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June/July 2020

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BRIAN'S UPDATES AT ASIAN AIR ARMS RESEARCH GROUP

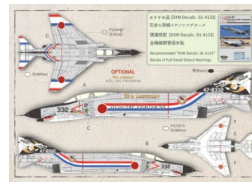


7

This issue carries yet another crop of excellent articles drawing on original research by real experts. Mark Attrill is starting a huge three-part survey of the use of the Mil Mi-24 family by Asian air forces—something that has never been written about before. It begins with the former Soviet Asian countries. The Hind theme is continued with David Thomas' low-cost build of a Hind and a review of Zvezda's new 1/48th offering. John Sheehan and Kevin Delve (from the [Canberra IPMS SIG](#)) start a two-part survey examining the use of the Canberra/B-57 series by Asian air arms, beginning with India and Pakistan (followed in the next issue with the extraordinary story of the RoCAF's B-57s). Mark Attrill is adding to this B-57 string with an analysis of their operations by the South Vietnamese Air Force, and Gregg Kittinger breathes life into a plastic oldie—Revell's B-57B Intruder. So, a real treat for Canberra/B-57 fans!

2

New 1/48 F-4EJ sheet for 10th Anniversary of 303 Sqdn JASDF is just about to be released by WandD Studios. If you want one get back to me and I should be able to get 25% off a bulk order! Haven't had prices yet but should be reasonable.



3



Gen. Bipin Rawat, India's Chief of Defense Staff, said in an interview that the country will buy another 83 Tejas fighters instead of 114 foreign-made aircraft. "The IAF is saying, I would rather take the indigenous fighter, it is good," Rawat was quoted as saying. The Indian Air Force (IAF) is set to operationalise its second squadron of the Tejas light combat aircraft (LCA) at Sulur airbase near Coimbatore in the state of Tamil Nadu. According to local media reports, the Number 18 Squadron, codenamed Flying Bullets, will feature Tejas aircraft in the Final Operational Configuration. Initially, it will include one aircraft, while extra units will be added gradually.

4

We've been fortunate to gain a new Country Specialist for India—a big gap since the sad death of Phil Camp. He is Navin Bala, who lives in the US and has been an avid follower of all things Indian, inspired no doubt by his father's exploits in the IAF as a fighter jock and a test pilot. Navin wrote that excellent article about the Marut in the April/May issue. Read more about Navin on page 13

5

Max Schep continues his unique series on the use of the B-25s by the Royal Netherlands East Indies Air Force, looking at the BB-25 and the SB-25 Strafer. A new contributor, Alex Sidharta, has sent me an excellent article on how he converted the AFV Club 1/48th F-5E into the Indonesian upgrade—the [Macan](#). Gary Markham has sent us another superb crop of videos from South Korea—he seems to have an endless supply of these!



6

You'll remember Andy Binks' book superb "Samurai Starfighters" book, well Andy's done it again and has just released "Samurai Phantoms" focusing on the highly colourful *senkyo* Tactical Air Combat (TAC) meets of the 1980s, using never-before published photos from member Akira Watanabe and friends—a real gem. Read all about it on page 23.

7

And finally, please remember that the Newsletter can only succeed if you keep sending me articles or suggestions for an article. I can help write the pieces but I DO need your continued help—don't be shy!



MIL MI-24 HIND AND SUB-VARIANTS IN ASIA

Part I—Transcaucasia and Central Asia (Former Soviet Republics)

By Mark Attrill

The Mil Mi-24 Hind and its many sub-variants ⁽¹⁾ have served over the years with no less than 19 different Asian Air Arms since the first deliveries of this formidable Russian attack helicopter family were made in 1979. Afghanistan have, by far, been the largest recipient of the type having taken delivery of over twice as many aircraft as Uzbekistan, which inherited some forty-five aircraft following the break-up of the Soviet Union in 1991. That said, Afghan deliveries took place over a protracted period and against the backdrop of an almost continuous state of internal conflict, with many of the aircraft providing attritional replacements, so the actual number in service at any given time was probably quite modest. At the other end of the spectrum, some air arms only received single-digit quantities of aircraft, which included Cambodia, Myanmar and Papua New Guinea, all of which are believed to have withdrawn the type from service already.

The sheer number of Asian air arms that have operated this aircraft, in peace and conflict, with a dazzling array of colour schemes and markings, combined with the availability of some excellent kits, should make the subject very appealing to aviation researchers, historians and modellers alike; it is hoped that this series of short articles will be interesting, informative and inspirational. It is not my intention to provide a comprehensive history of the type, since readers are fortunate enough to have access to some excellent reference material should they wish to delve deeper into the subject. Suffice to say, after a brief introduction, the major part of this articles will focus on the more interesting aspects of the Mi-24 Hinds' operational history with Asian air arms, including their use in combat, together with some coverage of the colour schemes and markings that have been applied during the types' Service in the skies over Asia, from Georgia in the West to Indonesia in the East—and all points in-between. [1. The Mi-25 is the original export version of the Mi-24D Hind-D and the Mi-35 is the export version of the improved Mi-24V Hind-E.]



ABKHAZIA

The Abkhazian Air Force was reportedly formed in 1992 and almost immediately entered into a civil war with neighbouring Georgia between 1992-93. The Abkhazian Air Force has been known to operate the Mi-25/35 variant of the Hind but accounting for the exact types, quantities, and service dates for aircraft is difficult due to a number of factors including Abkhazia's disputed status; a lack of official available information; multiple conflicts over the course of its existence; and the regular involvement of Russian aircraft and pilots in the conflicts and region. In general, the air force has relied on aircraft inherited from the former Soviet forces based in Abkhazia, with possible reinforcement in recent years by Russia with second-hand aircraft. No traditional contracts for aircraft purchases by Abkhazia have been reported. Anywhere between three and nine Mil Mi-24/35 Hinds have reportedly been operated by the Abkhazian Air

Force, sporting several of the export style camouflage schemes applied to the Hind, together with hastily applied national markings, which consist of a Red/White/Green Roundel with a White Star superimposed and, in some cases, flanked by a winged motif together with two-digit numerals in Yellow. Photographs of the aircraft suggest that these helicopters were on short term loan from the Russian authorities.



ARMENIA

The newly established Armenian Air Force inherited a number of former-Soviet Army Aviation Mi-24 *Hinds* following the break-up of the Soviet Union and the establishment of the Commonwealth of Independent States (CIS) Treaty in 1992, with the rapid transfer of in-country aviation assets, including a number of specialist Mi-24R *Hind-G1* and Mi-24K *Hind-G2* reconnaissance and artillery observation aircraft, previously operated by the 382nd Independent Helicopter Squadron at Yerevan. Armenian Mi-24s have reportedly been involved in at least two of the skirmishes during the long-standing

Nagorno-Karabakh territorial dispute and conflict with neighbouring Azerbaijan. The Armenian Mi-24s were used extensively during the Martuni offensive in November 1992 and at least one and possibly more were lost between January and March 1993, before a ceasefire came into effect in May 1994. One aircraft was lost in a training accident in 2008. Fighting flared up again between 2014-2016, which pitted these former-Soviet aircraft against similar types operated by the Azerbaijani Air Force. At least one Armenian Mi-24 *Hind* was downed by Azerbaijani forces along the disputed border in November 2014 and, on 2 April 2016 during a clash between Azerbaijani and Armenian forces, an Azerbaijani Mi-24 was shot down. Armenian Mi-24s appear to have operated in at least three different colour schemes with several styles of national markings. The aircraft were initially operated in the standard Soviet Army Aviation 'desert' colour scheme with appropriate national markings in the form of a roundel in Red/Dark Blue and Orange, and a relocated bort number applied to replace the hastily over-painted former Soviet markings. After local overhaul, the Mi-24Vs emerged with a revised colour scheme more suited to the Southern Caucasus landscape, of Khaki Green, with Dark Green and Dark Brown patches on the upper surfaces and Light Blue undersurfaces and another variation on the roundel with a white centre spot. The more common Mi-24P Hinds sported a rather unique colour scheme, comprising a Grass Green, Dark Green and Red Brown camouflage scheme with Light Blue undersides, with White bordered Blue Bort numbers and a three-colour roundel in Red, Blue and Orange. These aircraft also appear to have sported the rather bright Grass Green shade of the camouflage scheme on the upper surfaces of the main rotor blades. Armenia and Russia continue to maintain a close relationship with the long standing Russian-Armenian Treaty of Friendship of 1997 still in place which provides for close integration of air defence assets, so it can be assumed that the number of aircraft in the Mi-24 Hind force is well maintained with fifteen aircraft reportedly still in service at either Yerevan Airport or Shirak Airport, Gyumri.



MIL MI-24 HIND AND SUB-VARIANTS IN ASIA

Part 1—Transcaucasia and Central Asia (Former Soviet Republics)

By Mark Attrill



AZERBAIJAN

Azerbaijan acquired their first Mi-24 *Hinds* in 1991 when they received Mi-24V *Hind-E* and Mi-24RKh *Hind-G1* variants from the 845th Independent Helicopter Squadron of the Soviet Army Aviation following the break up of the Soviet Union. Although the Azerbaijani Government have courted considerable assistance from the United States, Turkey and Israel in the re-development of their military capability, this has mainly been in terms of Command and Control, Infrastructure and the development of UAVs - heavy reliance is still placed on the procurement and operation of Russian manufactured aircraft. Over time the Azerbaijani Air and Air Defence Force acquired several Mi-24P *Hind-Fs* from Ukraine

and these aircraft have been operated as part of a mixed force of rotary wing assets from Baku Kala Air Base.

Azerbaijani Mi-24 *Hinds* have been involved in combat operations against Armenian forces, as previously reported, with at least one loss in 2016. In 2010 Azerbaijan signed a contract with Rostvertol for the supply of twenty-four new build Mi-35Ms which have been the subject of a protracted delivery schedule. It is also reported that at least seven Mi-24G Super *Hinds* have been introduced to service, which may have been upgraded from the ex-Ukrainian Mi-24s, by the Konotop Helicopter Repair Facility and featured new Israeli avionics equipment fits.

The early Mi-24 *Hinds* were observed in one of the standard Soviet style camouflage schemes with a Dark Green and Light Brown 'popcorn' camouflage pattern on the upper surfaces with Light Blue undersurfaces and the Azerbaijani national insignia (a Medium Blue/Red/Green disc with a White Star and Crescent motif) applied to the fuselage sides and lower surfaces. The majority of the Mi-35M *Hind-Es* wear a overall gloss Dark Blue/Grey colour scheme with full colour national insignia although at least one of the new machines has a distinctive Dark Green and Sand Yellow camouflage scheme with deep Blue undersurfaces.

The Azerbaijani Mi-24G Super *Hinds* appear to have an overall very Dark Grey or Black colour scheme.



GEORGIA

The Georgian Air Force ^[2] reportedly received a small batch of Mil Mi-24D/V *Hind-D/Es* following the break-up of the Soviet Union, which was subsequently augmented by deliveries from Ukraine. The aircraft were operated by the Helicopter Squadron of the Georgian Air Force from Alexeevka (Tbilisi) Airbase and subsequently received several electronic system upgrades, provided by the Israeli Elbit company. Georgian Air Force Mi-24 *Hinds* took part in the short Russo-Georgia conflict in South Ossetia in August 2008 and were credited with an attack on the Ossetian presidential palace, enemy force assembly areas and a Russian convoy. Two Georgian Air Force

Mi-24s were destroyed on the ground at Senaki Air Base with another reportedly lost immediately after take-off from Tbilisi. As with other aircraft inherited from the Soviet Army Aviation units, Georgian Mi-24V *Hind-Es* initially operated in the standard Soviet Army Aviation 'desert' colour scheme with a simplified Georgian star insignia applied in three locations with a new bort number, also applied to replace the hastily over-painted former Soviet markings. In later years, the Georgian Air Force Mi-24s were observed in a new and fairly unique camouflage scheme of Dark Green, Brown and Sand upper surfaces with Light Blue lower surfaces and revised, more elaborate national markings incorporating the Georgian star.

[2] The Georgian Air Force was only established as such in 2016 following defence reforms. It had previously been known as the Air Force of the Defence Forces of Georgia



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MIL MI-24 HIND AND SUB-VARIANTS IN ASIA

Part 1—Transcaucasia and Central Asia (Former Soviet Republics)

By Mark Attrill



KAZAKHSTAN

In keeping with other independent states of the former Soviet Union in 1992, the newly established Aerial Self-Defence Force of Kazakhstan reportedly received some 36 former-Soviet Army Aviation Mi-24 Hinds following the break-up. The majority of these aircraft were Mi-24V *Hind-Es* of the 486th Helicopter Regiment of the Soviet Army Air Force that had only recently been re-based from Uteborg (in the former German Democratic Republic – East Germany) to Ucharal Air Base in Eastern Kazakhstan, close to the border with China. Beginning in 2016, the surviving complement of around twenty ageing Mi-24Vs began to be augmented and replaced with a new batch of Mi-35Ms. In service with the Kazakhstan Aerial Self-Defence

Force, the earlier machines originally retained the standard Soviet Dark Green and Light Brown 'popcorn' style camouflage scheme with Light Blue undersurfaces and a two-digit Yellow Bort number with new national markings applied in the standard location on the fuselage side and undersurfaces. Some refurbished machines then sported a revised two-tone Light Brown/Sand camouflage scheme with Light Grey/Blue undersurfaces and a relocated three-digit aircraft code, in Black, on the upper engine access doors. The new Mi-35M *Hind Fs* sport an overall Medium Dark Grey colour scheme on the upper surfaces with a deep Light Blue shade applied to the undersurfaces of the fuselage and winglets. These aircraft also feature a two-digit 'fighter' style aircraft code on the upper engine access doors and Kazakh Air Force titles on the tail boom, all applied in Red outlined with Yellow.



KYRGYZSTAN

Kyrgyzstan's Air Arm was initially formed from the remnants of the Central Soviet Air Force Training School at Kant in the aftermath of the dissolution of the Soviet Union. The Kyrgyz Air Force received a number of operational L-39 Albatross training aircraft and dismantled Mi-24D/V *Hind-D/E* attack helicopters in 1992 but have invested little in the development of an independent air arm. The Kyrgyz Air Force are part of the Commonwealth of Independent States' Air Defence System and have come to rely heavily on Russian cooperation and assistance with the establishment of a regional air defence system. Images of Kyrgyz Air Force marked aircraft are difficult to source although one

photograph shows 'Red 17', a Mi-24D or -24V in a Medium Green/Sand camouflage scheme with Light Grey undersurfaces and the national markings, a Red disc with an elaborate Yellow 'sun' symbol superimposed, and very large 'Kyrgyz Air Force' titles along the lower section of the forward fuselage. It is understood that Kyrgyz Air Force assets may have now been reduced to a handful of rotary-wing assets, which may include one or two Mi-24D/V Hinds although several airframes have also been noted in museums and some have been seen as 'Gate Guardians' at the entrance to military bases.



TAJIKISTAN

The Tajik Air and Air Defence Force was established in 1994 following the dissolution of the Soviet Union and since that time the Russians have undertaken the majority of Tajikistan's air defence requirements under the terms of the Commonwealth of Independent States' Air Defence System. In spite of several attempts by the Tajik government to establish a rudimentary fixed-wing combat capability, the Russians have limited their support to the provision of some L-39 Albatross training aircraft and a

number of combat and support helicopters. Russia reportedly donated 6 Mi-24 *Hind-D/F* in 2006, together with Mi-8 Hips with which to equip a Helicopter Squadron which is most likely based at either Aini or Dushanbe. It is quite difficult to distinguish Tajik Air Force aircraft since they often share the Red Star insignia used by the Russian Air Force although some aircraft, mainly L-39s, have been observed sporting a stylized national insignia in the colours of the national flag along with the Red Star.



The Mi-24



MIL MI-24 HIND AND SUB-VARIANTS IN ASIA

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By Mark Attrill



TURKMENISTAN

The Turkmen Air Force was also established after the break up of the Soviet Union and took over many of the assets of the previous Turkestan Military District. One of the units established within the new air arm was the 31st Separate Mixed Aviation Squadron (31 OSAE) at Ak-Tepe/Ashkabad Air Base, operating a mix of Mi-8 *Hip*-C and Mi-24P *Hind*-Fs helicopters. Ten Hinds were reportedly operated and have been observed in at least three different colour schemes with largely uniform application of national markings. The aircraft were initially observed in a distinctive Light and Medium Green disruptive pattern camouflage scheme with saturated Sky Blue undersurfaces, roughly equal to Azure Blue. These aircraft wore the

elaborate Turkmen multi-faceted Green star insignia superimposed with five stars and a crescent moon in white with a two-digit Bort number on the forward fuselage. Other Mi-24 Hinds have been observed in a revised Medium Green and Sand camouflage scheme, presumably applied after an overhaul, with Blue, white-bordered two-digit Bort numbers on the tail boom and tail rotor safety markings applied in the Turkmen language. The third scheme is, again, quite unique with a two-tone Light and Medium Green upper surface camouflage scheme with Saturated Sky Blue undersurfaces and the white-bordered two-digit Blue Bort numbers on the forward fuselage. Some aircraft have also sported a large Turkmen Air Force shield insignia on the upper engine access doors.



UZBEKISTAN

The Uzbek Air Force was an arm of the Armed Forces of the Republic of Uzbekistan, which was formed in 1994 following secession from the former Soviet Union, but maintained close ties with Russia through its status within the Commonwealth of Independent States, which provided for joint defence arrangements. As a result of this close relationship the Uzbek Air Force inherited a sizeable number of aircraft and helicopters, which reportedly included up to forty Mil Mi-24 *Hinds*. These aircraft formed part of the Separate Mixed Aviation Brigade at Dzhizak and the 66th Separate Helicopter Regiment then based at Chirchiq. The aircraft were also reportedly operated from Verhnekomsomlsk, as part of an Air

Mobility Support Unit, and have previously been actively engaged in operations against the separatist Islamic Movement of Uzbekistan during internal anti-terrorist operations. Uzbek aircraft have been operated in a three-tone camouflage scheme of Light/Mid Stone (FS20260), Mid Brown (FS20117) and Green (FS24097) with Light Blue/Grey undersurfaces (FS25414) (All quoted FS Numbers are approximate), with Green/White/Blue roundel national markings, two-digit White Bort numbers on the engine access doors and Uzbek Air Force titles, in black on the tail boom. It is understood that at least half of the existing fleet of Uzbek aircraft was subjected to an avionics upgrade programme performed by the French company, Thomson CSF in 2003-04. More recently the Mi-24/35 *Hinds* have been observed in a number of very different colour schemes including a very faded three-tone digital scheme combining Light Green, Mid Stone and Light Sand and another four-colour digital scheme with much richer colours, dominated by Sand Yellow with Dark Green, Chocolate Brown and Black digital patches over Deep Azure Blue undersurfaces. These aircraft have lost the Uzbek Air Force titles and the two-digit Bort number has been relocated to the tail boom behind the roundel. The third scheme that has been observed on Uzbek aircraft is a simple overall Dark Green colour scheme, seen on an 'Open House' event in 2019 to celebrate Uzbek Armed Forces Day.





MODELLING ON A SHOE-STRING

Or How to build a 1/48 Indian Air Force Mil Mi-25 (for less than £6.00!)

By David Thomas



The Mi-24/25/35 series of assault helicopters are well known, and feared, machines; a participant in many conflicts since making its operational debut in 1978, when Cuban pilots flew missions in Ethiopian Hinds against the invading Somali forces.

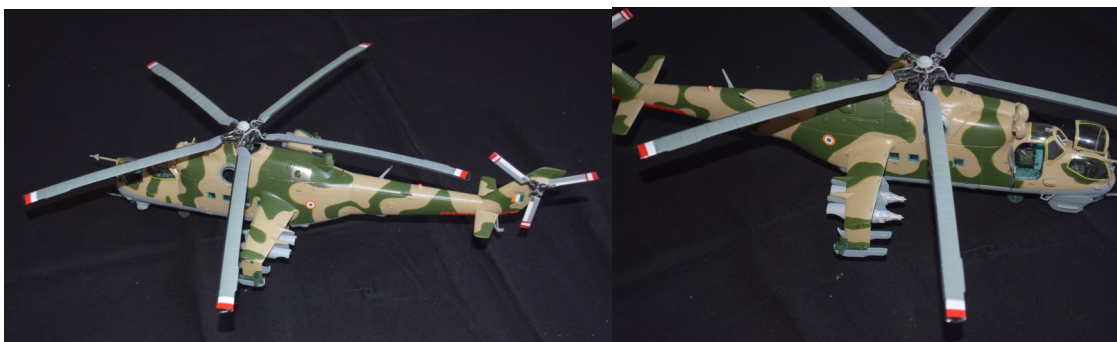
The Indian AF ordered its first 12 aircraft in 1983 although it is believed that a group of Indian pilots flew Soviet machines during that nation's invasion of Afghanistan in the early 1980s. Here they presumably became familiar not only with the handling of the machine but also the manner in which a modern assault helicopter was used in battle.

It would appear that this knowledge was used to embed the aircraft into the Indian Order of Battle fairly quickly as they were used as early as 1987 in fighting with the Pakistan Army in the disputed Siachen Glacier region, high up in the Himalayas. Initially the aircraft served with the 125th Helicopter unit and later in the 104th and 116th Units, following a second order for 20 Mi-35s.

Indian units were used in the Indian Peace-Keeping Force in Sri Lanka in the late 1980s, supporting government forces in their fight against the Tamil Tiger rebels. During their time there, the Hinds served with distinction in a number of actions, notably the defence of Jaffna and in Operations Trishul and Viraat, hitting rebel columns, cutting lines of communication and attacking boats bringing supplies across the Palk Strait. No Hinds were lost during the missions.

In 1998 a contract for \$25m was signed with the Israeli company Tarmam to upgrade 25 of the aircraft. The main purpose of the upgrade was to equip the Hind for night and adverse weather operations and to modernise the weapons systems.

The first public appearance of the improved machine was in 2003 at the Bangalore air show and since then the aircraft have been seen, along with other Indian AF machines, the original olive green/desert yellow disruptive camouflage scheme replaced by a coat of overall medium grey. They remained an important part of the Indian CAS force until recently. In 2020 they began to be supported in their role with the delivery of the first eight AH-64E Apache helicopters for the Indian Air Force. When the full order of 22 Apaches is delivered and achieves I.O.C. with the 104th Helicopter Squadron, the Hinds are scheduled to be retired, by which time they will have served the Indian forces well for almost 40 years.



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MODELLING ON A SHOE-STRING

Or How to build a 1/48 Indian Air Force Mil Mi-25 (for less than £6.00!)

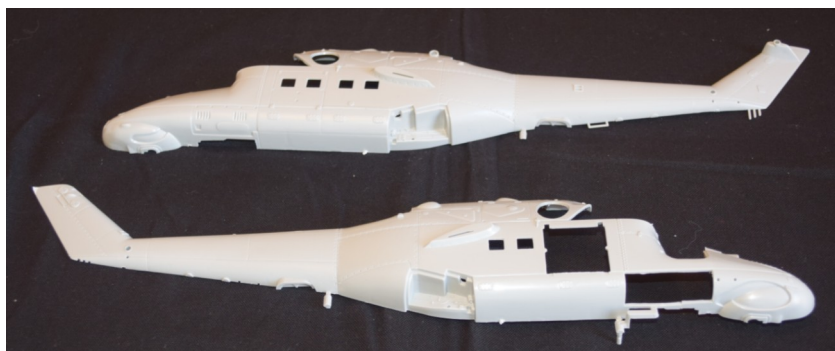
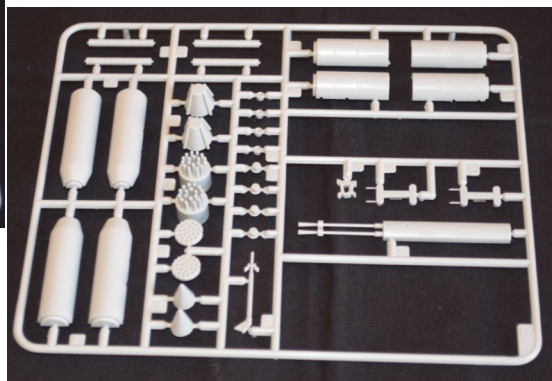
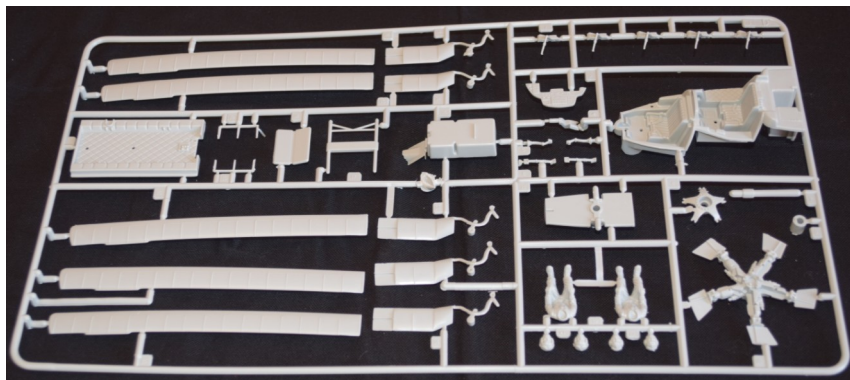
By David Thomas

The Hind has not been extensively covered in model form to the extent that its numbers and worldwide spread perhaps have warranted. Until Zvezda produced its recent 72nd scale kit, now followed by one in 48th scale, kits have been few and far between, and of varying quality and accuracy. In my favoured scale, 48th, some people will perhaps remember the Monogram kit which suffered from the fact that the tail boom was too short and the main and tail rotors collided, with presumably what in reality would have been catastrophic results for both. A recent article in Model Aircraft Magazine detailed a build of this kit built but it required a very necessary plug inserted in the tail boom to avoid the problem.

However, contrary to what was stated in the article, it was not the only 48th scale kit produced because some time in the late 1990s I discovered a Hind D kit on a market stall for the princely sum of £5.99. For that price I bought it plus a Su-27 Flanker kit beside it which was slightly more expensive at..... £6.50! The maker was a Chinese company called Mini Hobby Models, a company I'd never come across, before or indeed since. The Su-27 was built fairly quickly as a PLAAF aircraft from the first batch bought from Russia. It was, I suspect, a copy of the original Academy kit because you can interchange the parts of both and never notice the difference. The Hind got put in the loft and forgotten about.

It was rediscovered late in 2019 when I was clearing out part of the loft area and I thought after looking at the bits in the box, why not? I knew the Indians, among other air forces in Asia, had used them so it fitted into the AAA theme rather nicely. A little digging on the net soon produced a Linden Hill decal sheet with the right markings and I already had Vallejo paints in stock which matched the colours of the early pre-grey camouflage colours. So having spent less than £20 on the whole project I began.

The instruction sheet was typical of the era, very similar to a Hasegawa sheet, with a pictorial assembly sequence. Generally it worked well although there were times when I wished for more detailed drawings of some areas to show exactly where the parts were supposed to line up. The parts were all numbered similarly on the sheet and on the sprues which helped things along, unlike some instruction sheets I've come across in recent times. Despite its age it was clearly printed and the vast majority of even the smallest parts were recognisable on the drawings.





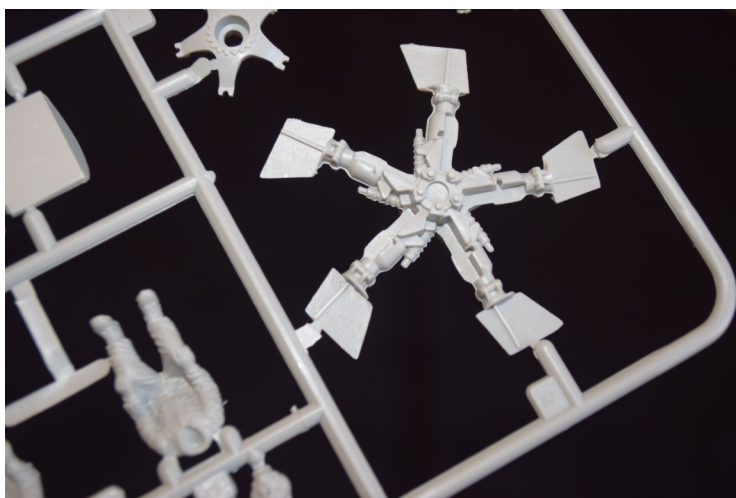
MODELLING ON A SHOE-STRING

Or How to build a 1/48 Indian Air Force Mil Mi-25 (for less than £6.00!)

By David Thomas

The photos which accompany this piece show the sprues which were contained in a suitably large box with equally suitable warlike art work on the lid. Flash was virtually non-existent and the engraving was generally restrained and accurate as far as I could tell from various pictures found on the internet. Sadly however, owing to technical difficulties with my camera, no images are available of the actual build so you will have to take my word for it that it was a relatively straight-forward process to build the main fuselage structure. Although it was possible to build the main cabin interior, as well as pilot and gunner positions, I decided not to do that but inserted the cabin parts to give the fuselage greater rigidity. I then closed up the doors giving access to that area. The cockpits were given a fair amount of detail. As far as I could establish, the initial deliveries to the Indian AF were painted the standard Soviet blue/green cockpit colours with analogue instruments, as depicted on the kit parts. This was painted appropriately and I added side consoles and seat belts filched from various Eduard pre-painted MiG sets. I'm sure the cockpits as built do not show reality but I contented myself with the fact that the were illustrative of a busy working environment, were of the correct colour and looked possible.

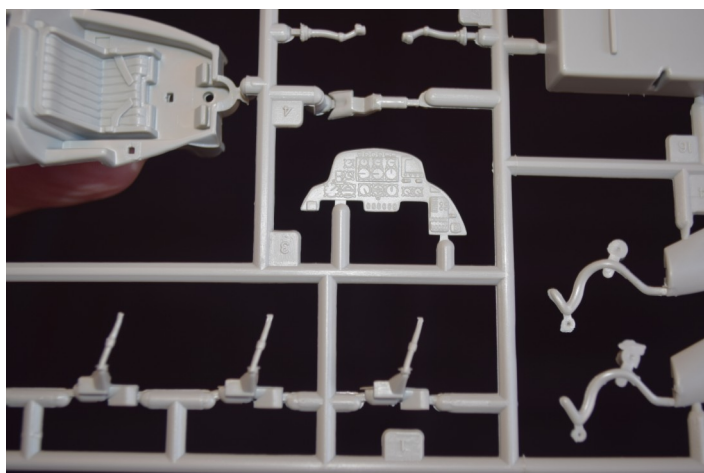
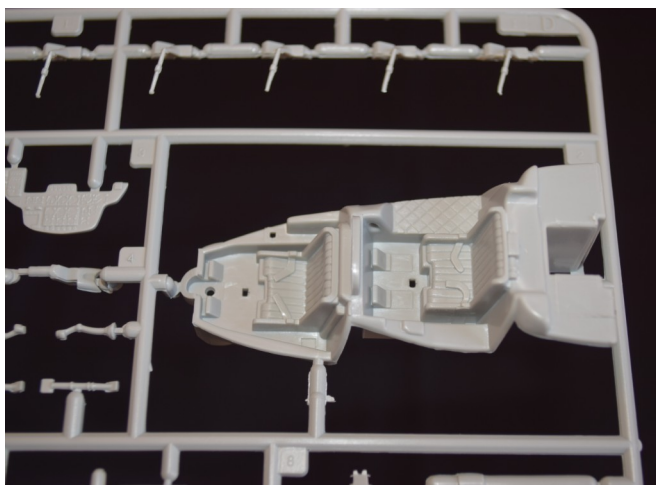
The biggest problems were encountered with the assembly of the main rotor and the attendant bits and pieces which go to make it up. I suppose I had never really paid much attention to any helicopter's rotor head: I knew they were there and presumed they were complex but how complex this one turned out to be surprised me. Perhaps the biggest surprise was that a kit of that era contained all of the necessary parts to make it look complicated - the difficulty was that all of these parts required fitting together in a relatively small space. It took as long to paint, bring together and assemble these parts to the very long pre-drooped rotor blades as it did to build and paint the whole of the rest of the aircraft. Was I pleased when it was finished?



Considering I needed to add nothing in the way of wire, sprue, plastic card or whatever, that set of rotors and the connecting bits and pieces look like what they are supposed to and, in my book, that is about as good as modelling gets. That said there were a number of occasions during this aspect of the build when it nearly finished up in the bin and where I addressed it in less than complimentary terms. However, once it was eventually finished and fitted onto the fuselage assembly I was pleased I had stuck with it.

The finished article can be seen in the accompanying photos and I hope you can see why I was so pleased with what was my first helicopter build. After nearly sixty years of modelling I thought it was about time I stepped out of my comfort zone and went for it. I'm glad I did. Whether I will build another (the new Zvezda version does seem very tempting), remains to be seen.

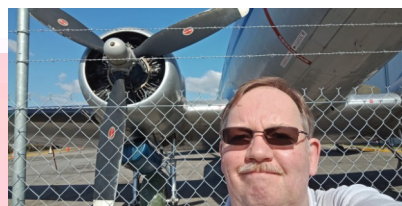
Did I mention the market trader had two of these kits and I bought them both? Anyone wanting to make me an offer for the second one, let me know. It's untouched in its box, and I would even throw in the unused parts of the Linden Hill decal sheet for the right offer. It will be probably be cheaper than the new one! If you fancy it mail me at davidtriplea21@gmail.com





ROKAF VIDEOS From Gary Markham of KBS World TV

Gary is our South Korean Specialist.
Click on his photo for his background.
He's gathered a huge amount of ROKAF video materials
and here's a selection of them—all fascinating!
He's very happy to help with your ROKAF enquiries.



Daily life of a KAI KT-1 maintenance crew—
gets very good after 15 minutes,
featuring superb, close-up details
of maintenance procedures.

Watch this KAI MUH Surion of the Republic of Korea
Marine Corps demonstrating some amazing aerobatics!
I didn't know choppers could do THIS!



KUH Surion of the Republic of Korea Army
embarking, carrying and disembarking troops.

A highly detailed, close-up service description of
ROKAF UH-1 and UH-60. Some glamorous pilots!



Originally not due till June 2020 is our latest combined
departments documentary. In conjunction with the
ROKAF Test Pilots, KBS Documentary team (us), Rider Eye,
is a 50 minute documentary about the Test pilots and
some of the aircraft they put through various tests.
I was called in to fly and film with my own team.
Some of the first scenes are older footage, to which
we've added brand new film not seen before.
The film includes pre-flight, post flights etc., with the
pilots. Its 50 minutes is all in the Korean language,
but has some fascinating details of flight procedures.



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North American B-25s in the Netherlands East Indies AF—Part 4

Converting the B-25J to the BB-25 and the SB-25 “Strafer”

By Max Schep

This is the fourth of a series of articles explaining the types, finishes and modifications used between the acceptance of the first B-25 aircraft for the Netherlands East Indies Air Force (NEIAF) in February 1942 until the handover in 1950 to the Angkatan Udara Republik Indonesia (AURI).

Image 1

During 1946, some of the B-25Js operated in their Australian wartime configuration as seen on N5-242, still wearing the red, white and blue flag (since November 1945), outlined with a white border. The configuration became known, in the period 1946-1949, as the BB-25, the first “B” standing for Bomber. The turrets on the BB-25 were deleted soon after arrival in Java. (Collection National Archives)



Image 1

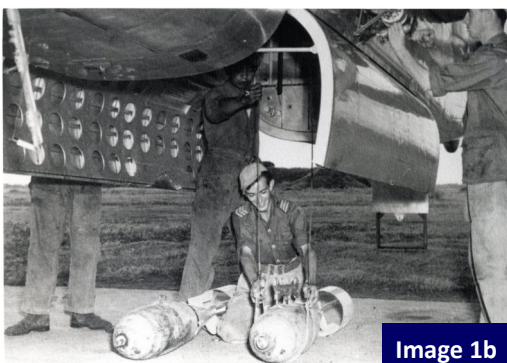


Image 1b

Image 1b

Bombs are loaded with the outer winch in the bomb bay of one of the BB-25s. (Collection Casius)

Image 2

At an American dump at Biak Isle were ten crated Strafer field modification packages found in 1946. One B-25J, N5-233, later M-433, was flown over with a team of technicians to modify the airplane and test it successfully. The eight .505 guns in the nose replaced the front turret. The remaining nine noses were shipped to the technical department at Andir airfield Bandung for fitting to B-25Js: these modified aircraft were then designated SB-25s. The early modified aircraft were still camouflaged in faded Olive Drab No.41 and Neutral Grey No.43, with new bare metal noses, as seen here on M-434 with contrasting white registrations on the Olive Drab background. However, the common practice in those days was to remove the Olive Drab in the background and use black registrations. (Photo Lesquillier)



Image 2



Image 2b

Image 2b

The same M-434, ex N5-234, flying in formation with two bare metal SB-25s in the service of 18 Squadron. The national markings on the wings were heavily faded and weathered. The fading of the Olive Drab made it difficult to distinguish from the bare metal. (Photo Hoyer)

Image 3a

Front view of one of the SB-25 Strafers with a total of 12 x 0.505 guns. This particular aircraft was still in a heavily weathered and faded Olive Drab. The aircraft were used for close -support operations in Sumatra. (Collection vd Berg)



Image 3a

North American B-25s in the Netherlands East Indies AF—Part 4

Converting the B-25J to the BB-25 and the SB-25 "Strafer"

By Max Schep

Image 3b

The unarmed nose compartment of the SB-25
(Collection Hooftman)

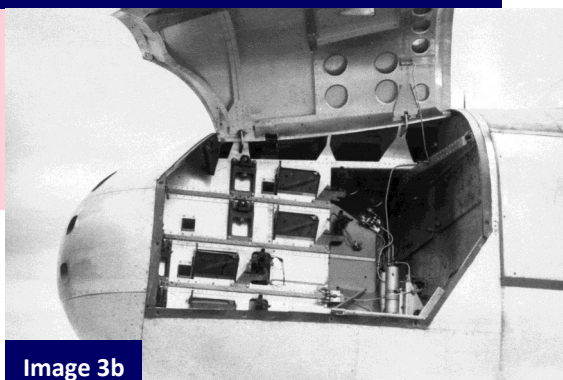


Image 3b



Image 3c

Image 3c

The portside of the open nose compartment of an SB-25 with fully loaded guns. (Photo Sluis)



Image 4a

Image 4a

16 Squadron was founded in November 1946 to operate in Sumatra. In 1947 a squadron member, Loreaux, designed a squadron marking— a black dragon with an open, bared mouth on a red shield, and a black number 16 on a red background, as seen here on an SB-25 of the squadron. (Collection Hooftman)

Image 4b

16 Squadron was inspired by the tales of Palembang and its surroundings, and transformed it into an American-style personal artwork, placing it on the portside nose of the aircraft. The squadron marking was at the same time positioned on the starboard side. Later, aircraft wore the squadron markings on both sides. An SB-25, and two BB-25s, M-421 "Ukkie" and M-458 "Black Dragon", are seen here during an official ceremony in Sumatra. (Collection National Archives)



Image 4b

Image 5

18 Squadron, which was founded at 4 April 1945 in Canberra, had its first five years lustrum celebration in 1947. Lt. Piet Hoyer designed a squadron emblem consisted of the pre-war nationality marking -the black-outlined, orange triangle with two yellow bombs and yellow-outlined blue lightning bolts. The photograph was made by Piet Hoyer of his design. (Photo Hoyer)

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Image 5

Guideline Publications





INTRODUCING OUR NEW INDIAN AIR ARM SPECIALIST NAVIN BALA



I was born into aviation many moons ago, and as the kid of an aviator I was brought up surrounded by all kinds of facets on aviation. Watching MiG-21s flying low over our home (as a happy 8 year old role playing “Star Trek” on the roof of his home with a chimney stack doubling-up as Capt Kirk’s chair), was the best memory I have.

I started sticking tiny bamboo-like barks onto a stick to make a MiG21 in 1982. That would essentially be my first model airplane. As we moved to a metro city like Bombay around 1985 and Dad started flying overseas, kits were introduced to me in the form of an F111 and a MiG-21 in 1:144 scale. Later I received a birthday gift of two Revell Germany 1:48 kits: a Spitfire and a Bf109: incidentally they had a unique never-seen-since retractable gear mechanism, that was simple and very sturdy.

In college I enrolled in the National Cadet Corps of my city and got introduced to balsa model building making a Su-7 and an F-14 among a few others.

Then our family moved to the US where I started building models in earnest and built over 250 models mainly Luftwaffe, IJN/A, RAF, RN etc., mainly in 1:72 and WW2.

Some of the techniques I developed were basic weathering with sponges and chopped bristles on flat brushes but nothing fancy. Then I started helping [Griffin Models in the US](#) to help refurbish some of his wood models which I was thrilled to do in my spare time and Brad Griffin kindly gave me some of the models that I had worked on.

Fast forward a few years later into a steady job and a family, and I started really getting into things. This was when I met some true legends like Murli, Jagan, Polly sir, Vinu, and many others who brought us together in a small band of Indian Modellers ushering in a new era of Indian Subcontinent builds. This would not have been possible without Mick Burton’s exceptional Bright Spark decals, which are now rarer than “unobtainium”.

[Ed. But Asian Air Arms Research Group still has some of them left—view and order at <https://www.asianairarms.com/decals-aaa>]

Needless to say my main builds are still MiG-21s and IAF fighters. My father had, as both a Test and Fighter pilot, flown a myriad of types ranging from Sabres, Mystères and MiGs to Nomads, Antonovs, Superconnies, Liberators, [HAL Basants](#), Mils and Alouettes. My goal was to build a line-up of his planes and, in that direction, I went and experienced the usual side tracks of “Oh how pretty an airplane” and there I go with that build. I currently have the usual obsessed-modeller’s esoteric stash of models which I doubt I would manage to build in this lifetime but it gives a warm feeling to look at and admire!

I have gained a lot of knowledge from the Indian Scale Modellers’ group, who are extraordinarily welcoming and pleasant modellers, as well as possessing a treasure trove of knowledge. I would love to expand my knowledge and share what I can with a wider community and am excited about being a part of Asian Air Arms Research Group. Since the first Newsletter I received, I’ve seen many eye-popping articles and builds.

I look forward to giving advice to fellow members on Indian military aviation: if you’d like information on this topic, just go to the group’s webpage and drop me a line using the form on www.asianairarms.com/navin-bala.

[Ed. See Navin’s most informative article on building the HAL Marut in 1/72 in the April/May Newsletter.]

Navin Bala





KIT PREVIEW

Zvedza 1:48 Scale Mil Mi-24 Hind V/VP Soviet Attack Helicopter

By Mark Attrill



The Mil Mi-24 Hind and its many sub-variants has been in service with over forty air arms worldwide since the first deliveries of this formidable Russian attack helicopter family were made to the Soviet Air Force in 1973. The iconic Mil Mi-24 was as synonymous with the prolonged war in Afghanistan as the Bell UH-1 Huey was with the Vietnam War and, since 1979, the aircraft has regularly emerged in the front line of conflict on at least four continents, from Angola to Sri Lanka, and Nicaragua to Serbia.

For this particular review, the announcement of a new kit from Zvedza in 2019 was truly exciting news since I have had a desire to build a 1:48 scale kit of this formidable aircraft, since I took the first of many flights in one almost twenty years ago. Like, I suspect, many others I had one of the Revell/Monogram kits in my stash, together with a host of

aftermarket resin and photo-etched sets but simply could not motivate myself to make a start, given the challenges in terms of accuracy with the kit. I eventually consoled myself with the excellent little 1:72 scale kit from Zvedza which is considered to be the most accurate rendition of the Mil Mi-24 Hind to date and also one of the best rotary-wing kits ever produced, which is some accolade. As a result, when Zvedza made their announcement, I had every confidence that they would look to upscale their existing kit and provide us with a state-of-the-art rendition in the bigger scale. Such was my confidence in Zvedza that I ordered this kit as soon as it hit the shelves in Russia and eagerly anticipated its arrival here in Estonia. In the meantime, I had read some of the inevitable commentary that always seems to follow any announcement of a new release and, more particularly, images of the sprues or contents and I will return to some of the points in the preview since they merit comment. Bottom Line, Up Front - this is a great kit that continues to encompass the ethos of Zvedza, as a purveyor of accurate, easy to assemble quality kits that are excellent value for money.

My first surprise was the size of the attractively decorated box that the kit arrives in. It is probably at least a third larger than it needs to be with the result that the kit does rattle around in it. Fortunately I found no damage to the parts contained in the three plastic bags, which includes one that separates the clear parts from all others. The box also contains a comprehensive decal sheet with marking options for four different aircraft, a 12-page assembly instruction booklet and a full-colour sheet detailing the relevant camouflage schemes and decal placement. The kit includes seven sprues, six moulded in Zvedza's common dark grey plastic and one clear sprue, containing crystal clear parts for the prominent pilot's and gunner's canopies, and cabin windows with which to complete the Mi-24V (Hind-E) or MI-24VP (Hind-E Mod) variants. It's quite obvious from the sprue layout and parts breakdown that Zvedza will most likely release other versions and I would expect to see the early Hind-A variant with the square 'glasshouse' style cockpit and at least one of the later variants, featuring the fixed twin-barrel 30mm cannon, at some point in the future, which would offer more options for modelling those aircraft used by Asian air arms in the past or at present. The instruction manual, rather confusingly, highlights the fact that the kit can be built in one of two versions; it would be more appropriate to say "option" since this part of the guide relates to the fact that the kit can be built with crew, cabin and engine access doors open or closed. For many modellers this news probably instills a degree of fear that the kit is over engineered and contains many parts. The opposite is the case and I was pleasantly surprised with the overall parts count, particularly when one considers that an entire sprue is dedicated to the extensive range of stores and weaponry included in the kit.

A more detailed examination of the instruction manual reveals that quite a few parts can be omitted from the construction sequence, particularly in the twin engine bay, if the various access doors/panels are modelled in the closed position so care must be taken as one works through the assembly sequence detailed in the instructions. Internal cockpit/cabin detail is good - but not stellar. The lack of raised detail in the cockpit is an area that has attracted some criticism on the various modelling forums since it relies heavily on the use of decals for the main instrument panels and side consoles, which are otherwise mainly blank; quite understandably some modellers believe this may be an appropriate solution with the smaller 1:72 scale kit but probably not in the larger scale. It is understood that Zvedza, in their quest to keep the overall cost of the kit to a minimum, may have decided to simplify this part of the kit in the full knowledge that some enterprising after-market manufacturers would cater to those modellers that required more detail. They were not wrong! Quinta, a relatively new company, have already released a somewhat novel, if pricey, set of '3-D decals' for the main cockpit area, including instrument panels, side consoles and seat belts. I now understand that Eduard will also release a comprehensive series of aftermarket sets to cater for early and late model Mi-24s, with the traditional Turquoise Green or Dark Grey/Black instrument panels respectively, in due course. In contrast, the fully enclosed main cabin and twin-engine bays appear to be very well detailed with all of the most prominent features for both areas included in the kit. I have little doubt that the other European after-market manufacturers will quickly follow suit, given the type's historical and contemporary significance, particularly in the Czech Republic, Hungary and Poland. As previously mentioned, the kit includes parts for both the -24V and improved -24VP variants and, again, care will need to be taken when selecting and applying parts since there are variations within each sub-variant too. For example, the large heat diffusing exhaust fairings fitted to one of the Mi-24V options are not applicable to the second, Czech Air Force, option. The kit also includes different tail rotor heads, engine intake and exhaust fairings, gunner's cockpit consoles, fuselage mounted defensive aid suites and nose turret mounted twin or rotary cannons to reflect the many variations in equipment fits between the two sub-variants.



KIT PREVIEW

Zvedza 1:48 Scale Mil Mi-24 Hind V/VP Soviet Attack Helicopter

By Mark Attrill

The aforementioned, and very comprehensive, stores and weapons sprue contains parts for second-generation armament including four B-8V20 lightweight rocket pods, two UPK-23-250 gun pods, four long range drop tanks and four 9K114 Shturm Anti-Tank missiles with which to arm your Hind. It should also be noted that the kit includes two nicely detailed four-part crew figures, in different poses, which if used will partially compensate for the lack of detail in the cockpit.

The parts exude quality with nice surface detail which will look good under a suitable camouflage scheme, although the smooth surfaces of the main fuselage have, again, attracted criticism in certain quarters with claims that the real aircraft is festooned with rivets and fasteners. Zvedza have been very proactive in addressing modellers concerns and have confirmed that the lack of detail in this area was due, in part, to the need to develop parts for a number of variants, including some variants that do not have the prominent rivet detail, but also to keep overall costs for the tooling down. Opinion is, inevitably, divided but I personally do not believe the lack of rivet detail is detrimental to the overall finish of this model. Indeed, it is also reported that one ingenious aftermarket company is already developing a new type of wraparound decal which incorporate the missing rivet detail. Suffice to say, the panel lines are finely reproduced and the main rotor blades, for example, have the necessary droop (a characteristic of the Mil Mi-24 when parked up), already incorporated.

The kit offers four marking schemes with two for each sub-variant. An early model Soviet Army Air Force Mi-24V operated from Bagram Air Base in Afghanistan towards the end of the Soviet occupation is accompanied by a more recent example operated by the 221st Helicopter Squadron of the Czech Air Force in 2012. The other two decal options are for the rarer Mi-24VP variant; allegedly only 25 examples were ever built before production ceased in 1989. Both aircraft are operated by the 125th Helicopter Squadron, Russian Navy Baltic Fleet, Chkalovsk Airfield, Kaliningrad Oblast but sport very different colour schemes with one finished in overall black and the other operated in the more traditional two-tone camouflage scheme with Light Blue undersurfaces. From an Asian Air Arms perspective, prospective modellers will also wish to note that Begemot, the Russian aftermarket decal manufacturer, are in the process of rescaling their existing Mil-24 Hind sheet to complement the new kit and this sheet includes markings for Afghan (Northern Alliance), Armenia, Georgian, Indian and Kazakh machines, although not all will be applicable to the Mil-24V variant (the Mi-24VP is used exclusively by the Russian air arms). I also have little doubt that as Zvedza release more versions of this kit, we'll see more aftermarket decal sheets being released.

In summary, this would appear to be another impressive release from Zvedza that captures the look and menace of this attack helicopter extremely well. Test build imagery reveals that the model has the 'twist and lean' of the Mil Mi-24 when parked, which is a particular characteristic of the real aircraft (it required a twist in the tail section to cope with torque issues), a feature that has proved to be elusive to kit toolmakers with the exception of Zvedza. Any small reservations I may have about the lack of raised detail, particularly in the cockpit area will, I have little doubt, be addressed by the aftermarket community and are more than compensated for by the overall quality of the kit. Certainly for those that want a relatively simple yet accurate 1/48th representation of the Mil Mi-24 Hind, then this is the kit by which all others will now be compared.

Highly recommended

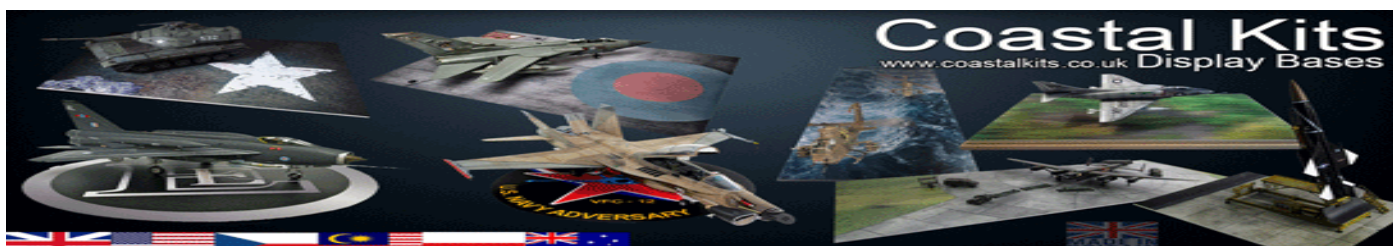
Mark ATTRILL

May 2020

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CANBERRAS AND B-57s IN ASIA

PART 1—INDIA

By John Sheehan and Kevin Delve

The Indian Air Force has been far and away the largest foreign user of the Canberra with over 100 aircraft acquired since 1958 and utilised in the full range, except nuclear, of Canberra roles. Initial interest was expressed in 1956 during a visit by the Secretary of Defence, and an evaluation process was already underway, with several IAF pilots having already flown the Canberra. An initial order was placed in 1957 for 80 aircraft, valued at £20 million (roughly 1.25 Tornados or 1/5th of an F-35!), consisting of 65 B(I)58s, equivalent to the B(I)8, eight



PR.57s, equivalent to the PR.7, and seven T.54s, equivalent to the T.4.

Although the aircraft were basically the same as their RAF equivalents there were a number of modifications, including autopilot, improved navigation kit, radio altimeter and such like - items which RAF crews would have liked on their own aircraft! The first deliveries were made in April 1957 and the first of the bomber squadrons, No.5 Squadron, equipped in 1958, followed in 1959 by the other two bomber squadrons, 16 Squadron and 35 Squadron. No.106 Squadron formed with PR.57s towards the end of 1959 and about eight of these aircraft were still in use with the PR unit in 1987 operating from Agra, about 100 miles south of Delhi.

A Jet Bomber Conversion Unit (JBCU) was formed alongside 5 Squadron to not only provide crew training but also to develop new tactical concepts suited

for the operational area and threats.

The final squadron to form, No.6 Squadron, had an unusual role for the Canberra, that of maritime support and anti-shipping.

Most military experts now agree that the best way of attacking ships is with stand-off missiles.

To maintain front-line strength, further orders were placed during the 1960s and 1970s. The simplest way to cover this is to list the deliveries as far as is known:

1963 - Six B(I)58s and one T.4 (September).

1964 - Two PR.57s, ex RAF PR.7s WT505 and WT639.

1965/66 - Three T.4s ordered but only one delivered.

1969 - Ten B.66s (ex RAF B.15/B.16s) ordered in October and delivered the following year.

1970 - Twelve B(I)12s and two T.13s bought from the RNZAF.

1971 - Two PR.67s.

1975 - Six T.4s.

The trainers were originally operated by an OCU at Agra, but the remaining aircraft were probably held on individual squadron inventories. Apart from owning one of the largest collections of Canberras, the IAF has also seen active service with these aircraft on more than one occasion, in 1961 in the Congo and then in the India-Pakistan wars of 1965 and 1971. The latter are also noteworthy as being the only Canberra versus Canberra wars, the PAF being an operator of the B-57 Canberra. The first loss in 'combat' was on 10th April 1959 when PR.57 IP-988 (ex-WT541) strayed into Pakistani airspace and was shot-down by a PAF Sabre; the engagement is reported to have been at 47,000ft and the chances are that the Canberra was on a recce mission.

An interesting point on the IAF trainers was that the pilot ejection seats were removed; this improved the seating arrangement and access but was somewhat surprising from the point of view of flight safety. The RNZAF acquisition in 1970 brought two T.13 trainers, and these retained the standard bang seat fit for each of the crew.

In the late 1960s the IAF looked to boost its Canberra strength and between 1969 and 1971 acquired 26 additional Canberras:

1969: ten B.66s (ex RAF B.15/B.16s) ordered in October and delivered the following year.

1970: twelve B(I)12s and two T.13s bought from the RNZAF.

1971: two PR.67s.

The two PR aircraft are sometimes listed as PR.57s but were in fact upgraded and refurbished RAF PR.7s (WH800 and WJ816) under the new designation of PR.67, the main difference being improved avionics, including an AD-560 Doppler navigation system, and better radar altimeters, as well as new ejection seats (2CA Mk2) with the 0-90 capability. The new aircraft, and the later addition of the podded Carl Zeiss RMK Aerial Survey camera to replace the F.49 Mk.IV in both PR Marks, improved 106 Squadron's overall capability as a National Strategic Asset.



[For pilots' accounts of flying Canberras/B-57s in sub-continent conflicts, please click here.](#)



CANBERRAS AND B-57s IN ASIA PART 1—INDIA

By John Sheehan and Kevin Delve

IAF OPERATIONS IN THE CONGO



Following the very sudden granting of independence from Belgium in 1960, the newly-formed Congolese Central Government faced a rebellion in the mineral-rich province of Katanga which had declared itself independent. With revolt spreading and attacks being made on European property, the Government called for United Nations assistance. The UN then called on member states to provide military forces and India responded with troops and aircraft. Hunters were at first considered because of the UN directive not to carry or drop bombs. However, Canberras were chosen and 5 ("Tuskers") Squadron was sent with their B(I)58s, which were better than Hunters in that they carried four 20mm cannon with 535 rounds per gun, had a longer endurance and, most importantly, had a navigator to find targets in the remote areas where operations were likely to take place. Six aircraft, plus support personnel, arrived at Leopoldville in October 1961 as part of the UN force which included Ethiopian F-86 Sabres, Swedish Saab J.29s and a variety of transport aircraft.

As the only long-range offensive aircraft available, it was not long before 5 Squadron was called on to make a series of decisive attacks. In early December the six Canberras, operating in pairs, made attacks on the rebel airstrip at Kolwezi and on Katangese troop concentrations in the surrounding area. The effects were devastating. Wing Commander A Soares led the pair attacking the airstrip: *"I took out the light aircraft with my 20mm cannon on the first low level pass whilst Flt Lt P Gautan, flying the second Canberra, destroyed the Fouga Magister. We made a rapid turn and on my second pass, I concentrated on the heavy transports and the control tower. During the second run I saw that we had stirred up a hornets' nest of activity. Katangese soldiers were running about everywhere, and scores of muzzle flashes told me that we were flying through a curtain of bullets. On the third and final pass I saw that all the parked aircraft and the control tower were ablaze, so we both hammered away at the stacked fuel barrels, the adjacent hangars and the buildings."*

Back to base at Kamina airfield for a QTR (Quick Turn Round) and off to Kolwezi again: *"On my first pass I flew low over the bulk petrol stores without firing.... I turned around for a second pass, firing a one-second burst. Since our cannon shells were loaded alternately with high explosive and incendiary shells, only one hit was needed to "whoosh" off the entire line of storage tanks. On the third pass I concentrated on anything that had survived the previous attacks. As before, we were flying through an angry hail of small arms fire, and as I pulled up I heard an ominous bang as my aircraft was hit in the nose area. My navigator was struck in the upper thigh. I pulled up through cloud and set course for Kamina, set the controls to automatic and climbed down and forward to render first aid."*

This is a classic account of this type of mission and it highlights the significant danger of small-arms fire, it also shows one of the more unusual advantages of an autopilot. From then on, into January, it was intensive operations with armed reconnaissance, interdiction of supply routes and CAS, often with the help of ground FACs. The fire support given by the Squadron was also a major factor in the battle for Elizabethville. From mid-January 1962 activity reduced, and photo-reconnaissance became the main role until the Squadron returned to India a few weeks later.

RAKSHAK SERIES

GANESHA'S FLYBOYS: THE INDIAN AIR FORCE IN THE CONGO, 1960-62



By K S Nair

CANBERRAS AND B-57s IN ASIA PART 2—PAKISTAN

By John Sheehan and Kevin Delve



As mentioned in Part 1, Pakistan too joined the Canberra club but, unlike India, the AFP would be operating Martin B.57 Canberras. Under the Military Defence Assistance Plan the US Government supplied, amongst other equipment, 25 reconditioned B.57 Canberras, comprising 22 B.57Bs and 3 B.57C trainers. The original plan was for the 22 B model aircraft to be delivered with the 'Georgina Peach' radar bombing system which would have given them an

all-weather bombing capability but, due to delays in development and the need to fill the delivery deadline of September 1959, the aircraft were delivered as 'standard' B.57Bs. As the radar system became available they were fitted to four spare forward fuselage nose sections held in store at Warner Robins AFB. The modified nose sections were then transported to Pakistan where they were swapped for 4 non-radar noses, which were returned to the USA for fit out: this process was repeated until all 22 B.57Bs were fully all-weather equipped by 1963, making them the only all-weather Canberras in service until the arrival of the B.57G. Some of the aircraft also received modifications to enable them to carry 4 extra under-wing long range fuel tanks giving them the range to reach Kolkata. Two squadrons were formed, namely 7 Sqn. and 8 Sqn. It is problematic to chronicle the operations undertaken by the AFP Canberras during the two conflicts as the combat claims are contentious. Due to the conflicts, the US government imposed sanctions on military equipment supplies to Pakistan: as a result the AFP, like many other air forces, had to turn to their own resources to re-manufacture and repair the Canberras themselves, but the biggest problem was in repairing the J.65 engines. The number of aircraft dwindled and by May 1970 only 7 Sqn. remained, by which time there were only 11 Canberras on strength. By 1987 it was time for 7 Sqn. to disband and the remaining aircraft went to 22Sqn. By this time the aircraft had undergone an avionics upgrade giving them a maritime strike capability. The writing was on the wall for the few remaining Canberras and the final operator was 32nd Fighter Ground Attack wing. The end came in 1987 bringing to a close 28 years of Canberra operations.

Running parallel to the AFP Canberra operations, in 1963 the USAF were also running clandestine operations out of Peshawar AFB. At the height of the cold war the US Navy were operating intelligence gathering flights out of Pakistan, but due to various infringements of the agreements between the USN and their AFP hosts, the Navy were asked to leave - this left a huge hole in the USA's intelligence in the area. After much diplomatic effort the Pakistanis agreed to allow the USAF



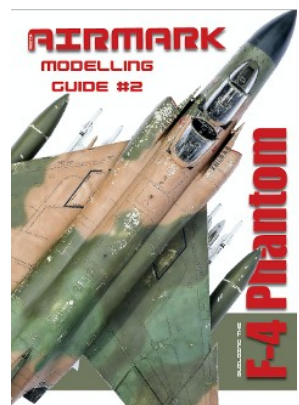
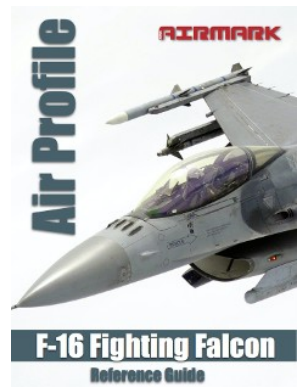
to operate aircraft out of Peshawar AFB on the proviso that the aircraft used were of a type already in the AFP inventory and were flown and maintained by AFP air and ground crew. To this end, under the Big Safari programme, two B.57Bs were dispatched to General Dynamics at Fort Worth Texas for conversion to highly specialised electronic surveillance aircraft. The two B.57s were code named Pee Wee I (52-1536) & Pee Wee II (52-1573). The two aircraft were identically fitted out with the rear seat area fitted out with the monitor and recording kit for the systems operator. The receiver package which was

mounted on either side of the nose was optimised for monitoring Soviet missile and range telemetry. The PEE WEE Canberras only stayed in theatre for a year before being replaced by two new and very different aircraft, but close relatives of the Canberra, the General Dynamics RB.57F known as PEE WEE III.

[For pilots' accounts of flying Canberras/B-57s in sub-continent conflicts, please click here.](#)



Squadron Leader Muhammad Iqbal, a highly respected officer in the Pakistan Air Force, was instrumental in the RB-57F program's success.



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In the next issue, Part 3 of this series will examine the use of the B-57s by the RoCAF.



MACAN!

Upgraded Indonesian F-5E by Alex Sidharta



The long story of the F-5 began in the mid-50s when Northrop was asked to build an inexpensive and easy-to-maintain light fighter aircraft. As a result, Northrop introduced a dual-seat aircraft coded N-156T which was later purchased by the US Air Force to replace the T-33 and it is known now as the T-38 Talon. The single seat version of the aircraft was coded as N-156F which eventually became the F-5A Freedom Fighter. The F-5 won the fighter procurement tender for exporting the light fighter to US allies in 1962.

The F-5E was developed as a replacement for the F-5A with the new GE J85-21 engine, longer body, larger wings, new avionics and AN / APQ-153 radar with two 20mm-cal. M39 cannon in the nose. The F-5E conducted its first flight on August 11, 1972 and its trainer version, the F-5F, on September 25, 1974. Unlike its single-seat version, the F-5F could only carry one M39 cannon in the left side of the nose. The last version of the F-5 family is the F-5G, which was marketed under the name F-20 Tigershark. It is a remarkable aircraft but lost out to the F-16 in the mid-1980s. Northrop produced some 1,399 F-5E / Fs until 1986 and they were used by 21 countries.

On April 21, 1980, Chief of Staff of the Indonesian AF Marshall Ashadi Tjahyadi witnessed the first arrival of Indonesian F-5E and F-5F Tiger IIs at Iswahjudi AFB, Madiun. The first batch of eight aircraft was transported by a USAF C-5 Galaxy, followed by eight more on July 5, 1980. Once assembled, the first Indonesian Tiger, an F-5F serial number TL-0514, successfully made its first flight into the Indonesian skies on 28 April 1980 at 14.35LT.

Indonesia bought sixteen F-5E/Fs to replace the 14th Squadron's Avon Sabres. The presence of the Mach 1.6 F-5E/F Tiger II reinstated the supersonic era in Indonesia after the Soviet-made MiG-21 had been entirely grounded in the early 70s. In 1985, Indonesian F-5s were planned to be upgraded by SABCA (Belgium), but the completion was delayed for many years until 1999. The upgraded Indonesian F-5 Tiger was called MACAN (which stands for **M**odernization of **A**vionics **C**apabilities for **A**rmament and **N**avigation. Macan also means "**tiger**" in the Indonesian language).

Exactly 36 years after its first flight, Indonesian F-5E/F Tigers made their final flight on April 28, 2006. This marked the end of the Tiger era in Indonesian AF history. It's now time for the old tiger to be replaced by a younger and fiercer one.



The Kit

There are many good and detailed articles about the AFV Club F-5E/F series, which was first released in 2009 so I won't go it over again. Before the AFV kit, there was the old Monogram (also reboxed by other brands like Revell, first released in the 70s) kit and the ESCI (now released by Italeri) kit. The quality of those previous kits are completely inferior compared to the AFV kit - in my opinion.

The AFV kit has fantastic details in and out. From the cockpit, wheels, intakes, wings and others. Even a small fret of PE is included for the intake grilles and canopy's mirror. Many variants and different contents have been released by this manufacturer, so modellers must learn which one to build and find the correct box. For an Indonesian F-5, the easiest one is #AR48S02 F-5E Tiger III which can be built straight from the box without the need to extensively modify the plastic. Still, modellers have to pay careful attention to find out which parts should be used, especially when building this Indonesian MACAN (upgraded) F-5E, as I did.

The Indonesian F-5E has the old-style radome, smaller leading-edge extension, dorsal antenna, and fin-fillet. There are two additional bulged sensors in nose and two RWRs in the tail exclusively for MACAN F-5. There are also some cockpit panel changes but they're too small to be reflected in my kit. I used the double glass HUD, tough.





MACAN!

Updated Indonesian F-5E by Alex Sidharta

The construction went well and I used almost no filler at all. Only a very small amount was used to blend the closed gun cover to the fuselage. One accident did occur. I accidentally stepped on the windshield when it fell off my working table. *Ouch!* Can you imagine the the sound of cracking clear-part when you accidentally stepped on it?....I had to buy another kit to replace the cracked windshield because some requests for help that I made were left un-answered.

I painted the wing's walkway lines in black and masked them using thin-stripped masking tape before the camouflage color was applied: that was the easiest way and gave a better result than painting it later. The same method was used for the black lines on the fin also.

The Indonesian AF didn't use the FS color system (or other known paint standards) at that time when repainting the aircraft. The colors are locally mixed-and-matched until the desirable colors are achieved. The aircraft colors are different from one aircraft to another, not only because of the different painting time, but also because of different mixes: that gives us a real headache!

From my research, Indonesian F-5's camouflage pattern is similar to USAF "New Blue" camouflage that uses FS 35414, FS 35164 and FS 35109. These colors were applied to the original Indonesian Tiger but the upgraded one has a similar pattern but with "paler" colors. After a long trial-and-error painting process, I decided to use Gunze C-20 Light Blue, Model Master 1721 Medium Grey and Model Master 2132 Flanker Blue-Grey, all of which turned-out OK to my eyes.

For this wrap-around and complex pattern, I used ordinary paper for masking. I attached the cut-to-shape paper using blue tack to the kit surface and sprayed the colors. Blue tack lifted the paper a little bit, ensuring the sprayed paint has soft-edge borders.

Indonesian F-5 decals are not available from the major decal brands. Fortunately, there is a local-publisher named CJM (Cap Jempol Metal) who releases some Indonesian-subject decals, one of them is the Indonesian Tiger. Although the decal has to be cut individually, the quality of printing itself is top notch! However, a "normal" decal would be more than welcome in the future.

I chose to present the model in a clean finish, so I used Gunze Semi Gloss Clear to seal everything in, including the very-light oil paint weathering previously applied.

I used thin-stripped masking tape to replicate the plexyglass sealant on the windshield and canopy from the outside and the result is convincing. I touched the end of each masking strip with a tiny drop of white glue to prevent them from peeling. By looking at the result, I'll definitely use this method again for my future builds.

The shark-mouthed 275 gallon centerline droptank is the point-of-interest of this model but I chose to add two more camouflaged wing droptanks as they are beautifully moulded by AFV. It's a pity to leave them in the box. Two AIM-9Ps were then attached to the wing tip launchers to complete the build.

Alex Sidharta, Jakarta, Indonesia





INDONESIAN ASSORTMENT—1

Spotted on Facebook was this listing of Japanese aircraft left behind on Java and Sumatra in late 1945 after Japanese forces had left. Apparently most were un-flyable. Any further information or comments would be most welcome.

Kekuatan Pesawat AURI sampai dengan 12 Juni 1946

Pulau Jawa	Tasikmalaya (2 pesawat <i>Mansyu</i> Ki-79), Surakarta (3 pesawat <i>Mansyu</i> Ki-79), Parigi (7 pesawat <i>Mansyu</i> Ki-79), Yogyakarta (43 pesawat <i>Yokosuka</i> K5Y1), Singosari (7 pesawat <i>Mansyu</i> Ki-79, 7 <i>Tachikawa</i> Ki-55, 14 <i>Kawasaki</i> Ki-48 <i>light bombers</i> , 9 <i>Mitsubishi</i> Ki-51 <i>light bombers</i> , 8 <i>Mitsubishi</i> Ki-46, 10 <i>Nakajima</i> Ki-43 <i>fighters</i> , 18 <i>Kawasaki</i> Ki-61 <i>fighters</i> , 1 <i>Mitsubishi</i> Ki-21 <i>medium bombers</i> , dan 2 <i>Nakajima</i> Ki-49 <i>medium bombers</i>).
Pulau Sumatera	Palembang (1 pesawat <i>Nakajima</i> Ki-27, 1 <i>Nakajima</i> Ki-43, 1 <i>Nakajima</i> Ki-44, 8 <i>Kawasaki</i> Ki-45, 14 <i>Kawasaki</i> Ki-16, 3 <i>Tachikawa</i> Ki-36, 1 <i>Mitsubishi</i> Ki-46, 3 "type 99 army scout", 3 <i>Mitsubishi</i> Ki-21, 2 <i>Mitsubishi</i> Ki-57, 2 <i>Tachikawa</i> Ki-55 dan 6 <i>Mansyu</i> Ki-79), Gelumbang (7 pesawat <i>Kawasaki</i> Ki-45, 12 <i>Mitsubishi</i> Ki-46, 1 <i>Mitsubishi</i> Ki-30 dan 1 <i>Mansyu</i> Ki-79), Batu (2 pesawat <i>Nakajima</i> Ki-43, 21 <i>Nakajima</i> Ki-44 dan 9 <i>Mansyu</i> Ki-79), Betong (5 pesawat <i>Nakajima</i> Ki-43, 2 <i>Nakajima</i> Ki-84 dan 5 <i>Mansyu</i> Ki-79), Lahat (2 pesawat <i>Mansyu</i> Ki-79), Tanjung Karang (8 pesawat <i>Tachikawa</i> Ki-36 dan 2 <i>Tachikawa</i> Ki-55), Pangkal Pinang (3 pesawat <i>Mansyu</i> Ki-79).

Sumber : HK-ML, Interlligence Overzicht No.4, 10 Juni 1946, halaman 4 dan 5 oleh Jos Heyman, Indonesian Aviation 1945-1950, Riverton, Australia, November 2005.

AURI MiGs and Beagles in Indonesia

Since the publication of his series concerning MiGs in AURI, Mick Burton has uncovered more information regarding their serial numbers, plus serials of Il-28s.

MiG-15UTIs were J-751 to J-771, a total of 21 aircraft

MiG-17Fs were F-1101 to F-1130, a total of 30 aircraft

MiG-17PFs were F-1130 to F-1163 (built in Poland as Lim-5); F-1181 to F-1189 plus F-1712 (built in Poland as Lim-5P) - a total of 23 aircraft. However records show a further three construction numbers allocated to Indonesia

MiG-21Fs were F-2151 to F-2170, a total of 20 aircraft

MiG-21UMs were T-2172 & T-2172, two aircraft (no photos ever published.....unless anyone knows better!)

Il-28Us were M-801 to M-806, a total of 6 aircraft

Il-28Rs were M-820 to M-825, a total of 6 aircraft

Il-28s were M-840 to M-852, a total of 13 aircraft





SAMURAI PHANTOMS !

By Andy Binks

Samurai Phantoms

The McDonnell Douglas (Mitsubishi) F-4EJ Phantom II in Japanese service

Andy Binks



In collaboration with the ASIAN AIR ARMS RESEARCH GROUP

Following on from his brilliant book "*Samurai Starfighters*", Andy Binks has now released a superb volume covering the use of JASDF F-4EJs attending the *senkyo* Tactical Air Combat (TAC) meets of the 1980s, where they practised air combat manoeuvring and tactics. Focussing primarily on the amazing colour schemes applied to these F-4s, this volume features a huge number of specially painted colourful aggressor aircraft, as well as several experimental lo-vis evaluation schemes. Drawn from the private collections of photographers Akira Watanabe, Eiki Nakashima and Kenae-san, this is a truly unique record, providing both modellers and aviation enthusiasts alike with an almost endless supply of unusual subjects. This latest volume has been created using 74 never-before published personal colour photographs in its 69 pages. It will be printed as a soft-back (20x25cm) on 100# Premium Lustre Gloss (148 GSM) Paper.



With new kits coming along in both major scales, this fantastic book is guaranteed to inspire you. Andy has included as much of the latest available information as possible, in order to offer the most complete guidance for each colour scheme, as well as referring to alternative photographs in other publications to aid the completion of an accurate F-4EJ Phantom model.

The price is £30 (UK) and £35 (Overseas), including all postage costs.

To pre-order contact andrewbinks@btinternet.com

REVIEW BY ANDREW TERRELL

Following on from last year's "*Samurai Starfighters*", author Andy Binks has produced a book for the modeller and aviation enthusiast covering the colourful years – 1980s to early '90s – of the F-4 Phantom in the Japan Air Self Defence Force (JASDF). Concentrating on the F-4EJ, the author provides a book that well caters for modellers' needs. Within the seventy glossy pages, 64 F-4EJs are examined in close detail. Each airframe, produced in order of serial number, includes at least one beautifully produced colour photo by photographers as notable as Akira Watanabe.

As I found out a few years ago whilst researching for my F-4EJ 'target towing' project, interpreting photographs of JASDF F-4s proved to be somewhat of a challenge. Indeed, without the help of Akira and the Asian Air Arms Research Group, who sent me the relevant photographs, the project would have stalled. It is at this point that some mention must be made of Peter Fearis' ground-breaking book, "*Defenders of Nippon: F-4 Phantom II*", published in 2002. This provided plenty of inspiration in the form of 400 colour profiles of every F-4 to serve in the JASDF. However, the historian in me, conditioned to work from primary sources (particularly photographs), left me frustrated. It was a book that offered a lifetime's worth of potential projects but lacked the photographic evidence to support the profiles. This was reinforced when comparing

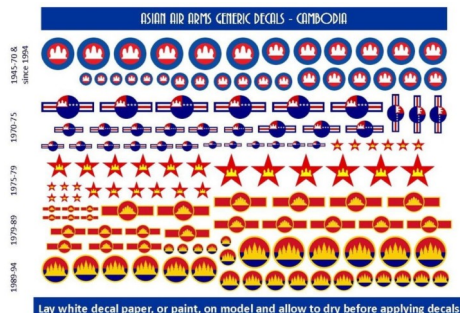
Akira's photographs with the aforementioned colour profiles. Perhaps unsurprisingly, colour tonal definition and demarcations in camouflage, highlighted some of the limitations of artwork over photographs.

As Andy Binks alludes to in the introduction to this new volume, post-war Japanese paint colours are difficult to confirm. To help with this, the reader is provided with near matches to the Federal Standard (FS) paint numbers. Detailed notes, that only a modeller would appreciate, are evident throughout the text. In some cases, this is backed up with a magnified image. Where appropriate the author has cross-referenced with previous publications in order to highlight some further information not shown in the provided photo. This could be seen by some as an issue as most of the sources are out of print and difficult to find on the second-hand market. It would arguably have been good to have had views of both sides of each aircraft but generally, the author's notes are more than adequate, an indication of the depth of research that has gone into this book. As has been mentioned earlier, the book covers just over a decade of service, but this arguably is the most interesting period. With the news that Finemodells and Zoukei Mura have just announced new F-4EJ kits, this book will prove invaluable. **ANDREW TERRELL**

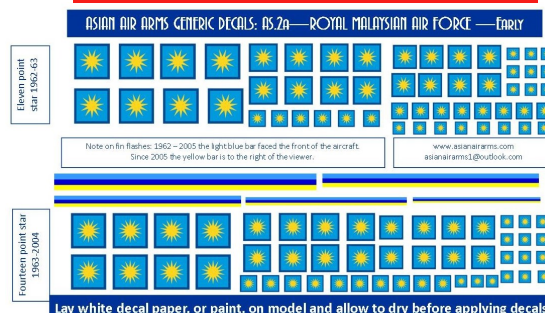


ASIAN AIR ARMS NEW GENERIC DECALS—TO FIT MOST SCALES

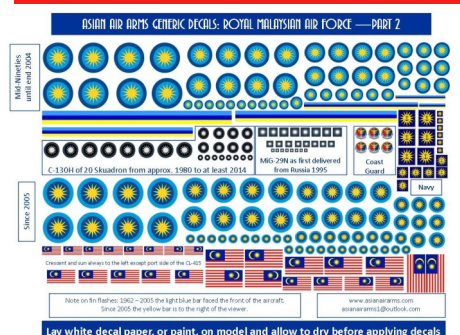
AS.1 CAMBODIA



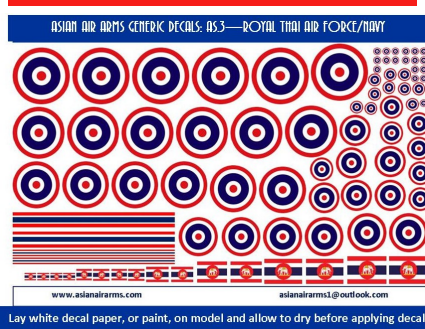
AS.2a MALAYSIA—EARLY



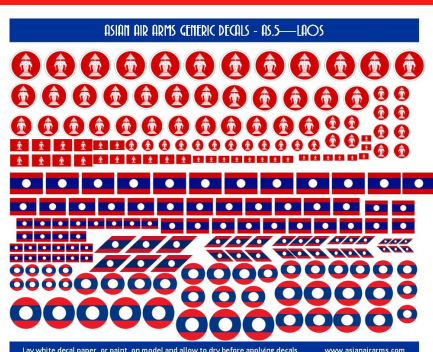
AS.2b MALAYSIA—LATE



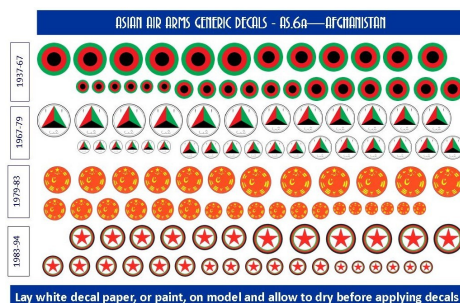
AS.3 THAILAND



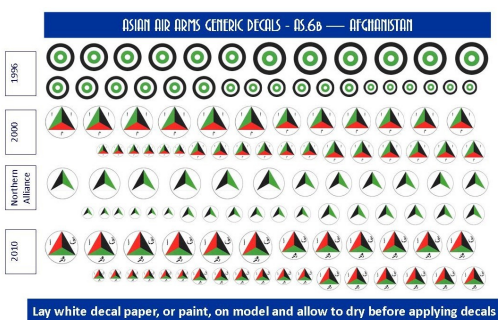
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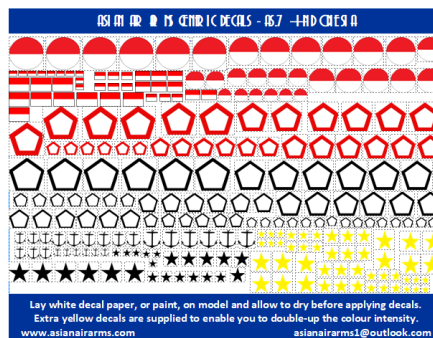
AS.6a AFGHANISTAN—EARLY



AS.6b AFGHANISTAN—LATE



AS.7 INDONESIA



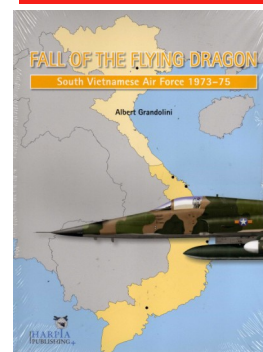
Each of these decal sheets is just £6.50 for members and £7.50 for non-members (plus postage).
[Click here for more details and to order.](#)



JULY 1st!

Wednesday July 1st will see the re-opening of our shop to the public—hurray! We look forward to welcoming you to our shop again.

In spite of the Covid-19 pandemic and the necessary social distancing measures we'll have our usual fabulous range. So, let's get back to modelling!



MARTIN B-57 CANBERRA IN VNAF SERVICE 1964-66

By Mark Attrill



The Martin B-57B Canberra played a short but very significant part in the history of the South Vietnamese Air Force (VNAF), as the first jet aircraft to be introduced to service and the only bomber to ever sport VNAF insignia.

As the war raged and escalated in the early 1960s, the South Vietnamese government was applying pressure on the United States to supply them with more advanced aircraft to supplement, and eventually replace, their existing fleet of A-1 Skyraiders. The United States continued to be reluctant to equip the VNAF with jet aircraft, and in particular with medium to long-range bombers, since this would be a technical violation of the Geneva Accords and could provide the South Vietnamese with the ability to bomb Hanoi and potentially escalate the war. By 1964, however, it was clear that the war was escalating and through a combination of pressure from the government in Saigon and a desire to boost the morale of the South Vietnamese people the US Government relented and directed the Military Aid Command in Vietnam (MACV) Staff to discretely select and send a group of the best Vietnamese fighter pilots to Clark Air Force Base in the Philippines, to be trained on the Martin B-57B Canberra.

Evidently, the rationale behind the selection of the B-57B was two-fold. At the time USAF were already operating two Japan based units, the 8th and 13th Bomber Squadrons, from Da Nang Air Base in South Vietnam which would provide MACV with the ability to equip the Vietnamese with the aircraft expeditiously and would also provide the VNAF with the ability to regularly swap out airframes in order to maintain their minimum requirement for four aircraft.

The first VNAF crews began their preliminary training in secret at Clark AFB in the Philippines in mid-1964. Since all of the pilots had considerable flying and combat experience, mainly on the A-1 Skyraider, training was limited to 70 hours tuition over circa 40 training sorties. Initial difficulties associated with the transition from the single-engined, tail-dragging A-1, to a much bigger, faster and heavier two-engined jet with a tricycle undercarriage were quickly overcome and the Vietnamese officers proved to be excellent pilots, although their small stature did present some problems with the flight controls. As the crews completed their training, they returned to Da Nang AB and flew combat missions with the 8th or 13th Bomber Squadrons. A second batch of VNAF pilots, including the charismatic Commander-in-Chief of the VNAF, General Nguyen Cao Ky, who later became Prime Minister of the Republic of Vietnam, received their training at Tan Son Nhut after the USAF B-57 Wing had forward deployed from Clark AB to Bien Hoa AB in South Vietnam.

In August 1965 the blanket of secrecy that surrounded the programme was removed and a formal announcement was made that B-57B jet bombers would be provided to the Vietnamese Nationalist Air Force. To commemorate this significant milestone in the history of the VNAF, a formal presentation ceremony was held on 9th August 1965 at Da Nang AB to hand over the four aircraft. In reality, and to ensure this high profile event would be a success, four dual-control B-57C conversion trainers were temporarily marked up with VNAF insignia and flown by joint USAF-VNAF crews during the official fly-past. Thereafter, the first jet aircraft unit of the VNAF was officially christened the "Biet Doi 615" (615th Special Flight), to be stationed at Da Nang Air Base with Major Nguyen Ngoc Bien as the Commanding Officer.



Immediately after the inauguration of the Unit, the B-57Cs were exchanged for four fully operational B-57B bombers drawn from the strength of the USAF Bomber Wing. For administrative purposes, the 615th Special Flight was affiliated to the 41st Tactical Wing of the VNAF, co-located at Da Nang AB but for most of the unit's missions, operational control was exercised by the USAF. In reality all of the early missions flown in 'VNAF' B-57s were performed by joint USAF-VNAF crews until the Vietnamese pilots and Weapons Systems Operators had gained enough skill and confidence to operate the relatively complex B-57.



EFFICIENT
COMPANIES



MARTIN B-57 CANBERRA IN VNAF SERVICE 1964-66

By Mark Attrill

The first recorded combat missions by an all-VNAF crew from the 615th Special Flight reportedly took place in October 1965 although the vast majority of combat missions continued to be undertaken in very close collaboration with the USAF B-57 squadrons. Although the introduction to service of the VNAF's first jet aircraft captured the imagination of the South Vietnamese population, (who dubbed the aircraft "Phan Luc Canh Doi" - Bat-Winged Jets), it was proving difficult to sustain the operational capability of the Unit. The shortage of an effectively trained, independent cadre of aircrew was compounded by a series of accidents including a freak incident in February 1966 when Major Ngoc Ngoc Bien, commanding officer of the 615th Special Flight, was killed in a ground handling accident on the ground at Pleiku Air Base. As the driving force and dynamic leader of the VNAF B-57 programme his loss was keenly felt and, with other priorities to contend with in the Spring of 1966, the USAF and VNAF authorities quietly terminated the VNAF B-57B 'experiment' and returned the aircraft to the co-located USAF B-57 squadrons. The Vietnamese did not have to wait long for another jet aircraft though, with the diminutive F-5A Freedom Fighter entering service with the VNAF just over a year later in the summer of 1967, as previously described in the June/July and Aug/Sept 2019 editions of the Asian Air Arms Newsletter.



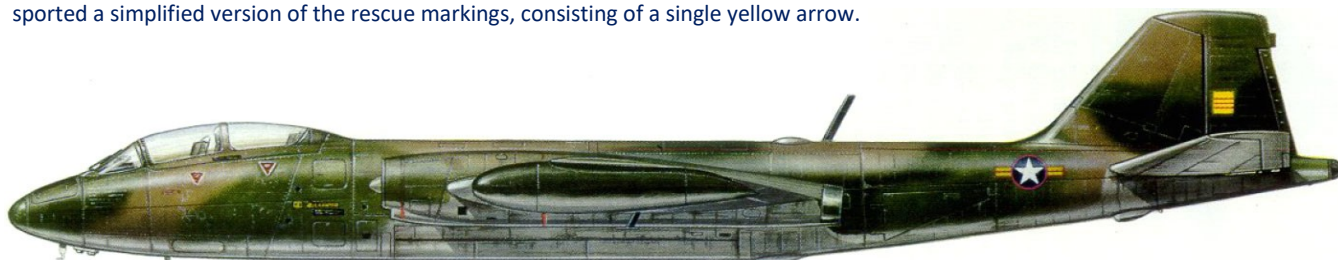
VNAF Martin B-57B/C Canberra Colours and Markings



In spite of the relatively short period of service with the VNAF, and the fact that the Martin B-57B Canberra was only ever operated by one Unit, the aircraft sported several different colour schemes and styles of markings, mainly as a result of the regular changeover of airframes between the two resident USAF Bomber Squadrons, and even some Air National Guard Units, in order to maintain the combat strength of the 615th Special Flight. During the seven months that the VNAF operated the B-57B, the majority of aircraft sported a natural metal colour scheme, although several examples were noted in camouflage as the USAF transitioned to repainting their aircraft in the standard South East Asia four-colour scheme during 1965. It should also be noted that the natural metal colour schemes could vary considerably. For example, at least one of the aircraft that participated in the VNAF Inauguration ceremony at Da Nang AB on 9 August 1965 appeared to sport a Light Grey mid-fuselage section. It should also be noted that the four aircraft (one on 'static' display and three in the formation fly-past, landing and formal presentation) were B-57C dual-control conversion trainers that were on loan for the ceremony and were returned to their parent USAF unit very shortly after the event.

Most of the VNAF B-57Bs were drawn from the 8th and 13th Tactical Bomber Squadrons and were crudely 'scrubbed' before the application of VNAF Markings. As a result, many could be observed wearing very faded outlines of the large black 'U.S. AIR FORCE' and 'USAF' titles that normally adorned the forward fuselage sides and the underside of the port wing, respectively. Large VNAF national insignia were normally applied directly over the USAF 'Stars and Bars' with the South Vietnamese Flag insignia applied to the rudder surfaces, although those aircraft participating in the inauguration ceremony had a larger style of the national flag applied to the upper fin surfaces. In some cases the original USAF 'Buzz' number was retained on the rear upper fuselage sides, such as on 52-1530/BA-530. USAF unit insignia were removed from the fin surfaces but most aircraft retained their individually coloured fuselage bands and nose caps; Yellow for the 8th BS and Red for the 13th BS. Some aircraft also retained the individual letter code on the fin surfaces which was, again, colour coded for each Squadron from which the aircraft originated. Some aircraft arrived directly from Air National Guard units and could be distinguished by their lack of fuselage bands and fin 'patches' as a result of the removal of the larger US ANG unit insignia. The standard and very distinctive four-arrowed rescue markings were retained on the forward fuselage although the ejection seat warning triangles appeared to have been of a modified type, possibly to include dual-language lettering. The wingtip mounted drop tanks fitted to these aircraft also varied from airframe to airframe; some were finished in gloss black while other aircraft retained natural metal finished tanks.

As previously noted, a small number of SEA camouflaged examples had begun to appear at Da Nang in 1965 and at least two of these, including 52-1532/P were noted in VNAF markings, with much reduced national insignia applied, again directly over the USAF 'Stars and Bars'. By this time the large U.S. AIR FORCE and USAF titles and individual unit insignia had already been dispensed with and the aircraft also sported a simplified version of the rescue markings, consisting of a single yellow arrow.





MARTIN B-57 CANBERRA IN VNAF SERVICE 1964-66

By Mark Attrill

VNAF Martin B-57B/C Canberra Serial Numbers #1

Variant	Serial No	Notes
B-57B	52-1530/0-21530 – BA-530	N/M – Large National Insignia
B-57B	52-1532/0-21532/P	SEA Camouflage – Small National Insignia
B-57B	52-1541/0-21541/M – BA-541	N/M
B-57B	52-1545/0-21545	N/M
B-57B	52-1567/0-21567 – BA-567	N/M
B-57B	53-3878/0-33878/W	N/M
B-57B	53-3928/0-33928	N/M
B-57B	53-3929/0-33929	N/M
B-57C ? B-57C ? B-57C ?	52-3830/0-23833 53-3849/0-33849 53-3889/0-33889	N/M #2

#1—These are the Serial Numbers of B-57B/C Canberra aircraft that were observed with VNAF insignia during the period August 1965-April 1966. There were generally no more than four aircraft at a time sporting VNAF markings.

#2—Photographic evidence suggests that these three aircraft were dual-control B-57Cs used for the formation fly past during the Inauguration Ceremony at Da Nang Air Base on 8 August 1965.

THE VNAF MARTIN B-57 IN MINIATURE

As with previous articles in this VNAF series, it is not my intention to list every item that has ever been produced of a particular subject but rather to focus on those kits and aftermarket items that are both readily available or will allow the modeler to reproduce a reasonable replica. Several early and fairly nondescript attempts by US manufacturers to produce a Martin B-57B Canberra were eclipsed in the mid-1980s when a mainstream manufacturer finally released a kit in the definitive 1:72 scale. The relatively simple Italeri

kit was typical of the period and featured raised panel lines and a basic level of detail in the cockpit, wheel wells and bomb bay spread over two light grey and one clear sprue. The kit included a full weapon load of bombs or rockets to furnish the bomb bay and wing pylons, for the night intruder version. The original issue included decals for three USAF options including a Vietnam based B-57B. The kit has been re-released several times since by both Testors, for the US Market and again by Italeri as recently as 2017. Canberra purists will be quick to point out that neither the Italeri kit nor the slightly later Airfix kit, described later, will allow you to produce a truly accurate model of the B-57B. In fact the original Frog B(1)8 from 1973 is deemed to have the most dimensionally accurate set of wings and

Canberra aficionados will likely insist that a truly accurate B-57B can only be produced by combining elements of the Airfix, Frog and Italeri kits! This is clearly beyond the scope of this article and for our purposes the Italeri kit can be considered to be reasonably accurate although it can definitely benefit from additional detail, particularly under the large cockpit canopy. Fortunately there are a number of aftermarket sets, most notably from Czechmaster, ResKit and Scale Aircraft Conversions to enhance the kit.

The second 1:72 scale kit of the B-57B, from Airfix, generated some controversy when it was released in 1987. In what was described at the time as 'unwarranted vandalism' it was revealed that Airfix had taken its original 1972 release of their hugely popular BAC Canberra B(1)6/20 and permanently adjusted the tooling to produce the Martin B-57 Canberra, thereby consigning the former kit to the history books and instantly increasing the value of secondhand BAC Canberra kits in the absence of any other option at the time. #3 In spite of the limited re-tooling, the Airfix kit was still very much a product of the 1970s and the detail, even on the new parts, is cruder than that found in the Italeri kit. Airfix took quite a few parts from the original BAC Canberra with the result that the bombs, for example, are British rather than US designs and the wing pylons are the wrong shape and incorrectly located. The cockpit canopy is not as finely rendered as that found on the Italeri kit and appears to sit too high on the fuselage. There are some serious shape issues with the fuselage, which has prompted some modellers to suggest grafting elements of the Airfix kit with the Italeri kit as previously mentioned. In summary, I would suggest the Italeri kit is the way forward until some enterprising manufacturer, such as Special Hobby or MPM decide to produce a newly tooled kit in this scale.

#3—A situation that, incredibly, continues to prevail in 2020 since no mainstream manufacturer has sought to produce the so-called 'bomber (round) canopy' variant of the EE/BAC Canberra to this day.





MARTIN B-57 CANBERRA IN VNAF SERVICE 1964-66

By Mark Attrill

Not surprisingly, given the subject and scale, Classic Airframes was the first company to produce a 'mainstream' kit of the Martin B-57B Canberra in 1:48 scale in 2007. The kit was typical of this sorely-missed company's products, combining very hard, shiny medium grey plastic parts for the main components with a plethora of high quality resin detail parts for the cockpit and wheel wells/undercarriage; a nice set of detailed kit instructions; and a high quality silkscreen decal sheet with markings for a number of USAF aircraft. The Classic Airframe kit was always deemed to be a 'short run' kit with the result that the plastic parts tend to lack locating tabs or pins which means that care must be taken when assembling the kit. The main advantage with the provision of the highly detailed resin parts is that they are specifically designed for the kit and require little work to incorporate into the overall build sequence. In the hands of an experienced modeler, with a few short or limited run kit builds under their belt, a fine and accurate replica could be produced from the Classic Airframes kit although VNAF markings would have to sourced from elsewhere.



Two years later and as a major part of Airfix's rejuvenation under Hornby ownership, the Martin B-57 was released as part of a comprehensive family of 1:48 scale Canberra kits from this iconic UK kit manufacturer. The US-orientated Martin B-57 Canberra kit provided parts for not only the standard B-57B bomber but also for the RB-57E all-weather reconnaissance 'Patricia Lynn' and B-57G FLIR equipped night intruder variant. Once again, Airfix had succeeded in producing a fine replica of the B-57B with a reasonable amount of detail in the cockpit, wheel wells and bomb bay. The surface detail was deemed to be on the heavy side with some deep panel lines, which were particularly prominent on the fuselage and rudder surfaces. The main advantage over the Classic Airframe kit is in ease of construction, price and

availability. In spite of the fact that both kits are currently out of production, the Airfix kit is still readily available and in some cases can still be purchased at reasonable cost, particularly in the UK and Europe where this variant of the Canberra family is less popular than the kits of the UK manufactured EE/BAC Canberra variants. Modelers can also avail themselves of a plethora of resin and photo-etched parts, mainly from aftermarket producers in the Czech Republic, with which to embellish the cockpit and wheel wells/undercarriage in particular. In keeping with the Classic Airframes issue, the Airfix kit does not include any decal options for a VNAF aircraft but Xtradecal include suitable markings for a natural metal example on one of their B-57 Canberra decal sheets.

At the other end of the spectrum, A-Model have also produced a 1:144 scale Martin B-57B/C Canberra (Kit AM1432). This kit is cruder than those small-scale kits produced by specialists such as Mark 1 and Platz but the 56-parts go together reasonably well and offer a good level of detail taking into account the size of the model. The A-model kit includes a generous number of external stores options but only includes decal markings for two USAF aircraft so VNAF decals would need to be sourced from elsewhere.



(Ed. Try Asian Air Arms Generic decal sheet AD.5.)

1:72 Scale

Make	Reference #	Item	Notes
Airfix	AX5018	Martin B-57B Canberra	1987 Initial Release – re-issued in 1995 with different markings including Vietnam based 13 TBS aircraft OOP
Italeri	IT144	Martin B-57B Canberra	1985 Initial Release - Included Decals for three USAF options – re-issued in 1999 with different markings including Vietnam based 8/13 TBS aircraft
Italeri	IT1387	Martin B-57B Canberra	2017 Re-Issue – Different Markings
Testors	TM698	Martin B-57B Canberra	1985 Re-Issue for US Market – Includes Decals for three USAF a/c
Blackbird Models	BMA72042	B-57B Detail Set	Resin – Future Release
Falcon	FNCV4372	USAF Canopy Set Part 1	Includes Vacform Canopy for B-57B (Italeri Kit)
Pavla	PAVC72129	B-57B Cockpit Detail Set	Resin – For Italeri Kit
Pavla	PAVS72087	B-57B Ejection Seats	Resin – For Any Kit
ResKit	RS72-117	Martin B-57B Canberra Wheel Set	Resin - For Any Kit
SAC	SAC72-067	Martin B-57B Canberra U/C Set	White Metal – For Italeri Kit
New Ware	NWAM552	Martin B-57B Canberra Mask Set	Basic – For Italeri Kit
New Ware	NWAM553	Martin B-57B Canberra Mask Set	Advanced – For Italeri Kit
New Ware	NWAM554	Martin B-57B Canberra Mask Set	Expert – For Italeri Kit
Blackbird Models	BMD72-033	Air War Over Vietnam Part 1	Includes Decals for VNAF B-57B 52-1532/P in SEA Camo Scheme
Print Scale	PSL72-193	Martin B-57 Canberra Part 1	Includes Decals for VNAF B-57B 52-1567/BA-567 in Nat. Met. Scheme
Xtradecal	X72-102	Martin B-57B Canberra	Includes Decals for VNAF B-57B 52-1541/M in Nat. Met. Scheme

MARTIN B-57 CANBERRA IN VNAF SERVICE 1964-66

By Mark Attrill



1:48 Scale – Airfix/Classic Airframe

Make	Reference #	Item	Notes
Airfix	AX10104	Martin B-57B Canberra	2009 - Currently Out of Production (OOP)
Classic Airframe	CF4130	Martin B-57B Canberra	2007 - Mixed-Media Kit - OOP
Classic Airframe	CF4141	Martin B-57B Canberra 'Night Intruder'	2007 - Mixed-Media Kit - OOP
Aires	AIRE4453	BAC Canberra Undercarriage Bays	Resin – For Airfix Kit
Czechmaster	CMKF4236	B-57B Flaps Set	Resin – For Airfix Kit
Czechmaster	CMKF4237	B-57B Canberra Cockpit Detail Set	Resin – For Airfix Kit
Czechmaster	CMKF4238	B-57B Canberra Wheel Set	Resin – For Airfix Kit
Eduard	ED48630	B-57B Canberra Flaps Set	Photo-Etched – For Airfix Kit - OOP
Eduard	ED49465	B-57B Canberra Interior Set	Photo-Etched – For Airfix Kit - OOP
Eduard	EDFE465	B-57B Canberra Interior Set	Photo-Etched – For Airfix Kit - OOP
Eduard	EDFE495	B-57B Canberra Seatbelts	Photo-Etched – For Any Kit
Loon Models	LO48225	B-57B Canberra FCS	Resin – For Classic Airframe Kit OOP
Loon Models	LO48226	B-57B Canberra Wing Tip Tanks	Resin – For Classic Airframe Kit OOP
ResKit	RS48-117	Martin B-57B Canberra Wheel Set	Resin - For Any Kit
SAC	SAC48-011	Martin B-57B Canberra Undercarriage Set	White Metal – For Classic Airframes Kit
SAC	SAC48-045	Martin B-57B Canberra Undercarriage Set	White Metal – For Airfix Kit
Xtradecal	X48-076	Martin B-57B Canberra	Includes Decals for VNAF B-57B 52-1541/M in Nat. Met. Scheme

**I'd like to give a big welcome to 37 new members**

Stefano Vettorazzi from **Belgium**; Jagan Pillarisetti, Vincent Klimas, Annandeep Pannu, John Maze, Jeffrey Eddy, and Mike Woolson from the **USA**; Khawar Sarfraz from **Hong Kong**; Saeed Nafees, Ali Jafri, Muhammad Murad and Khalid Zia Saleem from **Pakistan**; Harald Verweij from the **Netherlands**; Billie Tan, D'Sevn Jafo, Peng Chye Lee, Ying Goy, Pang Lin Ong, Ky Sia, Eric Then, Nicholas Cheong, Chee Yao Aw and Zong Xi Ho from **Singapore**; Manuel Viriato Veloso from **Portugal**; Khourn Thongsin from **Cambodia**; Andrew Chia and Roy Choo from **Australia**; Filip Jereczek from **Poland**; Danter Cappellini from **Venezuela**; Hans-Jeutrgen Glueck and Lukas Muller from **Germany**; Tejeshwar Singh from **India**; Carlos Escalante from **Guatemala**; Rene Barretto from **Panama**; Istvan Toperczer from Hungary; Alain Gode from **France**; and John Wells from the **UK**.

We now have 439 members from the following 53 countries!

Abu Dhabi, Algeria, Argentina, Australia, Austria, Bangladesh, Belgium, Bermuda, Cambodia, Canada, Chile, China, Croatia, Denmark, Finland, France, Germany, Greece, Guatemala, Honduras, Hong Kong, Hungary, India, Indonesia, Ireland, Israel, Italy, Japan, Laos, Latvia, Malaysia, Malta, Myanmar, Namibia, The Netherlands, New Zealand, Norway, Pakistan, Panama, The Philippines, Portugal, Poland, Qatar, Singapore, Slovenia, South Korea, Switzerland, Taiwan, Thailand, Ukraine, UK, USA and Venezuela—Phew!

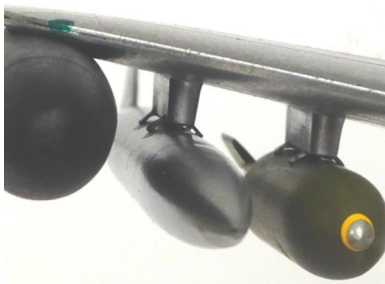


AH, THOSE WERE THE DAYS, MY FRIEND! On building the original Revell Martin B-57B "Intruder" By Greg Kittinger



I love to buy old lots on eBay, and this kit was one I built when I was a boy. It is a VERY toy-like kit – no panel detail, no cockpit to speak of, and the whole tail section “slotted” into the back end leaving huge gaps (any others out there remember this kit?) I wanted to do a South Vietnamese version rather than SEA (which in hindsight, with such a poor base to work with, an SEA scheme would have covered a multitude of sins...!) I did find a decal set, but they were really difficult to work with. They were printed on white film, so I had to trim right up to the decal edge, and even then they didn’t cut very well, so the edges show some raggedness. I also used some grey US decals to mimic the faded out US markings that I saw on reference pictures.

As the engine intakes and exhausts were just blanks, I felt I couldn’t leave them as they were, so I took some spare F-14 compressor blades, the nose cones of some Maverick missiles and some styrene, and drilled out the nacelle fronts and then rebuilt them. I also cut some drop tanks in half and inserted them into the rear of the nacelles, then drilled out the blanks there to open up the exhaust end of the nacelles.



The pylons were pretty much just a blob of plastic, so I at least added sway braces. I don’t use much PE, but found it necessary here.

I added a few aerials and probes, other decals from the spares box, and used a heavy dose of auto putty and elbow grease to cover up the tail section gap. I decided not to try to spend a great deal of time on panel lines – I did a bit of work on the tail just because it looked the most out-of-place without any further effort, and did a little shading on the top. I found that the lead pencil routine I had used on another model didn’t work as easily on the MM metalizer finish. I love building the new kits that fit like a glove and have a bazillion parts (Tamiya, Airfix, etc.) but I also love the challenge of taking these old dogs and trying to shine them up a bit.



See a selection of Greg’s other “in-flight” models here—
<https://imodeler.com/author/gkittinger/>



Mitsubishi T-2 CCV in 1/48 Modelled by Andy Binks



This is my model of the Hasegawa 1/48 Mitsubishi T-2 CCV. Apart from the additional items in the standard kit, such as the canard surfaces, i added Reskit exhausts, Royale Resin wheels, Finemold pitot tubes, and Platz stencilling decals (all of which are superb, especially the exhausts), as well as many minor changes to panels lines and the cockpit interior. I'm sure you will also notice the scratch built electronics cover in the rear cockpit too. *(Ed. Maybe so—if they had magnifying glasses!)*

The kit itself went together okay, but the fun started with the old and very fragile Hasegawa decals. They shattered on contact with water, so i decided to paint the Hinomaru and red stripes, which wasn't too hard to do. However, the CCV tail lettering was a challenge. I managed to get the kit decals on in one piece but they were yellow rather than white. I was living with this until they came off when i removed some masking tape after spraying the exhaust area, so i ended up masking and spraying the white lettering too, carefully protecting the TRDI and large red letters. The serial was replaced with Platz items.



At the end of the day, I am pleased with the slightly worn looks and accuracy of the finished model, but it was more of a challenge than I thought it would be, at the start of the project.

Andy Binks





1/48 CONVERSION SETS FOR AIRFIX HUNTER

AEROCRAFT MODELS



Introduction

To partly re-coin an old political saying, I am finding these days that 'A month in modeling is a long time' such is the speed with which a dazzling array of kits, aftermarket sets and decals, paints and finishing products hits the marketplace. As if to prove the point, literally days after I had completed my article on modeling the Hawker Hunter in Singaporean service, and lamented the lack of parts with which to do this easily, my good friend Ali McLean from Aerocraft Models contacted me to let me know about some additional resin parts he was going to add to his growing range of Hawker Hunter sets, all designed to improve or convert the Airfix 1:48 scale kits. Almost in the blink of an eye Ali has now delivered all of the parts necessary to complete the major part of the work necessary to reproduce the Hawker Hunter FGA.9 and majority of export aircraft that were based on this particular variant. In fact, following the success of his earlier Hunter sets and with some great assistance from renowned Hunter experts, Ali has completely refreshed his range and now offers a very comprehensive set of parts to cover the majority of single and two-seat export variants. Given that the Indian Air Force operated the earlier F.Mk.6 (as the F.Mk.56) and that both the Indians and Singaporeans used two-seat conversion trainers, I have included the sets designed to improve or produce these models in this review.

Hawker Hunter Conversion Sets

Two of the earliest releases in Ali's Hawker Hunter range focused on the provision of parts and decals with which to convert either of the current Airfix kits of the single-seat fighters in order to reproduce the two-seat advanced/conversion trainer variant. The two conversion sets are identical in content apart from the decal sheet and offer all of the parts necessary to produce almost every sub-variant of the two-seat aircraft ever operated, with the obvious exception of the three T.8Ms fitted with the Blue Fox radar for Sea Harrier trials and training. Each of the conversion sets consists of 27 resin parts together with four clear resin parts and a Photo-Etched frame with seven parts. The pale grey resin parts cover the obvious changes to the forward and rear fuselage, with the narrow jet pipe style 'pen nib' brake parachute housing that was peculiar to the two-seat variants, together with replacement parts for the upper spine of the fuselage to accommodate the wider forward fuselage. The majority of other parts are for the cockpit tub, complete with two ejection seats, control columns and nicely detailed instrument panels and side consoles. It should however be noted that only one 30mm cannon fairing is included in the set since all of the UK-operated two-seat aircraft only featured a single gun for training purposes. Some export two-seat aircraft were optimized for use as additional offensive assets, should the need arise; so RSAF T.75As, for example, were fitted with two 30mm cannons and an additional fairing. As always, Alistair's attention to detail is impeccable and he is aware of this. Further, he has confirmed that customers can, on request, ask for a second blister and gun barrel to be included in their T.7 conversion set order should they wish to model the T.75A variant. The four clear resin parts are for the two-part cockpit canopy and gunsights while the photo-etched fret provides for the ejection seat handles, canopy mirrors and prominent windscreen wipers. It should be noted that due to the limited run nature of these particular sets, the type of grey resin used and the overall finish is not quite as refined as that found in mass-produced sets, such as those by Aires, Eduard or Quickboost. Make no mistake, these are high quality sets but the major parts will certainly benefit from some polishing with a very fine sanding medium after assembly and before priming. The cockpit tub also features some nice detail, although the instrument dials are blank and will definitely benefit from the addition of suitable decals, such as those produced by Airscale (Early Allied Jet Instrument Dials – Product Code AS48AJET). I have little doubt that once the cockpit tub and ejection seats have been fully assembled, suitably painted and been given the appropriate weathering and wash treatment, the detail will stand out. The clear resin parts are equally well rendered and noticeably thin, which will add to the authenticity of the completed model but they will also benefit from some polishing and a dip in Klear varnish to improve their overall clarity. As a final note, and in keeping with an increasing trend among some of the smaller aftermarket manufacturers, the instructions for these comprehensive conversion sets will need to be downloaded from the website which is one way that Aerocraft can keep down costs for both himself and for the consumer which is no bad thing. Ali has also hinted at the possibility that additional two-seat conversion sets may be added to the range in due course and that these new sets may contain decal markings for some of the export versions too.



1/48 CONVERSION SETS FOR AIRFIX HUNTER



The most recent conversion set to be released, and the one that will be of most interest to those who may have read my previous article on modeling the Singaporean Hunter FGA.74/F.74S, is that which relates to the Hawker Hunter FGA.9 Fighter-Bomber variant. As many will know, one of the more obvious differences between this major sub-variant and the F.Mk.6 was the arrangement of the flaps, with the incorporation of a large cut-out to avoid fouling the large 230 gallon drop tanks when the flaps were deployed for landing. During the research into this new set, and as a measure of the meticulous lengths to which Aerocraft will go in the pursuit of accuracy, it was discovered that the hinge locations for the ailerons on the Airfix kit were not 100% accurate, so Ali McLean elected to reconfigure his original concept and release an even more comprehensive set, which now includes nine finely rendered grey resin parts. The all-important four-part flaps, which include the two inserts for the lower surfaces of the wings feature extremely nice detail on the inner surfaces; as previously noted the lack of any detail on the original parts is one of the very few weaknesses found on the Airfix kit releases. This detail is certainly a boon for those modellers, like me, who do not seem to get on too well with the more intricate photo-etched parts. The set also includes a replacement airbrake, again with nicely rendered internal detail, and a pair of the now corrected ailerons, together with a set of the upper wing bulges that housed the explosive bolt release mechanisms associated with the outer stores pylons - a prominent feature of the FGA.9 and export versions of the Fighter-Bomber variant.

Hawker Hunter Improvement/Correction Sets

There are currently a total of eight individual Hawker Hunter improvement/correction sets in the Aerocraft range, many of which will allow the modeler to improve their Indian or Singaporean Air Force Hunter projects. A quick check of the Aerocraft website will provide the necessary information on each of these sets, which include a pair of resin three-part 230 gallon drop tanks plus two sets (includes one spare set) of the sway braces associated with the carriage of these larger tanks; corrected stores pylons; and some nicely rendered cast brass undercarriage legs that address one of the few weaknesses with the Airfix kit—the plastic originals having a tendency to buckle under the weight of the completed model.

In summary, the additional sets that Aerocraft have now produced for the two Airfix 1:48 Hawker Hunter kits released to date, now make it entirely possible to reproduce an accurate representation of the single-seat variants that have seen service with the Indian Air Force and Republic of Singapore Air Force together with the majority of two-seat variants also operated by these two Asian air arms. The individual comments above, related to the quality and finish of the resin parts, can be applied to the whole range of Hunter products now offered by Aerocraft, which combine thorough research with ease of use and excellent value for money. The range of parts is only available direct from the manufacturer and, in many cases, the parts are almost made to order so you can expect some short delays on occasion, notwithstanding the added challenges associated with the COVID-19 emergency. That said, Ali McLean, the very proactive proprietor of Aerocraft goes out of his way to keep customers advised of progress with their individual orders and provides regular updates on his service via the website and social media. Ordering through the user-friendly website is very easy, shipping charges are very reasonable and all of my previous purchases have arrived within 2-3 weeks of placing the order, so you can buy with absolute confidence.

Please refer to the Aerocraft website for a comprehensive overview of the entire range of aftermarket products for the Airfix Hawker Hunter kits.

*At time of going to press (June 2020)

Mark Attrill – May 2020



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