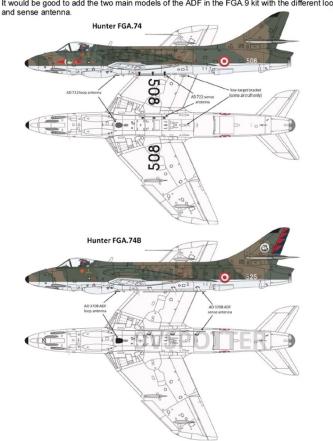


Other improvements

The various versions of the Hunters carried a myriad of antenna.

In particular, the FGA.9 and its export models has the prominent "towel rack" ADF sense

It would be good to add the two main models of the ADF in the FGA.9 kit with the different loop



# Extra parts for the unique Singapore Hunter with 7 weapon stations

Singapore Hunters were upgraded in the late 1970s with updated avionics and improved weapons capabilities. Besides the changes in antenna fit, the most visually identifiable difference with the original Hunters is the additional weapon stations and the ability to carry the American TERs

Profiles below shows the Hunter FGA.74B before the upgrade and the upgraded F.74S.





003 7111

### Suggested sprue tree to update the F.6 kit to a FGA.9

- 2 x ejector gun fairings
- 2 x 230 gallon tanks.
- 2 x 230 gallon tank bracing struts
- 2 x Corrected Inboard Pylon
- 2 x Corrected Outboard Pylon
- 2 x Flaps with cut-out
- 2 x panels to fill the flap cut-out
- 1 x long ADF short towel rack antenna
- 1 x short ADF towel rack antenna
- 1 x oval ADF loop antenna
- 1 x trapezoidal ADF loop antenna
- 2 x nose landing gear door links
- 1 x pilot



Lightweight Missile Pylon and TER adapter for outboard pylon



AIM-9 Sidewinder can also be mounted or the outboard pylon with the LAU-7 launch mounted to outboard pylon via the









The RSAF initially used the AIM-9G missile. When the AIM-9P was introduce launcher has to be moved forward with the help by a pair of adapter brackets

### line brackets with Modified TER for carriage of two bombs or rocket pods

A two-piece bracket to hold a modified TER (without centre bomb rack) is another special feature of the Hunter F.74S.







# Additional parts to make the Singapore Hunter F.74S with 7 weapon stations

- 2 x Lightweight missile pylon 2 x missile pylon adapters 2 x LAU-7 missile launcher 2 x AIM-9P missile 2 x AIM-9G missile

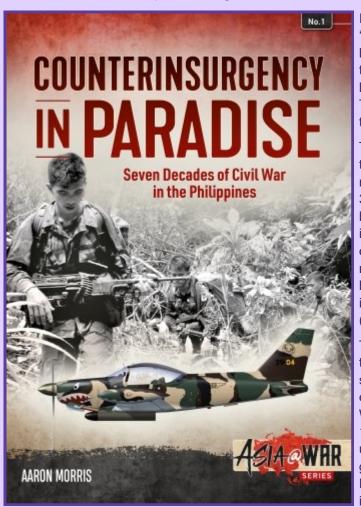
- 2-piece centreline brackets 1 x modified TER 2 x adapter for outboard station
- 2 x TER for outboard station
- 6 x Mk.82 500-bomb bombs
- 11. 2 x British 2.000-bomb bombs
- 11. 2 x British 2,000-bomb bombs
  12. 4 x TACAN/IFF antenna
  13. 1 x ADF loop antenna
  14. 1 x ADF sense towel rack antenna
  15. 1 x VUHF antenna
  16. 1 x UHF antenna



# Counterinsurgency in Paradise



Since this book, the very first in the **Asia@War** series, was published in 2016, another 33 titles have been added to this highly-regarded series, with many more on the list of forthcoming books. In the now-familiar A4 format, the book's 80 pages contain over 150 black and white photos along with several excellent colour profiles.



I must admit to having been greatly surprised by the book's subtitle, 'Seven Decades of Civil War in the Philippines'. I had, of course, been aware of the internal strife that has blighted the country over the years, but I had absolutely no idea that it had first started as long ago as 1946, when the country first gained its independence. That there appears to be no end to the conflict in sight makes the tragedy of this conflict all the greater.

To give some context to the book, the author points out the size of the country; it comprises 7,107 islands (some of which are little more than rocks) with a total area of 300,000 km² and a coastline of 36,289 km. Little wonder then, that since 1946 the government has been in conflict with so many different factions, including Marxist insurgents, Islamist insurgents, ethnic separatist insurgents and even disaffected elements of the military. While, for obvious reasons, the various campaigns have been predominantly land-based, the Air Force has, over the years, been very actively involved in the struggle, especially in the Counter-insurgency (COIN) role.

The first chapter deals with the beginnings of the conflict in 1946, the revolt by the Hukbong Magpapalaya ng Bayan (thankfully shortened to 'Huk' in Tagalog!). The Huk had been omong the most efficient guerrilla groups fighting the Japanese in the Second World War. Overlooked and side-lined after the war, the group, which by 1950 had an estimated 15,000 fighters and 150,000 supporters, took up armed revolt against the very oppressive and indiscriminate government of the time. The establishment of the Philippine Air Force (PhAF) and its early actions against the Huk are also covered in this chapter. A fascinating photo shows a C-47 (dubbed the XBC-

47) fitted with 6 pylons under the fuselage between the main landing gears, each loaded with a light fragmentation bomb!

The 'Golden Age' of the PhAF, from the mid 1950s to the late 1960s, when the Philippine Air force was considered one of the most modern South-East Asian air forces, is mentioned in Chapter 2.

Chapter 3 goes on to deal with the communist and Moro uprisings in the late 1960s and early 1970s. Another interesting and unusual photograph depicts a DHC-2 Beaver being armed with 250lb bombs under the wings. The Beaver was used as a COIN aircraft - sixteen were armed with 12.7mm machine guns, and 70mm rocket pods, another three were fitted with just the machine guns, and one toted a .30 calibre machine gun (with the imminent re-release of the Airfix Beaver, I see potential for an unusual diorama)! Photos of various other piston-engined aircraft used in the COIN role are also present in the section.

The next couple of chapters deal largely with ground-based actions, although mention is made, where appropriate, of the support given by the Air Force. Page 35 features a photo of a graffiti-bearing T-28 which had been captured and put to use by the rebels (scope for another diorama?). The 1989 coup against President Aquiino, which involved rebel-flown UH-1H and AUH-





76 helicopters alongside T-28s, and loyalist T-33s and F-5As, is also mentioned in Chapter 5.





In Chapter 6, we read about the financial difficulties which force the PhAF to curtail its development in the years from 1990 to 2014. These constraints meant that the Air Force had to make do with second-hand aircraft to replace its ageing fleet of T-28s in particular. These replacements included T-33s(!), F-5As and OV-10 Broncos, as well as small numbers of other types such as the C-130 Hercules and CASA 212 Aviocar transport aircraft. By 1992, all the T-28s were gone, and in April of that year, the armed forces launched an new offensive against insurgents on Luzon, using its newly-acquired aircraft. 'New' helicopters, in the form of MD-520s, Bell 412SPs and BO-105s were also put into service during this period.

The final chapters of the book deal mainly with the more recent and ongoing struggle against terrorist groups, and it quickly becomes clear that the PhAF's involvement has been quite limited. In his conclusion, the author gives his opinions as to why COIN tactics have been largely unsuccessful in the struggles against the insurgents and terrorists, mainly because of the lack of suitable aircraft. On the other hand, he also points out that the PhAF has been vital in the Close-Air Support and transport roles. Mention is made of the PhAF's plans for modernization, including the recent acquisition of some South Korean-made F/A-50 light fighters and additional transport aircraft.



Featuring six pages of colour profiles, many of which have been drawn by our very own Tom Cooper, this book will prove to be a fascinating read for anyone with an interest in the armed forces, politics and/or history of the region, and is thoroughly recommended.

Steve Komor, September 2022

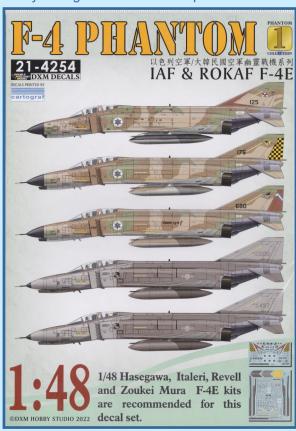


This photo, although it doesn't appear in the book, depicts one of the three UH-34Ds which were modified to carry light bombs. One is shown as a colour profile in the book.

# Double Excellent Model (DXM) Decals – McDonnell-Douglas F-4E Phantom II Parts I & II

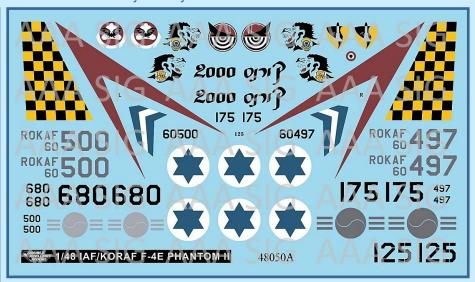


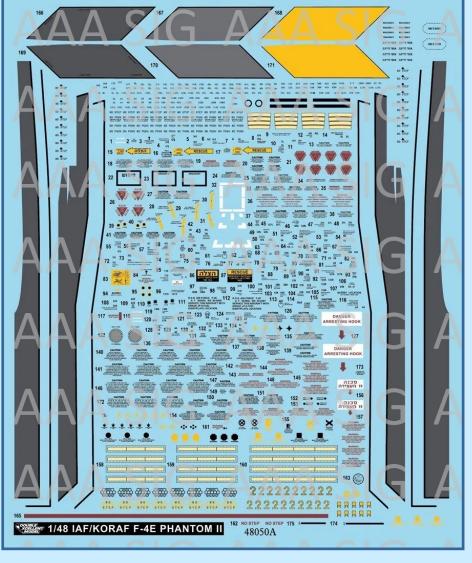
The most recent releases from Double Excellent Model, the Taiwanese company more commonly known as DXM Decals, are a slight departure from their normal US and JASDF subject matter with two sheets dedicated to the McDonnell-Douglas F-4E Phantom in service with other Air Arms. Both of these sheets appear to have been designed in anticipation of the future release of more 'long nosed' Phantom variants from Zoukei-Mura although, as is clearly stated in the header card, they can apply equally to any Hasegawa or Italeri examples of the F-4E Phantom II that one may already have in their stash.



The first of these most recent offerings (Sheet 21-4254) includes decal markings for both Israeli Defence Force (IDF AF) and Republic of Korea Air Force (ROKAF). Although I have little personal interest in Israeli Phantoms these have actually carried some of the more interesting and colourful markings during their career and this is reflected in the options on this sheet. Of course, our focus centres around the two ROKAF examples that are provided; near identical markings for aircraft in the low-visibility grey camouflage scheme with superbly rendered national and unit insignia and one of the most comprehensive sets of data and maintenance markings that I have ever seen on an aftermarket sheet for non-US F-4 Phantoms.









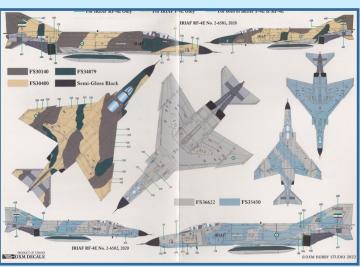


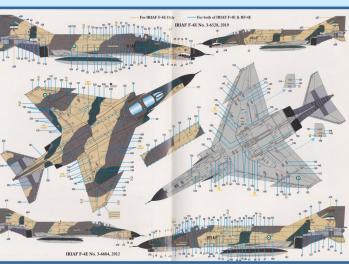


second issue The (Sheet 21-4255) features markings for Hellenic Air Force (HAF) and Islamic Republic of Iran Air Force (IRIAF) F-4Es and, in the case of Iran,

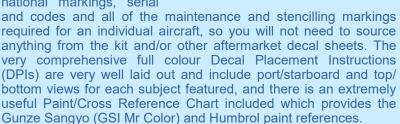
RF-4E Phantom variants. Two each of the IRIAF fighter-bomber and reconnaissance variants are provided for. In the case of the former, the two options cover aircraft finished in the attractive three-tone 'Asia-Minor' camouflage scheme with a slightly different presentation of the aircraft serial numbers on each airframe, and one featuring a rather striking set of 'Sharkmouth' markings, which is quite unusual for IRIAF combat aircraft. The two IRIAF RF-4E options cover an aircraft in the original, and more common 'Asia Minor' delivery scheme, with the second option featuring the more unusual and later two-tone blue-grey camouflage scheme which appears to have only

been applied to two of the dwindling number of RF-4E Phantoms still operated by the IRIAF.





As I have said previously, these DXM Decals exude quality, neatly presented in a transparent cover displaying a header/cover back to back with one of the decal sheets. The decal sheets are printed by Cartograf and conform to the high standard of production and quality control Cartograf renowned for. density and register are perfect, the decals are thin and extremely sharp so that under magnification even the small text is distinct. The two sheets featured here include very comprehensive sets of national markings, serial



the maintenance and stencilling markings all aircraft, so you will not need to source and/or other aftermarket decal sheets. The ull colour Decal Placement Instructions and out and include port/starboard and top/

DXM recommend utilising the Hasegawa, Italeri or Revell kits for these two sheets, although I suspect some will now wait for Zoukei -Mura to produce a more suitable version of their brand-new F-4E kit; the two releases so far, for an early USAF F-4E and Japanese F-4EJ or F-4EJ Kai are not suitable since they do not feature the

leading edge slats found on the IRIAF or ROKAF F-4Es. I would opt for the Hasegawa kit of the RF-4E Photo-Reconnaissance variant since this is judged to be the best available on the market, although they are quite difficult to source since the markings are only suitable for the German Luftwaffe boxings of the kit and not the more readily available JASDF kits of the early-variant RF-4E with the more angular nose features.

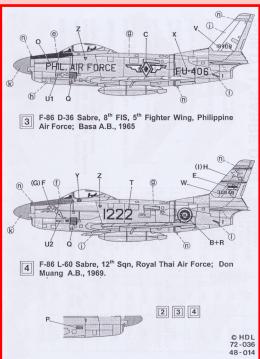
To date, DXM have only produced these decals in 1:48 scale although I suspect in time they will also be released in 1:72 and maybe even 1:32 scale.

Thoroughly recommended to all Phantom Phreaks or those with an interest in modelling the classic McDonnell-Douglas F-4 Phantom II in some more esoteric markings.

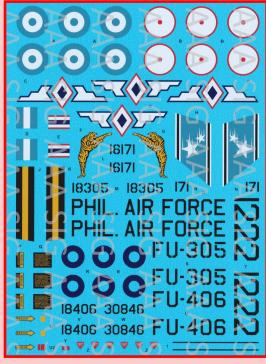
Mark ATTRILL – August 2022

# Hi-Decal Line - A Feast of Asian Decals!





Diego Rogoz, a fellow member of the Asian Air Arms SIG and the proprietor of Hi-Decal Line Decals, prompted by my recent Kitography of Iranian Air Arm subjects, has supplied me with a host of decal sheets from his range which for some reason had never featured in the review pages of our regular newsletter. I can now put that right with a veritable feast of Asian Air Arm subjects on offer. Taking the decals in numerical order, the first covers the North American F-86D/L Sabre Dog and features, among others, markings for Philippines Air Force and Royal Thai Air Force (RTAF) examples in the polished aluminium/matt aluminium scheme synonymous with fighter aircraft in the 1960s. The RTAF option particularly striking with highly colourful and attractive unit markings emblazoned across the fin surfaces, with a large Tiger motif leaping across the forward fuselage. Hi-Decal Line



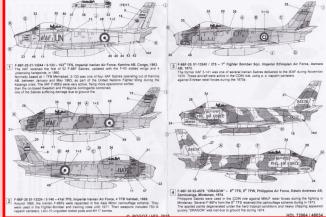
have thoughtfully printed the RTAF roundels in two parts in order to avoid potential register issues with these rather complex national markings.



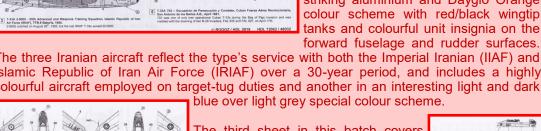
The next sheet is for the Lockheed T-33A Shooting Star, which enjoyed a long and successful career with a large number of Air Arms spanning over 40 years; the last operational aircraft being retired by the Bolivian Air Force as late as 2017. The Hi-Decal sheet includes decal markings for five aircraft including one Burmese and three Iranian examples. The Union of Burma Air Force (UBAF) option sports a rather striking aluminium and Dayglo Orange colour scheme with red/black wingtip tanks and colourful unit insignia on the

The three Iranian aircraft reflect the type's service with both the Imperial Iranian (IIAF) and Islamic Republic of Iran Air Force (IRIAF) over a 30-year period, and includes a highly colourful aircraft employed on target-tug duties and another in an interesting light and dark

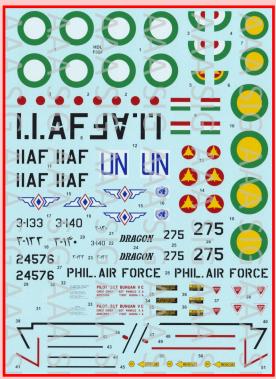
> The third sheet in this batch covers another North-American product, the for F-86F-25/30 variants 1960s and include at least one airframe that was retro-fitted with the slatted F-40 wing, so care will need to



Katanga (Congo) crisis in the early 1960s. The second IIAF option covers an aircraft from 1969 with the then newly-applied Asia-Minor three-tone camouflage scheme with light grey



earlier F-86F Sabre variant. Four decal include three that will be of primary interest to Asian Air Arm fans. The two Imperial Iranian Air Force examples are for F-86F-25 aircraft from the be taken when sourcing a suitable kit for this particular option, which features additional United Nations titling and insignia to reflect its role with the UN Fighter Wing during the



undersurfaces, which became the standard IIAF scheme for combat aircraft during the 1970s. The third Asian option is no less interesting, featuring an F-86F-30 of the Philippine Air Force that was engaged in COIN activities against rebel forces during the mid-1970s. This particular aircraft features an unusual three-tone green/dark brown/

tan camouflage scheme over light grey which appears to have been applied locally and sports the nickname 'Dragon' on the forward fuselage.

The last sheet supplied with this batch covers another interesting and unusual subject, the Ilyushin II-28 twin medium -engined ,although bomber it only features one Asian Air Arm option in the form of a North Vietnamese Air Force (VPAAF) IL-28 operated by the 929<sup>th</sup> Bomber Battalion, sporting a dark green over aluminium colour scheme. Coincidentally, this particular

subject featured in a recent post on our Facebook pages since it was involved in a rare but successful bombing raid on a CIA/Air America operating base in Laos some fifty years ago, in October 1972.

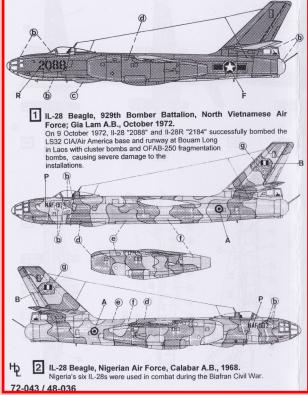
The Hi-Decal Line packaging may not be as sophisticated as that offered by other aftermarket decal manufacturers but this approach is reflected in the very reasonable price of these decals. The most important element, the decals sheets, are of a very high quality with excellent colour density and

excellent colour density and register. The decals are

thin and extremely sharp so that under magnification even the small text is distinct. All of the sheets featured here include very comprehensive sets of national markings, serial and codes and the majority of special-to-type maintenance and stencilling markings found on each individual aircraft. Each set of decals includes a very comprehensive set of Decal Placement Instructions (DPIs), which are very well laid out and include port/starboard and top/bottom views for each subject featured. There is an extremely useful Paint/ Cross Reference Chart included, which provides Humbrol and Model Master paint references along with the inclusion of FS numbers (where applicable), which should aid those modellers unable to source the aforementioned paints or have a preference for another brand or type of paint. The DPIs also provide a list of recommended kits for each subject, in each scale, and a list of book/ periodical references to aid with the completion of a chosen project. This latter point is particularly important, and leads me to the one minor reservation I have with the Hi-Decal Line range, namely the lack of colour found in the DPIs. The majority of decal options are for highly colourful and interesting subjects and it does seem a pity that they cannot be visualised in full colour through the medium of the instructions, although it is appreciated that this would ultimately add to the overall cost of the decal sheets.

Notwithstanding this minor reservation, I would highly recommend this decal range to those with an interest in Asian Arm Arms. Diego is passionate about the accuracy of his decal sheets and this is reflected in both the frequency with which he produces new sheets and his periodic re-releases of older issues when new information comes to light. There are, of course many other decal sheets in the complete range and the current ones are helpfully listed on the outer packaging of each release.

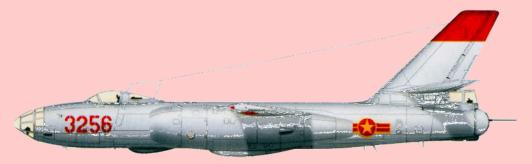




**ASIAN AIR** 

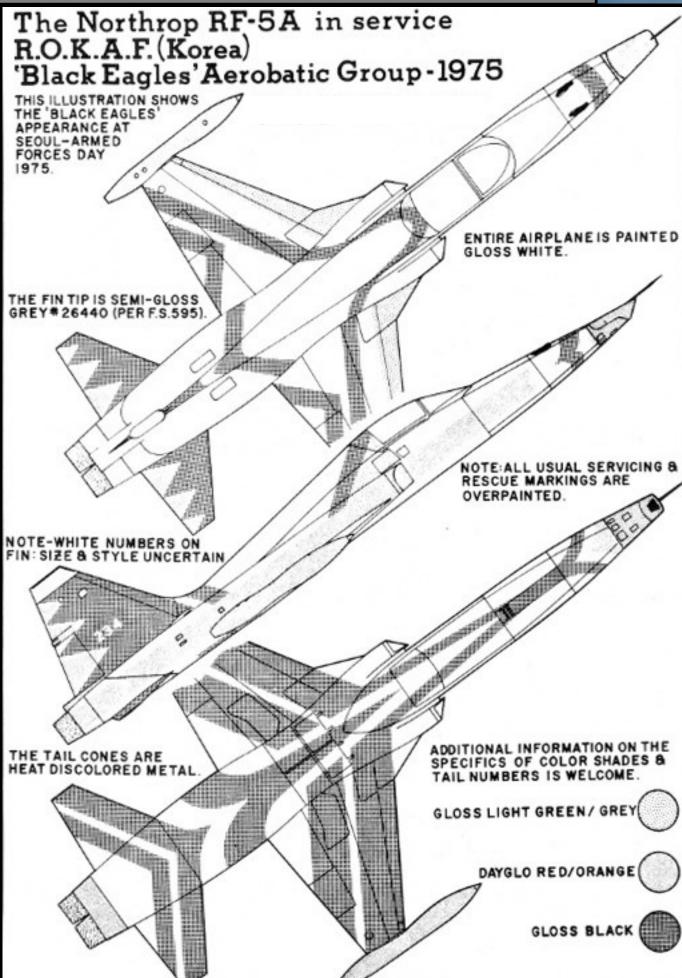
ARMS

Mark ATTRILL – September 2022



# S.A.F.O. Extract





# T-50B Golden Eagle -

# RoKAF Black Eagle Display Team by Vincent Lim



The KAI T-50 Golden Eagle (골든이글) is a family of South Korean supersonic advanced jet trainers and light combat aircraft, developed by Korea Aerospace Industries (KAI) with Lockheed Martin. The T-50 is South Korea's first indigenous supersonic aircraft and one of the world's few supersonic trainers. Development began in the late 1990s, and its maiden flight occurred in 2002. The aircraft entered active service with the Republic of Korea Air Force (RoKAF) in 2005. The aircraft appears to be a cross between the F/A-18 and the F-16, with the wings, top fuselage and tail section of an F-16 and the side air intakes of a F/A-18I



The T-50 has been further developed into aerobatic and combat variants, namely T-50B, TA-50, and FA-50. A F-50 single-seat multirole fighter variant was considered before being cancelled. The T-50B serves with the South Korean Air Force's aerobatics team. The Indonesian Air Force (TNI-AU) ordered 22 of the TA-50 light attack variant, and the Philippines Air Force ordered 12 of the FA-50 light fight variant. The Royal Thai Air Force also ordered 12 T-50 advanced trainer variant to replace the Aero L-39ZA in training and combat roles The T-50A was also marketed as a candidate for the United States Air Force's next-generation T-X trainer program, but failed to win.

The 53rd Air Demonstration Group, nicknamed the Black Eagles, is the flight display team of the Republic of Korea Air Force (RoKAF) based at Hoengseong Air Base.

The RoKAF Aerobatic Team has operated on various occasions at national ceremonies. The permanent team was initially formed on December 12, 1994, and flew six Cessna A-37B Dragonfly

airplanes. The team disbanded temporarily after the 2007 Seoul Air Show and reformed upon the arrival of their new T-50B Golden Eagle aircraft in 2010.



# The Kit

This 1/48 kit of the T-50 Golden Eagle is a recent tooling by Academy. The box contains 6 sprues of black plastic and one clear. One of the sprues is dedicated to the two crew figures, which have separate heads and even separate oxygen hoses! The canopy is well protected by an angled structure which forms a part of the sprue, and the details and panel lines are well up to today's standard. Minute parts for some of the console levers will require extra care in detaching from the sprue.

The instruction booklet consists of 8 pages, with 15 steps to complete the model. There is a separate sheet for painting and decal placement instructions. The instructions are clear and precise with Academy standard paint callout which the modeller has to refer to the paint list in page 1. A total of 14 colours required to complete the model.

The decals are printed by Cartograf, so you can be sure the quality will be up to the usual Cartograf standard, with vivid and accurate prints on thin film which conform to the surfaces easily with just a touch of Mr.Mark Softener. The decal sheet includes the serial numbers for all the planes in the fleet, which means you can build the whole demonstration team! The decal sheet



even includes Black Eagle demonstration team patches and National flag patches for the pilot figures.

The cockpit tub has a detailed front and pedestal instrument panel and side panel with decals for MFDs. It also features two multipart detailed ejection seats with a pilot with thumbs up. There is an intake right up to the engine compressor front, and exhaust ducting all the way from the turbine blades.

The modeller is able to make several choices, including: the usual open or closed canopy and airbrakes; flap/elevon positions and boarding ladders. What is interesting, and unusual, is that the landing gears have 2 options; on the ground with the aircraft sitting on the oleo, or with the oleo fully extended to depict the aircraft in flight with landing gears extended. It also has a pair of spare



wingtip AAM launching rails and wing -tip smoke generators, just in case you decided to build a T-50 Golden Eagle or FA-50 fighter version instead of an aircraft of the Black Eagle Demonstration Team.

One thing I would like to highlight is

the way the parts come together. It comes with the usual two -piece forward fuselage (left fuselage and right fuselage), a one-piece upper fuselage with main wings and a one piece lower aft fuselage.

asian air

ARMS

# Construction

The kit is very well engineered with excellent fit, and minimum filler is required. There were only two places where filler was used, namely the intake joint and the joint between the lower fuselage and the forward fuselage. The only issue I had with construction was with the canopy. There was a gap

between the front windshield and the aft clear canopy part, thus I opted for an open canopy instead.

A word of warning - most modellers would normally paint the fuselage before installing the landing gear. However, this kit requires the main landing gear to be installed into the bulkhead and completed with the rest of the main gear bay, as it will be almost impossible to install the main landing gear without breaking any parts after the completion of the main gear bay. To avoid any heartache, just follow the build sequence in the instructions!

# Conclusion

This is one of the most enjoyable kits that I have built in recent years. Not too complex, yet packed with details and perfect fit, not forgetting the decals that settled nicely on the surfaces. It took me about ten hours to complete the model. Looking forward, I may get another Academy T-50B, but this time round, I will mask and spray the stripes instead of using the decals. The Academy T-50B is an attractive model and highly recommended as a starter kit for new 48 scale builders.







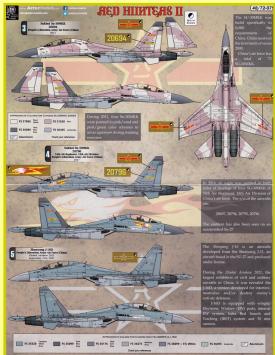




Clicking on this image will take you to a Youtube video which details the construction and painting of the cockpit.

# Aztec Models Decals – Red Hunters Part II – Export Sukhoi Su-27/30 Flankers





Aztec Models of Mexico have garnered a very good reputation with their production of high quality aftermarket decal sheets. Quite understandably, the vast majority of their previous releases have focused on Central or Latin American subjects, with just the occasional foray further afield, mainly to deliver markings for highly colourful or interesting subjects. Their most recent releases have mainly focused on combat aircraft that have been observed during the ongoing war in Ukraine, but they have also released two sheets under the 'Red Hunter' banner that chart the export success of the Sukhoi Su-27/30 Flanker family of combat aircraft, and the Chinese Shenyang J-16D derivative. The second of these two sheets (AZD48/72-075), which are offered in both 1:72 and 1:48 scale, will be of particular interest to our members, since they cover, among others, aircraft operated by the Chinese People's Liberation Army Air Force (PLAAF) and the Tentera Udara Diraja Malaysia (TUDM - Royal Malaysian Air Force). The three PLAAF subjects, covering two Su-30MKKs and a Shenyang J-16D are all very interesting individual subjects. The first option is for one of a small number of aircraft that received a rather unique 'Aggressor' scheme with pink/sand upper surfaces and standard medium grey undersurfaces. The second option is for an aircraft operated by the 54<sup>th</sup> Air Regiment, 18<sup>th</sup> Air Division in the more usual dark grey over medium grey colour scheme, but sporting high visibility national markings and a rather striking eagle's head motif on the forward fuselage. The third option is for a more recent Shenyang J-16D, as observed at the Zhuhai Airshow in September 2021, again sporting the standard dark/medium grey colour scheme with practically no markings save for low-visibility national insignia. The other decal options that will be of interest are for the Sukhoi Su-30MKM, a variant of the Su-30MKI, as operated by 12 Squadron of the TUDM. These aircraft sport

an overall medium grey colour scheme with relatively small high-visibility national markings and fin flashes. The decals focus on one particular airframe during various stages of its career, and with slightly different variations to the markings. It should also be noted that both the PLAAF 54<sup>th</sup> Air Regiment and TUDM options include additional serial numbers to complete other aircraft in these respective Air Arms/Units.

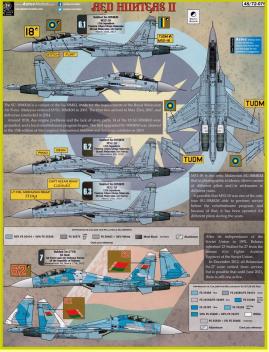
These Aztec Decals are very nicely presented, accompanied by full colour Decal Placement Instructions (DPIs) which are extremely detailed and which include a huge amount of information on the subject matter. I am not sure which company actually prints the decal sheets, but they have excellent colour density, register and are extremely sharp, so that under magnification even the smallest text is distinct. My only slight reservation is that the decals appear to be a little thicker than some other proprietary aftermarket brands, although I have not encountered any negative comments from users in this respect. Unlike some of their previous offerings, the two decal sheets included in this issue are somewhat simpler, providing complete sets of national markings, serial and codes but no maintenance or stencilling markings, which will need to be sourced from the donor kit and/or other aftermarket decal sheets. The very comprehensive full colour Decal Placement

Instructions (DPIs) are very well laid out and include port/starboard and top views for each subject featured, together with some detailed information on each aircraft, and in some cases colour photograph references. Colour scheme callouts are presented in the form of Federal Standard numbers, or nearest equivalents, for each colour scheme. The Instructions also include an extremely useful Paint/Cross Reference Chart which provides additional information for Model Master/Testors, Humbrol, Tamiya and Revell paint references. The DPIs also include some additional references to other published

sources of information on each aircraft variant.

Thoroughly recommended to all those who are interested in modelling the impressive looking Sukhoi Su-27/30 Flanker in some more esoteric markings.

Mark ATTRILL - September 2022



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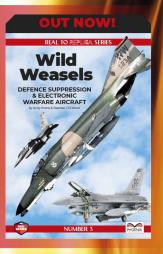


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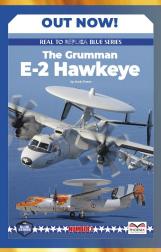






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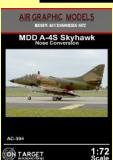


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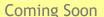














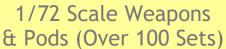


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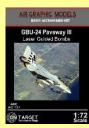










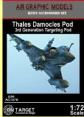
















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