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ASIAN AIR ARMS NEWSLETTER 20

April/May 2020

Asian Air Arms website and Newsletters support
"Asian Air Arms SIG", a Special Interest Group of IPMS (UK)

ASIAN AIR
ARMS



Image Copyright: [M Shahriar Sonet](#)

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BRIAN'S UPDATES AT ASIAN AIR ARMS RESEARCH GROUP



1 Well, IPMS are reporting that they're still planning for ScaleModelWorld 2020 but speculation is inevitably growing whether it will be able to go ahead or not. Typical of the comments is *"I cannot realistically see a situation where IPMS(UK) will be able to host such an event. Even if the exhibition centres are open again, I suspect the organisational and financial burdens associated with enhanced sanitary procedures could make it cost prohibitive."* Then add to that, a reluctance of many of the older modellers to expose themselves to risk, whilst some of the younger modellers (and their partners) could feel some discomfort at the thought of mixing with older folk. Add these together and, even if it does go ahead, attendances are likely to be severely affected.

2 I've had great support from members who've provided articles for this issue of the Newsletter, resulting in this edition being the largest yet, at 34 pages. However, I'm always looking for new material, information, photos, etc., so if you have something you'd like to contribute please don't be shy—e-mail me with your idea. Don't worry if you've never written an article before—I can help with this process. So, don't wait—get in touch with me.

3 A major article this issue covers the use of the Matador/Harrier by the Royal Thai Navy. It's been researched by Dave Fleming who's the Leader of the Harrier SIG—and has become the latest member of Asian Air Arms Research Group. You might have read his article in the previous Newsletter, looking at the Indian Navy's use of the Sea Harrier. Welcome to the group Dave.



4 Apparently Guizhou has notched up its first export sale in Asia of the FTC-2000, in the form of the latest version, the FTC-2000G. The speculation is that the customer is Cambodia. The FTC-2000 (previously referred to as the JL-9, which was developed from the JJ-7, itself an indigenous development of the MiG-21U/UM) has not been a big seller, even in China where it's used in very small numbers by the PLAAF and PLANAF, who both have given their trainer preferences to the Hongdu L-15 (a development of the Yak-130!) Bli-mey, it's enough to make your head spin!

5 Also, you'll see that our membership continues to grow steadily. We've had 32 new members since the last Newsletter and membership now exceeds 400.

6 Work In Progress: In future issues of the Newsletter we'll be featuring such tasty items as Asian air arms' use of Mil Mi-24/35, B-57/Canberra, Cessna A/T-37 and C-47. Plenty to look forward to!



ANTONOV AN-32 Cline—HOT AND HIGH



To meet the needs of the Indian Air Force for a "hot & high" medium transport, Antonov re-engined the An-26 with Ivchenko AI-20D turboprops, providing 85% more than those on the An-26. Two pre-production prototypes followed, with the An-32 going into production at the Kiev factory in 1980. The initial idea had been for Hindustan Aeronautics Limited (HAL) to license-build the An-32 in India, but that scheme fell through.

The An-32 featured the AI-20D turboprops mounted in nacelles that placed the engines above the wings, not forward of them as with the An-26. That was done partly because the AI-20Ds were substantially bigger, affecting the aircraft centre of gravity, and partly because they used wider-span four-bladed props -- increased from 4.5 meters (14 feet 9 inches) in diameter to 4.7 meters (15 feet 5 inches) in diameter -- leading to a ground clearance problem. The increase in engine power and the repositioning of the engines of course had a series of "follow-on" effects that demanded a few other changes in the aircraft design. The high positioning of the engines meant a greater tendency towards "pitch-down", and so the tailplane span was increased by 22.5 centimetres (9 inches). The greater power meant stronger asymmetric thrust and a tendency to yaw if an engine went out, and so the tailfin was raised 10 centimetres (4 inches). Changes in airflow led to turbulence problems around the rear fuselage, much like those that had afflicted the An-26, this was fixed by increasing the size of the rear ventral strakes and modifying their contours. To boost its "hot & high" operations, triple slotted flaps were fitted inboard of the engines.

A total of 214 was built for export up to 1994, with India being the biggest user at 123 aircraft, the first Indian An-32 being delivered in the summer of 1984. The Indians contracted with Antonov in 2009 to upgrade 105 machines to the "An-32RE" configuration with modern avionics, a new oxygen system, and improved crew seats. 40 were upgraded in Ukraine, the rest domestically in India with Ukrainian assistance.



Afghanistan was the second-biggest An-32 user at 49 aircraft, other Asian users were Bangladesh (3) and Sri Lanka (4). In the 1980s about three dozen civilianised "An-32A" machines were built for domestic civil organisations, followed in the mid-1990s by approx. 40 "An-32B", featuring general small refinements, and it is believed that four were given an "Executive" re-fit and spirited away to North Korea.

Guideline Publications

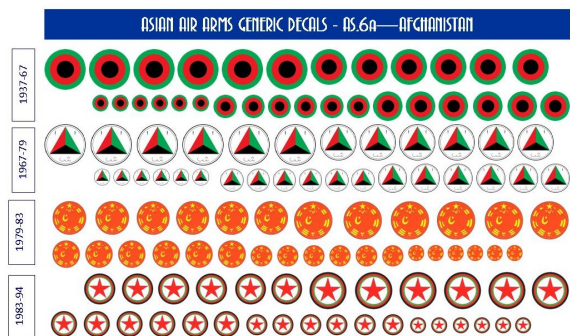


ANTONOV AN-32 Cline—HOT AND HIGH

AFGHANISTAN



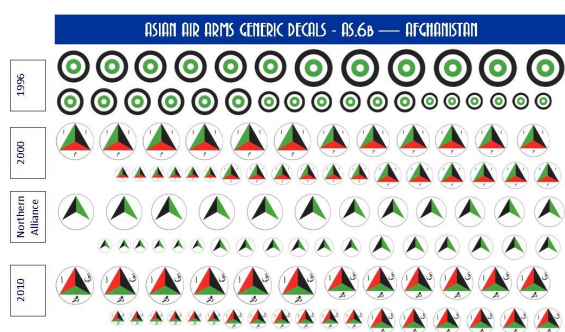
Asian Air Arms Generic Decals—Afghanistan Parts 1 & 2. £6.50 each plus P&P



Lay white decal paper, or paint, on model and allow to dry before applying decals

Underlay each decal with white decal disc or paint.

Click image to order.



Lay white decal paper, or paint, on model and allow to dry before applying decals



ANTONOV AN-32 Cline—HOT AND HIGH

INDIA





ANTONOV AN-32 Cline—HOT AND HIGH

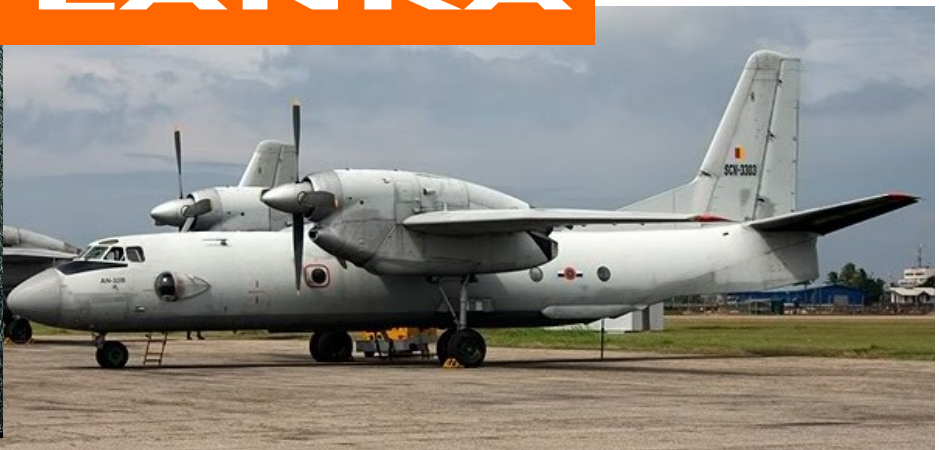
BANGLADESH



After a 6,000km flight, this An-32 underwent a major overhaul by Factory 410 at Kiev-Zhuliany, Ukraine in September 2017 including an avionics upgrade. The remaining two An-32s will follow.



SRI LANKA





ANTONOV AN-32 Cline—1/72 AMODEL by Peter Sharpin



If you're up for a challenge then make an AMODEL kit! I love them for the challenges they present and the subjects they cover. The AN-32 kit is one of their better kits and well within the capability of moderately experienced modellers. With AMODEL kits you must clean every part with a scalpel blade and glass paper, test fit and adjust as necessary, and above all else, take your time. You'll then be rewarded with a fine representation of the real aircraft.

On opening the box you are presented with the usual mass of sprues supplied by AMODEL. I find the quickest way to gauge the difficulty of the coming build is to inspect the clear parts. In this case they were pleasingly clear, crisp and thin. Sure enough, the build proved to be one of the less arduous ones! The major assemblies were well moulded with recessed

detail, with sprue gates that are generally larger than those found on mainstream kits but if parts are removed with a sharp pair of snips no damage will result.

Work started with the cockpit and forward cabin interior which were fully detailed—even including a toilet and wash basin! Alas, once installed, these were never to be seen again. All parts were cleaned up and assembled without difficulty, the completed assembly was then fettle-fitted into the fuselage as it was a bit too wide. I chose to have the rear ramp in the open position so this was completed as a sub assembly and set aside for fitting later. The interior was completed with a 'clear flat floor' for cargo, the roof having what appear to be crane runners for loading, and these were also added. The fuselage was joined and all gaps filled and sanded. The clear parts were thinned and added. Milliput was smeared with a fingertip into the gaps round the frames and left to dry and the residue was polished off afterwards.

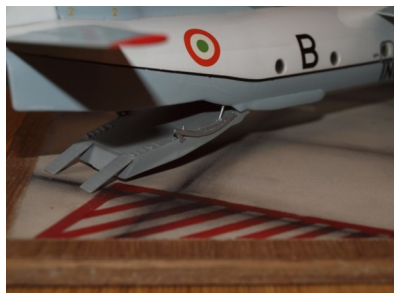
The wings and tail were assembled, cleaned up and sanded prior to affixing to the fuselage: the most challenging part being the engine nacelles, which needed a fair bit of persuasion and filler to fit well. The major parts were then glued together, ensuring the correct anhedral wing angle was achieved, followed by filler and sanding (you're getting the idea!) Undercarriage parts and propellers were put together ready for painting, but left unattached to the aircraft for the moment. The clear parts on the major assembly were then masked up using Kabuki tape and Maskol.

Having trodden a well-worn path of using trusted enamel paints for the last 50 years, I had a complete brainstorm and decided to try water-based acrylics. I duly rooted out the 10 year old acrylics which I had bought (but never used) for testing my skills with this medium. After a cursory glance at an article on how to use them, I decided tap water would suffice as a diluting agent, and so, armed with pots of already separating liquids, I set off for the spraying area (the garage). The next stage involved covering my carefully assembled An-32 with a substance akin to the residual sludge you get after cleaning your paint brushes after a session of DIY. In horror I watched, as the sludge pooled and obliterated areas of finely recessed detail, while at the same time leaving other areas completely devoid of paint. I would have had better results with a handful of out of date yoghurt, lobbed at my creation from the recommended safe social distance. I snatched up the sorry sight and ran to the outside tap to wash the offending residue off. This I succeeded in doing quite rapidly due to the hastily selected and inappropriate water pressure! After much grinding of teeth the whole thing was cleaned up and I started again. Numerous re-sprays were required as my masking tape ripped off first the grey, then the white, in my attempts to produce a crisp line. However, I persevered with the devil paints and eventually managed to get a finish that I considered acceptable. The model was then glossed and the decals applied. The undercarriage and fiddly bits finished the model, along with crystal clear windows. The most difficult part of the build being the fitting of the ramp which was ultimately achieved by pinning it in place using brass rods and superglue.

The finished model looks the part but I think the wording down the side should be in Sanskrit on one side, rather than English on both. Maybe someone could confirm. this *(Ed. You're quite right Peter—portside should be in Sanskrit. Find the correct lettering on Bright Spark's decal sheet BS.1A—see page 13 of this Newsletter.)*

All in all a fun build and that is what it's all about. I'm quite pleased with the finished result but would rather have teeth pulled than use acrylics again! *(Ed. 10 year old acrylic? Maybe the outcome wasn't surprising!)*

Peter Sharpin





ANTONOV AN-32 Cline—KIT AVAILABILITY



1/288 Eastern Express



1/144 PAS DECALS



1/72 Amodel



1/144 Eastern Express

CORONA VIRUS BLUES!

Well, “lockdown”, what a great opportunity to get my mojo going again. So, first up was something way off-beam—helicopters! Specifically, Revell’s 1/32 German Police H.145. I got all internals done, now for painting BUT (being a rattle-can modeller) I was irritated to discover that I didn’t have the right shade of blue—and couldn’t get it at the moment! Put it to one side!



And try again, this time Revell’s 1/72 Agusta A.109 for a pretty Algerian Police example. Assembled, masked and then discovered that the can I’d selected came out a totally different shade to that shown on the lid! My local source of rattle paint (car parts shop) was closed, of course! So, I reverted to the old hairy stick and after several dispiriting attempts, decided to give it just one more try—it came out fairly close but still not quite close enough. Put it to one side also.

On to MisterKit 1/72 Mi-2, (Indonesian Police). It was going well until I discovered that the main air intake was missing! So, I wearily completed the Missing Parts voucher and went to post it to MisterKit in Poland but the Post Office told me that they couldn’t send any letters overseas because “all planes have been grounded”!!! What? Too fed up to argue. I then found, on-line, Quick Boost’s replacement set: it gave me exactly what I wanted. So, having received it quickly, I’m now finally on the way to completing something! And that is the total sum of my modelling lockdown adventures. I hope you’ve made better use of your time!



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MIDDLE EASTERN STRIKEMASTERS IN THE LION CITY

By YK Goh



When Singapore gained its independence in 1965, one of its priorities was the setting up of an air arm as part of the establishment of the Singapore Armed Forces (SAF). The Singapore Air Defence Command (SADC) was officially formed on 1 September 1965 - later being renamed as the Republic of Singapore Air Force (RSAF) - and went on to become an independent service on 1 April 1975.

The new air arm needed to start a rapid build-up of manpower whilst setting up the SAF Flying Training School (FTS). While initial batches of pilots were sent to UK to get their "Wings", FTS was to conduct the ab initio and advanced jet training to graduate pilots up to "Wings" standard. For the advanced jet training phase, 16 BAC Strikemaster Mk.84s were purchased and the first arrived in 1969 to form 130 (Eagle) Squadron.

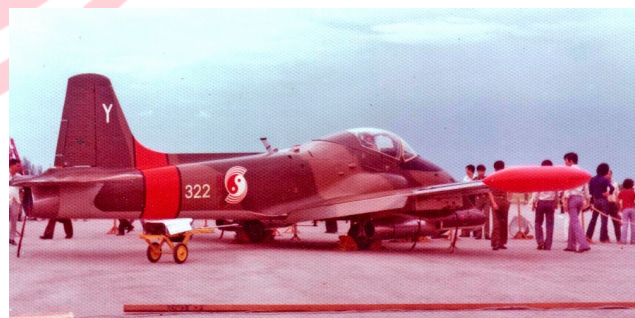
The Strikemasters served well and when, in the early 1970s, additional aircraft were sought, a search for 2nd-hand aircraft was begun due to the high cost of new production aircraft as well as meeting the schedule for expanding the capacity of FTS. Coincidentally, South Yemen which had retired its Strikemaster Mk.81s had put them up for sale. The Yemeni Strikemasters had a different avionics fit, an unpressurised cockpit and were equipped with armour. They were also flown with only one ejection seat as they were used as ground attack aircraft.

The four aircraft were delivered in pairs by contract pilots and all were delivered to Changi Air Base by June 1974. On arrival, they were put through a major servicing, given the serial numbers 320-W, 321-X, 322-Y and 323-Z, and joined the Mk.84s. Together with the purchase package of the four Strikemaster Mk.81s, were seven Jet Provost T.Mk.51s. These were all shipped to Singapore, arriving at Changi Air Base in late 1974. As the Jet Provosts were significantly different in cockpit layout and performance to the Strikemasters, they were only used by Standards Squadron for Flying Instructor training. The seven Jet Provosts were given the serials 350 – 356.

With the continued built up of the RSAF and to increase the training capacity of FTS, a further five Strikemaster Mk.82s were purchase, this time from the Sultan of Oman Air Force (SOAF). These five were flown back by pilots of 130 Squadron, together with a technician, led by the Commanding Officer, arriving at Changi Air Base in May 1977. The five ex-SOAF aircraft were given the serials 327-331.

The Strikemaster fleet served 130 Squadron well till its replacement by the Italian Siai-Marchetti S211 in 1985. While one was retained for the Air Force Museum, the rest were sold to an Australian dealer. Two of the Jet Provosts were sold to a UK owner and were refurbished and flew as G-JETP and G-PROV.

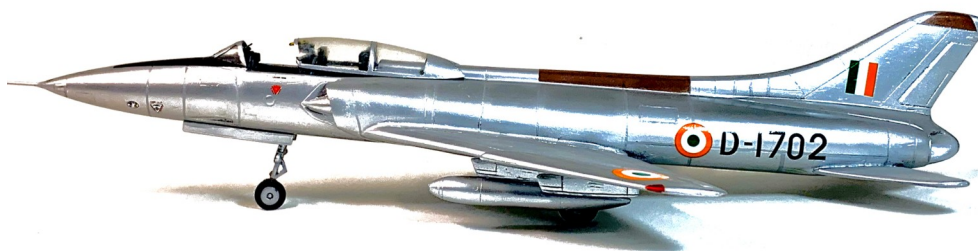
Y K Goh





1/72 HAL HF-24 MARUT

Built by Navin Bala



I've been a fan of the HAL HF24 Marut for many years. I had initially heard about this aircraft as a kid when my late father would tell us stories about this ingenious, indigenous fighter and I would see pictures of them in his albums. Also as a parting memento from HAL we had HF24 Marut and HJT16 Kiran wooden models adorning our display rack at home. So the fire had already been started.

For years I wondered if there was a model kit of the HF24 and I asked everyone I could. Alas I never found anyone with similar interests, (in those days scale modelling was unknown in India and they used to call them, and lots probably still do, "Toys"). Well fast-forward to adulthood and steady job and model building with the internet as our friend. I then came across a group of modellers at its infancy called Indian Scale Modellers who mainly modelled the Indian Air Force and the Sub continent. Here I heard of some experienced modellers mention a Marut kit being built really long ago, that it was a limited run but absolutely unavailable.

One day I was directed by my good friend and fellow modeller Vinu toward an e-bay listing of a Warrior HF24 Marut. I sat up for days scouring the listings and eventually became the proud owner of 4 vac-form Warrior Models Maruts (one was gifted to Vinu, and I greedily kept the rest.)

I set about building one of them holding the others till I developed my skills enough to do better justice to the others. Technically I have three Marut Model kit types .



1. Warrior Model vac-form with period decals; resin multimedia for intakes, wheels, drop tanks and ejection seat; and white metal landing gear.

2. Warrior Model vac-form that seems to be a later re-boxing, featuring a larger array of decals and markings, plus a resin exhaust and extra hard-points with rocket pods.



3. Alliance Models resin kit with all the above goodies and white metal gears.



All three canopies are, of course, vac-form clear crisp canopies. The Warrior kits however can be made into either two-seater or single-seater and that was what I was after. So off I went on my very first ever attempt at a vac-form kit! I "you-tubed" myself to death on building vac-forms and read any book I could find on the subject.





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1/72 HAL HF-24 MARUT

Built by Navin Bala

As per the tips in the books I scored the edges of the hard plastic and it didn't pop off as described. So I had to start chopping pieces off the edges and then sand down the extras. I made a solid wing spar and inserted two into each fuselage half to accept the wings. I then made four rudimentary bulkheads in the fuselage with sheet styrene and ran four styrene rods along them and one big on in the center to give it rigidity and prevent the model from twisting (this was quite evident in the test fit.)

Then I went about sanding and puttying with Apoxie Sculpt which, so far, has been my go-to putty.



I sprayed the finished model with Alclad Grey Primer Filler then Mr Surfacer Black primer from a rattle can. (I should say here that I decanted, but I didn't!)

Then when I was happy with the dry, cure and surface finish I gently buffed the model with an old t-shirt. Then it came time for the paint. I used an IWATA eclipse HP-CS airbrush and Alclad Airframe Aluminium and sprayed a fine mist onto the model. Then I proceeded to pick off a few panels holding a card against the panel lines. I sprayed the edges, thus achieving a rudimentary panel shade. Having done this, I went over some panels that had been eradicated during the sand and putty stage, and masked and sprayed fine lines to suggest panel lines. I was afraid to line scribe on the vac-form lest I cut right through the thin plastic. After a coat of Future I applied some Bright Spark decals (Ed. These decals are produced by member Mick Burton and sold by us—see page 13), and numbers from an Xtradecal RAF set.

The landing gear went on fairly normally with Superglue/CA sticking to tweezers; fingers; toothpicks; the floor; just about everything, till the resin wheels finally agreed to stay with the white metal landing gear.

Now we get to what should have been first since we always start with the cockpit. Well I have a short story about it so I left it for last.

In my HF24 model I decked the front cockpit as in the kit instrument panel. However for the rear seat I sourced some CRT screens and affixed those on the instrument panel. *"Why would a conventional cockpit on a fighter built in India in 1967 (and depicted as flying in 1976) have a glass cockpit?"* you might well ask. Well, my father had mentioned they were testing glass cockpit instrumentation in 1976 on the HF24 and he had flown that aircraft, D1702 with the rear cockpit having glass instruments CRTs and buttons..

My building of these kits is my small way of trying to keep this beautiful, sleek, built-for-speed fighter alive in hearts and minds of the future generations.

Should a model manufacturer wish to invest in a production run or limited run of this airplane I am sure they would be creating a path for a legend. If someone builds a Marut injection model please mark me down for 10— these would represent the main schemes I would like to see painted on my shelf.

Well thank you for reading and happy modelling—see the next page for a history of the Marut.





1/72 HAL HF-24 MARUT by Navin Bala



HF-24 „Marut“ Mk.1T.

The HF24 was a twin engine multi-role fighter aircraft designed by the legendary Focke Wulf Fw190 designer Kurt Tank. He was directly involved in the design and testing of the Marut in India. On 11th March 1961 the first Marut HF001 test aircraft started taxi trials and on 24th June 1961 made her official maiden flight. Incidentally the Marut is also the last possible aircraft to have a full scale glider version designed for testing and was towed aloft by a DC3 prior to the prototype flying.

The Marut was armed with four Aden 30MM cannon in the nose, flew at 691mph and could strike targets 200 miles away with sufficient margins on internal fuel. It carried four wing hardpoints which being wet could carry drop tanks, rocket pods or bombs. In addition, like the French Mystere, the Marut single seater had 50 Matra rockets in a rocket bay that retracted into the fuselage (a space that was adapted in the Marut Mk.1T trainer for the instructor's seat).

The Marut was subsonic, for the engines it was designed to carry were not available and it had to make do with the under-powered Orpheus 703. That having been said the Marut excelled in the low-level strike role, being extremely manoeuvrable and retaining energy. It has been said that the leading edges were designed for low level flight as they were so thin they could have sliced through power lines and continue flying with barely a scrape! The Marut cockpit was quite spacious with a Luftwaffe-type Grey cockpit and western style instrumentation. The bubble canopy gave it an excellent all-round view and the forward view was quite exemplary. The Marut had a basic gunsight but was an excellent gun platform when using two guns. The other two tended to cause vibrations and loss of controlled flight and were eventually faired over. Now I noticed something about her. Having sat in a few Luftwaffe planes in my time, I couldn't help but get that familiar Luftwaffe aircraft feel from the Marut cockpit as I sat in her. The high perch and the RLM-ish Grey: all that was needed to complete the effect would be a push button gear lever and that familiar glue-mixed-with-oil smell!

The Indian Air Force operated 3 Squadrons in all, excluding the testing unit and Air Defence unit. Having become operational on 1st April 1967 the Marut missed the 1965 war but proved her mettle in the 1971 war. No Marut has ever been shot down in air combat and in turn it has chalked up an F86 Sabre with two of its 30MM Aden cannons. A total of 147 Maruts was built, and one was sent to Egypt in an exchange with Willy Messerschmitt's HA300 Program and flew in Egypt with the E300 Engine. There is a picture of the grand Luftwaffe Ace General Gunther Rall of WW2 fame in the cockpit of an HF24 Marut: did he also fly the Marut covertly? We may never know.

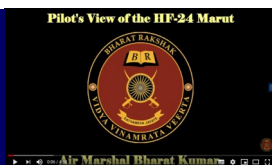
Today the Marut is long retired and the once gallant lady stands to be lost into annals of time. Sadly, few museums have taken this iconic design into their folds: the most pristine example being the one in Germany in OberSchleissheim near Munich.

Navin Bala



Marut
in
flight

A pilot
recalls
the
Marut



General Gunther Rall, the third most successful fighter pilot in aviation history, trying out the Marut.



Three Maruts flying in formation over Bangalore (now Bengaluru). In the middle, flying D1702, is my father.





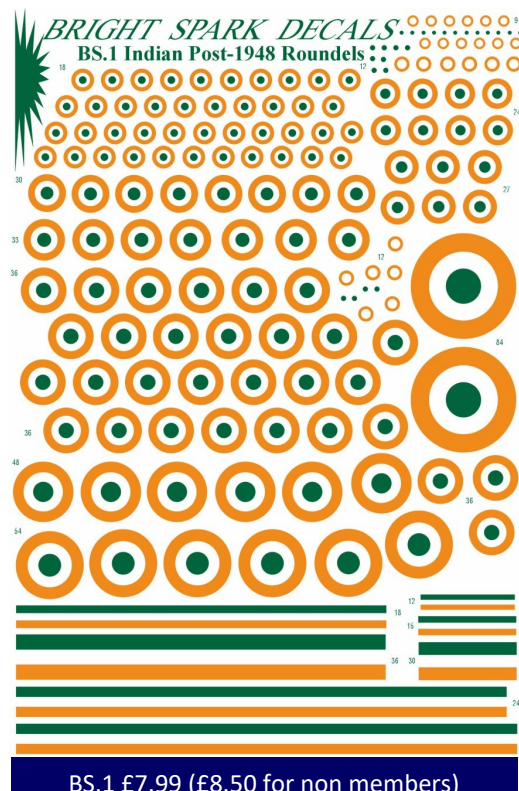
INDIAN (IAF & IN) AND PAKISTANI (PAF & PN)

1/72 INDIAN AND PAKISTANI ROUNDELS, FLASHES AND TITLING

Asian Air Arms Research Group has been fortunate to obtain a very limited supply of Bright Spark's superb decals covering the Indian Air Force/Naval Air Arm, and the Pakistan Air Force/Naval Air Arm.

These will be available to members at special prices but, we don't have many, so get them whilst you can!

Order them at <https://www.asianairarms.com/decals-aaa>

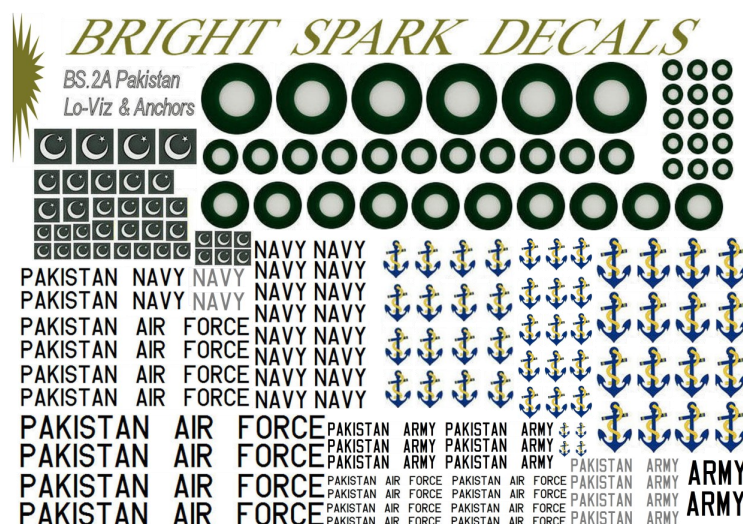
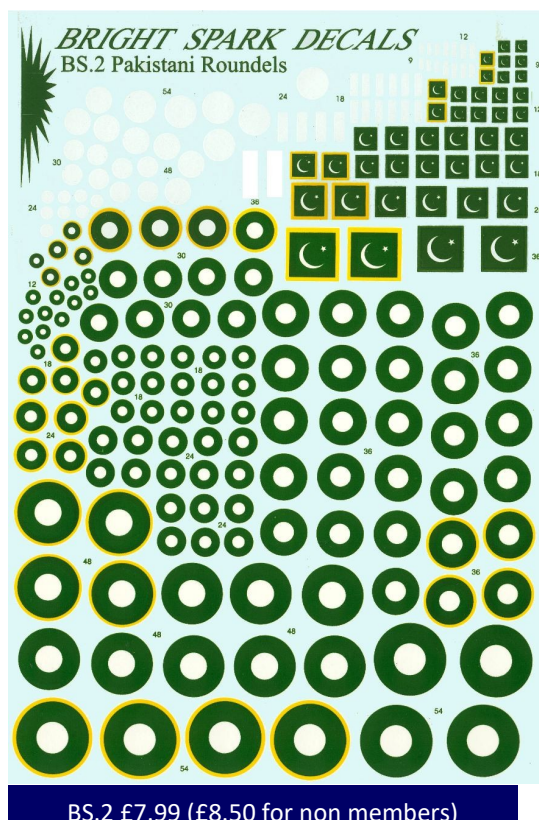


Includes Lo-Vis roundels for Sea Harriers

Each sheet includes a comprehensive listing of roundel and fin flash sizes for most post-war aircraft used by these two air arms.



BS.1A £6.99 (£7.50 for non members)



BS.2A £6.99 (£7.50 for non members)

These sheets have been produced by member Mick Burton of Bright Spark Decals.

BS.1 and BS.2 are screen-printed.
BS.1A and BS.2A are not and have each
received one coat of clear varnish.



AV-8/HARRIER IN ROYAL THAI NAVY SERVICE

By Dave Fleming



Thailand was a somewhat unexpected 5th member of the first generation Harrier club, with their Harriers only entering service in 1997, almost 30 years after the first RAF aircraft arrived. They were also the only customer for second-hand Harriers, (attempts by Britain and the United States to dispose of their old aircraft having come to naught). Thailand acquired Spain's remaining AV-8S and TAV-8S Harriers as part of a deal to purchase a 11,500 tonne light aircraft carrier which was built in Spain. This ship entered service as the HTMS Chakri Naruebet. "Chakri Naruebet" was based on the design of Spain's 'Principe de Asturias' carrier, but was a significantly smaller ship, being approximately 5000 tonnes less weight loaded. In fact, she was the smallest

aircraft carrier to operate jets, although the RTN refer to her as an 'Offshore Patrol Helicopter Carrier'.

Thailand obtained 7 single seat AV-8S aircraft and 2 TAV-8S Harriers – these were the Spanish version of the AV-8A aircraft delivered to the United States Marine Corps, and in fact Thailand referred to them as AV-8As. Harrier designations can be complex, and British marks were based on the engine fitted, so these aircraft were equivalent to the RAF's GR3, but with a pointed nose. By the time they were sold to Thailand, the Spanish single-seat aircraft had been through upgrades that gave them a similar RWR system to the British Harriers, with antennae on the fin leading edge and on the end of the tail boom. This also resulted in them having the slightly taller fin of the Sea Harrier and GR3.

The two-seaters did not have the RWR, and externally looked similar to the USMC TAV-8A. Both marks had a single UHF antenna on the upper fuselage: the AV-8A style VHF antennae had been removed in service. These were already old aircraft – the Spanish Harriers were delivered in two batches in 1976 and 1980, and were refurbished before delivery.



It's fair to say that Thailand's experience with the AV-8A was not a happy one. The Asian financial crisis of the late 90s affected them badly, and within months of them entering service, Flight Magazine was reporting that the Royal Thai Navy was experiencing severe challenges in maintaining and operating its Harrier fleet. Sources reported that there were no funds available to allow for spares support and maintenance of the aircraft. Within months, 2 aircraft were grounded by power-plant issues, and only half the supplied 16 engines were believed to be serviceable. Further budget restrictions meant that only bombs and rockets were available as weapons options for the RTN.

By 1999, it was believed only one aircraft was operational, and the RTN was actively searching for other early Harriers to use as spares sources, however it's not thought many were available (the US had scrapped many of those stored at AMRAC) and it is not believed any airframes were obtained. Availability remained poor for the rest of their service.



When the Royal Navy prematurely retired their Sea Harriers in 2003, Thailand made enquires about purchasing some of the retired FA2 airframes. These radar-equipped aircraft were widely seen as being one of the best air defence systems in the world, and would have been a major leap in capability for Thailand, but like the proposed Indian purchase of these aircraft, costs and technology transfer prevented a deal being reached. Thailand finally removed the Harriers from its order of battle in 2006, and the surviving aircraft were allocated for display at various locations in Thailand.



AV-8/HARRIER IN ROYAL THAI NAVY SERVICE

By Dave Fleming

OPERATIONS

In spite of their poor serviceability, the RTN took the Harriers to sea on occasions, operating from HTMS Chakri Naruebet, in the sea control role originally envisaged for this style of light carrier in 1970s studies.

In January 2003, following a dispute with Cambodia that led to riots and the burning of the Thai embassy in Phnom Phen, Chakri Naruebet was deployed with a number of AV-8As (believed to be three) to make a 'show of force' in case air cover was needed for the evacuation of Thai nationals from Cambodia. This would be the only 'operational' deployment of the Thai Harriers

COLOURS AND MARKINGS

For such a small fleet, the Thai Harriers appeared in a variety of colour schemes over their short lives. Some aircraft were delivered in the Spanish scheme of Light Gull Grey over white, but others were painted in various shades of grey. The different shades may be down to photographs or colour fading - it's difficult to get firm information. What is known is that at least one aircraft was painted in the before leaving Spain.

Some have theorised that at least one variation on the scheme was due to a thin layer of paint over the Spanish scheme, but that may be wrong. Best advice – have a look at photos and choose your paints accordingly! Known schemes are as follows – some aircraft may have had more than one!

Serial	Scheme	Notes
3101 TAV-8A	Light Gull Grey over white	Had a slightly lighter fin at one point, but this may be post service.
3102 TAV-8A	Light Gull Grey over white	
3103 AV-8A	Light Gull Grey over White	Upper grey MAY be slightly darker
3104 AV-8A	1) Light Gull Grey over white 2) Overall Mid Grey	In the LGG/White scheme, this aircraft was seen on the carrier with a 'patchy' scheme – this is believed to be due to crew cleaning the aircraft's national markings
3105 AV-8A	Light Gull Grey over White	
3106 AV-8A	Light Gull Grey over White	
3107 AV-8A	Grey over light Grey (in Spain) Overall Mid Grey	Fake radar nose. Painted with rudder stripes the style of VMA-542
3108 AV-8A	Dark Grey over Mid Grey	Estimated FS36118/36270 Painted with a fake radar nose This MAY be the same top colour as 3107 and 3104, but it looks darker
3109 AV-8A	Light Gull Grey over White	

Dave Fleming

To see more of Dave's photos go to <https://www.asianairarms.com/thailand-photos>



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North American B-25s in the Netherlands East Indies AF—Part 3

By Max Schep

Part 3 describes the changes of the operational B-25D-25 until VJ-Day.



Image 1—New B25D-25-NCs

After the modification with the side packs a third 0.5 was installed in the nose of all the operational aircraft of 18 Squadron. With the arrival of the first B25D-25 in the first quarter of 1944, three new gun positions completed the development of the B-25Ds.
(Collection van de Berg)



Image 2—Tail gun B25-D-25

At the end of the fuselage was the transparent ending replaced by a tail gun and a small turret. This aircraft had the wavy dividing line between Olive Drab No.41 and Neutral Grey No. 43 used by the Kansas production facility of the B-25.

(Collection Frank F. Smith)

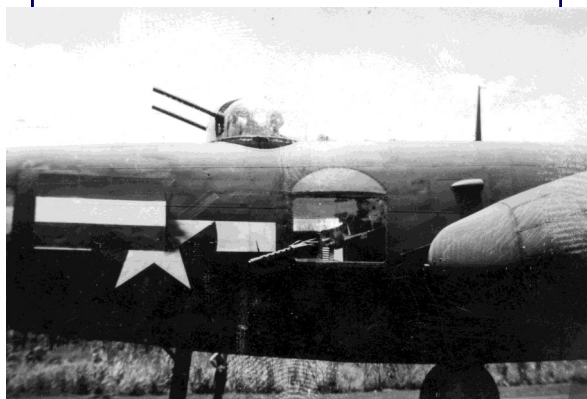


Image 2b—Side guns

Two new gun positions were created by the introduction of the side windows in the fuselage. The American star and bar are only partial over-painted by the red, white and blue of the NEIAF marking.

(Photo J. Koedam)

Image 2c—Nose guns

The nose configuration of B-25J N5-237 fully armed with two solid nose guns and a movable one. On the site of the side packs, the cockpit was reinforced with armour plates.

(Photo Casius)





North American B-25s in the Netherlands East Indies AF—Part 3

By Max Schep

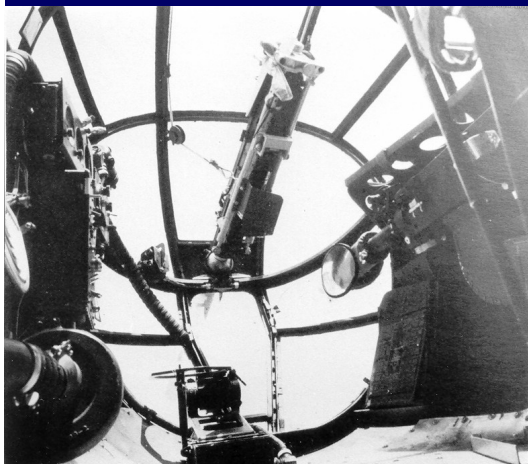


Image 2d—Nose gun

The view from the inside of the nose compartment of an aircraft of 18 Squadron with only the movable front gun installed
(Photo NIMH)

Image 3—New arrival

In the middle of 1944 arrived the first B-25Js with 18 Squadron to replace older types. The B-25D-25 N5-188 "Pistol Packing Mama" in formation with three new B-25Js N5-218 "Grace", N5-230 and N5-226. The new aircraft gave more room for the tail gunner and the turret was moved to the front of the fuselage.
(Photo O.G. Ward)

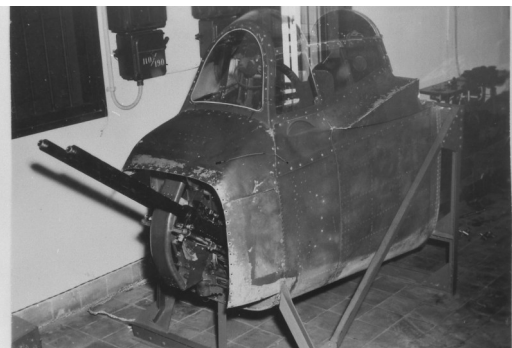


Image 3b

Detail of an instructional frame of the tail gun of the B-25J as used by the ML-KNIL.

Image 4

The B25Js had the early side packs replaced by permanent and more streamlined ones. This is clearly visible on this film-still of N5-240. Overall camouflage finish is still Olive Drab No.41 and Neutral Grey No.43. A personal marking has probably been painted out with a medium green type of colour contrasting with the weathered Olive Drab.
(Still film Kregten)



Image 5—Back to Java

23 September 1944 was a memorable day for 18 Squadron when N5-180 "ADA" and N5-185 "Lienke" took off from the airfield in Potshot, Australia to fly over Java. For that purpose, all the unnecessary parts of the aircraft were removed to save weight. Even the Neutral Grey on the undersides were returned to bare metal. The red, white and blue insignia was enlarged to enable the prisoners in the camps en-route to recognise the aircraft. Both aircraft flew different routes which were painted in white on their noses.
(Collection G.J. Tornij) ©M.T.A. Schep 26 April 2020





UNION OF BURMA AIR FORCE—AIRSPEED CONSUL/OXFORD

By Nick Dixon



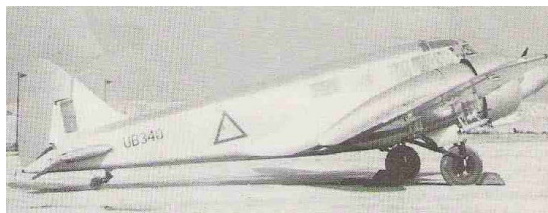
Consul UB339 armed with 8 x 3in Rockets (with concrete dummy heads) and 2 x .303 gun pods.

(Photo from <http://beyondthesprues.com/>)

Union of Burma Air Force Airspeed Oxford/Consul

I started doing some research on the UBAF Oxford/Consul use after seeing the above photo and considering a modelling project. I soon found that reference material is very sparse. Below is an amalgam of what I have found. A total of 15 Oxfords and nine Consuls saw service with the UBAF. Some were armed with two 0.303 machine guns mounted in pods under the fuselage, and eight 25 lb. (11.3 kg) rockets, four under each wing. At least 3 had turrets installed similar to those fitted to original RAF Mk.1s.

Unfortunately, not much is known of their service. However, by 1950, five had been lost.



Consul UB340 (photo via Mick Burton)

Above, left, is a photo of UBAF Oxford marked as G-21-11 on a pre delivery test flight, previous RAF identity and subsequent UBAF ID not confirmed in source documents

Former RAF serial numbers include, R6161 (received 18 November 1948), T1101 (9 December 1948), T1386 (13 October 1948), V3746 (2 December 1948), W6578 (19 December 1948), W6638 (18 November 1948), X7135 (18 November or 25 November 1948), BM719 (16 December 1948), ED173 (2 December 1948). Unfortunately, no tie-ups between the RAF s/ns and the UBAF s/ns are known. At least two Oxfords received Class B registrations before delivery, G-22-11 and G-22-15.

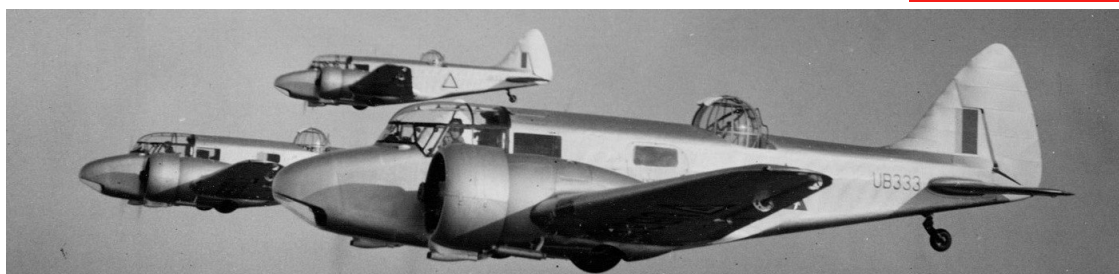
References on the UBAF as a whole are not plentiful and for the Oxford I have used the two most informative;

<http://www.aeroflight.co.uk/waf/aa-eastasia/burma/burma-af-aircraft.htm>

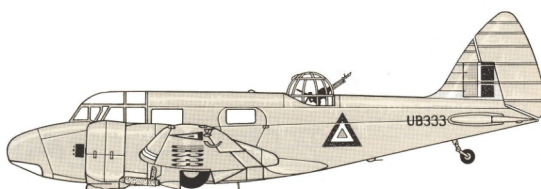
"The Oxford, Consul, Envoy File" – by John Hamlin – Air Britain. All 3 above photo feature in this book which is a magnificent volume

Thanks to Mick Burton for two images and the above profile that I'd previously not seen.

Nick Dixon



UB333 and 2 other turreted Oxfords (photo via Mick Burton)



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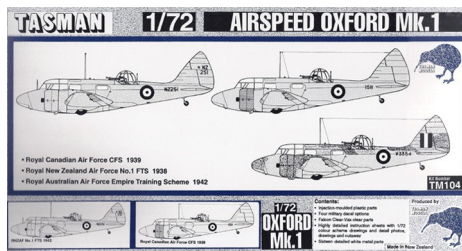
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UNION OF BURMA AIR FORCE—AIRSPEED CONSUL/OXFORD

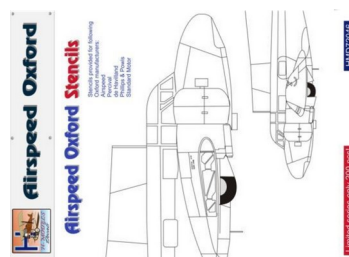
By Nick Dixon



HISTORY OF UNION OF BURMA AIR FORCE AIRSPEED CONSULS/OXFORDS

Serial	c/no.	Prev. Identity	Delivered	Fate/Notes
UB-331			March 1949	Damaged Beyond Repair at Mingaladon AB 26 April 1949. Hung-up bomb exploded on landing.
UB-332			March 1949	Crashed on overshoot, 5 April 1949 at Nawngghio, near Maymyo.
UB-333			March 1949	Fitted with dorsal turret and Lewis gun. Tested at A & AEE at Boscombe Down before delivered to Burma.
UB-334			August 1949	
UB-335			August 1949	Missing on ops in Heglu area, 15 December 1949.
UB-336			August 1949	Damaged Beyond Repair on take off from Meiktila AB after engine failure, April 1950.
UB-337			December 1949	
UB-338			December 1949	
UB-339			October 1949	Consul. Damaged in landing accident, March 1950. Stored by June 1951.
UB-340			October 1949	Consul. Crashed during demonstration flight, 15 June 1950, when under-wing rocket exploded.
UB-341			November 1949	
UB-342			November 1949	
UB-343			February 1950	Consul
UB-344			February 1950	Consul
UB-345			March 1950	Consul
UB-346			January 1950	
UB-347			January 1950	
UB-348			February 1950	Consul
UB-349			February 1950	Consul
UB-350			March 1950	
UB-351			March 1950	
UB-352			March 1950	
UBC.1			c. September 1949	ex HN831, G-AJNL, XY-ABK
UBC.2			c. September 1949	ex HM917, G-AJNU, XY-ABI

Print
Scale
1/72



H-Model
1/72
&
1/48





BRIC-A-BRAC TABLE

I receive lots of links to u-Tube clips from members and I'd like to share some of them here, with you. All are very well worth watching.

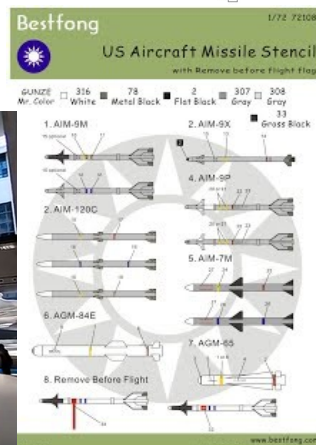
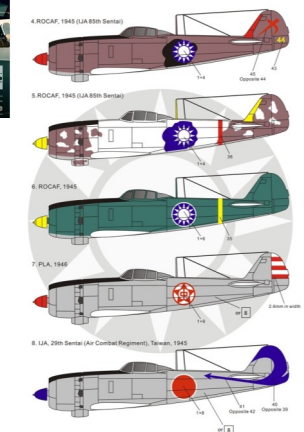


A great video of pre-flight preparation of ROKAF F-15K Slam Eagles



Watch Australian journalist Anna Coren's first flight in KAI T-50.

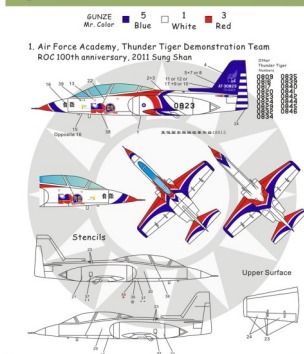
Bestfong



Here's another of member Eric Moya's great walk-arounds, this time of the PLAAF's Nanchang Q-5 Fantan



Bestfong
AIDC AT-3 in ROCAF



And here's Eric's Indonesian MiG-21F-13 walk-around, featuring great detail of undercarriage and their bays.

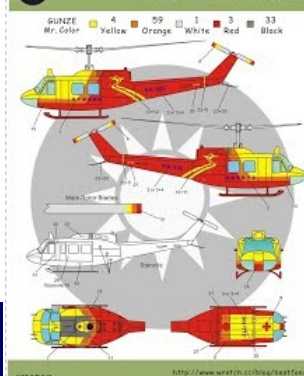


From Gary Markham in South Korea is a video detailing ROKAF F-4E pre-flight preparation—lots of lovely detail on arming up.



Another video from Gary comparing the TUDM's Hawk 200 with PhAF's FA-50PH.

Bestfong
BELL UH-1H in NASC



HOBBYBOSS 1/48 SUKHOI Su-30MK2 TNI-AU**By Ian Gaskell**

© Ian Gaskell

As my love of Soviet/Russian aircraft is so great, having several Flankers in my stash is an absolute must, but this is only the second one that I've built. My first being Kinetic's 1/48 Su-33 Sea Flanker. I was asked if I'd would build a 1/48 Indonesian Air Force (Tentara Nasional Indonesia Angkatan Udara, TNI AU) Su-30, for our IPMS Portsmouth display at the Tangmere Scale Model Show, May 2019. Naturally, I said Yes. The basis of the build is the wonderful Hobbyboss Su-30MKK, which is visually similar to the Su-30MK2. The box is huge, and is crammed full of plastic, with enough weapons to arm a whole squadron of Flankers! What I did find surprising was just how little Su-30 specific aftermarket there appears to be, especially cockpit sets (Wolfpack Design being the only one, and that was for the Academy kit). So, I decided, as far as the cockpit was concerned, I would use the kit supplied parts, and use the instrument decals. However, I did get some aftermarket that I could use. A pair of Aires seats; Fine Moulds seat belts; Plus Models ladders; Aires resin exhausts; Armoury weighted resin wheels; New Ware masking set; Master Models pitot; a Caracal decal set; and a pair of Five Star Models resin pilots. I had an Eduard PE cockpit and interior detail set, for the Hobbyboss Su-27UB, and used the detailing part of the set, to add some extra detailing to the cockpit. Making a start on the kit, I tackled the canopy first. The seam here was horrendous. Despite the usual, using finer and finer grades of Micromesh cloths, and dipping in Klear, you could still see the seam through the depth of the clear plastic, even though the surface was smooth. I did manage to source a replace canopy, however, and this was fine. It couldn't have been more different from the original. When the Klear was fully dry, the canopy was masked, both on the inside, and outside.



On to the cockpit, and as mentioned before, the detail is reasonably good. The tub was assembled, and primed, and painted Blueish Grey. This colour is maybe a bit lighter than it should be, but once the decals were on, and some wash added, it turned out ok. The instrument decals looked good, and after applying some Micro Sol, I gently stippled them down, so they conformed over the smaller switches and buttons.

Next, I did the wheels. These Armoury resin wheels are just fantastic, there is plenty of detail, which is very crisp. Each wheel comes in three pieces, the tyre, and each side of the hubs. These were all painted, and weathered separately, before assembling. The opening, for mounting to the undercarriage leg, just need a small amount of opening up for a good fit.



EFFORTION
COMPANY



HOBBYBOSS 1/48 SUKHOI Su-30MK2 TNI-AU

By Ian Gaskell



Turning to the weapons, I chose a loadout that I had seen on a reference photo of Indonesian Su-30s. That is 4 R-73 Archer and 2 R-77 Adder AA missiles. Plus a pair of Kh-29T Kedge air-to-surface missiles. These were kit-supplied versions, and went together very well.

They were all primed in black, then painted with Hataka Orange Line White. The R-73s were masked with thin tape and then the white was applied. Once painted, the tape was removed, to leave the 3 black ring markings on the missile body. There are decals to replicate this, but this method gives a much better look. After a quick gloss coat, a small amount of panel line wash was applied, to highlight the detailing. The clear lenses on the R-73s, and Kh-29s, had

some Tamiya Clear Smoke painted on the insides.

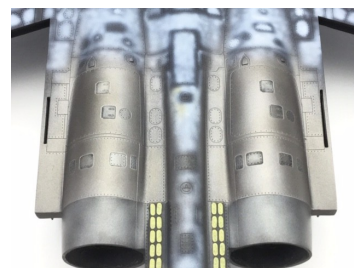
The missiles were followed by the pylons. These were black primed, then painted with Light Ghost Grey. When dry, a coat of gloss was applied, and then followed by the decals. Another gloss coat was applied, and then some panel line wash applied. This was then finished off with a matt coat.

All the undercarriage legs, speed-brake, and wheel-bay doors, were similarly done, with the addition of using a Molotow chrome pen for painting the oleos on the undercarriage. On the brake and bay doors, Orange Line Red was applied to the interior surfaces.

Next, I started on the Aires resin exhausts. The detail on these is very good, and they go together without any fuss. They only thing I did have to do, was to file down the flange, at the rear of the fuselage, where the exhausts fit. Again, I used black primer, and then used different dark metallic shades of Vallejo Metal Colours acrylics. They were glossed, and given a dark wash. With the excess wash cleaned off, a matt coat was used. The weathering was a combination of dry-brushed aluminium, and Tamiya Burnt Blue and Burnt Red, for the heat staining. Inside the exhaust, I built up the white, by several dry-brushed layers, with some light sand and tan colours, for the colouration.

Further into the build than I would normally do them, I now started the seats. After priming, the seat cushions were airbrushed with Orange Line Olive Green. Then some Dark Green wash used on the cushions. This was followed by some detail brush painting of some of the levers, etc, with Hataka Blue Line acrylics. Although Aires supply PE belts, for their seats, I decided I'd try some belts from Fine Moulds. These are made from an ABS type plastic, and can be moulded into shape very easily. They too, were painted with Blue Line paint. The detail on these belts is just outstanding. Under a magnifier, you can see the stitching on the belts. When a wash is applied to these, they really do stand out.

At this point, I put the fuselage together. The cockpit tub was cemented into the fuselage top half, and the front wheel bay into the bottom half. The two halves were then cemented together, and clamped and taped, to hold everything in place, while the cement dried. The fuselage fit is very good, and no filler was required. The intakes were added afterwards, and here, a small amount of filler was required, at the join with engine bay area.





HOBBYBOSS 1/48 SUKHOI Su-30MK2 TNI-AU

By Ian Gaskell

It was now time to start the painting. Firstly, the fuselage was primed with UMP black, as well as the horizontal and vertical stabilisers (which were left off for now). When the primer was fully dried, I set about the pre-shading, using Orange Line White. On the underside, particularly around the engine area, I used a couple of different browns, to give a dirty tone, once painted. The panels around the engines were masked off. The small access panels, here, were painted various lighter metal colours. These were then masked off themselves, and the rest of the area sprayed with a dark gunmetal. Masks for these small panels are included in the New Ware mask set. They also include masks for the dialectic panels, and the Chaff/Flare dispensers too.

With the pre-shading completed, I started on the camouflage. First, the Light Ghost Grey is airbrushed. Afterward, I started the masking, for the next

colour, using rolled-up pieces of Blu-Tac placed on the respective parts of the fuselage. Rather than spending huge amounts of time, filling the gaps between the Blu-Tac, I used randomly cut shapes of card. These I placed as I went around spraying the Mid Eagle Grey. I find this a much easier solution, saving both time, and masking tape. To finish off, a good gloss coat was built up, ready for the decals.

The decals were a mixture of the kit supplied ones, and those from the Caracal set. The Hobbyboss decals went down ok, but the Caracal decals are very thick. They needed extra Micro Sol applying, to get them to conform enough. These were sealed with a couple of coats of gloss.

Starting the weathering process, I used a dark grey wash, from Mig Productions, for the panels lines. The excess was wiped off. On the underside, some Fuel Stain and Oil Stain wash was used around the engine areas. The washes were then sealed with a matt coat. When that had dried, I used pastels to create some grime and muck, around the airframe. An additional matt coat was sprayed on, to finish off.

Now the undercarriage components were assembled, and fitted into their respective wheel-bays. The undercarriage doors were also attached. The missiles were attached to their pylons, and they were hung under the wings. The vertical, and horizontal stabilisers were attached next, along with the speed-brake, in the open position. Next, the seats were dropped into the tub, and the main canopy added. Lastly, the pitot was added to the nose, and all the clear parts were fitted, namely the navigation lights, wingtip lights, and theIRST at the front of the windshield.

For added interest, I made a couple of Plus Models crew ladders. Being plastic, these were very easy to assemble. They were painted, and some chipping added. There was also the 2-man crew, which were very nice resin figures, from Five Star models. They were hand painted, using Hataka Blue Line acrylics.

This example of the Su-30, is highly recommended. The only negative I experienced was the awful canopy seam, on the original canopy supplied. The replacement was fine, so I was just unfortunate to get a "Friday Afternoon" canopy. Overall, this kit has to be one of the best that Hobbyboss have produced. I found the fit to be very good, and the detailing is also very good. There is a large selection of weapons to choose from, giving a huge variety of load-out options.

Ian Gaskell





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Modelling A Loyal Lion City Debutant

by Mark Attrill



**Modelling a
Singapore Air Defence Command
(SADC) *
or
Republic of Singapore Air Force
(RSAF)
Hawker Hunter FGA.74S from
the new Airfix 1:48 Hawker Hunter.**

* Renamed as the Republic of Singapore Air Force (RSAF), an independent service within the Singapore Armed Forces (SAF) on 1 April 1975.

Introduction

The Hawker Hunter was the first jet fighter to serve with the Singapore Air Defence Command. All of the Hunters were refurbished aircraft, purchased in two batches covering three main variants. The first batch of 20 aircraft arrived at Tengah Air Base in 1970 to form 140 (Osprey) Squadron and consisted of 12 FGA.74 single-seat fighters, four FR.74A reconnaissance fighters and four T.75 two-seat conversion trainers. The second contract for 27 aircraft followed shortly afterwards and included 22 FGA.74B fighters and five T.75A two-seat conversion trainers, all of which arrived with a slightly different avionics fit and, in the case of the T.75A, a second 30mm Aden cannon. The additional deliveries allowed the SADC to form a second operational unit, 141 (Merlin) Squadron in 1972.

The RSAF Hunter fleet underwent a major upgrade programme in the mid-1970s which allowed the service to re-designate the aircraft as F.74S, FR.74A and T.75S respectively. The upgrade programme included an improved avionics fit and additional weapons stations, making the RSAF Hunters unique. The additional weapons stations were for a pair of dedicated missile pylons, inboard of the main undercarriage and similar to those found on Swiss and Omani Hunters but also a centerline hard-point for a modified Alkan Triple Ejector Rack (TER) with a capacity for two 1,000lb bombs or Matra 155 SNEB Rocket Pods.

No 141 Squadron was disbanded in 1981, with all of its Hunters re-assigned to an enlarged 140 Squadron, which relocated to Paya Lebar Airport in 1983. The arrival of the F-16A/B Fighting Falcon in 1990 resulted in the new fighter taking over the 140 (Osprey) Squadron 'number plate' and 141 (Merlin) Squadron was thus reactivated to become a Hawker Hunter unit once again. The remaining Hunters continued to serve in the frontline as part of the RSAF's air defence shield, until they were finally phased out of service in 1992. (*Introduction by courtesy of 'Defending Our Skies – The RSAF – A Full Spectrum Force' authored by member YK Goh and reviewed in the Asian Air Arms SIG Newsletter dated December 2018*).

The Airfix 1:48 Scale Hawker Hunter Kit

Since the arrival of the long awaited Airfix 1:48 scale Hawker Hunter F.Mk.6 (AX09185) in 2019, much has been written or commented upon in both the printed media and online forums about the kit and the more recent arrival of the 'straight wing' F.Mk.4/5 variant that was the subject of a second release (AX09189). These days modellers take great delight in analysing kit parts to see what other variants may eventually see the light of day and it does seem inevitable that Airfix will eventually follow up the release of these two early variants of the enigmatic Hawker Hunter with what is, arguably, the most popular variant, the FGA.9. Why do I say this? Well, for many the starting point for modelling the majority of export Hunters would be a kit of the FGA.9. Unfortunately, I suspect the mid-term and future release programme for Airfix may, like so many other things, be severely affected by the economic fallout from the ongoing COVID-19 crisis and our wait may be prolonged. The good news is that the aforementioned F.Mk.6 and F.Mk.4 boxings actually provide most of what the modeller requires to produce many of the export variants including the Singaporean FGA.74A or F.74S.





Modelling A Loyal Lion City Debutant

by Mark Attrill

Since so much has been previously written about the two Airfix Hunters, the main purpose of this short article is to outline my own experiences in building the kit with a series of build notes, together with some recommendations on aftermarket products that may be used to enhance the overall appearance of the basic kit and finally to attempt to highlight those modifications that would need to be made to the existing Airfix kits to reproduce the FGA.74 or its sub-variants.

The most obvious external difference between the F.Mk.6 and FGA.9 variant is the so-called 'pen nib' fairing that is located above the jet pipe and below the trailing edge of the fin/rudder. Airfix included these optional parts in their initial release due to the fact that one of the *original* decal options was going to be for an RAF Tactical Weapons Unit F.6A sub-variant, which also sported the pen-nib fairing. For some reason this option was dropped in favour of the highly colourful 63 Squadron F.Mk.6 that adorns the box lid of the kit but the earlier mentioned 'pen nib' fairing parts were retained in the box. In actual fact, prospective modellers should note that these parts appear in both boxings to date since the F.Mk.4 release includes all of the original sprues in addition to those parts required to produce the earlier 'straight wing' variants, without the distinctive 'dog tooth' leading edges to the main wing so either kit can be used for this project.



Build Notes

I started building my first Airfix Hunter some two weeks ago, albeit to fulfill another project, and I have to say that the progress I have made in that time is testament to the overall quality of the kit. I will readily admit that my normal build rate is glacial to say the least, do consider myself to be a modeller rather than an assembler but do also appreciate when a kit falls together given that my time for the hobby is somewhat limited at present. *It should be borne in mind that the notes below refer to the F.Mk.4 kit (AX09189) so any reference to build sequence numbers in the instructions may differ from those included with the earlier F.Mk.6 kit.*

I, potentially, complicated things for myself by incorporating an Aires aftermarket resin and photo-etched cockpit detail set into the equation (AIRE4773) – I do have a weakness (obsession?) for aftermarket products and while the Airfix parts are actually very nice I could not help myself. I did approach this part of the build with some trepidation since my previous experiences with Aires cockpits have not been too harmonious but I have to say they were spot on this time around. The resin parts fitted extremely well with a minimum amount of sanding required – mainly limited to the internal spar detail on the cockpit sidewalls on the main fuselage parts. I made one diversion from the Aires kit - I dispensed with the instrument dial film that should be sandwiched between the resin and photo-etched instrument panel parts since it proved to be too dark and utilized individual instrument dials from one of the excellent Airscale decal sheets for Early Allied Jets (AS48AJET). I also replaced the shell ejector ports (Parts C2/3) with resin replacements from Quickboost (QB48-880).

I deviated from the build sequence in the kit instructions three times - at this stage I was only 75% through the build! The first was to leave off the second air intake fairing (Parts A13/19 at Box 18) until after the fuselage halves were joined at Box 20. The fit of all of the parts is so precise that one can 'twist' and glue the second air intake fairing in place after the main fuselage has been assembled. The second deviation was to bring 'forward' the build of the rear fuselage assembly (shown at Boxes 21-25) and attach the rear fuselage sections to the respective fuselage halves first rather than to build the rear section as a separate part, complete with jet-pipe, to be offered up to the completed forward section (as shown at Box 25). The fit of the one piece

upper wing section, main undercarriage bay parts and lower wing panels are sublime, with the forward parts of the wings fitting around the air intakes almost seamlessly. Do remember to open up the holes in the lower wing panels for both the inner and outer stores pylons. The kit undercarriage bays are more than adequate with detail that really pops out after an application of aluminium and your favourite wash. *N.B. If using the F.Mk.4 kit do remember to totally disregard Boxes 34-37 (on Page 9) which cover the work necessary to reproduce the straight wing variant.*





Modelling A Loyal Lion City Debutant

by Mark Attrill

The next section is where one needs to start the minor modification work necessary to reproduce the FGA.74/F.74S. One of the least noticeable differences between the F.Mk.6 and FGA.9 variants was the semi-circular 'cut out' that was present on the outer edge of the main flaps. This cut out was necessary to allow the flaps sufficient clearance around the much larger 230 gallon drop tanks often fitted to the FGA.9 and export variants. There are many scale plans and photographic references available to show how big the cut-out was – it should be relatively easy to re-scribe the required portion from parts A16/17 using a rotary cutter, not forgetting to add the section removed to the lower wing sections and adjacent to the respective parts C64/65 if you are displaying the model with the flaps down.

Although it has been well documented elsewhere, it may be worth reiterating that one of the few weaknesses in the Airfix kit is the complete lack of detail on the inner surfaces of both the flaps and the underwing housings. This appears to be at odds with the detail featured elsewhere on the kit but may well be a deciding factor for any modeller wanting to display the flaps down although Eduard have now produced a photo-etched flying control surfaces set which addresses the issue, albeit for the F.Mk.6 variant only. Some filling or re-scribing of the panel lines may also be necessary – once again refer to photos or scale plans for more precise information. One other very minor issue that can be fixed at this stage is the shape of the trailing edge of the ailerons. Airfix did not get the shape of the outer edge quite right – again, reference to plan view photographs will confirm that very minor work with a file will result in reproducing the slightly inward rake of these flying control surfaces.

My third deviation from the kit instructions was to add the link collector fairings (Parts C15/16 and colloquially known as 'Sabrinas') and the airbrake housing unit (all at Box 64/65), so I could address any requirements for filler etc as the major part of the airframe was nearing completion. At this stage, I cannot move on without complimenting Airfix on the overall fit of parts, which now rival that which we have come to enjoy from the likes of Avantgarde and Tamiya. The use of filler has been absolutely minimal throughout and, in many cases, only due to my own ineptitude.

Attention now turns to the undercarriage and, once again, I have succumbed to the temptation of adding some aftermarket items. A major weakness, quite literally, of the Airfix kit is the rigidity of the main undercarriage legs (Parts C45/46) with anecdotal evidence revealing a tendency to buckle alarmingly under the weight of the completed model. This would suggest that the purchase of a set of Scale Aircraft Conversions' white metal replacement undercarriage parts (SAC48-367) may become obligatory. These are 'drop in' parts that replace the main undercarriage legs, jacks and the nose leg. The second set of aftermarket products I will use is the Quickboost undercarriage door set (QB48-889) which replaces all of the kit parts – to be honest, this is more a luxury than a necessity since the kit parts are very acceptable. I have also purchased a set of resin main and nose wheels from Barracuda (Czechmaster Resin also do a similar set) although, again, the Airfix parts look perfectly adequate and have the advantage of having separately moulded wheels and tyres which eases painting.

Moving on to some of the more specific items necessary to complete a SADC/RSAF example, one can source the outboard stores pylons from the existing Airfix kits since they are included in order to cater for future releases. The modeller will, however, need to reproduce the small bulges that appear over the outer wing panels on the FGA.74. These relate to the housings for the explosive bolt release mechanisms for the outboard stores pylons (Photo 1)



In spite of operating in a relatively limited amount of airspace, SADC/RSAF Hunters were rarely seen without a pair of 230 gallon drop tanks fitted. Neither these items nor the larger inboard stores pylons have been included in either of the two Airfix kit releases to date, since the earlier variants were not equipped or cleared to use the larger drop tanks so they must be sourced from elsewhere. The Academy/re-boxed Italeri kits do include a pair of 230 gallon drop tanks and the UK aftermarket company, Flightpath, also include a very nice pair of resin tanks in their "RAF Hunter F.6/FGA.9 Detail and Weapons Set" which was designed for the Academy/Italeri kit. I do also recall Flightpath marketing the drop tanks separately at one time but I understand both these and the aforementioned full detail set are now both out of production. Incidentally, the full detail set also included a nice pair of resin Matra 155 SNEB rocket pods too. In the short term I would recommend looking for the Academy or re-boxed Italeri kits and, given the release of the superb Airfix kits, I would imagine the retail value of the Academy offering will drop as modellers look to upgrade their collection.* When fitting the larger drop tanks, do not forget to include the additional strengthening braces between the outer surfaces of the pylon and the wing.

The inboard stores pylons, designed for the carriage of AIM-9 missiles will need to be scratch built using reference photographs to confirm the size and design of these fairly unique items.

* As if to prove the point, I have just acquired a second-hand 100% complete example of this kit for £19.99!



Walkaround the RSAF Hunter with AAA member Eric Moya



Modelling A Loyal Lion City Debutant by Mark Attrill



Fortunately these pylons do not appear to be too complex and are similar in shape to some of smaller stores pylons fitted to both the RAF Harrier I and Harrier II variants* and have standard LAU launch rails fitted to them (Photos 2 & 3).

* Harrier I (BAe Harrier GR.1/3; Sea Harrier FRS.1/FA.2)
& Harrier II (BAe Harrier GR.5/7/9)



The outer wing pylons can either be left *sans stores* or equipped with a pair of Matra 155 SNEB rocket launchers. I have also seen photographs of a 140 Sqn F.74S, (Serial No 527) which resides in the RSAF Museum, with the outer pylon sporting a second AIM-9 fitted to what appears to be a standard LAU launcher rail with an intermediary adapter pylon (Photo 4). This particular aircraft also features the rarely seen centerline stores pylon with the Alkan TER fitted (Photos 5 & 6).



Other airframe additions are fairly minor and can be replicated with some rudimentary scratchbuilding or sourcing of parts from the spare box and most are associated with the various changes in external appearance that were associated with avionics upgrades. Care must, therefore, be taken with identifying the specific type of blade aerial fitted to the upper fuselage just behind the cockpit canopy.



Early examples included a 'standard' swept blade antenna as seen on other export variants: but later in their service career, RSAF Hunters sported a much larger, Gloss White antenna (Photo 7) together with an oblong shaped black fairing further forward (Photo 8).



On the underside, there is a smaller, swept, semi-matt Black blade aerial adjacent to the nose undercarriage leg on the starboard side (Photo 9) and an oval shaped flat aerial fairing to the rear of the link collector fairings (Photo 10). The F.74S also acquired a 'towel rail' type aerial array on the rear port fuselage adjacent to the trailing edge wing root (Photo 11).





Modelling A Loyal Lion City Debutant

by Mark Attrill

As I write this (in mid March 2020) the most difficult aspect of building a SADC/RSF Hawker Hunter will be sourcing suitable decals in 1:48 scale. To date, the only decals I have managed to find are included in the Italeri Limited Edition re-issue of the Academy kit from 2012 (Kit No. IT2708), which includes decal markings for Hawker Hunter F.74S Serial Number '527' when operated by 140 (Osprey) Squadron and, coincidentally, the aircraft featured in the majority of the walkaround photographs highlighted with this article. From a positive perspective, *if* you can find this kit for a reasonable price, it is no exaggeration to state that it will be worth it for the 230 Gallon Drop tanks and decal sheet alone! The Cartograf printed sheet rivals many aftermarket sheets and also offers a wealth of other options, including a very nice Indian Air Force F.56 operated by 14 Squadron. The only drawback with the decal sheet may be a small concern with the size of the 140 Sqn insignia which appears to be a little larger than the original (See Photo 12).

Reproducing an earlier SADC example would be easier since they only featured Red/White/Red roundels and fairly simple serial numbers with no individual Unit or Squadron insignia. It therefore almost goes without saying that my good friend and fellow AAA SIG colleague, CL Kwek of Miliverse Decals fame needs to address the issue and bring us a high quality sheet of Hawker Hunter decals to complement the other great subjects he markets in this range ! *(Ed. Sounds like a hint to me!)*



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See overleaf for Mark's list of available kits and after-market accessories



Click the image for a fascinating 16 minute video as the first group of RASF Hunter pilots recall their training and experiences.



Would you like to share a flight with a Hunter instructor? Click the image and get into the passenger's seat

I'd like to give a big welcome to 32 new members

Welcome to: Jerone Nijmijer, Rinus Middelaar, and Pieter Bastiaans from the **Netherlands**; Scott Collingwood from **Australia**; Stephen Bierce, Kevin Ingham, William Sanders, Navin Bala, Christopher Polly, Ryan Relich and Greg Kittinger from the **USA**; Gabriel Yu, Henry Tho and Alex Huang from **Singapore**; Avm Singh from **India**; Jerome Ovigne from **France**; Bob Ricketts from **Bermuda**; Reza Ramadahn, Nugroho Prio Hutomo and Sinang Aribowo from **Indonesia**; Stefano Vettorazzi from **Belgium**; Alessandro Salerno from **Italy**; Son Bui from **Vietnam**; Shahriyar Islam Shakil from **Bangladesh**; Deryk Walker and Shihhua Lin from **Taiwan**; and finally, Gary Hagermann, Glenn Ashley, Graham Summers, Mike Bate, Dave Fleming and Gay Campbell from the **UK**.

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Modelling A Loyal Lion City Debutant

by Mark Attrill

As always, I include a short list of the recommended kits/aftermarket accessories with which to complete an example of the SADC/ RSAF Hawker Hunter FGA.74/F.74S, ahead of Airfix releasing an FGA.9 kit and the likes of Miliverse or Xtradecal covering the Singaporean examples in their ranges. I do not profess to be an expert on the Hawker Hunter or the FGA.74/F.74S sub-variants so any errors or omissions on my part are of my own volition and I welcome readers' comments, corrections or observations for our collective edification.

STOP PRESS: I've been notified by Alistair Maclean of Aerocraft, who already produce some excellent resin/brass correction sets for the Airfix Hawker Hunter kits, that he's just released a Hunter FGA.9 Export Conversion Set and a pair of resin 230 Gallon Drop tanks. These sets will undoubtedly make the reproduction of the RSAF variants considerably easier. Alistair is sending advance copies to enable me to review these new parts, (along with the entire Aerocraft Hawker Hunter range), in the June/July edition of the AAA SIG Newsletter.

Mark Attrill

Make	Reference #	Item	Notes
Airfix	AX09185	Hawker Hunter F.Mk.6	Original Issue – Includes parts to reproduce 'pen nib' exhaust fairing and outer wing stores pylons (2019)
Airfix	AX09189	Hawker Hunter F.K.4	Re-release of original full kit which includes additional parts for the F.Mk.4/5 'straight wing' variant with narrow jet pipe. (2020)
Italeri	IT2708	Hawker Hunter F.Mk.6/FGA.9	Re-issue of the original Academy kit. Includes 230 gallon drop tanks and Cartograf printed decal markings for an RSAF FGA.74 operated by 140 (Osprey) Squadron.
Aerocraft	N/A	Hawker Hunter Wing Pylon Set	Resin set offering corrected inner and outer stores pylons for the Airfix Hawker Hunter kits
Aerocraft	N/A	Hawker Hunter Undercarriage Set	Turned Brass undercarriage legs/ jacks for all Hunter variants and a resin replacement nosewheel
Aerocraft	N/A	Hawker Hunter FGA.9/Export Conversion Set	Resin set including corrected ailerons and flaps and air brake with correctly rendered internal detail – IMMIMENT RELEASE – MAY 2020
Aerocraft	N/A	Hawker Hunter FGA.9 230 Gallon Drop Tanks	Resin Drop tanks – To be used in conjunction with Wing Pylon Set - IMMIMENT RELEASE – MAY 2020
Aires	AIRE4773	Hawker Hunter F.Mk.6 Cockpit Detail Set	Full resin & photo-etched set to reproduce F.Mk.6 cockpit. Suitable for later single-seat variants
Airscale	AS48AJET	Instrument Dial Decals – Early Allied Jets	Can be used to replace the instrument dial film in the Aires Cockpit Detail Set (AIRE4773) or to furnish the kit supplied instrument panel.
Barracuda	BCR48406	Hawker Hunter Resin Wheel Set	Drop in replacements for all Hunter variants
Czechmaster	CMKF4387	Hawker Hunter F.Mk.6 Cockpit Detail Set	Full resin set with acetate sheet instrument dial sheet to reproduce F.Mk.6 cockpit. Suitable for later single-seat variants
Czechmaster	CMKF4388	Hawker Hunter Undercarriage Bays	Resin replacement parts for the Main and Nose undercarriage bays
Czechmaster	CMKF4392	Hawker Hunter Resin Wheel Set	Drop in replacements for all Hunter variants
Quickboost	QB48-880	Hawker Hunter 'Air Bottle Charging'	Incorrectly labeled – These are in fact replacement cannon shell ejector ports
Quickboost	QB48-889	Hawker Hunter Undercarriage Covers	Full set of resin replacement undercarriage doors
SAC	SAC48-367	Hawker Hunter F.6 Landing Gear	White metal undercarriage legs/ jacks for all Hunter variants



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Serial, RBF Fantrainer 400

Type	Thai Serial	s/n	Buzz	Sqn / Wing	Base	Delivered	Withdrawn	Remarks
400	BF18-1/27	003	4001	?	RTAFB Thakli	8. 1984	ca. 1994	
400	BF18-2/32	021	02	?	RTAFB Thakli	1989	ca. 1994	
400	BF18-3/32	027	03	?	RTAFB Thakli	1989	ca. 1994	
400	BF18-4/32	022	04	?	RTAFB Thakli	1989	ca. 1994	
400	BF18-5/32	023	05	?	RTAFB Thakli	1989	ca. 1994	
400	BF18-6/35	024	40236	402 Sqn 4 Wing	RTAFB Thakli	1992	ca. 1994	
400	BF18-7/35	025	07	?	RTAFB Thakli	1992	10. 1993	Crashed
400	BF18-8/35	028	08	?	RTAFB Thakli	1992	ca. 1994	
400	BF18-9/35	029	09	?	RTAFB Thakli	1992	ca. 1994	
400	BF18-10/35	030	10	?	RTAFB Thakli	1992	ca. 1994	
400	BF18-11/35	031	11	?	RTAFB Thakli	1992	ca. 1994	
400	F18-12/??	032	12	-	-	-	-	Uncompleted airframe
400	BF18-13/??	033	13	-	-	-	-	Uncompleted airframe
400	BF18-14/??	035	14	-	-	-	-	Uncompleted airframe
400	BF18-15/??	034	15	-	-	-	-	Uncompleted airframe
400	BF18-15/??	037	16	-	-	-	-	Uncompleted airframe
400	BF18-??/??	038	-	-	-	-	-	Uncompleted airframe
400	BF18-??/??	039	-	-	-	-	-	Uncompleted airframe
400	BF18-??/??	040	-	-	-	-	-	Uncompleted airframe
400	BF18-??/??	041	-	-	-	-	-	Uncompleted airframe

Serial, RBF Fantrainer 600

Type	Thai Serial	s/n	Buzz	Sqn / Wing	Base	Delivered	Withdrawn	Remarks
600	BF18A-1/27	002	40211	402 Sqn 4 Wing	RTAFB Thakli	8. 1984	27.12.1994	Crashed
600	BF18A-2/30	006	?	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-3/30	007	03	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-4/30	008	04	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-5/30	009	40215	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-6/30	012	40216	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-7/30	013	?	402 Sqn 4 Wing	RTAFB Thakli	1987	12. 2. 1992	Crashed
600	BF18A-8/30	014	40217	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-9/30	015	40221	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-10/30	016	40222	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-11/30	017	40223	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-12/30	018	40224	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-13/30	019	40225	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	
600	BF18A-14/30	020	?	402 Sqn 4 Wing	RTAFB Thakli	1987	8. 1989	Crashed
600	BF18A-15/32	004	40226	402 Sqn 4 Wing	RTAFB Thakli	1987	ca. 1994	



CHENGDU J-20

Modelled in 1/72 by Sean Chua

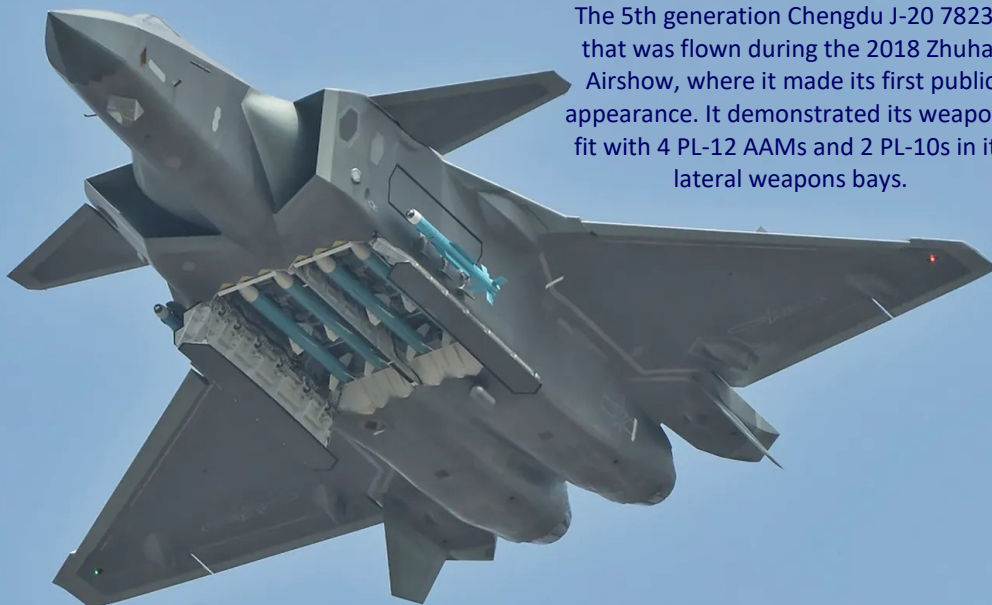
The 5th generation Chengdu J-20 78233 that was flown during the 2018 Zhuhai Airshow, where it made its first public appearance. It demonstrated its weapons fit with 4 PL-12 AAMs and 2 PL-10s in its lateral weapons bays.



1/72 Dream Model

This 1/72 DreamModel Chengdu J-20 kit wears the decals of the 5th generation aircraft '78233'. The camouflage scheme and the colours chosen were based on photographs taken during this appearance and on internet photos. The box colour scheme instructions were neither accurate nor complete.

It was built out of the box. The fitting was generally good with only some areas needing filler. Overall a decent kit to build for an operational J-20.





AURI MiG-21 F-13 in 1/72 by Nughoro Prio Hutomo



Kit: Revell; Scale: 1/72; Decal : Cap Jempol Metal [CJM] Decals (locally produced decals specialising in Indonesian Air Force)

On opening the box, there are 3 sets of sprue, moulded in silver plastic, and one clear sprue for the clear parts. It has nicely engraved panel lines and rivet detail is superb. Decals are supplied for East Germany, Russia and Finland.

After fitting the seat into the cockpit, I assembled the exhaust, main wheel housing, added a nose weight and then closed the fuselage. The fitting is very good, with no gaps so almost no putty was needed—just minimal shaving of the excess glue and a light sanding. However, a problem arose when glueing the nose cone to the fuselage—the front section is inaccurate, it should be a smooth slope from windscreen to the nose rim, but is not! So I corrected it using Tamiya putty to give the necessary sloping appearance thereby giving the front fuselage the correct look.

I took off the IFF antennae since the Indonesian Air Force uses a different type, and replaced it, in the middle of the body, behind the cockpit, with a single antenna made from sprue. I sanded the lower fuselage seams before adding the cannon fairing and fitting all of the air scoops.

The wings fitted the fuselage very satisfactorily. I decided to depict an operational, armed machine, so cut off the dummy missiles and smoothed the launchers. Then I used a more accurate pair of missile from my spares box. The undercarriage legs fit well but the main doors were not so co-operative! I think they are a bit too long, when fitted to the main landing gears, so I trimmed the tops a little and reshaped them. But beware that the front leg is a bit fragile. I posed the front airbrake open and the rear closed, then I add the centreline fuel tank.

For painting I used Model Master Aluminium for the whole body. The rear end area was painted using Mr Color C61 Burnt Iron; nose cone and dielectric panel were painted with Mr Color C340 Field Green. The red lightning flash was painted by using the mask supplied by CJM Decals (for the front) and I just followed the shape all the way to the rear end—the red was Tamiya XF 7 Flat Red.

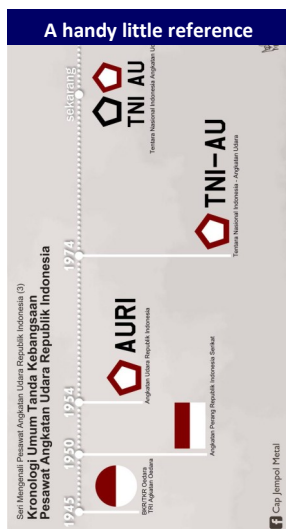
I varnished with Mr Color GX 100 Super Clear, then washed the panel lines with a dark acrylic poster colour. After wiping clean the black panel line, I applied the excellent CJM decals, which consist off two parts, the white base and the red and black top, so I put on the white base first and then, when dry added the red on top of it. After it was all dry, I add another coat of Mr Color Super clear and then a light shading on some of the panel lines by applying chalk pastel with a soft brush. Finally, I applied a light coat of Mr Color C182 Flat Clear.

Overall this is a great kit, with excellent detail. The only (easily remediable) problem being the nose profile.

Nughoro Prio Hutomo



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