

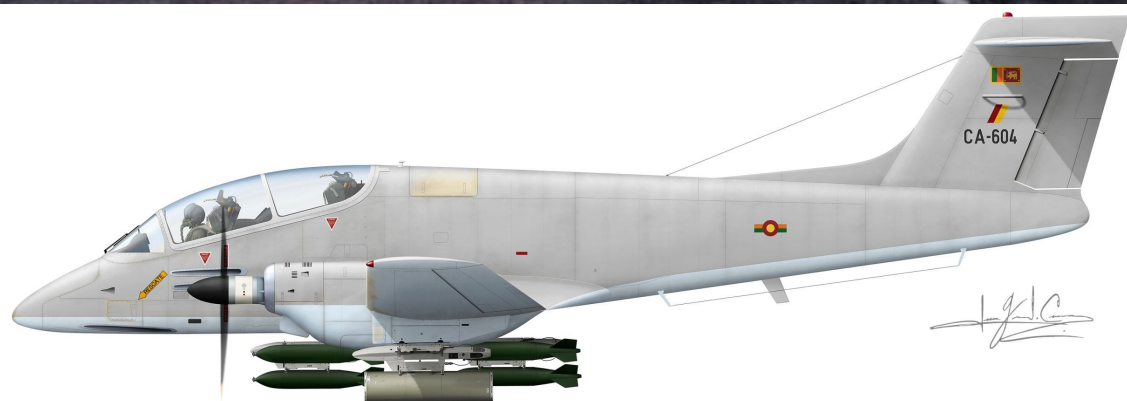
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ASIAN AIR ARMS NEWSLETTER 27

June/July 2021

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"Asian Air Arms SIG", a Special Interest Group of IPMS (UK)

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Fellow Asian Air Arms Enthusiasts,

I very much hope this latest newsletter continues to find you and your families safe and well during the ongoing global COVID-19 pandemic. In Europe at least, we would have normally enjoyed the start of the traditional Airshow season by now with the model show programme also well underway. It's a time of year when some will put away their modeling projects and tools, and head outside to find inspiration at one of the many air or model shows or aviation museums as they make early preparations for their next autumn/winter projects. Sadly, many of the show organisers have had to, once again, shelve their plans for 2021 so we continue to rely on seeking inspiration through the printed and electronic medium.

Our newsletter Editor, Steve Komor, has done another great job pulling together a host of interesting material from a variety of sources for this newsletter. I am also delighted to report that another of our brand new members has put pen to paper and produced a very timely piece on the FMA IA-58 Pucara; the recent release of the Kinetic 1:48 scale kit and some Asian Air Arm related aftermarket decals, will feature in the next edition of our newsletter. I do hope that these new contributors have provided enough inspiration to our broader readership to have a go and send us an article or some photographic material for consideration.

On a final note, we are now making early preparations for our participation in Scale Model World 2021 at Telford in November, in the hope that the show does go ahead. We understand that a final go/no go decision will be made sometime in August and we will then let all of you know how we will proceed as a Special Interest Group, given that many of you normally travel to the UK for this great event.

So, until next time, Happy Modelling/Researching and above all **Stay Safe!**

Mark Attrill, Asian Air Arms Research/SIG Leader

We welcome our 4 latest members

Chris Luz-Raymond - Australia; Dave Olmstead - Canada; Jamison Chowski and Waikong Chung - USA

We now have 471 members from the following 57 countries!

Algeria, Argentina, Australia, Austria, Bahrain, Bangladesh, Belgium, Bermuda, Cambodia, Canada, Chile, China (PRC), Croatia, Denmark, Estonia, Finland, France, Germany, Greece, Guatemala, Honduras, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Korea (Republic of), Laos, Latvia, Malaysia, Malta, Myanmar, Namibia, The Netherlands, New Zealand, Norway, Pakistan, Panama, The Philippines, Poland, Portugal, Qatar, Russia, Singapore, Slovenia,

Greetings, readers!

Welcome to a bumper 36-page edition of our Newsletter, and let me first say a very big **'THANK YOU'** to everyone who has taken the trouble to get in touch, the feedback on the last few editions has been overwhelmingly positive. The more observant among you will no doubt have noted that our membership appears to have declined in recent months - this is because we effectively 'lost' 14 members, mainly due to double accounting and a couple of 'resignations'. On the other hand, we now have an 'active' membership of 471 individuals from 57 countries, and the hope is that we will soon reach the 'magic' 500 and add a couple more significant countries to the list.

It's really gratifying to be receiving articles from some new sources, such as Jamie's two articles in the last edition, and new member Chris Luz-Raymond's article which you'll find in this one. Coincidentally, both have prepared articles on aircraft in Sri Lankan Air Force service, and it definitely seems that Sri Lanka is very much the 'flavour of the season', as we also have David Thomas' review of Volume 3 of the Helion series on the long and brutal war in Sri Lanka in this edition, and I know that Mark is planning a feature on Sri Lankan decals for the new Kinetic Pucara kit, for a future edition.

Another 'flavour of the season' seems to be the F-4 Phantom, particularly those that served with the JASDF, the last of which were sadly recently retired. Several new kits of this mighty aircraft have recently been issued, along with a whole host of decal sheets to portray the various colourful retirement schemes. Mark reviews several of these decal sheets in this edition, and Gary Markham has kindly provided a couple of links to YouTube footage showing the final flights of a few of the Japanese aircraft.

Now, it seems to me that most of our members must have at least a working knowledge of English, as the newsletter is only produced in English. And if that's the case, then there must surely be quite a number who could also write a short piece in English. So come on people, why not put pen to paper, or finger to keyboard, and write something for everyone else to enjoy? We shouldn't have to rely on the same handful of contributors all the time. It doesn't matter if your English isn't perfect, we can always work around that. It's not necessary to accompany your article with pictures either, we will always be able to find something on the Internet. Articles, no matter how long or short, can be submitted to me at any time (stevekomor@gmail.com), and are always welcome. Remember, if it's interesting to you, then the chances are it will be interesting to at least some of our other members.

Looking forward to hearing from some of you!

Steve, June 2021



The Pucara in Sri Lankan service

by Chris Luz-Raymond

Brief History

The FMA IA-58 Pucara was a significant achievement for the indigenous Argentinian aviation industry. Its development can be traced back to 1966 when the *Fuerza Aerea Argentina* (FAA) issued a requirement for a low-cost Counter Insurgency (COIN) type aircraft. Notable in the development phase of the aircraft was the influence of *Dipl.Ing.* Reimar Horten¹. At the same time as the Pucara was being developed, Rockwell demonstrated the OV-10 Bronco to the FAA against the final requirement in 1968.



The first production aircraft flew in November 1974. The main production run continued until September 1983 with the final fourteen aircraft built over the period of the next twenty years. All told, one hundred and twelve aircraft (including four test aircraft and three partially completed aircraft) were accounted for in production.

General characteristics

Role: Counter insurgency, close air support, light attack
Operators: Argentina, Colombia, Uruguay, Sri Lanka

The FMA IA-58 is a two seat light attack aircraft powered by two turboprop engines. It has a narrow fuselage and tail section with a tandem seat cockpit and steep sloping nose affording the pilot excellent forward visibility. The IA-58 requires minimum ground support to operate and is capable of rough & unprepared terrain operations.

Specifications

Powerplant: 2 × Turbomeca Astazou XVIG turboprop, 729 kW (978 hp) each
Dimensions: length 14.25m; height 5.36m; wing span 14.50m
Weights: empty 4,020 kg; max take-off weight 6,800 kg
Performance: max cruise speed 500 kph; max range 3,710 km; combat radius 350 km
Service ceiling: 10,000 m
Crew: two
Armament:

Guns:

2× 20 mm Hispano-Suiza HS.804 autocannons
4× 7.62 mm FN Browning machine guns

Hardpoints:

3 with a capacity of: centreline 1,000 kg (2,200 lb); wing pylons 500 kg (1,100 lb); total external stores 1,620 kg (3,570 lb),

Rockets:

ARM-657 Mamboretá pods

South Atlantic Conflict (Malvinas War - Falklands War)

The Malvinas War-Falklands War is well documented elsewhere. The Pucara was the mainstay of the FAA asset on the Islands during the conflict. The deployed aircraft suffered significant attrition to their numbers. A detailed operational log of individual aircraft can be found in *The Pucara Story* (Caballero, 2013).

Eelam Wars – COIN Requirement

The Sri Lankan Civil War (1983-2009) between Sri Lanka and the Liberation Tigers of Tamil Eelam (LTTE) is generally broken into four specific periods - Eelam War 1 (1983-1987); Eelam War 2 (1990-1995); Eelam War 3 (1995-2002) and Eelam War 4 (2006-2009). The Pucara's operational history with the SLAF occurred broadly during the Eelam War 3 period – that is 1995-2002. As a result of lessons learned during the Eelam War 1 and ongoing tensions between Sri Lanka and the LTTE, the SLAF began to re-arm and re-equip in the early 1990's. At the end of 1992 the SLAF acquired four IA-58 Pucarás from Argentina. The aircraft were delivered by C-130 Hercules in four separate flights between December 1992 and April 1993, and allocated serial numbers CA-601, CA-602, CA-603 and CA-604. They were painted light grey with white undersides. Pilots and ground crew received training in Argentina. The Pucarás were operated by 7 Squadron, SLAF, from Anuradhapura and Vavuniya bases in the north of Sri Lanka, and enhanced the ground-attack capacity of the SLAF considerably, the task having been undertaken by the SIAI Marchetti SF 260TP until that point.





It is interesting to compare the SLAF's two early COIN workhorses head-to-head (Caballero, 2013, p. 28).

The SF 260TP load-out on two hard-points was either:

- 12.7 x 99 mm gun pods (290 rounds): **or**
- Two rocket pods (14 rockets): **or**
- Two 75kg bombs: **or**
- Four 50kg bombs

The Pucara in comparison was a purpose-built COIN aircraft with:

- 4 x 7.62 machine guns, 900 rounds
- 2 x 20mm autocannon, 270 rounds
- 76 x 2.75 rockets
- 1,075 kg of bombs (125kg bombs)
- 1,500 kg of bombs (250 kg bombs)



The Pucara also had armour for the pilots and the engine. Clearly, the introduction of the Pucarás gave the SLAF significantly added 'punch' for its COIN operations.

Operational History & Losses

From mid-1993 to mid-1997 Pucarás were in action against the LTTE in the north of Sri Lanka. It was not an easy task, particularly when the LTTE acquired a supply of man-portable-air-defence systems (MANPADS) probably in the form of Soviet SA-7 Strela (or a derivative thereof) (Mendis, 2013, p. 127). A number of SLAF aircraft including the Pucarás fell to MANPADS.

The difficulty acquiring additional spare parts, poor serviceability arising mainly from the troublesome Astazou engines and operational losses. While the SLAF technical teams worked wonders in keeping all kinds of aircraft flying, they considered the Pucara too tech prone, and the two surviving aircraft were withdrawn from service in 1998. Due to a number of factors the Pucara was not deemed an operational success in the SLAF. Their role was given to IAI Kfir in 1996.

The losses (according to the list of Sri Lankan Air Force aircraft losses during the Sri Lankan Civil war) were:

- 13 Oct 1993: FMA IA-58 Pucara crashed near Jaffna. The wreckage was towed away by the Sri Lankan Army (SLA)
- 14 July 1995: FMA IA-58 Pucara shot down by the LTTE. The pilot died.
- 15 March 1997: A SLAF FMA IA-58 Pucara crashed after a bomb exploded immediately upon release, in the Kaudala area, the pilot ejected and was recovered later.

There are two surviving Pucarás on display in Sri Lanka: CA-603 is the gate guardian at Anuradhapura and CA-605 (renumbered CA-602) is in the SLAF Museum, Ratmalana.

Modeller's Notes

The recent release of a 1/48 IA-58 Pucara by Kinetic (#K48078) has rekindled an interest in this aircraft, previously kitted in 1/72 (plastic) and 1/48 (resin). TwoBobs Decals has issued two sets of decals covering a selection of aircraft including one of the SLAF Pucara – CA 601. References indicate the Pucara had either a Martin-Baker Mk6 (Wolfpack 48186?) or APO-6A ejection seat configuration.

By all accounts the Kinetic model of the Pucara is a 'good build'. There are a number of excellent *modellers'* images in publications, as well as on the internet, of the Pucara in SLAF service. Sources indicate the grey is FS 36492. (Now if only I was brave enough to attempt all four SLAF IA-58 Pucarás in their grey/white scheme with the subtle differences therein...pre-shading, post-shading, black basing, oil dots!).

¹Caballero, Dr R and Cater, P (2013), *The Pucara Story*. p7. Dipl.Ing Reimar Horten and his brother Walther designed the Horten Ho 229 'flying wing' for the Luftwaffe in the latter stages of WW2. Later, in Argentina, he was employed by DINFIA in Cordoba as an engineering and design consultant and teacher, where he and his students oversaw the construction of prototype A-X2, a full scale single seat wooden glider.

The author, Chris Luz-Raymond was born in Sri Lanka and migrated to Australia. He served in the Australian Regular Army, with the Royal Australian Artillery, from 1973 to 1995 with 16 Air Defence Regiment, seeing 40mm Bofors, Redeye (MANPADS) and Rapier and RBS-70 (SAM) at close quarters! He's been sticking/glueing models (aircraft/armour) together since the early '60's!



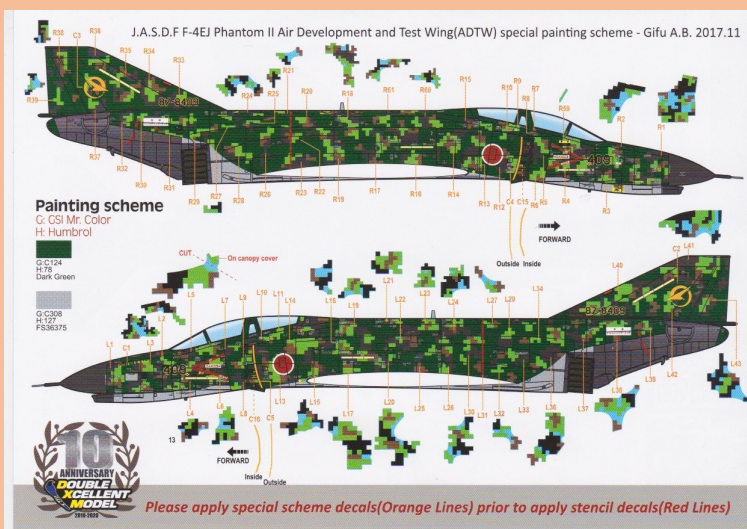
Double Excellent Model (DXM) Decals –

McDonnell-Douglas F-4EJ and F-4EJ Kai Phantom II in Japanese Air Self Defence Force (JASDF) Service

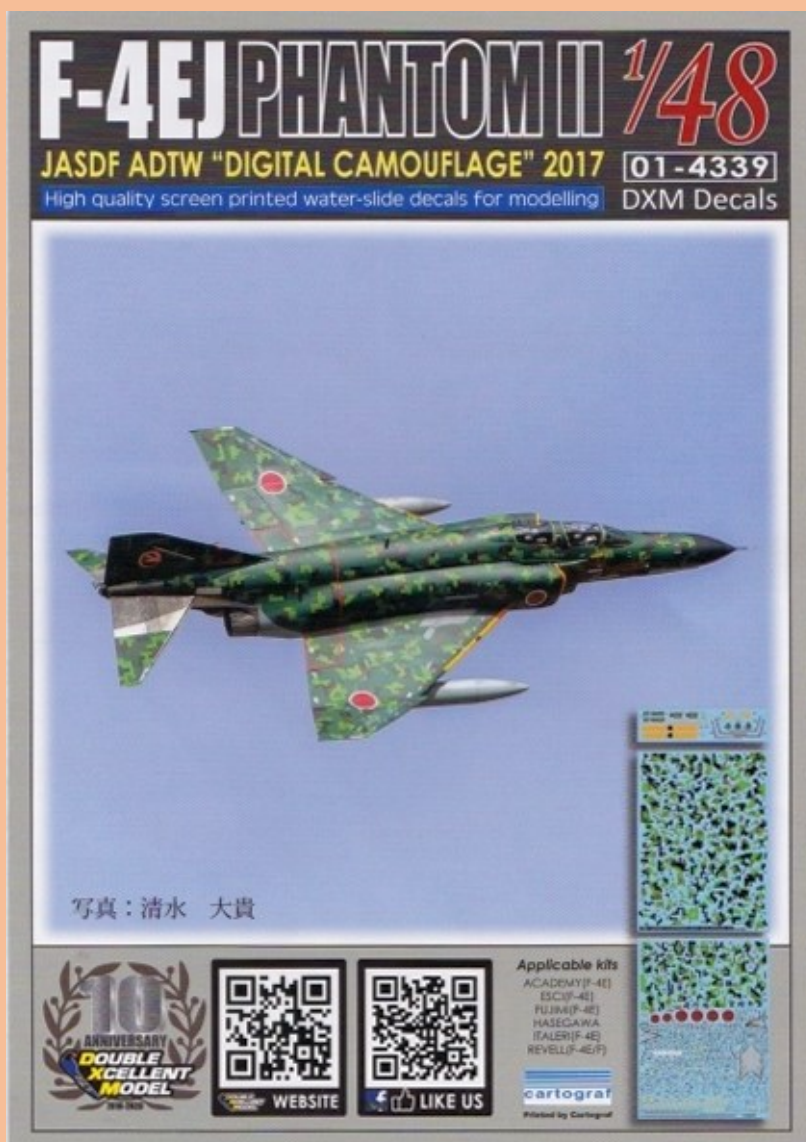
The curiously-named Taiwanese decal company, Double Excellent Model, more commonly known as DXM Decals, seem to have taken over the mantle from Platz Models for specialising in modern JASDF subjects, having previously focused on specially marked JASDF F-15J/DJs, Mitsubishi F-2A/B 'Viper Zeros' and some Air Combat Meeting F-4EJ Phantoms, with the odd foray into French or US subject matter. In more recent times, they have turned some of their attention towards the iconic McDonnell-Douglas F-4 Phantom and its service with the Japanese Air Self Defence Force. A large part of DXM's reputation is also founded upon their concentration on, and depiction of, specially marked aircraft, so they have had a bit of a bonanza with the number of special colour schemes and markings that have been applied to the Japanese F-4s as they reached the twilight of their extensive career with an Air Arm that has treated aviation enthusiasts to a plethora of special schemes over the years. Some of the decals featured in this review have only just reached my workbench, but I am also including some of DXM's previous releases, since they all complement the 1:48 scale Zoukei-Mura F-4EJ Kai Phantom II review in this newsletter, as well as other kits, most notably from Fine Molds, Fujimi and Hasegawa in 1:72 scale, and Hasegawa in 1:48 scale. Since there are so many sheets to cover, I will depart from my normal format for decal reviews and provide some more general comments, which are applicable to all, before focusing on particular subjects.

From the outset, these DXM Decals exude quality, and are neatly presented in a transparent cover displaying a header/cover back-to-back with one of the decal sheets. The vast majority of the decals reviewed here include at least two A5 sized decal sheets, given the nature of the subject matter, with some quite extensive special markings. The decal sheets are printed by Cartograf and conform to the high standard of production and quality control Cartograf is renowned for. Colour density and register are perfect, the decals are thin and extremely sharp so that under magnification even the small text is distinct. Interestingly, the decals do have the same 'feel' as those produced by the aforementioned Platz Models of Japan. All of the sheets featured here include very comprehensive sets of national markings, serial and codes and all of the maintenance and stencilling markings found on each individual aircraft, so you will not need to source anything from the 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/bottom views for each subject featured, and there is an extremely useful Paint/Cross Reference Chart included which provides the Gunze Sangyo (GSI Mr Color) and Humbrol paint references.

As previously mentioned, DXM have previously released some decals covering JASDF F-4EJ and F-4EJ Kai Phantoms, including some of those that have sported special markings during the annual Air Combat Meetings together with the so-called 'Sea camouflaged' jets of 8 Squadron. This review is focused on the more recent releases, all of which have concentrated on the wide variety of special colour schemes and/or markings associated with the run-up to and final retirement of the F-4 Phantom from JASDF Service.



The first of these more recent offerings (Sheet 01-4339/11-7232) covered the spectacular digital camouflage scheme that adorned one of the 'standard' F-4EJ Phantoms (87-8409) operated by the Air Development and Test Wing (ADTW) in 2017. The 1:48 scale edition of this decal sheet includes 2+ A5 sized decal sheets since all of the upper surface of the airframe sported the 'tactical digital' markings, primarily in Dark Greens and Browns which gave this particular F-4EJ Phantom a very distinctive look. The decals were produced before the release of any of the Zoukei-Mura 'long-nosed' F-4 Phantom kits and according to the instructions can be sized to



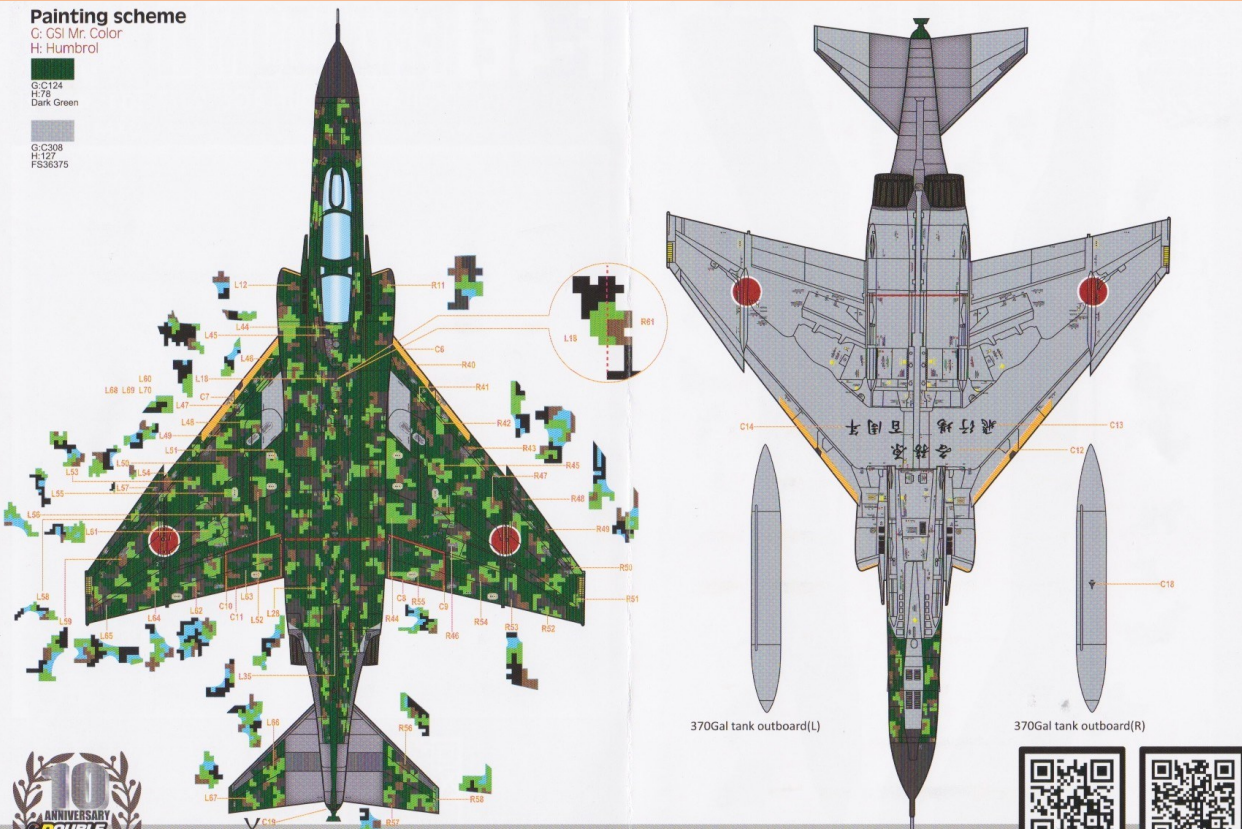


Painting scheme

C: CSI Mr. Color
H: Humbrol

G: C124
H: 70
Dark Green

G: C309
H: 127
FS36375



Please apply special scheme decals(Orange Lines) prior to apply stencil decals(Red Lines)



fit all of the previously available F-4EJ kits including the venerable Hasegawa kit but I imagine they can also be adjusted to suit the more recent kit. Modellers should note that if they are using a Zoukei-Mura kit, they should opt for the earlier F-4E Phantom 'Early Vietnam' kit (SWS-010) since this has the correct fin cap and wing tips for this particular airframe. Although marketed as an USAF Vietnam-era F-4E, with the earlier style of nose-mounted cannon muzzle, the kit does include the parts for the later, and more common, style of cannon muzzle, so a standard F-4EJ can be produced from the box. The 1:72 scale sheet will have undoubtedly been produced for the Hasegawa kit since this is readily available on the domestic market and, until the arrival of the recent Fine Molds kit, probably the best rendition of the F-4EJ in this scale. Again, I would imagine the decals would fit the latter kit too.

The next two releases (Sheets 91-4236/7129 & 91-4237/7130), from early 2020, covered the retirement schemes applied to two F-4EJ Kai Phantoms operated by 301 Sqn. The special markings were almost 'mirror image' in design though featured different colours to better compliment the base colour applied to each airframe; one aircraft sported an overall Gloss White colour scheme with the second utilising an overall Gloss Black scheme. Once again, the decals will have been designed primarily for application to the Hasegawa offerings in both scales, although the DPIs also indicate their suitability for other kits, and I imagine the particular designs could be easily adapted to the more recent Zoukei-Mura and Fine Mold kits in 1:48 and 1:72 scale respectively, since both sheets feature decal blocks of 'spare' colour to overcome any difficulties associated with the application of the main decals to the wing leading edges, for example.

The next sets of JASDF F-4 Phantom retirement related decals cover the relatively modest, by JASDF standards, special markings applied to some of the 501 Squadron fleet of MDD RF-4E and RF-4EJ Phantoms in 2020. There are three different sheets in each scale to cover all of the individual airframes that received the special markings. The first (01-4243/7136) is for a RF-4E (47-6905/905), in the attractive two-tone blue 'Sea Camouflage' tactical colour scheme optimised for maritime operations, which sported special markings with gold/brown fuselage bands, suitably decorated drop tanks and the customary full colour shark mouth markings. The second RF-4E sheet (01-4244/7137) features another RF-4E (57-6907) in the overland 'Forest Camouflage' colour scheme with very similar special markings applied to fuselage and drop tanks. All of these sets appear to have been sized for the respective Hasegawa kits and given the location and design of the fuselage bands in particular, I suspect may be difficult to match with other kits. Fortunately, the Hasegawa RF-4Es remain the definitive kits of this particular Phantom variant on the market today. The third sheet in the 501 Sqn 'Trilogy' is for the unique RF-4EJ variant which is also peculiar to the JASDF and, indeed, to 501 Sqn. The RF-4EJ variant can be a 'standard' F-4EJ or updated F-4EJ Kai, with all of the offensive capabilities of the original aircraft





retained but wired and equipped to carry a specially configured reconnaissance pod. Unlike the previous issues, this particular sheet (01-4245/7138) features three RF-4EJs including two that sported the special retirement markings over a four-colour tactical camouflage scheme that resembled the US 'European 1' camouflage scheme of the 1980s. Such is DXM's attention to detail that they have included two sets of the special fuselage bands since these differed slightly between the two subject aircraft (07-6433/433 & 67-6380/380). A third standard 501 Sqn 'line jet' (77-6392) is also included and the sheet provides three different sets of the sharkmouth markings and 501 Sqn Woodpecker motif to cater for the minor variations in these markings. Modellers should note that this particular decal sheet also includes a full set of standard national insignia with comprehensive safety markings and stencilling which has been taken from Sheet 01/4243/7136, so care must be taken over the selection of the individual aircraft serial numbers for the RF-4EJ aircraft. The only kits of the RF-4EJ variant that I am aware of are those produced by Hasegawa so, not surprisingly, these are the ones recommended for these decals, but I imagine the Zoukei-Mura kit could also be utilised providing the fin bands will fit the contours of this particular kit.



One of my all-time favourite JASDF special colour schemes is the relatively simple farewell scheme that was applied to MDD F-4EJ Kai Phantom II (37-8315) of 301 Squadron in 2020, and this is the main subject of the last DXM release in their tribute to the F-4 (Sheet 11-4247/7140). This particular aircraft operated in the later two-tone light grey colour scheme with striking black & yellow upper wing/stabilator surfaces. The fuselage was adorned with a large yellow/black scarf logo from the unit insignia that straddled the cockpit area, large 'Go For it !! 301 Sqn' titles and Frog insignia on the fuselage sides, with a large black Frog logo on the fin/rudder surfaces. The aircraft also featured a low-visibility sharkmouth and suitably decorated black/yellow drop tanks. As with the other sheets featured here, a full set of national insignia, stencilling etc is included with this release. According to the kit instructions the special markings are sized for the Fujimi and Hasegawa kits and can be trimmed accordingly, so I am hoping to use a set on the brand new Zoukei-Mura kit without too much trouble. Another useful addition to the DPIs with these later sheets is the inclusion of FS numbers (where applicable) which should aid those modellers unable to source the Gunze Sangyo (GSI Mr Color) and Humbrol paint references quoted in the instruction sheets.

Fans of large scale models may also wish to note that the farewell markings applied to one of the 501 Sqn RF-4EJ Phantoms in 2020 (07-6433) and the spectacular ADTW Digital scheme that appeared on F-4EJ Kai Phantom (87-8409) in 2017 are also available in 1:32 scale (Sheets 01-3211 & 01-3509 respectively), although it should be noted that the RF-4EJ issue comes without standard stencilling, which must be sourced from the donor kit (Revell or Tamiya are suggested).

Zoukei-Mura's first issue of the MDD F-4EJ Kai Phantom II variant (reviewed elsewhere in this newsletter), which features superb Cartograf-style silkscreen decal markings for the spectacular 301 Sqn 'Phantom Forever' Blue special, means that these two companies have pretty much sewn up the

market for extremely high quality aftermarket decals for all of the most recent JASDF F-4 Phantoms that have sported special markings or colour schemes. Fortunately for the modellers among us, these are probably the last word in quality and presentation, and we now have an embarrassment of riches in each of the most popular scales.

Unreservedly recommended to those with an interest in the classic McDonnell-Douglas F-4 Phantom II and/or modern JASDF subjects.

Mark ATTRILL – June 2021



Morane-Saulnier M.S.500 'Criquet', model by Carmel J. Attard

Presented here are some photos of **Carmel John Attard's** Heller 1:72 scale Fieseler Fi156 Storch which has been modified to represent a licence-built VNAF Morane-Saulnier MS.500 Criquet, one of the first aircraft to equip the fledgling VNAF in the early 1950s, when the 1st Air Observation Squadron was established at Nha Trang. Carmel omitted the rear-mounted machine gun position from the upper main cockpit glazing, replacing it with a flat transparent panel and flattening the trailing edge of the elevators. There continues to be considerable debate surrounding the colour scheme applied to these aircraft, with some sources quoting an overall dark green scheme while others indicate light blue undersurfaces. A couple of black and white photographs in the Squadron Signal book on the VNAF, for example, appear to suggest the aircraft were finished in the overall green colour but none of the photographs are particularly clear, and Carmel has opted to go with the lighter colour for the undersides.





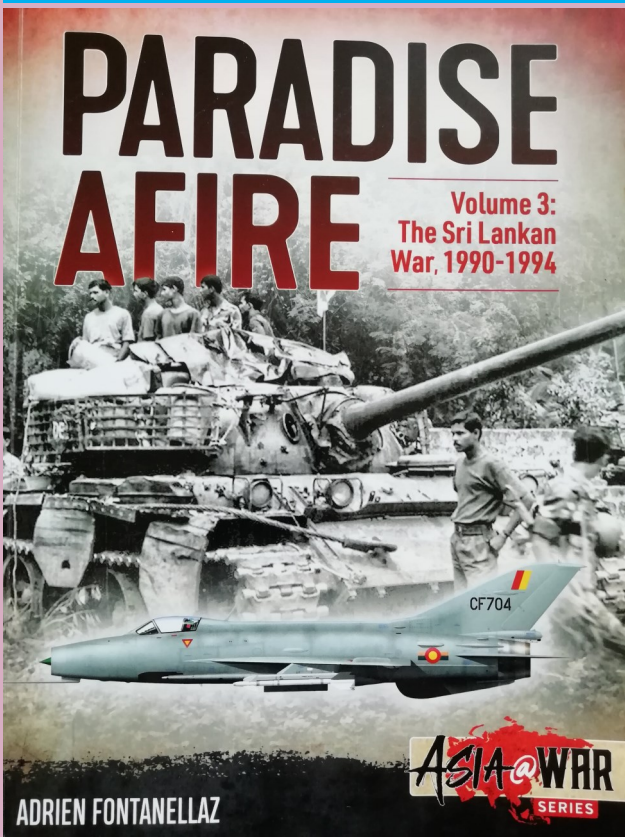
And here are some photos of the real thing, some of which were recently posted on the Group's Facebook page by Luke Nevern.





"Paradise Afire", The Sri Lankan Civil War 1990 – 1995

Vol. 3. by Adrien Fontanellaz



The third and final volume of Adrien Fontanellaz' coverage of the Sri Lankan Civil War has recently been published, and covers the final period from 1990, after the withdrawal of the Indian Peace Keeping Force (IPKF), to the ceasefire agreed between the leaders of the Liberation Tigers of Tamil Eelam (LTTE) and the Government in Colombo in January 1995. That relatively short period of time was marked by some of the fiercest and most brutal fighting to occur at any point in the war. Suffice to say that being captured was something to be avoided at all costs as very few prisoners survived their captivity. In truth, this violence possibly extended the conflict and caused the loss of so many more lives on both sides than might otherwise have been the case.

As with Volumes 1 and 2, this is a slim volume of some 70 pages and covers the action in only eight chapters. These cover both the political and military aspects of the war with as much detail as the author could achieve but, as he states in the preface, a great deal of what occurred is still unknown.

However, for the readers of the Asian Air Arms Research Group Newsletter it is probably not necessary to cover the whole of the conflict in these years' but to look specifically at the actions of the Sri Lankan Air Force (SLAF). This is covered in some detail in Chapters 1 and 4.

The author argues that the role of the SLAF in this period cannot be over-emphasised; supporting isolated garrisons with supplies and manpower, as well as providing close air support when required. He points out that the bulk of the SLAFs flying hours in the 4-5 years under review involved operational flying, e.g. in 1994, from a total flying hours of over 17000, some 14000+ were on operations.

He also notes that during this same period the number of aircraft in the inventory was more or less static at around 70 – 80 machines. This wasn't because the AF didn't need more aircraft They did, but modern combat and transport aircraft are very expensive and other services' needs were more cost-effectively satisfied from a limited defence budget. This meant the AF needed to learn to take care of what they had, and this led to the evolution of a proficient and efficient Engineering Wing in support of the frontline. Despite the shortage of funds in the early 90s several of the aircraft types were reaching the end of their viable careers in the front line and needed to be replaced, while combat losses were growing as the LTTE gained access to more and better anti-aircraft defence systems.

The author recognises that a significant stimulus to development came when in 1987 the Indian AF were able to penetrate Sri Lankan airspace with impunity to deliver relief supplies to Tamils in the north of the island. The transport aircraft and their Mirage 2000 escorts were in and gone before the SLAF was able to do anything. This led to the realisation that some form of air defence aircraft were required to avoid similar events occurring in the future. The problem was where to get them, as many countries proved unwilling, because of the ongoing war, to sell the Sri Lankans the aircraft they wanted. In the end it was only the People's Republic of China (PRC) who proved to be willing. They offered the Chengdu F7, a Chinese development of the original Mig-21. The SLAF would have preferred the A5 Fantan because it was more suited to the ground attack role, however, the Chinese refused to release these for sale. In the end the SLAF agreed to buy a version of the F7 with a limited ground attack capability but this was very much secondary to its role as an interceptor. This was referred to as the J7BS. Four of these were ordered. While an improvement on what the SLAF had previously been able to field in the interceptor role, range and payload limitations meant the aircraft was at best a "Jack of all trades but master of none".

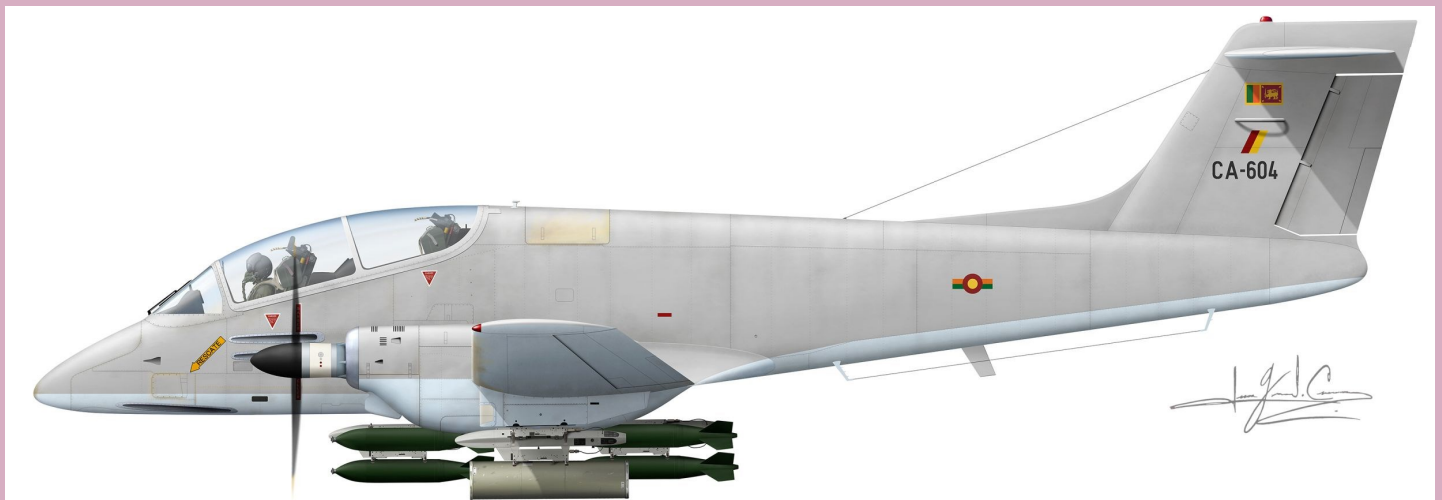




A further problem was that very few of the SLAF pilots were current on fast jets, so the purchase had to include three training aircraft, a single FT7, and two FT5s (a twin seat Mig 15 derivative). Eventually the training issue was resolved when the PRC also provided a number of instructors and by mid 1992, some eighteen months after the aircraft were first delivered, the newly formed No. 5 Jet Squadron became operational.



At about the same time the SLAF acquired 12 Italian built SF260s from the Republic of Myanmar to support the expansion of the training programme but they also proved to be effective close-air support machines, although hampered by limited range and load problems. These were followed in 1992 and 1993 with the purchase of four Argentinian Pucara COIN aircraft. These were much better suited to what the AF needed, being able to carry about five times the load of a SF260 at much higher speeds. However, a shortage of spares and serious corrosion issues meant that their life with the SLAF was limited to only some 5 years before they needed to be withdrawn and scrapped.

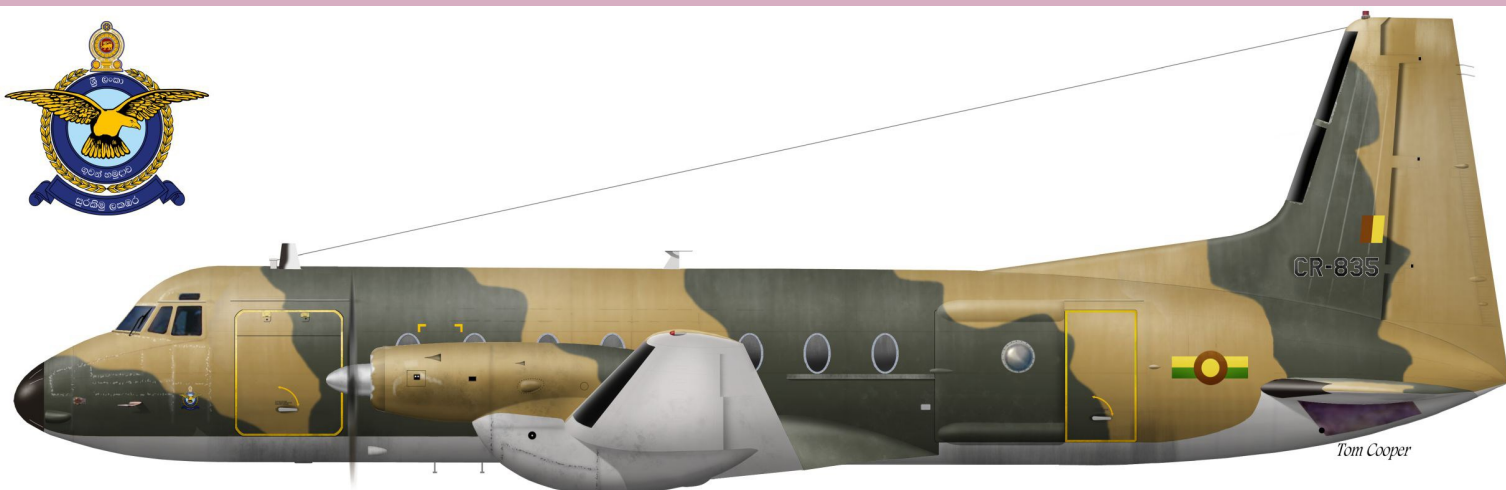


The transport and helicopter squadrons were also provided with new aircraft, notably in the case of the helicopters, a number of new Russian Mil-17s, which increased carrying capacity significantly on that of the existing AB212s and the aircraft proved to be much better suited to the harsh physical and environmental conditions of the country.

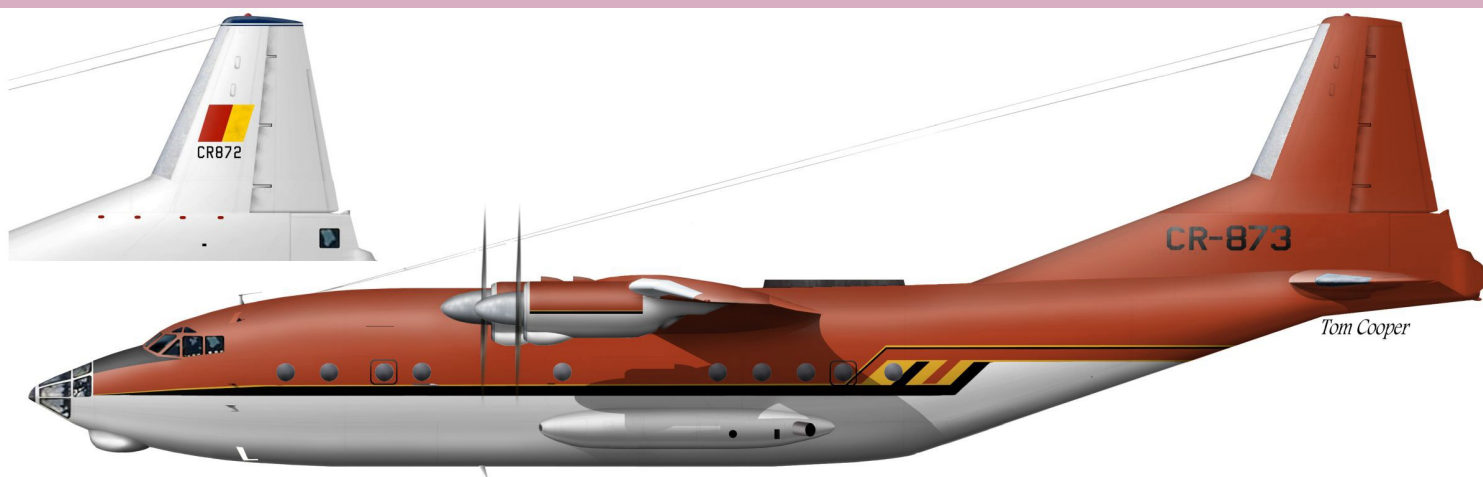




All of these new aircraft are illustrated in the colour profile section which is such a useful feature of all of the books in this series from Helion. Again, with the exception of that of the Pucara's profile (which was provided by Luca Canossa - Ed.), the aircraft illustrations are the work of AAA member Tom Cooper.



As you will realise this third volume is about much more than just the role of the SLAF, and as in the two previous volumes, reviewed in earlier newsletters, author Adrien Fontanellaz covers the action of both sides in a balanced and clear manner. It is not an easy read, the brutal nature of the fighting and the innumerable atrocities committed by both sides makes that impossible, but together they provide a reasoned and reasonable analysis of what occurred in Sri Lanka over the latter years of a war which ravaged the country for some 25 years. It is little surprise that the author reaches the conclusion that the 1995 ceasefire was inevitable as both sides were worn out by their efforts.



David Thomas,
June 2021



HELION & COMPANY



Bronco Models – 1:48 Scale Mikoyan MiG-15Bis Fagot-B ‘Korean War’

In this age of the internet, and with our ever-increasing thirst for knowledge and information, it is now quite rare for kit manufacturers to be able to keep new releases largely ‘under wraps’. That said, Bronco Models managed to do just this with their brand-new Mikoyan MiG-15 kits in late 2020, when news first emerged that the Military Museum of the Chinese Peoples’ Revolution in Beijing were marketing a 1:48 scale MiG-15 ‘Fagot’ in their museum shop to coincide with the 70th Anniversary of the Chinese Peoples’ Volunteers mission in Korea. Given the rapidity with which the kit was announced, there was some initial speculation that it was simply a re-boxed Trumpeter kit with new packaging and decal options, but it soon became clear that this was, indeed, a brand new kit. Bronco have built up a good reputation over the years, although the majority of their range is focused on military vehicle subjects. Their previous aircraft kits have received mixed reviews but the promise of a new MiG-15 kit in 1:48 scale, that may counter the inaccuracies found in the Tamiya and Trumpeter offerings, was eagerly anticipated.



Following the Limited Edition ‘museum’ edition, Bronco released two ‘mainstream’ kits which cover the later MiG-15bis ‘Fagot-B’ (Kit Reference FB-4013), the subject of this review, and the earlier MiG-15 ‘Fagot’ (Kit Reference FB-4014) with both kits featuring a wide range of Korean War-era decal options. The kits are presented in fairly sturdy boxes featuring attractive and predictable ‘patriotic’ box art; my boxing portrayed a pair of cannon firing MiG-15s downing at least one USAF F-86 Sabre. Inside, the modeller is greeted by four sprues containing 65 light grey and 9 clear parts which is a relatively modest parts count for a 1:48 Post-War jet subject. There are also two small decal sheets which include markings for no less than five Korean War-era MiG-15bis, all sporting Korean People’s Army Air Force (KPAAF) markings but flown by Soviet or Chinese Volunteer pilots. A full set of comprehensive and clear assembly instructions, which also include full colour camouflage and marking diagrams complete a nice package. Two of the sprues are common to both kits since the more obvious external differences between the two variants are few. The most obvious difference is the size and shape of the fuselage mounted air brakes so sprue B will differ between each boxing, but the other sprues contain the alternative parts for the cannon armament arrangement and one of the inner wing fences.

Assembly is rather conventional and starts with a nicely detailed cockpit tub although care will need to be taken with the cockpit sidewalls (parts C20/21) since they have been reversed on the diagram and the modeler will need to source some suitable seat harnesses to adorn the rather simple ejection seat. Elements of this kit have a ‘snap together’ feel to them with several parts exhibiting large locating ‘plugs and sockets’ rather than pins. The first of these parts is the lower forward fuselage housing the cannon, which is fixed to the lower surfaces of the cockpit tub, before this is sandwiched, together with the three-part exhaust pipe between the fuselage halves, which also feature the rather unique plug and socket system. Not surprisingly, given the simplicity of the original, the entire airframe comes together quite quickly after this. The wings also come together with a series of large plugs although this contrasts with the nicely detailed inner surfaces of the main flaps, which can be dropped, together with the separately moulded ailerons and rudder which can also be posed. Modellers should take care to select the correct port inner wing fence with the ‘cut out’ (part B13), which was a feature of the MiG-15bis. The undercarriage bays also feature some good detail which will pop out nicely with an appropriate wash. The comprehensive undercarriage is also nicely detailed and can be posed in the retracted or deployed position. The kit provides both the ‘slipper’ and standard type drop tanks fitted to the MiG-15bis and assembly is rounded off with a very clear, two-part cockpit canopy.





MiG-15bis Fagot-B Korean War
米格-15比斯型战斗机
(朝鲜战争)

FB 4013

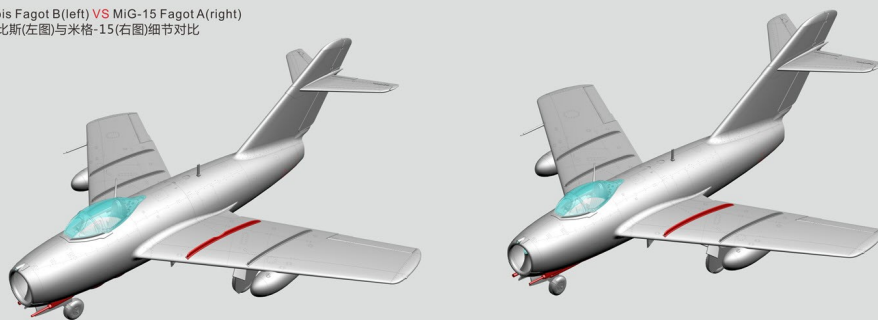
MiG-15 Fagot Korean War
米格-15型战斗机
(朝鲜战争)

FB 4014



微信公众号
1/48 SCALE

MiG-15bis Fagot B(left) VS MiG-15 Fagot A(right)
米格-15比斯(左图)与米格-15(右图)细节对比



Option	Unit/Pilot	Scheme
1	'Red 2249', 7 th Air Regiment, 3 rd Air Division, Lt Wang Hai, China 1953	Natural Metal with Kill Markings
2	'Red 325', 196 th IAP, 324 th IAD, Yevgeni Pepelyayev, Antung, China 1952	Natural Metal with Red Nose Markings
3	'Red 124', 523 rd IAP, 303 rd IAD, Lt Mikhail Zykov, Mjaogou Airfield 1951	Natural Metal with Red Trim
4	'Red 03', 161 st IPA, 971 st IAD, Maj Arkady Boitsow, Manchuria 1953	Three-Tone Brown/Green Camouflage over Blue-Grey undersurfaces with Kill Markings
5	'Red 1998', 518 th IAP, 216 th IAD, Captain Mikhin Ivanovich, 1952-53	Three-Tone Brown/Green Camouflage over Blue-Grey undersurfaces with Kill Markings

As previously mentioned, the kit provides decal markings for five different aircraft as follows: I am not an expert on the Mikoyan MiG-15 'Fagot', but the general consensus of opinion seems to indicate that this new Bronco release is now the most accurate rendition of the type in this scale. There has been some speculation on one or two of the dedicated modelling websites surrounding the portrayal of the trailing edge of the wing root but, in my humble opinion, the Bronco kit looks to be OK and certainly passes my own litmus test for accuracy and, perhaps more importantly, appearance. It should come as no surprise that the aftermarket companies, most notably Aires, Czechmaster and Eduard, have been quick off the mark with the release of various detail parts or sets for the more fastidious modeller, which include replacement Instrument panels, ejection seats, exhaust, wheels, gun muzzles and other airframe enhancements. Modellers may also wish to note that supply of the Bronco kit, particularly in Europe and the USA, has been quite sporadic due to the after-effects of the COVID-19 situation but Hobby 2000, a relatively new Polish company that specialises in re-boxing existing kits, has already released four different versions of the Bronco kit, complete with Cartograf standard decal sheets and vinyl masks. These more readily available kits are, however, more orientated towards European subjects so those wanting to recreate an example of the MiG-15 or any of its many sub-variants, as operated by any of the Asian Air Arms will need to source aftermarket decals from elsewhere.

Highly recommended!

Mark Attrill

June 2021





Kinetic Models – 1:48 Scale McDonnell-Douglas AV-8A Harrier USMC

(Reference K48-072)

Since working with the RAF Harrier Force on several occasions in the early 1980s, I have always had the urge to tackle a 1:48 scale kit of the type, but quickly learned that the number of options available in my preferred scale were few and far between and required a considerable amount of work to produce reasonable replica. I had always imagined that Revell of Germany would eventually oblige us, given their interest in German-based NATO subjects, but it was not to be, and we had to wait until 2020 and the arrival of the long-awaited Kinetic kit of the first-generation Harrier. As with many of their previous kits, Kinetic look to squeeze as many variants as possible out of their basic set of moulds, and such is the case with this Harrier. In spite of issuing two different boxings to cover the RAF Hawker-Siddeley (Later BAe) Harrier GR.1/3 and the licence-built McDonnell-Douglas AV-8A Harrier, the kit sprues are identical and, indeed, in some cases share the same sprues as can be found in the first-generation BAe Sea Harrier FRS.1. I will readily admit that I have no desire to build the USMC variant but a recent photograph of a Royal Thai Navy AV-8A Harrier in an overall dark grey colour scheme quickly followed by the release of the Cut Then Add decal sheet, reviewed in the last newsletter, piqued my interest, so I thought I would share my thoughts on the kit.

The McDonnell-Douglas AV-8A Harrier 'USMC' issue of the kit is presented in a sturdy box featuring an AIM-9 Sidewinder armed USMC VMA-513 'Flying Nightmares' aircraft in the hover. Inside the full box, the modeller is greeted with eight medium grey sprues containing just over 350 parts, a clear sprue with 18 parts, and a small photoetched fret with a number of detail parts, including ejection seat harnesses, leading edge wing fences and other airframe details. Although the parts count appears to very high for this diminutive single-seat fighter bomber, a large percentage of the parts are actually redundant and very much a product of the modular approach taken by Kinetic; for example, there are a considerable number of parts associated with various weapons that were never in the USMC inventory. Kinetic have a well-earned reputation for their decal sheets and this one is no exception. Designed by Crossdelta and printed by Cartograf, it provides superb decal markings for seven USMC options, including two with high visibility Unit markings and a further two that feature low visibility national markings. Last, but not least, is the instruction booklet, and as many who have purchased Kinetic products before will know, this is their major weak spot. Granted, the instructions included with this kit are better than some previous iterations, and there is evidence of assistance with their preparation by subject matter experts, but they are still confusing in parts. Furthermore, the black and white camouflage scheme and decal placement instructions are very difficult to read and modellers will need to work from alternative references in order to produce an accurate colour scheme and markings unless they opt for an aftermarket decal sheet.

Like the vast majority of aircraft kits, assembly is rather conventional and starts with a nicely detailed cockpit tub with an option to fit multi-part versions of either the early generation Stencel SEU-3 Ejection seat or later Martin-Baker Mk.9 variant, depending on the time period. The engine fan and combined rear undercarriage/air brake bay also need to be pre-assembled at this stage. As with so many other Harrier kits, Kinetic have attempted to produce a rather complex 'working' arrangement for the four swiveling exhaust nozzles which is also designed to be sandwiched between the two fuselage halves before joining. Falling back on my previous experience with the same firm's Sea Harrier kit, I would avoid this feature and be content with deciding on a fixed position for the engine exhaust nozzles. The next items are the rather distinctive outer sections of the air intakes and the manufacturer's rather ingenious and effective portrayal of the auxiliary intake doors; when powered up these doors remain closed but on engine shut down those on the upper surfaces drop open at various angles, as gravity takes over. Kinetic provides two different styles of parts (N1/2 or N3/4) to replicate this look with the minimum of fuss. Assembly of the mainplane follows and here the manufacturer has avoided any temptation to provide an option to portray the separate flying control surfaces with a droop since this is not a characteristic of the original. The four position undercarriage on all Harrier variants is always tricky to replicate in the down position, requiring all four landing gear to sit comfortably on the 'ground', and this kit is no different, so care will need to be taken at this stage of assembly. In an attempt to ease the masking process for the main wheels, Kinetic have moulded these in three parts; the theory is that the pre-painted hub can be neatly sandwiched between the pre-painted tyres but in reality the amount of sanding required to neaten up the seams of the latter upon assembly appears to negate any perceived advantages. I suspect I will substitute these parts with aftermarket items in due course. The crystal-clear two-part cockpit canopy, which can be posed open, incorporates some very fine engraving to replicate the rather complicated 'zig-zag' arrangement of the miniature detonating cord. Once final assembly of the main airframe is completed, the modeller can then turn their attention to deciding on an ordnance fit, and here they will find a very comprehensive array of stores/weapon pylons, drop tanks, missiles, rocket pods and bombs available to hang from the jet. Fortunately, Kinetic have provided a very useful table in the instruction book which hints at the best stores/weapons loadout or fit for each airframe portrayed in the Decal Placement Instructions. That said, I was a little disappointed to learn that there are very few US-orientated weapons included, since the sprues originate from the kits of the Sea Harrier and BAe Harrier GR.1/3, so you will be left with an impressive number of parts for your spares box.





As previously mentioned the kit provides decal markings for seven different aircraft from three of the four USMC Units that operated the first-generation AV-8A Harrier:



Option	Type/Unit	Notes
1	AV-8A 158976/WF, VMA-513 'Flying Nightmares'	1974
2	AV-8A 158975/WF, Detachment B, VMA-513 'Flying Nightmares'	1982
3	AV-8A 158710/WH/23, Detachment B, VMA-542 'Flying Tigers'	1977
4	AV-8A 159259/WH/25, Detachment B, VMA-542 'Flying Tigers'	1977
5	AV-8A 158962/WH/05, Detachment B, VMA-542 'Flying Tigers'	1981 – Low Visibility Markings
6	AV-8A 159240/NM/60, VMA-231 'Ace of Spades', USS Franklin D. Roosevelt	1977
7	AV-8A 158955/CG/05, Detachment H, VMA-231 'Ace of Spades'	1980 - Low Visibility Markings

The Kinetic AV-8A Harrier is marketed as one of their 'Gold' standard kits and there is no doubt that the overall appearance of the kit parts, with finely recessed panel lines and what appears to be excellent fit, is superior when compared with some of their previous releases. I can imagine that care will still need to be taken with some of the assembly, most notably the joining of the fuselage with the mainplane but some early test-fitting suggests that this will be easier than that I experienced with their earlier Sea Harrier kits. If you are going to use this kit as a basis for the Thai variant, then care will need to be taken with such things as the aerial and weapons fit, and the two negative aspects of this kit, namely the lack of US-orientated weaponry and the weak colour and markings instructions, are largely irrelevant. I would also wait for the release of a better resin replacement ejection seat or cockpit detail set and aftermarket main and nose wheels, but these are very much personal choices and do not take anything away from the fact that in all other respects this would very definitely be my first choice kit with which to utilise the Cut Then Add Royal Thai Navy AV-8A decals.

Highly recommended!

Mark Attrill

June 2021





YouTube Links page

The licence-built HS.125 in use as a SAR aircraft with the JASDF



F-4 Phantom II JASDF Final year



'Protecting our Peaceful Sky' - a JASDF film showing current capability



South Korea's new KF-21 fighter



Japan's new indigenous fighter proposal



JASDF Samurai Phantoms at Hyakuri Air Base



ROKAF F-15K 'Slam Eagle'



Goodbye 302sq F-4 OJIRO Air Base Phantoms



All the links on this page have been provided by Gary Markham. Click on the pictures to watch the associated video.

Some great footage here!



Taiwanese 'Fagot', anyone?

Ed. - I am very grateful to Meindert de Vreeze for allowing me to edit and reproduce this article from his [Aircraft Modelling in Plastic](#) website.

The baptism of fire for the MiG-15 was to occur during the last phases of the Chinese Civil War, where it was flown by Soviet pilots from the 50th IAD. The aircraft scored its first kill on April 28, 1950, when one downed a Nationalist Chinese P-38 Lightning.

The first upgrade to the original MiG-15 came in 1950, with the arrival of the MiG-15bis. While the aircraft contained numerous minor improvements, it also possessed the new Klimov VK-1 engine and many featured external hardpoints for rockets and bombs. Widely exported, the Soviet Union provided the new aircraft to the People's Republic of China. The PRC received its first batch of MiG-15bis fighters in late 1952, only 6 months before the end of the Korean War. A total of about 1,500 MiG-15bis were aided to China between 1952 and 1955, and some of these aircraft took part in the Korean War.

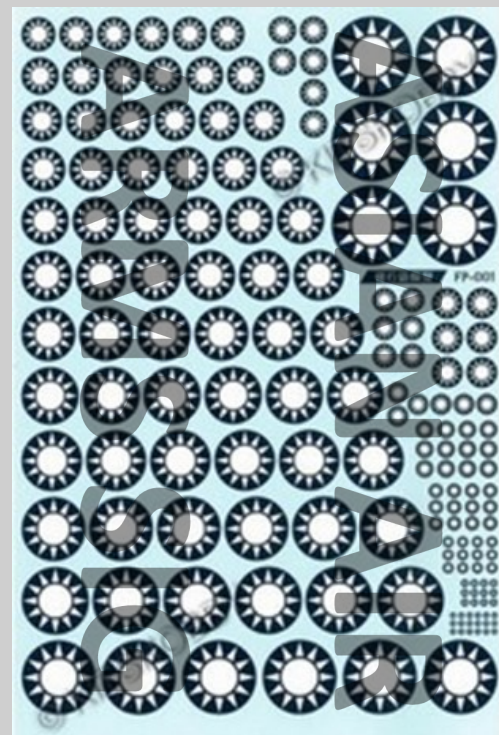
In accordance with an agreement signed between the Soviet Union and China in October, 1951, the MiG-15bis was chosen to be the first Chinese license-produced fighter jet. Factory No. 112 (later the Shenyang Aircraft Corporation) would produce the airframe while the Shenyang Engine Overhaul Factory (later the Shenyang Liming Motor Company) would produce the WP-5 turbojet engine (licence-built VK-1 engine). Both factories would receive guidance and instructions from Soviet experts.

However, it soon became apparent that the two factories would not be fully prepared for mass production until 1955, while the more advanced MiG-17F fighter jets were already entering active service by that time. The MiG-15bis was becoming outdated, therefore there was no desperate need for MiG-15bis fighter jets. Instead, the PRC started to produce the J-5 (license-built MiG-17F) in Shenyang instead. MiG-15bis aircraft damaged in the air battles of the Korean War were sent to Factory 112 for repair and overhaul. Overhauled aircraft often received parts and avionics of the MiG-17F/J-5, and these aircraft were unofficially called J-2, although this never became the official name of the hybrid fighters. The MiG-15bis /J-2 served with the PLAAF until the late 1970s.

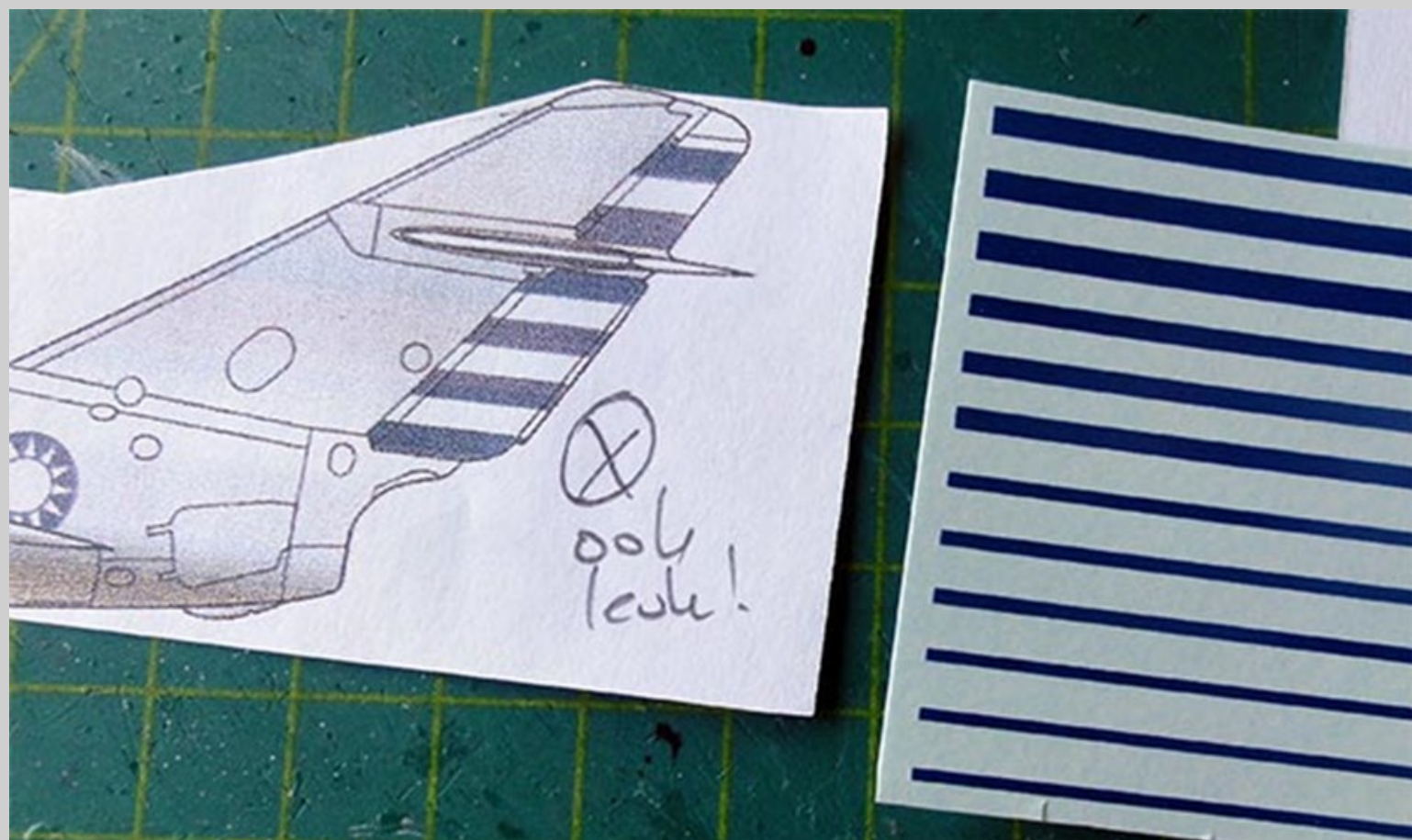


On March 3, 1962, pilot Liu Chengsi of the Chinese PLANAF flew his MiG-15 from Luqiao air base in Zhejiang to Taoyuan County, Taiwan. Liu was rewarded 1,000 taels (approximately 50 kg) of gold and allowed to remain in Taiwan. His J-2 received Taiwanese roundels but retained the Chinese red code 1765 on the nose.

The Eduard MiG-15bis model was made "straight out of the box". In the second photo (overleaf) you can see the typical extra "bis" panel and repositioned landing light. The MiG-15 had a mid grey cockpit interior. The seat armour plate is metallic, and the headrest and seat cushion leather are black. Seat straps are olive and/or medium brown. The instrument panel was mainly black or very dark grey with black boxes on the sides. The areas below the canopy are mid-grey and the coaming is anti-glare black.



The roundels came from **Flying Party Studio set FP-001** and I used the 9 mm diameter decals in six positions (below and above the wing tips and on the vertical tail). The red "1765" was composed from various spare decals. The most time-consuming decal work was producing the blue stripes on the rudder. I painted the rudder white and the blue stripes came from an Xtradecal set.



I added some black stencils from the kit, although I'm not sure if these were used on this Chinese MiG. Dragging each small decal through some varnish like Johnson Future/Pledge helps to avoid silvering. Finally, the "bis" blade antenna on the fuselage spine was set in place along with the long wire antenna.



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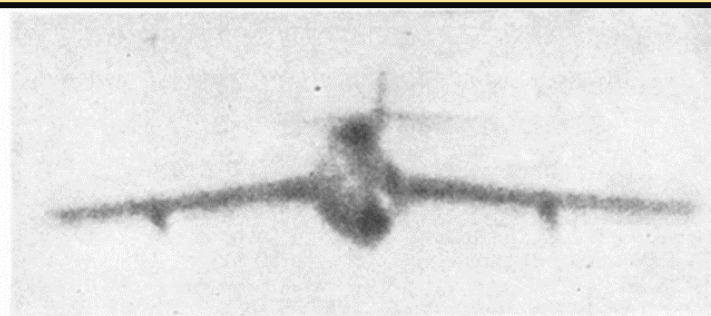


Early Cold War Defections

During the early years of the Cold War, the various Western intelligence services were very keen to acquire Soviet aircraft. Aircraft such as the MiG-15, MiG-17, and types like the IL-28 bomber and Yakovlev trainers (which were less interesting) were developed in great secrecy after the Second World War, and were virtually unknown. During the Korean War, which erupted on June 25, 1950, it turned out that in the hands of a good pilot, the Soviet Mikoyan-Gurevich MiG-15 could out-maneuvre American F-86 Sabres.

Discussions about this appeared in the U.S. magazine "Aviation Week" in December 1950.

Ed. - My sincere thanks again go to Meindert de Vreeze, who has very generously allowed me to not only reproduce this article from his [Aircraft Modelling in Plastic](#) website, but also to edit and correct the English text where necessary.



Report From Korea on the MIG

The following informal report on the Russian MIG 15 interceptor, which has figured prominently in recent news dispatches from the Korean battlefield, was written for AVIATION WEEK by Alpheus W. Jessup. As McGraw-Hill World News on-the-spot reporter in the Far East, Jessup has been covering the Korean war at first hand.

This note will supplement other material you have (AVIATION WEEK, Nov. 13) about this MIG 15 that has cropped up in the Korean air. Most of this comes from Navy Panther pilots, a couple of whom have had a good look, but quick. The accompanying photograph, a many-times enlargement from 16mm. gun camera film, may be of some help.

► **Supersonic**—From what they have seen of it, the Panther boys say that if flown right, the MIG 15 should easily pass Mach 1. Four F9Fs in a slight glide were after one which climbed right away from them and went up hill doing it.

Another of the boys spotted one down underneath about 2000 ft., split S and went after him. It looked like an easy kill. But just as it was lined up, the MIG emitted a couple of puffs of white and then a stream of white smoke from the tail pipe and left the Panther "as if it was standing still." The Panther was about 20 knots over the redline at the time, but the MIG went off in a five to ten degree climb.

► **Jato or Afterburning?**—There's no confirmation of what caused the white smoke. It might be internal Jato bottles, some form of water or other injection system for rapid acceleration, or afterburning boost. Other MIG 15s have been observed emitting the same smoke pattern when making a sudden run for it. No black smoke has been observed during these engagements.

Panther pilots say the MIGs could hold F9F and F-80 any time they want if they would just learn how to work together. But fortunately there has been little evidence of combat teamwork or real aggressiveness by the MIG pilots.

► **Nearly Delta**—Panther pilots who've gotten good topside views were amazed at the extreme swept back structure of the wings. None of the identification charts were close. The wing tips are almost even with the tail. There is a slight taper at the tips; not much, but a definitely discernible taper.

If they filled in the space between wings and fuselage, it would make a perfect delta wing. The horizontal stabilizer is placed very high, but isn't quite a T-structure. You can get some idea of that construction from the photo, which is rear view.

They believe the MIG carries 37mm. guns.

► **Dodging Combat?**—Totally unproven characteristics are range and strength. Both Air Force and Navy pilots believe the MIG has a short range, but this admittedly may be influenced by the fact that the MIGs are continually dodging back across the Yalu River to sanctuary on the Chinese side.

(One theory, Air Force, has Russian pilots flying the MIGs with orders not to be shot down on the wrong side of the front lines; thus the failure of the MIGs to get into a full scale scrap or to penetrate deeply into North Korea is explained.)

They also don't think that the MIG can withstand the Gs pulled by either the F-80 or the F9F. But there's no proof of this either.



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AVIATION WEEK

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What Vandenberg Found in Korea

Better Planes Needed to Match MiGs

- Chief of Staff feels Air Force defense concept still sound in light of latest fighting experiences.
- But increased Communist air activity emphasizes immediate need for long-range jet bombers.
- Call expected soon for faster high altitude fighters and better interdiction and support aircraft.

By Alpheus W. Jessup
(Chief, Tokyo Bureau, McGraw-Hill
World News)

Tokyo—Gen. Hoyt S. Vandenberg, USAF Chief of Staff, left Far East Air Force headquarters last week carrying a firm conviction that the Air Force concept of its role in American defense is sound and has not been changed by its experience in the Korean war.

He also carried to Washington after his latest inspection trip to Korea a packet of serious problems involving American air power—problems ranging from the immediate question of more fighters and bombers to longer-range considerations of faster high-altitude fighters and improved interdiction and close support planes.

► **Pressing Problem**—An immediate problem is the extent to which it is necessary and possible to reinforce FEAF with additional jet fighters and jet bombers.

Until now, only two or three reconnaissance-type jet bombers have been assigned here, but the current air situation, resulting from the recent rapid increase in Communist MiG-15 strength and improvement in Red pilotage and tactics, leads toward the conclusion that jet bombers are desirable.

B-29 Superforts are now unable to undertake daylight raids against potential MiG bases in the aerial "no man's land" between Sinanju and the Yalu River without an escort of the entire Far East jet fighter strength. Even then, losses are high.

But it is essential to prevent the MiGs from using bases near Sinanju—bases that would extend MiG range over the battle line and threaten the Air Force's continual interdiction of all Red roads and railroads running from the front through Sinanju to Com-

munist supply sources toward Manchuria.

Also, it is obviously prohibitive to consider bombing the Antung MiG nest with B-29s. Only a small portion of United Nations jet fighters are able to reach Antung with enough fighting time to make an escort effective.

► **Jet Bombers Answer**—The best answer is jet bombers capable of keeping "no man's land" airstrips bombed out with daylight hit-run attacks. These also would maintain a threat of retaliation against Manchurian centers for any Communist bombing foray against U.N. bases.

Superior piloting kept U.N. Sabres, Thunderjets and Meteors ahead of the MiGs, even though outnumbered several times, but American flyers now report that Communist pilots have "graduated" and are beginning to level up.

It is now apparent that more even numbers are required if the United Nations are going to maintain air-to-air victories.

► **Questions for Future**—First and foremost among the longer term problems is the speedier development of a high-altitude fighter with considerably greater speed than the F-86 Sabre. The plain, ordinary MiG appears faster than the Sabre at altitudes above 30,000 ft. Recently one MiG, apparently souped-up, pulled away from Sabres on the level around 26,000 ft., where Sabres usually gain.

With Communist piloting improving, Vandenberg obviously will put the heat on fighter development when he returns. That's the only way the United States can keep ahead at high altitudes.

Another long-term problem concerns an adequate fighter-bomber for interdiction and close support missions. The F-84s are showing up fairly well against

predicted characteristics but Korea has pointed out a couple of deficiencies.

► **Thunderjet Limits**—The Thunderjet is still a "9,000-ft." airplane and it is apparent that tactical aviation must operate from runways less than 6,000 ft. long. Greater thrust may answer the Thunderjet's present limitations.

There also is a growing feeling that the Thunderjet may not be the best answer to the requirement for interdiction and close support aircraft.

(Queried in New York, Republic comments: The F-84 has done an outstanding job in Korea; both AF and Republic realize it is not the final answer; the airplane is continually improved, with superior versions now in production.)

Vandenberg emphatically restated that Air Force primary missions are still strategic and that priority must go toward perfecting the ability to deliver the atomic bomb. The second priority goes for air-to-air defense and interdiction. Close support is last, but he indicated that the Air Force's expansion would increase close support training.

Berlin Airlift Chief Assigned to AMC

Announcement that Maj. William H. Tunner, Deputy Commander of MATS, had been reassigned as deputy commanding general of the Air Materiel Command indicates that AMC is due for a general administrative reorganization.

Tunner, who commanded the joint USAF-RAF Berlin airlift in 1948 and 1949, is best known in the Air Force for his ability as an organizer and administrator.

General situation at Wright-Patterson AFB, home of AMC, an Air Force spokesman said, is one of considerably lowered morale. Organization of AMC is confused as a result of removal of research and development responsibilities and the much publicized irregularities in AF procurement there.

Said an AF spokesman, "Tunner is not going to Wright-Patterson on a nuts and bolts assignment—just organization."

He will succeed Maj. Gen. St. Claire Streett, who has been in ill health for some time. Streett will complete 35 years service in December.



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AVIATION WEEK, November 19, 1951

Pilots of these 'secret' aircraft were encouraged to defect to the "other side". Awards were promised, and paid, after defection, in cash or pure gold. Pamphlets containing these promises were dropped over Eastern Bloc territory such as China to inform potential defectors about this.

MiG Price Tag: \$100,000 Delivered

Inflation apparently has hit the American market for Russian-built MiG-15 jet fighters. Gen. Mark Clark has offered \$100,000 and political asylum to the first Communist pilot who delivers a MiG-15 intact to United Nations forces in Korea and \$50,000 to any pilot who delivers one thereafter.

USAF planes are pushing the sales campaign by dropping leaflets with the offer over North Korea. Pentagon intelligence offices wryly recall an offer made three years ago to USAF in Europe by a Czech pilot to deliver a MiG-15 intact for \$10,000

and the promise of personal political asylum.

The Czech was a former Luftwaffe fighter pilot who had flown German jets and was a civilian employe at a Russian base in East Germany where he regularly taxied MiG-15s from hangars to dispersal areas. A top USAF general in Europe summarily rejected the offer. That was in 1950 before the MiG-15 had appeared in Korean combat. Now the military is offering 10 times the Czech's price and three years later USAF does not have a flyable MiG-15.

But defectors didn't only go from the Eastern Bloc to the West. There were also pilots who defected to the Eastern Bloc, such as from Taiwan to China, from the U.S. to Cuba, to North Korea, North Vietnam and so on, with various Western aircraft.

In 1951 a North Korean MiG-15 crashed in the sea and was salvaged by the West. This was the first MiG jet to be investigated, although it was a wreck.

The U.S. Aviation Week magazine often reported stories of defections. Some of these old articles are reproduced here, courtesy of 'Aviation Week' archives.

From 'Aviation Week', May 1953



First Detailed Photographs of Russia's Top Operational Combat Aircraft Reveal . . .



MIG BEFORE TAKEOFF shows characteristic chunky lines, broken by bulges for guns and ejection chutes. Pins protruding from wing between fences and ahead of cockpit are visual landing-gear indicators. At left of windshield is shielded pitot.



MIG ARMAMENT pack lowers from fuselage on four cables for access. Fairings on ground cover exposed barrels. Larger cannon (37-mm.) mounts recoil spring and blast tube externally. Panel under nose probably is steel, protects against gunblast.

Red MiG-15:

By David A. Anderton

First detailed pictures of the \$100,000 MiG, only Russian-built jet aircraft to come into U. S. hands in flyable condition, have been released by Air Force.

A team of five top USAF test pilots evaluated the Red interceptor against the North American F-86 Sabre in a series of flight tests which covered the range from round-the-field flights to simulated combat. Results of the tests still are being studied; but here are the first pilot reports:

- The Sabre was preferred over the MiG as a combat weapon.
- Lack of automaticity on the MiG kept the pilot busy and diverted his attention from alert flying.
- The MiG is slower in flat-out level flight.
- Stall warning is insufficient in the MiG.
- The MiG cockpit is uncomfortable and on the small side.
- Heating and ventilating systems are poor.

► **MiG History**—This particular fighter had been built in 1951 and was the same model used in combat in Korea.

Ro Kum Suk, senior lieutenant, North Korean air force, flew the Russian-built craft to Kimpo Air Base on Sept. 21; the following day the swept-wing interceptor was on its way to



...continued from previous page

Smooth Finish, Lightweight Construction With Only Four Major Fuselage Bulkheads.



MIG NOSE uses waste space in duct splitter for landing light. Gun camera mounts over cowl inlet; cowl panel for access lies on ground under left wingroot. View shows anhedral droop of swept wings, circular fuselage cross-section.

AF Test Pilots Analyze Captive Fighter

Okinawa in the belly of a C-124.

After reassembly on Okinawa, the MiG-15 was ground-tested; it made its first short, low-altitude flight Sept. 28. The five test pilots who put the little Red plane through the wringer included Maj. Gen. Albert Boyd, commander of Wright Air Development Center; Maj. Charles Yeager, first pilot to fly faster than sound, and Capt. Harold E. Collins, recent holder of the world's 15-km. speed record (F-86D, 707 plus mph.).

► **Miscellaneous** — The photographs show the excellent finish of the MiG, reveal it is built in a conventional manner. There apparently are no large pieces of machined skin, for example. Large numbers of rivet lines criss-cross the fuselage and tail surfaces, showing that the structure underneath is composed of many light frames and stringers. Only four major bulkheads are indicated by the rivet pattern.

MiGs which fought in Korea were credited with a top speed of about Mach 0.92. The airplanes grossed about 12,500 lb. without drop tanks. Engine was a Russian development of the Rolls-Royce Nene, rated at under 7,000 lb. thrust with water injection; Russian designation of the engine is VK-1.

Wingspan of the sweptback craft is 33 ft.; overall length is about 35 ft.



MIG TAIL has large blister at juncture of horizontal and vertical surfaces to prevent flow breakaway. Elevator has external skin doubler near outboard hinge. Top rudder hinges are external; lower are hidden. Dark patch is speed brake.

Guideline Publications



Polish Pilot Describes Improved MiG

By William J. Coughlin

Los Angeles—Lt. Francizek Jarecki, Polish air force pilot who escaped to Denmark in a Russian-built MiG-15, last week gave details of the improved Red fighter he flew to freedom.

He listed these improvements in the new MiG, apparently the same model the Communists have been using in Korean fighting for more than a year:

- New powerplant, with thrust up from 4,540 to 5,400 lb.
- Aileron boost.
- Improved gyroscopic gunsight.
- Radio compass.
- Radio altimeter.
- Marker beacon receiver.
- Better armament (the one-37-mm. and two-23-mm. cannon combination now familiar in MiG Alley).
- Modified cockpit.
- Stronger construction.

In response to AVIATION WEEK inquiries, Jarecki disclosed that his squadron received 14 of the new-type MiGs last February. The young lieutenant said the second Polish pilot who escaped to Denmark May 20 in another MiG was from the same squadron and presumably flying the same model MiG.

"Many more will follow," he predicted, adding that several pilots tried to escape before he did but were shot down.

► **Policed Pilots**—Jarecki told of the control system the Russians have established in an effort to prevent such escapes. He said all flights must be cleared with the control center at Warsaw 24 hr. in advance and are restricted to a definite flying area. Four Russian-piloted aircraft remain on alert at all times to scramble after any aircraft which leaves its assigned zone.

"They shoot down any such

plane," Lt. Jarecki said through an interpreter.

► **Flight to Freedom**—The Polish flier said he planned his own escape in advance of the flight but denied that he received any financial offer from American sources.

"I did not even know of any such offer," he asserted.

Jarecki said he delayed his takeoff by pretending to have trouble with his landing gear and was airborne two minutes behind the other three ships in the four-ship MiG flight. Breaking away from the flight, he flew over a Russian base on the Baltic, 60 mi. west of his Polish station, dropped his tanks on the field there and headed for the Danish base on Bornholm Island.

He was chased by other MiGs, he said, and Danish vessels on the Baltic later reported he was fired upon, although he was unaware of this at the time. Jarecki said he believed he was landing at a U.S. base and was surprised to find himself in Danish custody.

► **"Finest Fighter"**—In describing the Russian-built fighter further, Jarecki said the MiG handled nicely in the air.

He said he had heard of aerodynamic difficulties which caused an unrecoverable spin but had encountered no such trouble himself.

Pilots in his squadron, according to Jarecki, are under the impression the MiG-15 is the finest fighter aircraft ever built. The Russians have told them this many times, he said.

► **U.S. Orientation**—The Polish lieutenant was in Los Angeles on a tour of North American Aviation's F-86 plant. After inspecting production lines, he spent some time talking with North American designers. Jarecki was accompanied by an Air Force party which included Col. Francis S. Gabreski.

Col. Gabreski said the Air Force was taking Jarecki on a tour of U.S. bases and plants "strictly for orientation." He said there are no plans for the Polish flier to check out in an F-86 in the immediate future.

► **Red Training**—The 21-year-old lieutenant said he had a total of 150 flying hr., of which 50 were in the MiG-15. Prior to checking out, he trained in a two-place version of the MiG. The MiG he flew to Denmark was the latest model in Poland, although he believes newer models are in existence elsewhere.

He said he decided to flee Poland because of the unsatisfactory life in his country under the Russians. "We never knew what tomorrow might bring," he commented. Jarecki said his final decision to flee was made after he was asked to do counter-espionage work against members of his own squadron.

Russians fly with the Polish air force "down to the lowest levels—including the squadron level," he reported. He said the Polish air force was given very complete information on Allied aircraft, including dimensions, armament and strength. Russian reports told of many MiG victories over B-29s and other bombers in Korea, Jarecki said, but no mention was made of the fighter warfare with the F-86s.

He said he definitely had been told Russians were flying MiGs in the Korean fighting. At least one Russian officer now stationed in Warsaw is a veteran of the Korean war, according to Jarecki.

► **Improved British Sight**—Concerning the MiG gunsight, he said it was a mechanical gyro sight—"a British sight which the Russians have improved." He described his aircraft as a Mach .92, 750-mph. fighter with a service ceiling above 50,000 ft. It does not have elevator boost, he said.

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On September 21, 1953, No Kum-Sok, a 21 year-old, defected with his North Korean Air Force (DPRK) MiG-15 to Kimpo, South Korea. He was rewarded with \$100,000. The MiG later went to the USA to be tested in secrecy. Many years later, this MiG-15 went on display at the USAF Museum, Dayton, Ohio.

On January 12, 1960, Chinese pilot Yang Decai flew a Mikoyan-Gurevich MiG-15, serial number 6501, from Luqiao in China to Yilan in Taiwan. However, Yang was killed when his aircraft crashed on landing.

On March 3, 1962 the Chinese PLANAF pilot Liu Chengsi defected and flew his MiG-15bis from Luqiao air base in Zhejiang to Taoyuan County, Taiwan (now Taoyuan City). Liu was rewarded with 1,000 taels (approximately 50 kg) of gold.

In December 1970, North Korean MiG-15 pilot Major Pak Sun-kok defected to Gangwon Province, South Korea, with his aircraft. Obviously the aircraft was by now well known in the West.

In later years other interesting types to be "acquired and examined" by Western intelligence services were the MiG-19, MiG-21, MiG-23 and later the MiG-25. On September 6, 1976, Soviet Lieutenant Viktor Belenko defected and flew to Hakodate in Japan and with his highly secret MiG-25P. The Foxbat was thoroughly examined before being returned to the USSR a few days later.

For more information, check out Wikipedia at https://en.wikipedia.org/wiki/List_of_Cold_War_pilot_defections



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The Fairchild C-123K Provider and Lockheed C-130A Hercules in Service with the South Vietnamese Air Force (VNAF) 1971-75

The South Vietnamese Air Force (also known as the Vietnamese Nationalist Air Force (VNAF)) witnessed large scale growth between 1968-1972 as the United States determined the way forward for their own withdrawal from Vietnam following growing political and public unrest at home over the conduct of an unpopular war and the ongoing peace process. A key tenet of this growth was to enhance the organic transport capability of the VNAF through the supply of two tactical air transport types, the Fairchild C-123K Provider and the Lockheed C-130A Hercules to bolster a small fleet of Fairchild C-119G Flying Boxcars and the more numerous Douglas C-47 Skytrains already in service.

The C-123 Provider, originally designed as an assault glider aircraft for the United States Air Force, first flew in 1949 after which it had been progressively modified; by 1962 the modified C-123K variant had been evaluated for operations with the USAF in Southeast Asia which led to a contract to upgrade 180 of the existing piston-engined C-123B aircraft to the C-123K standard, featuring wing mounted auxiliary jet pods and anti-skid brakes, which significantly improved its short field capability. The aircraft was, therefore, already a familiar sight in the skies over South East Asia, having operated with the USAF for several years, including the highly controversial Operation **Ranch Hand** jungle defoliation projects of the early 1960s and risky resupply operations to the besieged US forces in Khe San during 1968. Both the USAF and Air America, the cover airline of the Central Intelligence Agency, also made extensive use of variants of the C-123 during numerous covert operations over Laos and Vietnam throughout the 1960s. In fact, three of the earlier C-123B models had already been used by the 83rd Special Operations Group as the Unit's operational demands increased. South Vietnamese aircrew received appropriate training in 1964, after which three of the twin-engined aircraft were supplied to the 83rd SOG. Although the aircraft remained assigned to the USAF, which also maintained them, they sported VNAF insignia and were briefly operated from Nha Trang on clandestine operations between 1964-66.



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By 1970 the USAF had developed their Improvement & Modernisation programme for the VNAF, as part of the broader 'Vietnamization' policy of the US Government and part of this included the aforementioned enhancement of the VNAF's air transport capabilities. VNAF airmen had already started C-123 combat crew training so that by the time the first VNAF C-123K equipped unit, the 421st Transport Squadron was formed in May 1971, the unit was ready to fly airlift missions immediately. Four months later a second C-123K Squadron, the 423rd was formed, again using aircraft that had been directly transferred from USAF Units departing from Vietnam. In all, a total of 72 C-123K Providers were eventually provided, which allowed for the establishment of a third Squadron, the 425th with all three C-123K units operating as part of the 5th Air Division, 53rd Transport Wing at Tan Son Nhut Air Base. The Fairchild C-123K Provider had a brief but largely successful career with the VNAF and from the outset was heavily involved in supporting ARVN Units during the major North Vietnamese offensive of 1972, most notably establishing air bridges to those encircled units located at An Loc and Kontum. Some of these sorties were conducted in spite of a heavy enemy AAA presence with several lost to ground fire. In mid to late 1972, a small number of the aircraft were fitted with beacon transponders, which allowed the aircraft to conduct high-altitude, low-opening (HALO) parachute drops of supplies, in order to reduce risk and inherent losses.

In spite of the enlarged VNAF Air Transport fleet of C-7, C-119 and C-123 aircraft, there were still insufficient assets to support the widely dispersed ARVN units, so the US Government decided to include the Lockheed C-130 Hercules in their so-called Project Enhance Plus programme. The original plan called for the much larger, more capable C-130 to replace all of the C-119, C-123 and C-47s still in Service with the VNAF by early 1973, in order to reduce the drain on resources and the number of transport aircraft at Tan Son Nhut Air Base. The VNAF were directed to return the remaining C-123K Provider fleet back to the US authorities in January 1973 although ongoing issues with establishing initial operational capability on the Lockheed C-130A Hercules with the newly formed 435th and 437th Transport Squadrons resulted in delays. As a result, the 423rd and 425th Air Transport Squadrons retained their C-123s until April and the 421st Transport Squadron continued to operate the C-123K Provider throughout most of the year, before handing over the last of its aircraft, which were distributed to other Allied Air Forces in the region, including Cambodia, Laos and Thailand.



Pham Quang Khien's Collection

C-130A Serial Number # 55-0009



VNAF Fairchild C-123B/K Provider Colours and Markings

Due to the nature of their role in supporting the highly secretive work of the 83rd Special Operations Group, images of the early twin-engined C-123B Providers operated by the Unit are quite rare. As previously noted, the aircraft were supplied directly from USAF sources and sported an overall Light to Medium-Grey colour scheme with and overlaid VNAF 'Stars and Bars' insignia in four locations. The aircraft retained their standard USAF serial numbers and did not appear to sport any form of Unit or Base Locator codes on the fin surfaces, as observed on the later C-123K models.

By the time that the C-123K Provider 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, although it is understood that some aircraft may have received black lower surfaces for nocturnal air support operations. In spite of the adoption of a less conspicuous colour scheme, the aircraft retained the Type F national insignia, together with full-sized national flag, large two-letter Light Grey or White Unit locator codes and the aircraft serial number, in Yellow, on the fin.

VNAF Fairchild C-123K Provider Units/Identification Codes – 1971-72

Unit	Variant	Air Base	Tail Code	Notes
421 st Transport Squadron	C-123K	Tan Son Nhut	Q	Operational May 1971 – January 1973
423 rd Transport Squadron	C-123K	Tan Son Nhut	R	Operational July 1971 – January 1973
425 th Transport Squadron	C-123K	Tan Son Nhut	X	Operational December 1971 – January 1973

Lockheed C-130A Hercules

As the 'Vietnamization' process gathered pace, and in an effort to help the VNAF to manage less aircraft types across an increased number of individual Units and Squadrons, the USAF facilitated the introduction of the larger and more capable Lockheed C-130A Hercules into Vietnamese Service. Thus, the 435th and 437th Transport Squadrons were formed at Tan Son Nhut in January 1973, equipped with a total of 32 C-130A model Hercules drawn from USAF Units. This allowed the VNAF to stand down the three C-123K equipped transport squadron in the same month. As before, the USAF had prepared well for the introduction to service of the new aircraft with the first Vietnamese C-130 qualified instructor crews arriving back in their home country in time to form the new Squadrons.

During their early months in service, the vast majority of VNAF C-130 missions were airlifting personnel and cargo from Tan Son Nhut to the Northern part of Military Region 1 to assist the ARVN in stemming the tide of advance of the NVA. For example, C-130 Squadrons played a decisive role in redeploying the 22nd Division of the ARVN to Pleiku in the summer of 1973 to counter a NVA offensive. Although each Squadron notionally had 16 aircraft on strength at this time, and taking into account that the

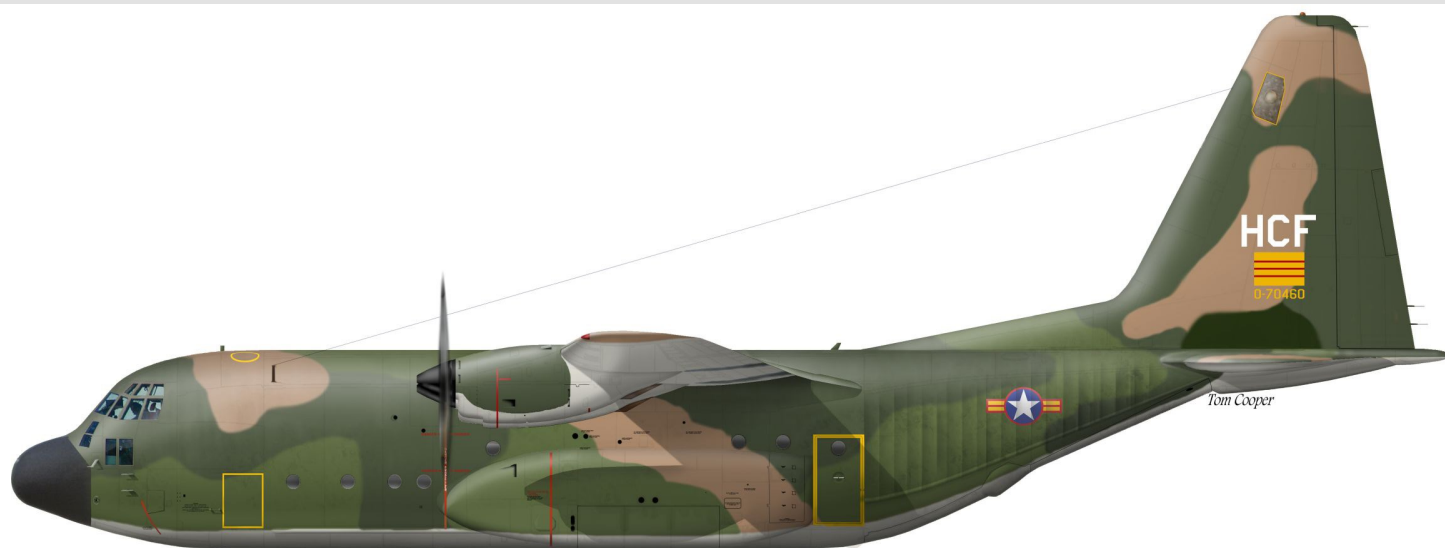
majority of A-models were already some 15-17 years old when they entered VNAF Service, serviceability rates were low with an in commission rate as low as 4-5 aircraft per Squadron, per day. As the demands placed upon the hard-pressed C-130 fleet increased so too did the maintenance issues including some significant issues with fuel leaks and structural cracks in the wing spars and undercarriage. The VNAF managed to return some aircraft back to the USA and Singapore for major servicing and repair work, which marginally improved serviceability rates. The VNAF also took to introducing local modifications to the C-130, fitting a rudimentary self-protection system consisting of flares and numerous 'panic buttons' around the airframe, which could be activated by any crew member upon a first sighting of a SAM launch. By the summer of 1974, and against the backdrop of a worsening situation on the ground and a shortage of offensive air assets, some VNAF C-130s were re-roled to conduct basic bombing missions, utilising rudimentary navigation and bomb-aiming equipment and procedures. Some missions involved dropping full loads of 48 fused 55 Gallon drums of napalm on enemy concentrations



while others used various combinations of ordnance, including Mk.81, 82s or M117s bombs, all rolled over the rear cargo loading ramp. Some of these sorties were so successful that the C-130 even picked up some new nicknames including 'mini B-52'. For one attack alone, in the vicinity of Da Nang, the VNAF managed to assemble a force of nine C-130s each loaded with 32 Mk.82 bombs and during the first three weeks of April 1975, the C-130 fleet was primarily used in this role conducting over 150 bombing sorties. In the closing weeks of the war, with the NVA advancing southward, the VNAF C-130s were increasingly used for the evacuation of personnel and families from northern air bases and cities with near legendary tales on the number of refugees carried in one plane. One well known episode involved a flight from Nha Trang to Tan Son Nhut with the carriage of over 300 individuals on one aircraft, originally designed to carry an absolute maximum of 150 persons. Inevitably, and as the VNAF became more desperate, these high value transport assets were put at risk with at least two airframes lost to groundfire. By the last week of April the rout of South Vietnam had begun in earnest and the C-130 fleet inevitably played a key role in the last evacuations. One crew from the 435th Transport Squadron defected and flew to Singapore with 56 refugees on board while another nine C-130As managed to escape to Thailand before the fall of Saigon, all packed with military personnel and refugees.



It is understood that the North Vietnamese captured some 14 C-130As although the overall serviceability status of these aircraft was unknown since some had sustained damage during the last heavy days of fighting in and around Tan Son Nhut Air Base. Some of these aircraft were eventually taken on the strength of the 918th Transport Regiment at Tan Son Nhut, from where they continued to operate until serviceability issues and a shortage of spare parts and engines eventually signalled their demise.

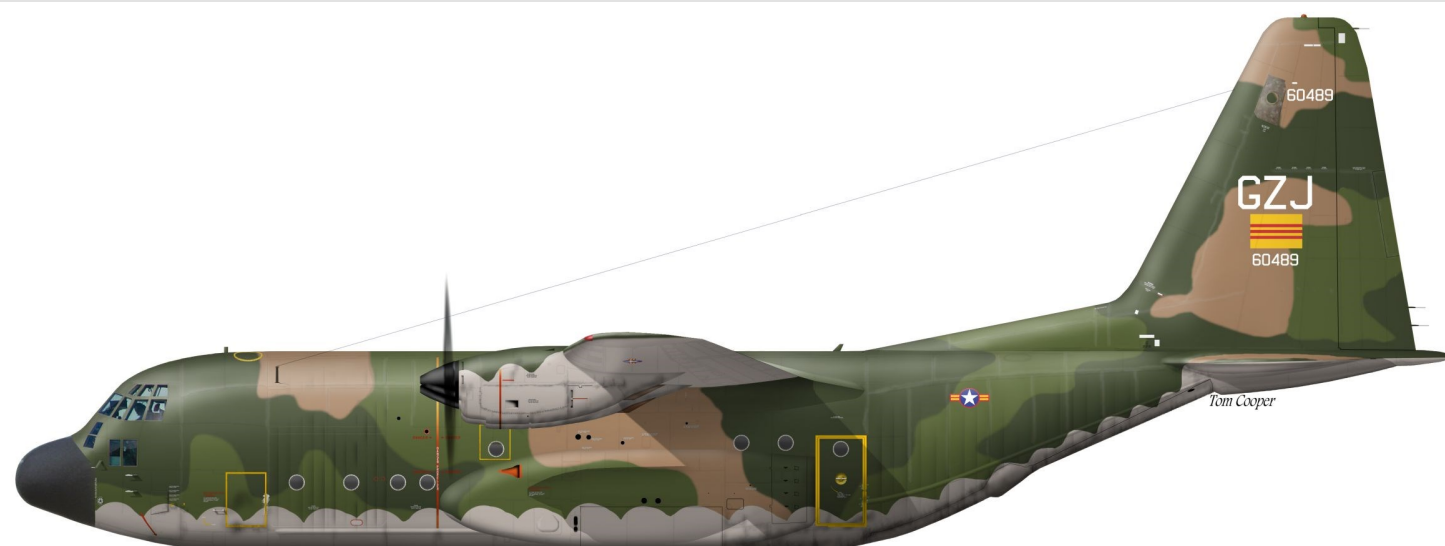


VNAF Lockheed C-130A Hercules Units/Identification Codes – 1973-75

Unit	Variant	Air Base	Tail Code	Notes
435 th Transport Squadron	C-130A	Tan Don Nhut	HC	Operational January 1973 – March 1975
437 th Transport Squadron	C-130A	Tan Son Nhut	GZ	Operational January 1973 – March 1975

VNAF Lockheed C-130A Hercules Colours and Markings

By the early 1970s the vast majority of USAF Tactical Air Transport assets, including those Lockheed C-130s employed in role, were operating in the standard 'South East Asia' camouflage scheme and, as with the C-123K that preceded it into VNAF Service, such was the case with the VNAF C-130As. As before, 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. It should be noted that the demarcation lines between the lower and upper camouflage could differ with some aircraft observed with a very distinctive wavy or scalloped line while others were straighter. The aircraft retained the Type F national insignia although these could differ in size



from airframe to airframe. All aircraft appeared to bear the full-sized national flag with large White three-letter Unit locator codes. As with the camouflage scheme, the application of the aircraft serial number could differ with some aircraft bearing the serial in two different locations on the fin, in Black, with others bearing a single application, below the VNAF insignia and three-letter locator code, in yellow.



The Fairchild C-123B/K Provider and Lockheed C-130A in Miniature

Space in this issue of the newsletter precludes me from including a comprehensive list of kits and accessories for these two subjects so I will focus on providing some

recommendations based on my previous experience and that of other modellers that I know who have tackled these subjects. The Fairchild C-123B/K Provider has actually fared quite well in miniature. The early efforts in 1:72 scale, including some vacuform kits, have now given way to an excellent kit from Roden. This is a typical Roden kit – high quality plastic parts that make up an accurate representation of the original. The early and late variants are catered for in different boxings; The C-123B twin-engined version (Kit ROD056) includes markings for a VNAF example. Roden later re-issued the kit with the additional parts and new decals for the four-engined C-123K variant with the wing mounted turbojets (Kit No ROD507). A-Model have also released a family of C-123 Providers in 1:144 scale. Again, the –B and –K versions are marketed separately (A1408 and

A1404 respectively). A-model kits are not the most refined of injection moulded kits but they can be made into a nice replica with some extra attention and an understanding that a lot of trimming of the parts is required, given the limited run nature of these products. Once again the C-123B kit (A1408) offers decal markings for a VNAF example.

As one of the most significant aircraft to appear during the Post-War period, it should come as no surprise to learn that the Lockheed C-130 Hercules has become a very popular kit subject with good quality kits in all of the main scales, and including 1:200 scale which is very popular with airliner modellers. Airfix, Esca and Italeri have all previously released kits of the C-130 in 1:72, with varying degrees of success. In 2020, however, Zvezda eclipsed them all with a modern rendition of the Hercules (Kit Reference ZVE7321), which has gone on to receive well-deserved reviews for its accuracy and ease of assembly (Kit Reference. You will find an in-depth review of this kit in one of the previous editions of the

newsletter so I will not dwell on it. A surprisingly large number of kits have been released in 1:144 scale. The best of these, by some margin, is the Minicraft kit (MC14748), which is nicely moulded with excellent panel lines and great detail. The kit also offers several options including the three-bladed propellers that are applicable to the earlier C-130A variant and, therefore, the VNAF variant. As previously mentioned, Hasegawa cornered the market in 1:200 scale with a very nice little C-130E/H Hercules, which features very finely engraved panel lines and excellent detail for such a diminutive kit. Last but not least of the 'mainstream' kits is the massive 1:48 scale offering, first released by Italeri in the mid-1980s. At the time this was a truly revolutionary kit release and the kit is deemed to be generally very accurate and a wonderful canvas for producing a highly detailed model. Space is, of course, a major consideration but this did not seem to stop the kit from becoming a best seller. The main limitation in producing a VNAF C-130A Hercules from any of these kits (with the exception of the aforementioned Minicraft 1:144 release) is the availability of three-bladed propellers although I understand at least one company has produced aftermarket resin replacement parts in the past and I suspect another enterprising aftermarket supplier will eventually produce suitable parts for the new Zvezda kit since it is proving to be a winner.

Mark Attrill

June 2021





Asian Aerobatic Teams, Part 3

Until quite recently, **India** had three military aerobatic teams.

Sagar Pawan (Sanskrit for 'sea breeze') was the aerobatic demonstration team of the Indian Navy's Aviation Arm. It was one of the only two naval aerobatic teams in the world, the other being the Blue Angels of the US Navy. The team used four Hindustan Aeronautics HJT-16 Kiran Mk.2 trainer aircraft, and was based at the Naval Air Station INS Hansa in Dabolim, Southern India. The colour scheme used by the aircraft was dark blue on white.



AEROBATICTEAMS.NET

On 3 March 2010 one of the Sagar Pawan Kiran Mk. II planes crashed onto buildings near Begumpet airport, killing the pilot and co-pilot. Commander SK Maurya and co-pilot Lt Commander Rahul Nair died in the crash. Shortly before the plane hit the ground, Nair managed to eject from the aircraft. Sadly, he did not survive as the plane had come too close to the ground, so his parachute didn't open up fully and he got stuck in high tension electric wires. Commander Maurya's body was found in the plane wreckage. Since that crash, the team has not flown anymore.

Sarang

The Indian Air Force aerobatic team 'Sarang' (Peacock – the national bird of India), flying on four modified Indian-built HAL Dhruv helicopters, was formed on 18 March 2002, as a part of the Aircraft and System Testing Establishment (ASTE) at Bangalore. First public display was on 23 Feb 2004 during Asian Aerospace at Singapore.

In February 2007, the team had its first fatal accident when a Dhruv crashed at Yelahanka Air Force Station during a rehearsal. Co-pilot Squadron Leader Priyesh Sharma was killed instantly and the pilot, Wing Commander Vikas Jetly received serious head injuries.

In February 2010, a Sarang helicopter crash-landed while preparing for the air display at Pokhran, Rajasthan. No one was injured in the incident.

The Sarang team's present home is Indian Air

Force base at Yelahanka near Bangalore. All of the team's helicopters are painted in red and white and have a large, stylised peacock painted on each side of the fuselage. The helicopters are equipped with white smoke generators.



AEROBATICTEAMS.NET



Surya Kiran

The first aerobatic team in the Indian Air Force was first formed in 1982 on the occasion of the Air Force's Golden Jubilee anniversary. The team flew nine Hawker Hunter F.56A fighters from No.20 Squadron, which were painted in overall dark blue with white trim. This team received the name "Thunderbolts".

In 1990, it was decided to re-equip the team with four Indian-built HAL HJT-16 Kiran Mk.II jet trainers.



The team was based at Bidar Air Force Base, the second biggest Air Force training centre in the country. On 27 May 1996, another two planes were added to the formation team along with one spare. This revised team then received its present name of "Surya Kiran" (Rays of the Sun). Their first demonstration under the new name was on 8 October during the "Indian Air Force Day" celebrations at Palam. The following year, the team increased to nine formation aircraft with a solo pair.

In 2001, "Surya Kiran" made its foreign debut while performing in Colombo, Sri Lanka. In 18 March 2006, during a practice flight of a three-ship formation at Bidar Air Base, one of the team's planes crashed, taking the lives of two of the team's pilots. The crash occurred while they were performing a low level pass. This was the first ever "Surya Kiran" crash.

On completion of a decade of precision formation aerobatics, 'Surya Kiran', the youngest nine-aircraft aerobatic team in the world, was conferred with Squadron status. With effect from 1 May 2006, the team became IAF's No. 52 Squadron.

Then, on January 21, 2009, Wing Commander Rajpal Singh Dhaliwal was killed when his "Surya Kiran" trainer crashed near Bidar, shortly after he took off from the station on a routine training flight.

The IAF "Surya Kiran" team performed for the last time in their Kiran trainers on Feb 9-13, 2010 at the Aero India airshow in Bangalore. After these demonstrations, the team was disbanded for internal Air Force reorganization reasons. All of the team's HJT-16 Kiran Mk.II planes were re-allocated for pilot training purposes and all 13 of the team's pilots were dispersed to other IAF squadrons.

The Surya Kiran team, were reformed again at the beginning of 2015, this time flying BAe Hawk Mk 132 aircraft. The first public display with the new aircraft was during the Air Force Day celebrations at Hindon on October 8, 2015, but only four aircraft flew and they just performed flypasts in different formations. In November 2016, the team added two more aircraft to their formation. Finally, in 2018, the Surya Kiran team finally increased to nine aircraft as planned.

On February 19, 2019 two of the Hawk aircraft collided in mid-air during the Aero India air show rehearsal, killing one of the pilots.





Super Wing Series - McDonnell-Douglas F-4E (Early) (SWS-010) and F-4EJ Kai Phantom II (SWS-011) by Zoukei-Mura - 1:48

The Japanese specialist aircraft kit manufacturer, Zoukei-Mura, famous for their superb 1:32 scale kits of World War II aircraft subjects and a growing family of 1:48 'short nose' F-4 Phantom IIs, recently turned their attention to producing the first of the so-called 'long-nosed' F-4 Phantom family, and two of these kits have recently passed over my modelling desk. Time and space preclude the inclusion of a comprehensive review at this stage, but when I have more time I will actually start one of these kits and should then be able to provide more information. Therefore, please treat this short preview as a 'taster' for what you can expect.



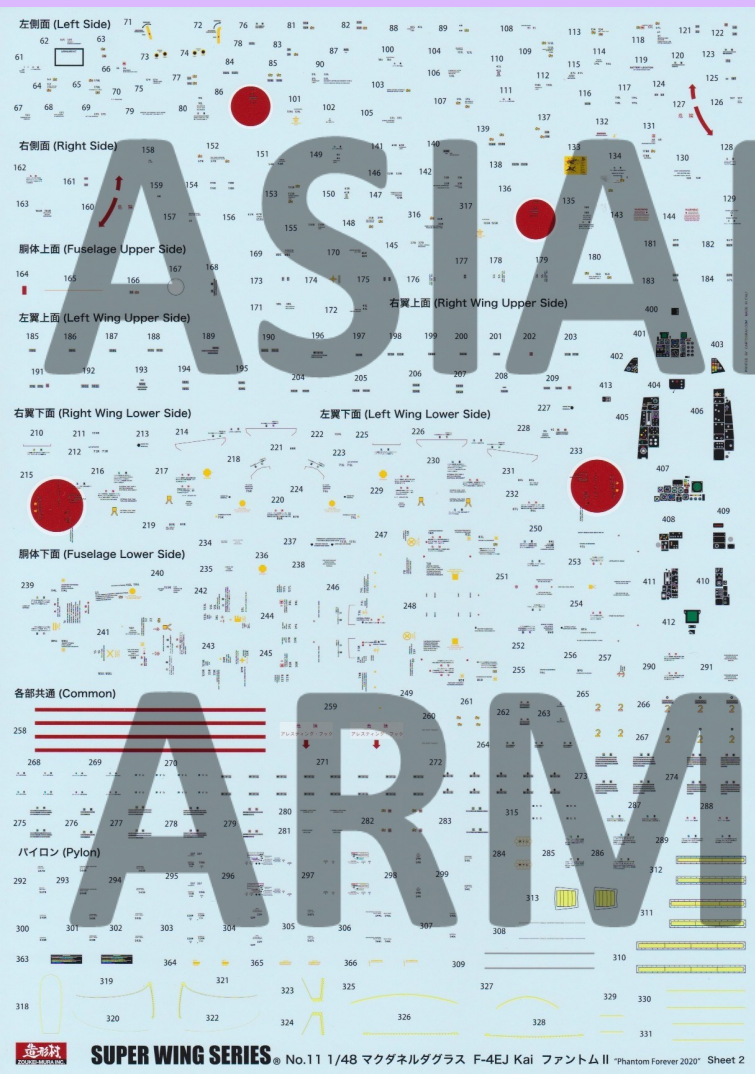
Rather surprisingly given the timing, which coincided with the retirement of this significant type from JASDF Service, Zoukei-Mura opted to first release the F-4E Phantom II 'Early Version' (Kit Reference SWS-010) with Vietnam-era USAF decals, and fitted with the very early style 20mm gun muzzle. This early style gun muzzle suffered from exhaust gas issues during its early service and was replaced in-service quite quickly, and is therefore limited to early USAF and Israeli examples of the F-4E. The good news is that the kit does include the later style gun muzzle parts and the fin top and wingtip parts that were applicable to the pre-F-4EJ Kai Phantom variants, so the kit can be used as the basis for early JASDF F-4EJ Phantoms. I have little doubt that Zoukei-Mura will issue a specific F-4EJ kit in the future but for those that cannot wait, this kit will form the perfect donor for those superb DXM decals of the F-4EJ in ADTW 'Digital Camouflage' markings, reviewed elsewhere in this newsletter, as well as other early-generation JASDF F-4EJs. The kit is typical of other Zoukei-Mura F-4 kits, with superb detail packed into a reasonable parts count. The surface detail is second to none and there are none of the well-documented shape issues with the rear fuselage that were noted with the aforementioned 'short nose' variants.

Zoukei-Mura normally wait some months between each kit release but the imminent retirement of the last F-4EJ Kai Phantoms from JASDF Service in 2021, together with their own 10th Anniversary celebrations, probably forced them to break tradition. We were then treated to an early release of their superb F-4EJ Kai Phantom 'Phantom Forever 2020' (Kit SWS-011) in late 2020, which comes complete with a brand new sprue to cover the parts needed to reproduce the upgraded F-4EJ Kai Phantom, which featured new avionics, self-protection equipment and a revised cockpit arrangement, so parts for a new radome, fin top and wing tips, cockpit parts etc are included. Furthermore, the kit provides the decals necessary to complete the superb 'electric blue' Phantom Forever 2020 special colour scheme applied to one of the last 301 Squadron aircraft in Service with the JASDF. As a result, between Zoukei-Mura and DXM Decals, all of the special colour schemes and/or markings applied to JASDF F-4 Phantoms just before their final retirement can now be reproduced in miniature.





There can be no doubt that Zoukei-Mura have, with these first kits of the long-nosed F-4 Phantom, reset the bar for 1:48 scale kits of this hugely popular classic. Since all but the most discerning modeller will now be able to reproduce a high quality model from the basic Zoukei-Mura kit, without recourse to a host of aftermarket detail or correction sets, the seemingly high Recommended Retail Price (RRP) of these new kits should be deemed quite reasonable.





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