

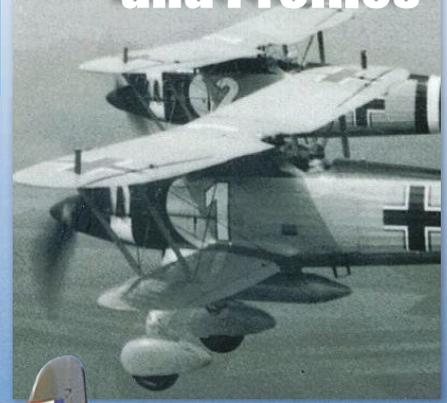
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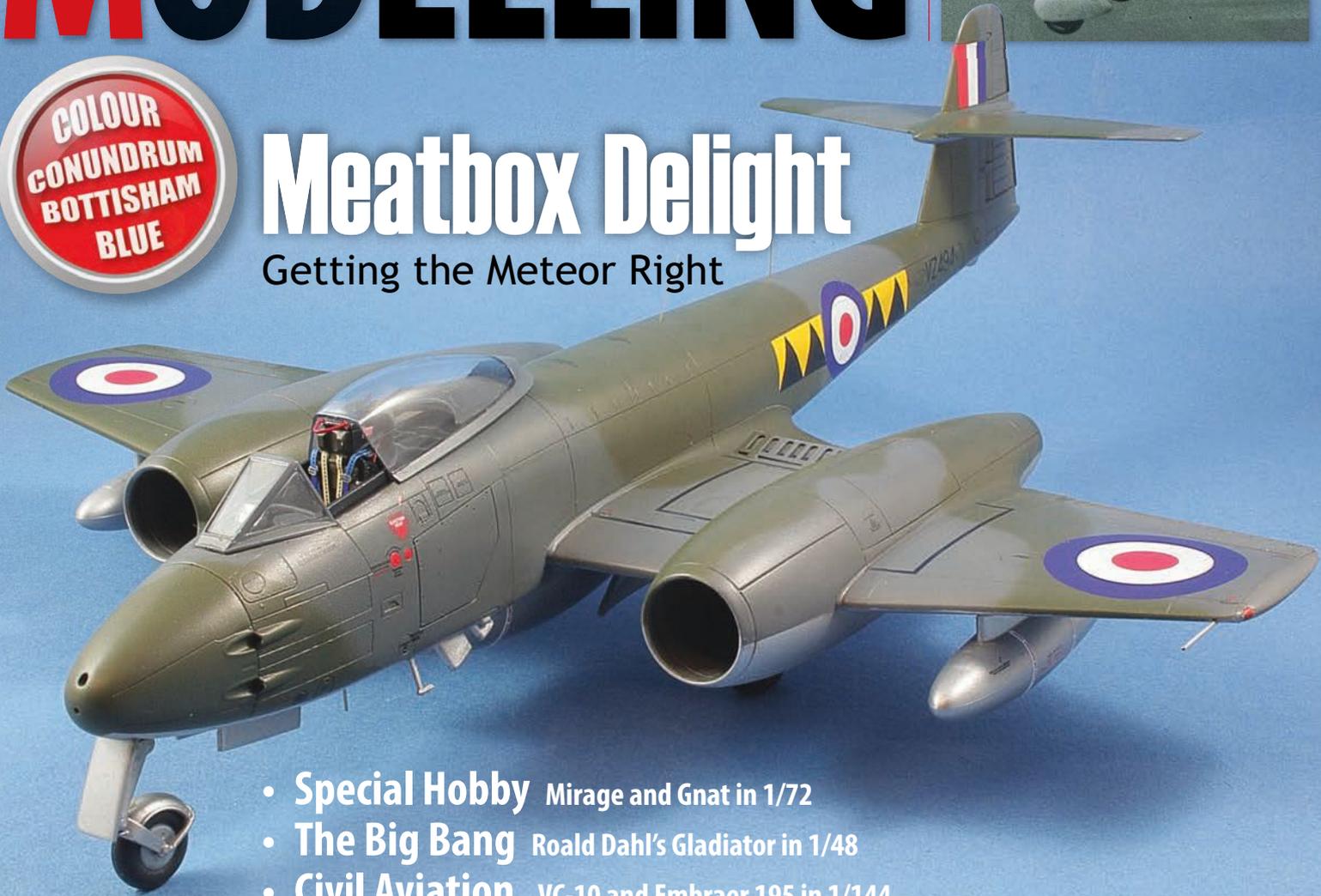
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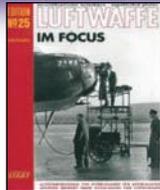
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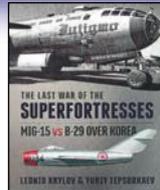
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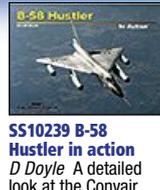
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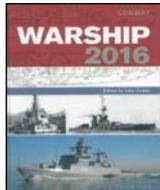
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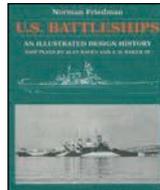
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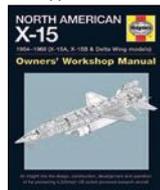
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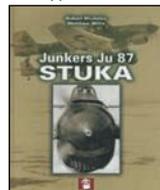
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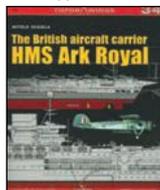
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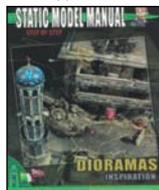
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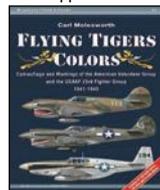
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SH32052 Tempest Mk. V Hi-Tech 1/32

+ EXTRA PARTS!

(INCLUDED: resin cast parts of interior equipment, etchings for interior and exterior of the model, pre-cut masks (clear parts + wheel tyres), clear parts, wheels, decals for 5 camouflages + labels)



RESIN CAST PARTS OF INTERIOR EQUIPMENT

- pilot's seat
- control column
- throttle control quadrant
- pedals and footboards



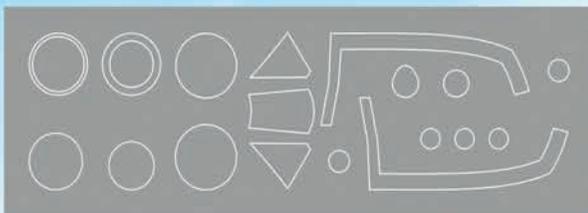
GUNSIGHTS

(both types used in the Tempest)



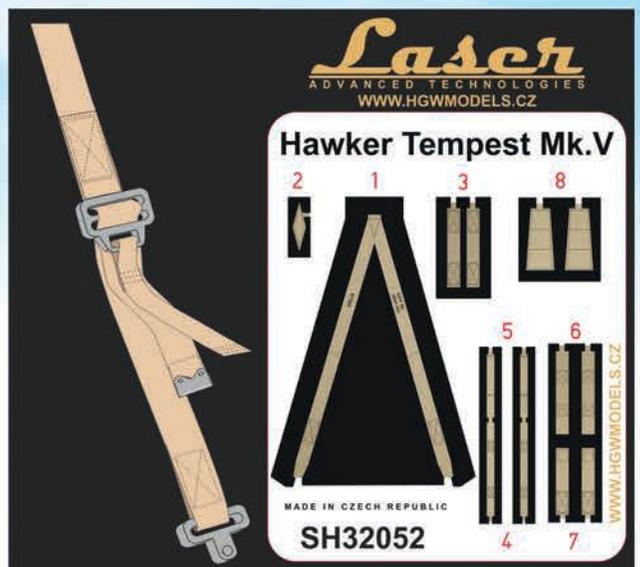
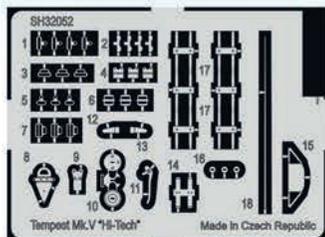
MAIN U/C WHEELS

(early and late style) + TAILWHEEL



PRE-CUT MASKS (clear parts + wheel tyres)

ETCHINGS FOR INTERIOR AND EXTERIOR OF THE MODEL



HGW LASER-CUT MICROFIBER SEATBELTS



Beau Chasseur

Special Hobby's New Mirage F1 in 1/72

By Peter Doyle



Mirage F.1CG

Kit No: 72214

Scale: 1/72

Type: Injection Moulded Plastic

Manufacturer: Special Hobby
Hannants/Squadron
www.cmkkits.com

Perhaps competing with the Hawker Hunter for the accolade of the most visually pleasing design of postwar jet fighter, Marcel Dassault's elegant Mirage F1 first took to the air as a private venture in 1966. It was developed from the Mirage III and was powered by a SNECMA Atar 9K engine. In French service the initial version, the Mirage F1C (C for *chasseur* or fighter) was intended to replace the AdlA's Mirage IIICs, Vautours and Super Mystère B2s and entered *Armée de l'Air* service in late 1973 when Mirage F1Cs joined EC (*Escadron de Chasse*) 2/30, Normandie-Niemen, at Reims where they replaced Vautour IIINs. In 1975 it was the turn of EC 2/5 and 1/5 at Orange where Mirage IIICs were replaced whilst EC 3/5 was upgraded during 1981. Then in 1976 the Super Mystères of EC 3/12 at Cambrai were replaced followed by EC 1/12 in 1978 and EC 2/12 in 1980 and finally EC 1/10 at Creil started to receive aircraft in 1981 to replace Mirage IIICs. These were soon transferred to Reims to combine with EC 30. Reportedly about 162 F1Cs were built of which the last seventy nine were F1C-200s, which could be distinguished by the addition of a flight refuelling probe and an airframe number in the 200 series. Thereafter the Mirage F1B was developed, twenty of which entered service in the early 80s spread across all F1 squadrons (B for *biplace* or two seater).

Subsequently the need for a dedicated tactical reconnaissance aircraft was recognised

and the F1CR was developed. Two different camera housings beneath the nose were commonly seen catering for panoramic and vertical cameras plus a laser rangefinder. These entered service in 1983 with ER 2/33 (*Escadron de Reconnaissance*) at Strasbourg where they replaced Mirage IIIRs, followed by co-located ER 1/33 and ER 3/33 in 1988.

As the Mirage F1Cs of EC 5 and EC 12 started to be replaced by Mirage 2000Cs in the late 1980s, surplus F1C-200s were converted into Mirage F1CTs to undertake the ground attack role in order to replace Mirage IIIEs and Mirage Vs. The F1CT featured the addition of a laser rangefinder beneath the nose plus various other systems and weapons modifications to enhance ground attack performance. They first entered service with EC 1/13 replacing Mirage IIIEs at Colmar in 1992 and EC 3/13 in 1993 replacing Mirage Vs.

At this point some extraordinarily complex squadron and base reshuffling started to take place initially in 1993 and 1995, and is worthy of an article in itself. This saw ER 33 taking over the former EC 30 Mirage F1Cs and F1C-200s at Reims whilst keeping its own F1CRs but moving them in from Strasbourg to Reims. Coincidentally EC 30 took over operation of EC 13s F1CTs at Colmar. The final F1CRs and F1C-200s retired in June 2003 and at that point EC 3/33, still at Reims, took on some F1CTs from Colmar to undertake the Mirage F1 OCU role. Then in July 2005 EC 3/33 disbanded and its F1CTs returned to Colmar and were assigned to EC 1/30 which now took over the OCU function. In 2009 Colmar closed and all remaining F1CRs, F1CTs and F1Bs were gathered together under the ER 33 banner operating from Reims until 2011 and then from Mont de Marsan. The last F1CTs stood down in October 2012 and finally only ER 2/33 with F1CRs and F1Bs remained until that, too closed down in April 2014. Four aircraft were then kept

airworthy solely for the Bastille Day flypast on 14th July 2014.

As well as French service many Mirage F1s were also exported to countries too numerous to mention, including Spain and Greece. Additionally there were F1A attack versions used, not least by South Africa.

Over the years there have been a number of passable Mirage F1 kits starting with a Heller one in the late 1970s which was followed by an Airfix kit shortly afterwards. Hasegawa came next with a good kit that continues to be reissued, including as an F1CR, and which has also been released by Revell. Finally ESCI released a kit, popular at the time because its recessed panel lines but not especially accurate.

But now we have the Special Hobby kit. I have to say that this, without a shadow of a doubt, is undoubtedly the best 1/72 kit of a post World War II subject that I have made in a long time. It is accurate, fits together well, has a wealth of detail and can be completed as pretty well any single seat version of the F1 from the sprues included. The kit has excellent mouldings with crisp refined panel lines. Parts are supplied for the F1C, the F1C-200, the F1CR and the F1CT and presumably cover most export versions too. There are also parts for two different F1CR camera fairings for the F1CT laser rangefinder fairing, and three fins of which one is without ECM sensors, one has the early round pointed style of sensors and one has the more recent chisel edge style as fitted to the F1CT and later to some F1CRs. Martin Baker Mk4 ejector seats are provided and there are Mk10s for the F1CR and F1CT. There are also three different instrument panels.

A splendid selection of stores is offered including pairs of Matra R550 Magic missiles of three different types, a pair of Matra Super



F1C-200, 5-NR number 238 of EC 1/5, subject of this article seen at its home base of Orange-Caritat in 1982. The missiles are acquisition or training rounds



The finished model as F1C-200 of EC 1/5. NB the correct designation for the Mirage F1s is F1C, F1CT etc. not F.1C, F-1C or F.1CT etc. as seems to appear on most kit boxes



530Fs, two different varieties of Barracuda ECM pods, a Phimat pod, a pair of Paveway IIs, a Raphael TH reconnaissance pod, a Thales ASTAC elint pod, an RP35P optical reconnaissance pod and a pair of 1,300l drop tanks. Finally there are two pairs of additional stores pylons in resin. The initial three releases are for Greek and Spanish single seaters and for a French F1B. Generally everything is very well fitting and belies the fact that this is a short run kit.

As all the parts I needed were included I chose to make a Mirage F1C-200 from the early 1980s, based on photos taken at BA115 Orange-Caritat in 1982. I started as recommended with the cockpit tub. The instrument panel, coaming and rear bulkhead fit together well and can be fitted easily into the fuselage halves. At the same time the nose wheel bay was added as well as the jet pipe assembly. I chose to use a resin jet pipe and exhaust nozzle from CMK, which were specifically designed for the Special Hobby F1 kit. There's not a lot wrong with the kit items but the resin is just slightly better detailed.

The fuselage halves went together well and once that was done the cockpit was painted, mainly in black. The four part Martin Baker Mk 4 and Mk10 ejector seats provided are accurate replicas and for my F1C-200 I needed the Mk 4 seat. It didn't however have belts moulded in or otherwise supplied nor ejection handles and so to save time I chose to use the resin seat newly released by CMK, which included a photoetch fret containing both. Seats were black with dark green cushions and mainly tan belts, and the ejection handles were of the double loop type.

Following this various other parts of the fuselage were added including the intakes, the fin plus its aerials either side, the tailplanes, the ventral strakes and the panel

on the underside of the intakes that included the air brake detail. Air brakes were normally closed on parked aircraft and flaps were retracted, all of which made life easier for construction of my own subject. The tailplanes were more often than not positioned with the leading edge angled upwards to some varying extent. To do this requires the front locating pin to be removed but is otherwise easily achieved. I always like to imagine that it's the result of the pilot, as the engine shuts down, pushing the control column forward to make his subsequent egress from the aircraft a little easier.

Having cemented together the wings, which fitted without any problem, I joined together the nose-cone halves, which in my case included the component with the refuelling probe, it being an F1C-200 that I was building. Once assembled the nose-cone was fitted to the nose and this required a good deal of refining and careful adjustment of the mating surfaces to fit seamlessly. To prevent tail sitting I found that the nose-cone filled with my usual mix of Blu-Tack and lead shot was perfectly sufficient.

The front main undercarriage doors were normally seen closed although it was not uncommon to see them open for maintenance access, often in association with an open canopy. I was planning to fit them closed and started with the front upper doors. These were a good fit in the closed position, albeit the lugs which on the actual aircraft locked the upper doors to the lower needed to be removed. Next I fitted the delicate single piece main undercarriage assembly and the single separate strut. Although seeming a little fragile the assembly had a realistic scale appearance, was plenty strong enough and had the advantage that everything was set at the correct angle. Once the legs were in place the front lower doors could

also be fitted, again in the closed position. This then left the rear main doors to be added in the open position at a later stage.

The nose undercarriage leg followed together with the door that attached to the front strut. The nose wheel main door was fitted closed. For enhanced detail resin replacement wheels from CMK were fitted. From a study of numerous photos it became evident that the sit of the aircraft varied from more or less level to slightly nose high. This was no doubt a result of what fuel and stores were being carried, with lighter loaded aircraft tending to be a little nose high and more heavily loaded aircraft less so. As something of a generalisation F1Cs and F1C-200s were often seen to be nose high and F1CTs less so. The kit provides for the more heavily loaded possibility and to represent my F1C-200 I removed the nose wheel oleo and replaced it with a 4mm longer piece, which I made up from the spares box. Some gentle bending of the scissors link was required to widen the gap so the new piece would fit in.

Next the accurately fitting thin clear canopy and windscreens were attached with liquid cement being used where there was no danger of damage being caused by capillary action drawing it up inside. Glue 'n' Glaze was used elsewhere, and then Milliput was used to fill any gaps between the canopy and the fuselage. I also used Glue 'n' Glaze to fill the glass covered emergency access points behind the windscreens rather than the fiddly transparent components.

Before I added the final details such as aerials and wheels I sprayed the fuselage underside in Alclad 2 Semi Matt Aluminium to represent the aluminium paint of the original and painted the upper surfaces in my own *Bleu de Mirage* mix. Most of these small parts have been cleverly thought out including the trio of pitots around the nose, which each have a large circular

base that fits into a circular recess in the fuselage and results in a perfect scale appearance. Finally, on the matter of pitots, be warned that the main nose pitot is very vulnerable. I bent mine three times before it finally broke off completely at which point I decided to use a metal replacement from Master.

Painting and Finishing

Several things struck me as I trawled through over three hundred photos of Mirage F1s taken over the last forty years whilst trying to find inspiration for finishes for the completed model. The first was how appalling the British summer weather usually was, with leaden skies and often rain, not helped by my then primitive camera equipment resulting in pictures totally unsuitable for publication! This contrasted markedly with the weather and light in France and the much better photos taken there. The next thing which I hadn't really noticed at the time, was the huge variety of different squadron fin markings on Mirage F1s. It was also evident that markings had toned down in stages over time from the extravagant fin markings of the early F1C years with yellow outlined roundels and red trimmed intakes to rather smaller and more subdued markings by the mid 1990s. Also evident were different equipment fits over time. Obvious externally was the lack on original aircraft of both the fin mounted RWR antennae and the IFR probes, some of which aircraft were still the same in the early 2000s. Subsequent F1C-200 aircraft were built with both RWR antennae and IFR probes. As time progressed a few standard F1Cs also appeared with RWR antennae. Then there was the different chisel shape of the RWR aerials of F1CT aircraft and these were eventually retrofitted to F1CRs in the mid 2000s. Finally there was the apparent colour difference between F1CRs and the

F1CT 30-QD 239 photographed at Fairford in July 1999. Of note is the lack of the nose up attitude of the F1Cs, the dark appearance of the camouflage and the matt green nose-cone



F1CR 118-CY number 660 of ER 2/33 seen at Fairford in July 2013. The contrast in camouflage with the F1CT 30-QD can be seen. A change was made in the early 2000s altering the aircraft code to indicate the base number BA118 Mont de Marsan instead of the number of the Escadre, which would be 33. Fortunately this change has recently been reversed. This aircraft features the chisel shaped ECM fairings on the fin which was a very late modification



An F1C of EC 3/33 seen at Biggin Hill in September 1996. It is a standard F1C and hence without a refuelling probe and also of note is the absence of fin mounted ECM pods. The slightly nose high attitude common on F1Cs can also be seen

seemingly darker F1CTs even though both were camouflaged in the same grey and green. F1CTs had a wraparound camouflage whereas the F1CRs had light grey undersides, in place of the F1C's silver. Added to that F1CTs often featured a matt dark green nose radome instead of black and also had the green camouflage curving down around the fuselage to meet the radome. On the F1CR the black radome adjoined a grey area of the upper surface camouflage and I suspect that this plus the lighter undersides gave an overall lighter look to the aircraft. That said, the extension forward of the dark green on the side of the noses started to appear in F1CRs too in the mid

2000s. F1Cs, F1C-200s and F1Bs were finished with upper surfaces in semi gloss *bleu francais Defense Arienne* also commonly known as *Bleu de Mirage*. Undersides were silver. These colours were used throughout the life of the three types and were still in use on the final F1Bs withdrawn in 2014. Formally it was referred to by its manufacturer's colour code of Celomer 6345-2617 and sits somewhere between FS25189, FS25190, FS25193 and FS25177 with the first two predominating. I had previously purchased paint labelled as *Bleu de Mirage* but found it to be inaccurate so I made up my own mix.

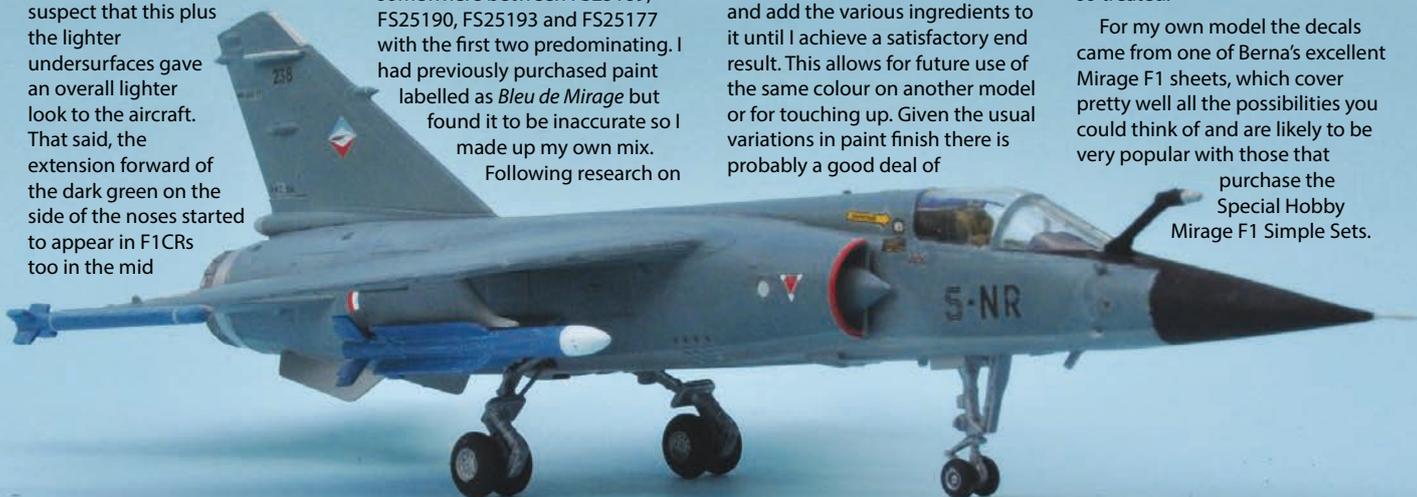
Following research on

French discussion groups and having also looked closely at some one hundred and fifty photos taken in varying light conditions, I settled on a mix of two parts Humbrol 230 PRU Blue and one part Humbrol 87 Steel Grey with an adjustment made by adding a few drops of Humbrol 144 Intermediate Blue. The Intermediate Blue doesn't sound like much but it makes a significant difference. When making my own paint mixes I usually clean out an old paint tin and add the various ingredients to it until I achieve a satisfactory end result. This allows for future use of the same colour on another model or for touching up. Given the usual variations in paint finish there is probably a good deal of

latitude over what might be considered to be accurate. The same colour was also used on Mirage IIICs in their later years.

In more recent times, since about 2000, the pale rather faded looking French blue in the centre of the roundels appears very slowly to have been replaced by a slightly darker, brighter, medium blue. However even at the end in 2014 only about half of the remaining F1CRs and F1Bs seem to have been so treated.

For my own model the decals came from one of Berna's excellent Mirage F1 sheets, which cover pretty well all the possibilities you could think of and are likely to be very popular with those that purchase the Special Hobby Mirage F1 Simple Sets.



THIS MONTH'S FEATURES:

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Getting the Meteor Right
By **Rick Greenwood**

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Modelling an IAF Shahak in 1/32
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Mk 4 Makes Way for Merlin
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- 28. **Pulpit Fighter**
Converting the Airfix BE2c to a BE9
By **Dave Hooper**

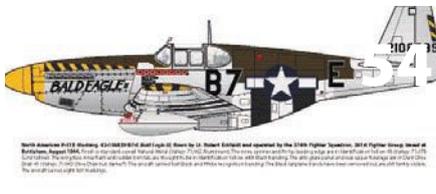
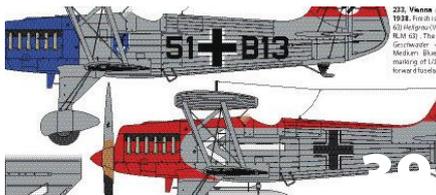
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Trains and Boats and Planes



Trains and boats and planes have all featured large in my firmament this month and I am pleased to confirm that, just as the poet asserted, 'they mean a trip to Paris or Rome for someone else, but not for me.' I remain resolutely here at my post, besides which my preferred destination would have been Cologne, and the Northern end of Gremberg marshalling yards, but that is my business and will be of little interest to readers here.

Trains have featured because the sun came out and lured me to the line side to indulge in my other pastime, photographing mainline diesel hauled freight trains. Having slyly mocked the notion in the past that the onset of summer would lure us away from the modelling bench, where in previous years I have remained unmoved by the climate, I was indeed tempted out by that sunny spell at the start of May only to be asked several dozen times by passers-by, 'Is the Flying Scotsman coming?' The response 'I hope not as I am awaiting a Class 60' seems to have left them nonplussed but I am moved to wonder if aviation photographers have this same response when they are seen in public places pointing a camera at the sky: 'Oooh is a Spitfire coming?' The problem of course is that public perception of both hobbies is ill-informed and one either has to put up with it or try to practice one's chosen discipline in far-flung places far from the maddening crowd.

Boats of course you will have noticed occupying the four centre pages of this issue. This section has been included as a response to feedback on our Facebook pages, where every time a ship model is posted a huge and enthusiastic response is generated. The piece has been collated and put together on an occasional basis and you will note that none other than Mr. Neil Robinson is a contributor. That a great deal of product is available in 1/72 and 1/144, allowing some interesting projects to be considered by aviation modellers working in those scales, is a direct result of the industry recognising that a great many of us do choose other subjects besides aircraft, so we present the *Shipping Forecast* on the basis that as many readers will be interested in these pages as are likely to be in any other specific scale or genre of aircraft. Of course if you are not then we have cunningly positioned it in the middle of the magazine so aviation purists can simply remove it...

I would stress by the way that we are not calling this section a supplement. No extra pages have been added but what I have done is negotiated with the powers that be for an increase in the word count per page, so I have been able to fit more material into the rest of the magazine, something that will remain in future issues ensuring that even better use is made of space and a better deal offered to readers all round.

As for planes we present the usual mixed bag of scales and subjects, and I would recommend readers sample them all as our articles are tailored to offer something for everybody, and there is plenty of historical reference, modelling techniques and know-how all across the board...

By **Gary Hatcher** 
Editor

Distributed to the UK and international news trade by
Intermedia
<http://www.inter-media.co.uk/>
 via **MarketForce (UK) Limited**
 110 Southwark Street, London SE1 0SU
<http://www.marketforce.co.uk/>

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SHIZUOKA HOBBY SHOW 2016

A Photo Report

By **Gustav Jung**

Shizuoka is a city home to many model kit manufacturers in Japan, such as Tamiya, Hasegawa, Aoshima and Bandai. The show took place this year be-

tween 12th and 15th May and we are grateful to Mr. Gustav Jung of Wolfpack Design for the present report www.wolfpack-d.com



An overview of the exhibition hall



A new 1/48 tooling of the F-14 Tomcat on Tamiya's Booth



Tamiya's Tomcat offers markings for VF-84 Jolly Rogers and VF-2 Bounty Hunters



Armament sprues for the F-14, including, AIM-7E/M, AIM-9H/L and AIM-54A/C are to be sold separately



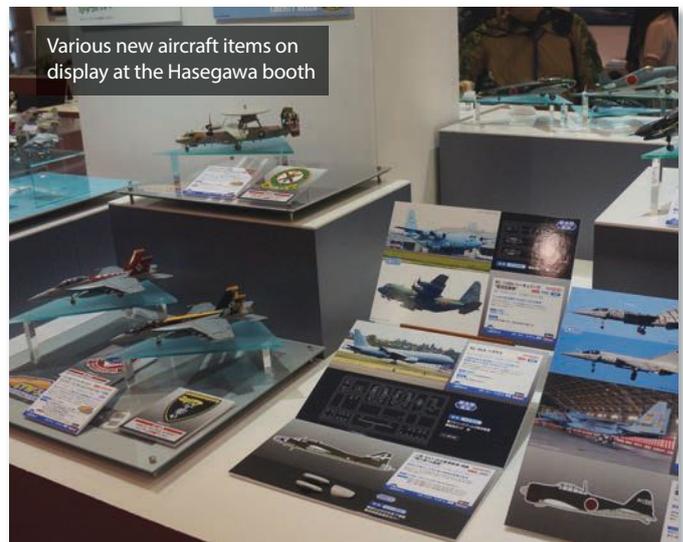
Tamiya's surprise item was a modern civilian Jet, a 1/100 Embraer 175 in 'Fuji Dream Lines' colours.



Hasegawa's new tooling is a 1/32 Mitsubishi A6M5c Zero Model 52 Hei including detailed pilot figures



Tamiya's Embraer. 'Fuji Dream Lines' is a low cost airline based in the Shizuoka area



Various new aircraft items on display at the Hasegawa booth



Hasegawa's new 1/200 KC-130H Hercules 'JASDF'



Final test sprue parts for the Kinetic 1/48 F/A-18C Hornet on show at the Doyusha booth



Hobbyboss 1/48 Su-27 Flanker B



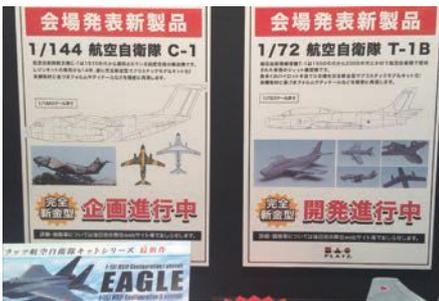
Fine Molds announced a new 1/48 A5M Type 96 Carrier Fighter



Both early and late versions of the Claude are due from Fine Molds in 1/48



Another new tool Super Etendard - Kittyhawk in 1/48



会場発表新製品
1/144 航空自衛隊 C-1
完全新製品 企画進行中

会場発表新製品
1/72 航空自衛隊 T-1B
完全新製品 開発進行中



The first plastic model manufacturer in Shizuoka was Aoshima, who announced a 1/144 US-2 Flying boat in JMSDF markings

Another Japanese manufacturer, Platz, announced a 1/144 Kawasaki C-1 Jet transport and a Fuji T-1B. The Fuji T-1 was Japan's first jet-powered trainer aircraft. The first flight was in January 1958. Atotal of sixty six were built and the type was retired in March 2006



Aoshima also announced a 1/72 JGSDF OH-1 Ninja Scout helicopter



The first plastic model manufacturer in Shizuoka was Aoshima, who announced a 1/144 US-2 Flying boat in JMSDF markings

KOVOZÁVODY
PROSTĚJOV

Supermarine Spitfire Mk.VB Trop



Supermarine Spitfire LF Mk.IXe/c



Supermarine Spitfire Mk.VB "Red Stars"



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www.kovozavody.cz

AZmodel
Plastic kits



MS 406C-1 Foreign Service



Bf 109F-4 Aces



Bf 109F-2 Aces

more info on our web
www.azmodel.cz



WOLFPACK DESIGN

Coming soon from Wolfpack in 1/72 is WP17205, the T-45C Goshawk. This is an upgraded boxing of the Italeri plastic parts with the addition of resin SJU-17/A NACES ejection seats, etched detail parts and markings for three aircraft in service with the US Navy and Marine Corps,

This will be joined in the range by another new kit in 1/48 - WP10007, the T-38C Talon 'USAF'.

Modelsforsale/Sprue Brothers

www.wolfpack-d.com



VALLEJO

New products May 2016

By Colin 'Flying' Pickett

Weathering Effects

Vallejo are renowned for their high quality paints and pigments, and have expanded their range to provide us modellers with an array of superb weathering effects materials. Whilst obviously aimed directly at the armour modelling fraternity it's a fact of life that aircraft get filthy too and with this in mind it is quite possible to use these products on them as well, alongside references, to get the maximum in realistic effects. These products will be especially useful to those who like to depict their models on Dioramas with accompanying service vehicles and equipment.

Arriving in a 40ml bottle, the Vallejo Environment weathering effects are provided in varying textures and thicknesses to represent the differing finishes and cover twenty eight products so far.

As an aircraft modeller I was particularly drawn to the 'Engine' series of acrylic effects, though the streaks, rust and grime effects also look very useful. When you consider the field operating conditions of military aircraft during wartime the applications are endless. Another great and imaginative range of products from Vallejo.

RAF Colours – Day Fighters 1941 – 1945 & PRU (#71162)

The latest in the boxed sets of RAF colours, this

highly useful collection contains the main Model Air acrylic colours you'll need to model RAF fighter aircraft in the European Theatre of Operations ready for use in your airbrush, though with care it is possible to brush paint these as well. The pack includes eight 17ml dropper bottles of paint, these being: Ocean Grey 71.273, Dark Green 71.324, Sky Type S 71.302, Medium Sea Grey 71.307, Black 71.057, Insignia White 71.279, PRU Pink 71.408 and Faded PRU Blue 71.109.

The pack also includes a tremendously useful colour chart by Antonio Morant explaining the various colour schemes used by the RAF and FAA during WWII, depicting examples of aircraft they were used on as well as colour descriptions and explanations. Your scribe has to admit to reading this in fascination a number of times before adding it to the 'Very Useful' portion of his references though it's the sort of item that would look equally at home on the workshop wall (if I had space).

The Vallejo paint sets have become a 'go to' resource when starting a new project, especially as the range expands to cover numerous and varied air forces.

Creative Models/Stevens International

www.acrylicosvallejo.com



MINICRAFT

We note with interest that Minicraft have a new UK importer – Amerang, who will be handling the range henceforth. Minicraft have, we are also pleased to note, confirmed that further pre-painted canopies will be included in some of their forthcoming 1/144 releases. Nice to see some of the back catalogue continuing to be updated in this way.

www.minicraftmodels.com



SPECIAL HOBBY

The hot news from Special Hobby this month is the imminent arrival of the two-seater B/BE version of the 1/72 Mirage F.1 kit. SH72291, the Mirage F.1B/BE offers the modeller a wealth of detail throughout and comes on seven grey plastic and one clear sprue with cockpit canopy and other smaller transparent parts, and a set of alternative resin parts depicting special features of Spanish machines such as the Sidewinder wing-tip launchers and chaff dispensers

positioned beneath the tailplanes. A decal sheet printed by Cartograf caters for two French Mirages, both of them in a standard camouflage scheme of blue-grey over aluminium and sporting attractive anniversary/retirement markings. The third machine on offer is a Spanish one wearing black and yellow tiger stripes and a four-tone tactical camouflage typical for early Mirage F.1 versions in *Ejército del Aire* service.

In 1/32 the F2A-1 Buffalo is rebboxed as 'The First in US Service'. The kit comprises nine grey plastic and one clear sprue, a set of finely detailed resin components and a PE-fret. The decal sheet caters for machines in distinctive pre-war guises as well as one in an overall grey finish.

Further releases due from Special Hobby include:

SH48117 CAC CA-13 Boomerang (reissue)

SH72337 A-20B/C Boston with UTK-1 Turret

SH72306 Barracuda Mk II Home Fleet (reissue)

One other excellent piece of news is that while Special Hobby are still very busy finishing the 1/32 Tempest they are going to prepare a very special Tempest issue of their Newsletter to pave the way for the kit so it looks like it won't be long now.

Hannants/Squadron

www.cmkkits.com



AZ MODEL

New releases announced from the AZ stable include the following:

KP -Kovozavody

1/72

KPM0066 Spitfire Mk Vb Trop

KPM0067 Spitfire Mk IXe/c

KPM0068 Spitfire Mk Vb Red Stars

AZmodel

1/72

AZ7528 MS-406 France

AZ7529 MS-406 In Foreign Services

AZ7530 Bf 109F-2 Aces

AZ7531 Bf 109F-4 Aces

1/144

AZ14419 Tu-134B Air Koryo

AZ14420 DC-9 Aero Republica Colombia

www.azmodel.cz

Hannants/UMM-USA



REVELL

Global Merchandising Services have teamed up with Revell to produce an Iron Maiden limited edition 'Ed Force One' model in celebration of the band's 2016 World Tour. In support of their new album, *The Book of Souls*, which went to #1 in over forty countries, Iron Maiden began their 2016 world tour in Florida on the 24th February and will be playing in thirty six countries across six continents. Global Merchandising Services' Licensing Manager said 'Revell are an obvious partner for this fantastic collaboration. Their model kits have been a synonym for plastic modelling for over sixty years, and this detailed model of Ed Force One will appeal to both traditional builders and hobbyists as well as the dedicated Iron Maiden fanbase'.

Thomas Randrup of Revell GmbH added 'Our 1/144 Scale Model of Ed Force One will bring something new as well as fun to the Civil Aviation Model Kit genre and we are looking forward to a successful co-operation with Global Merchandising and Iron Maiden on this 2016 New Product Release.'

www.revell.de



KINETIC SU-33 FLANKER D

By Colin 'Flying' Pickett

The Su-33 is a naval development of the renowned Su-27 Flanker that entered service with the Russian Navy in August 1998 having a larger wingspan, along with upgraded undercarriage and structure to cope with the extreme conditions of carrier operations. It's been a long wait for a model of this impressive and powerful aircraft, but finally Kinetic have seen fit to meet our needs with the introduction of their 1/48 kit (#K48062).

There is no doubting the size of the Flanker D and this is reflected in the box size, which needs to be large to house a model 457mm long with a wingspan of 306mm, and constructed of no less than three hundred and twenty plus parts. These include components for a very well detailed cockpit and undercarriage bays as well as the options to fold the wings and tail radome to depict a Flanker parked up on deck. The kit has very finely rendered engraved surface detail and some of the best injected exhausts that I've seen to date. This is coupled with a full set of R-73 and R-27E missiles, which are formed of one part using slide moulding. The missiles and exhausts are housed in their own boxes within the main box to protect them from the rigours of transport.

Both of the decal options in the kit are of operational aircraft in the blue/grey scheme based on the Russian aircraft carrier *Admiral Kuznetsov*. Depending on the Flanker of choice the decals, which are printed by Cartograph, provide a stylised Eagle or Tiger motif for the tail of the aircraft along with a full set of Red Bort numbers and stencils to suit. The only flies in the

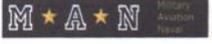
ointment are the slight mould lines present on the centre of the canopy parts, which will need polishing out. Despite the high parts count the model itself does not look too complex an undertaking and will assuredly be an attractive proposition to any modeller of modern combat aircraft.

www.luckymodel.com

Hannants/Sprue Brothers



In Association with MAN Models (<http://www.manmodels.co.uk/>)



Whether you're looking to thin out your stash of kits for some cash or pick up a few bargains, come to the:

North-West Kit-Swap

To be held on Sunday 21st August 2016
10:00 to 15:00.

The Canberra Club
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Lancashire, BB2 7LF
5 Minutes from J31 of the M6, Licensed Bar,
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Doors open to sellers at 09:00
Tables available for hire at £8 each,
Book in advance to avoid disappointment!
Entrance is free for members of the general public.
For further information and table booking see the IPMS
Lancashire website
<http://ipmslancashire.wordpress.com>
or email
ipmslancs@gmail.com



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1/32 1/48 1/72

1. belt thickness 0,04 mm
2. buckle thickness 0,1 mm
3. shading
4. stitching and stenciling
5. buckles and belts in one piece
6. easy application

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Seatbelts USAAF WWII STEEL

Available in June
Seatbelts RAF early STEEL
Seatbelts Luftwaffe WWII bomber

Available in July
IJN seatbelts STEEL
Seatbelts Soviet Union WWII fighters

www.eduard.com/steelbelts



Meatbox Arriving



Getting the Meteor Right By Rick Greenwood



Open fuselage cannon access bays are provided and these fit well in the closed position with a little work

Kit No: 09182
Scale: 1/48
Type: Injection Moulded Plastic
Manufacturer: Airfix
Hannants/Stevens International
www.airfix.com



When the fuselage parts were offered up to each other for the first time I was quite alarmed at how warped they appeared towards the nose. They did line up when dry fitted and held in place with masking tape, so no other corrective action was taken. The fit of the cannon access panels in the closed position was found to be ok, although they are ever so slightly undersized and required careful alignment to ensure everything looked in order. Once I had practiced fitting them precisely in the required position a few times I added Tamiya Extra thin cement from behind to secure them in place. Adding the cement from the inside of the fuselage sections protects the visible surface of the model from any marks or excess glue smudges. The result was good but the panels stood slightly proud of the surrounding plastic so using a medium grit sanding sponge I sanded the panels until they matched the adjacent surface of the fuselage sides. To maintain the fastener detail around the edges of each panel they were checked regularly though out the process and re-scribed as required.



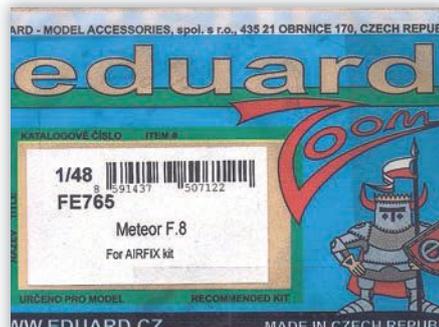
The completed cockpit tub minus ejector seat

Following on from my recent in box review in the June 2016 issue, I will concentrate on a build feature of the kit pointing out any problematic areas and what I did to rectify them along the way.

Once the initial euphoria had worn off I started working with the sprues and things started to look a little different. The plastic was covered in a generous helping of mould release agent and they felt greasy to the touch, leaving a residue behind on my fingers. The parts were washed in warm soapy water at the kitchen sink to eradicate this before commencing the build. Make sure you put the plug in as well, this will save any parts that become detached from the runners making a bid for freedom...

Once I was sure the cement had cured and the plastic fully hardened the panel lines had a scribing tool run around them to ensure any detritus had been removed from the sanding process and to give them some consistency.

Progressing on to the cockpit the kit instructions were followed to some degree. The cockpit features pleasing detail on the sidewalls and a raised detail instrument panel that uses a decal placed over the top to depict the gauges. To aid painting I found it beneficial to paint the cockpit parts before assembly so with the parts removed from the runners and carefully cleaned up to remove any mould lines work could commence.



The Eduard Zoom set for the type

Once dry a closer examination of the plastic followed and showed a slight texture to its surface. Normally this would not be too much of a concern, however when using silver paint on any model it becomes something that needs attention. As I would be depicting a camouflaged machine I left the surface as it but it might be easier for those wanting a High Speed Silver finish to give the model surfaces a light sanding with a product like Micro Mesh before commencing the build to achieve that highly polished surface needed in preparation for applying the silver paint.

The floor and side walls of the cockpit tub were sprayed with Alclad Aluminium and allowed to dry after which a coat of cheap supermarket hairspray was misted on in preparation for the black acrylic top coat. The black was removed by scrubbing with a soft paint brush moistened with water to reveal the aluminium beneath in areas subjected to wear.

Detail painting of the side walls and instrument panel was then completed using yellow and red Gunze paints to add interest to the knobs and switches. Once all was dry the cockpit tub was assembled as per the kit instructions and allowed suitable time to cure completely. If you want to enhance the cockpit area further Eduard have released sets #49765 and a Zoom set #FE765 that provides pre painted cockpit instrument panels and seat belts amongst other items.



The completed nose section after a lot of work

Having already seen a few built up examples on the Internet, with gun and engine panels opened up I thought I would go down the route of closing all the access panels on my model to preserve the clean elegant lines of the type although this can be the Achilles heel for many kits.

Construction.

Before any work with the plastic started I sat down with a cup of coffee and read the instruction booklet a couple of times. I made any observations in pencil at the relevant stage of the build to aid my memory later.

Whilst I was waiting for the cockpit to dry I turned my thoughts to the separate nose section in the kit. I repeatedly test fitted the components in this area time and time again and could not achieve a perfect fit so I glued the two nose cone parts together and set them aside to dry.

Investigating ways to attach the nose took some time but eventually I found a way to achieve a reasonable fit. I fitted the cockpit tub to the

fuselage and left it unsecured to allow some wiggle room later. The fuselage sections were mated and left to dry with strips of masking tape holding everything in alignment. Dry fitting part D30 made it clear that this part has the potential to mess up the fit with the nose cone if it's not seated correctly, fully flush with the fuselage opening. Sanding the rear mating surface quite a bit helped it to sit slightly further back and removal of the locating pin at the top centre of the fuselage had its benefits too.

Further sanding of the alignment structure moulded on the front of the bulkhead also helped.

With this bulkhead now glued in place further dry fitting showed an acceptable fit of the nose cone could now be achieved.

There seems to be no apparent way of adding the nose gear leg to the airframe after the nose cone has been added so this was made up and secured in position. I found that the nose gear door part D19 made for a very tight fit in the nose cap, but by removing the moulded in locating stub on the front strut and the pip on the door the door could then be added at a more appropriate time in the build.

I now came to the point of securing the nose cone in place and after a very careful application of small amounts of superglue it was temporarily held in place. I focused the alignment on the cannon troughs as any remedial work would be impossible to achieve without damage to the detail in this area. Once completely sure I had the best fit possible Tamiya Extra Thin was run into the panel line to add strength to the join. After allowing it to dry and the plastic to set fully, the area around the upper nose sections were sanded slightly to blend it into the contours of the fuselage. The panel line was re-scribed to complete this time consuming stage of assembly without having to resort to any major filling and sanding.

Before starting the wings the rear end of the model was completed. I added the horizontal stabilisers first and noticed a slight problem with the upper port section being short shot, and the very trailing edge of the root. Nothing major and it was simply filled and sanded smooth.

The fit of the parts were excellent and the separate elevators were added in a slightly deflected position to add interest.

Airfix have moulded the rivet detail found on the elevators, rudder and ailerons as fine lines of raised detail. I thought these were too pronounced and they were gently sanded to reduce their appearance. The rudder features a flange at the trailing edge and it appeared over exaggerated again, so it was sanded down for a thinner more scale like appearance. The rudder is novel in its engineering and is split to cater for the trailing edge fairing on the vertical tail. The lower part is held in place by the upper part, which features a keyed shaft that slots into place. All fitted well with no issues noted.

With the fuselage now complete attention turned to the biggest proportion of the build, the wings. There are a number of options on offer here in the way of early/late style ailerons, small and large bore intakes, open or closed engine bay covers and separate gear bay doors for an in-flight pose. All the parts required were carefully removed from the sprue and had any trace of mould seam lines and the remains of their attachment points cleaned up with a fine sanding stick so as not to hinder their fit in any way.

Airfix supply the lower wing as one part to which the many internal structures are added step by step. I opened up the flashed over holes for the under wing and centre line fuel tanks. The main part to be added to the lower wing is A6, which I suppose can be classed as the main spar as it ensures that the engines and undercarriage all align correctly. A precise fit is a must, so make sure the parts sit level and in the recess provided. The forward part A1 follows the same requirements as above. I used clamps to hold everything in alignment while the liquid glue dried and once I was happy these were in alignment and the glue fully cured I added the parts for the main gear bays. Nice structural detail is provided by Airfix with a satisfying result obtained.

Both the jet exhaust ducts were assembled and added to their respective location aft of the engine bay rear bulkhead, before both engine mounts were added (C23+ C24). To finalise this section the upper wing sections were secured in place with no fit issues noted.

A dry fit to the fuselage was conducted at this point with a poor fit noted in the wing root area. This was rectified to some degree by fitting the wing/ fuselage trailing edge fillets and adding some spreader bars from wooden cocktail sticks. However the leading edge wing root still caused some issues and needed the only filler used on the kit during construction.

Work commenced again after a suitable curing period for the liquid glue and my thoughts turned to the separate intake parts. I selected the later large bore intakes and found them both to be a tight positive fit. The intakes are made up of two parts - the external intake nacelle and a hard to reach internal seam to clean up after assembly. A quick pass or two with a sanding sponge was the only corrective work required for a good all round fit and with the wing now fully assembled the separate twin tab late style ailerons were added in a neutral position.

As the engines in my kit were to be buried deep within each wing I chose to construct and paint them to illustrate the detail found on these parts so breaking out the Alclad the metallic areas were painted first, followed by the black. Scuffs and scratches were added and the heat effect towards the rear of the combustion chambers was replicated with Alclad jet exhaust applied sparingly. Airfix supply an engine dolly if you prefer to display the engine out of the aircraft but if you are going down this route be mindful that the engine can be seen down the jet intake and its absence would be noted if the cowl is in the closed position.

Airfix offer a different set of additional parts if the engines are to be displayed resulting in the fact that their supplied cowls wont fit in the closed position afterwards.

With both engines completed they simply clicked into place into the open engine bay. Both engine covers were secured in place with Tamiya tape while the glue dried and a sanding sponge was employed again to make a blemish free joint to see completion of the wing assembly.

If you are planning on having the engines on show, but still in the wing then Eduard offer an etched set (#48883) that offers a little more finesse to the kit parts and supplies a more scale thickness nacelle cover as well.

Airfix recommend fifteen grams of nose weight to be inserted at the rear of the cockpit tub assembly but I found nearer twenty was



The rear end of the model completed before reducing the effect on the flange and raised rivets



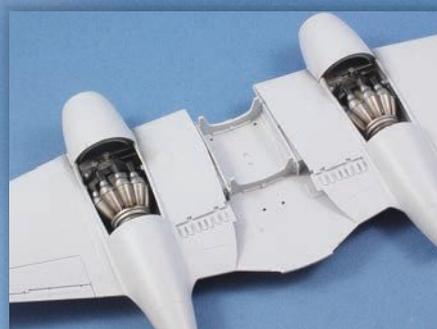
Completed lower wing section showing the placement of the internal structures



Mind the gap - the poor fit demonstrated at the wing root

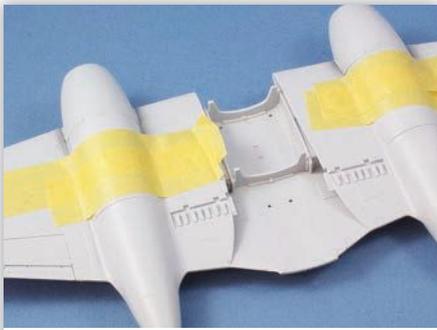


The kit supplied engine looks the parts when painted carefully



The two engines in place





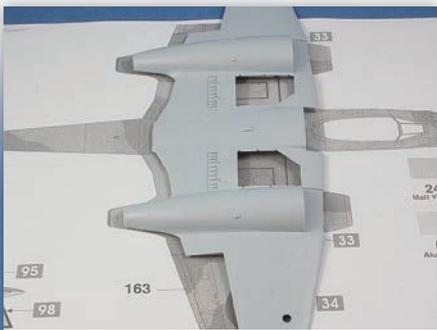
The engine cowls were a good fit and held in place with tape while the glue dried



The remedy to the gap at the wing root



The belly tank held in place with rubber bands - these are simply cut to remove them afterwards



The kit guide was enlarged to 1/48 and used to make paper templates for the camouflage



The model was painted in stages to assist in application of the camouflage pattern

required for which I used cheap fishing weights obtained from a pound shop held in place with copious amounts of Blu-Tac to stop them breaking free.

The main wing assembly was added into place with a resounding click and everything lined up as expected thanks to the dry-fitting session carried out earlier. The wing root gap was reduced by applying careful downward pressure on the fuselage to spread its cross section slightly and then held in place with a clamp. Tamiya Extra thin was then applied down the wing joint and left to dry overnight. The remaining area that needed corrective work was the forward section of the wing root and this was filled with Milliput epoxy putty and some Mr Surfacer 500 to make the surface smoother. Once this had set a scribing tool was run along the wing root joint to add a consistent look to the panel line in the hope of disguising the fit problem to some degree.

The other couple of items that I wanted to address were dealt with at this stage too. The strange raised almost saddle like area on the fuselage spine that represents the fuel filler panels were sanded smooth and a panel line scribed in its place for a more realistic look. I'm convinced that this is a mould/tooling flaw as none of the marketing CAD renderings on the Airfix website show it. The raised band that follows the diameter of the fuselage at the wing trailing edge was simply sanded down to show only a faint outline in its location. I'm not too sure what this was supposed to represent on the kit but it's in the location of an overlapped panel at the fuselage break point on the real airframe so it might just be Airfix's representation of this area.

The underside was up next, and the seam at the rear of the fuselage to wing joint was sanded down to achieve an acceptable fit. The belly tank was dry fitted next and some reworking of the kit was required in this area in order to obtain a good fit. There is a raised panel running across the fuselage underside that interferes with the fit of the belly tank, and this was simply sanded off as the majority of it is under the tank itself and can't be seen. If left as Airfix intended it leaves the front end of the belly tank unconnected to the fuselage. Looking at reference photo's though I'm sure that Airfix may have intended an insert to be placed in this location at some point.

With the belly tank now secured the cartridge ejector chutes were added an allowed to dry.

Painting

My usual method of preparation was implemented at this stage with the model being washed in warm soapy water and scrubbed down with an old toothbrush. It then received a coat of Alclad Grey Filler Primer and the cleaning process was repeated. The finish of the primer was polished by the scrubbing action of the tooth brush and this is usually sufficient for camouflaged colour schemes but the undersides of the model were going to be HSS so some extra preparation was required.

The under surface was polished to a glass like finish with 8000 grade and then 12000 grade Micro Mesh. I paid careful attention to areas where a rough build up of primer may have accumulated. Once happy that I was ready to

commence painting the model was again washed and when dry wiped over with lint free cloth dampened with Isopropyl alcohol.

To replicate the High Speed Silver finish Halfords Gloss Aluminium spray paint was procured. A good way to make this more manageable and to obtain a finer finish than out of the spray can is to decant the paint into an old cup. Watch out for the splash back from this as if you're not careful you will end up with silver paint all over the workspace. Once a suitable amount had been collected it was transferred to a more manageable receptacle and measured out for airbrush application. I thinned the paint considerably with cellulose thinner and applied a nice even coat to the undersides of the airframe, undercarrige doors and wing tanks. A few hours drying time were allowed before a coat of Johnsons Klear was applied to protect the finish during the remainder of the painting process.

As I had used a solvent based paint for the undersides I continued the theme for the top side colours and used Dark Sea Grey and Dark Green from the Xtracolor range of enamels. The kit provided painting diagram was enlarged to 1/48 and paper templates of the camouflage pattern made. These were then reproduced onto the model using a hard lead pencil, to provide an outline to copy free hand with the airbrush.

The Xtracolor paint was thinned with cellulose thinners and a few drops of Rustin's Paint Drier (Terebene) added to accelerate their drying time to a matter of a few hours. The Dark Sea Grey was applied first in a very well thinned mix along the pencil lines ensuring they were completely covered, the larger areas were then filled in with a few more drops of paint added to the mix to aid coverage. The same process was then repeated with the Dark Green to build up the camouflage pattern. I worked on different sections of the airframe in separate painting sessions to aid alignment of the patterns and to facilitate handling of the model during the process. Once the main paintwork was finalised the model was given a few misted on coats of Johnsons Klear to seal the fresh paintwork and protect it from handling as well as preparation for the decals.

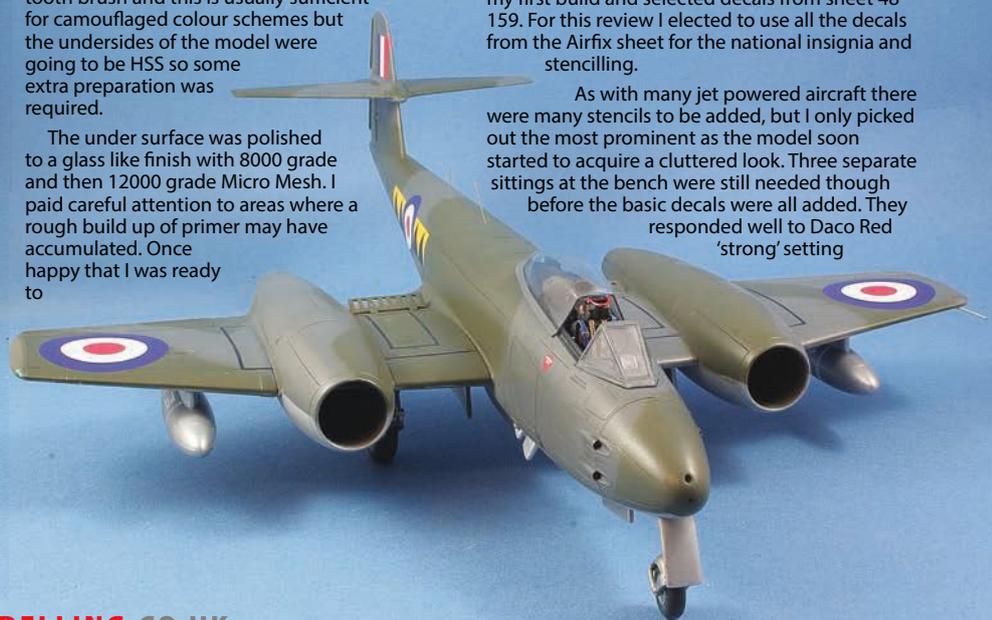
Decals

Airfix supply two marking options in their kit, one with an all over silver finish and the other with camouflaged topsides:

1. WL123 No.111 Squadron Royal Air Force North Weald, Essex, England, 1954
2. WH364 N0.85 Squadron Royal Air force Binbrook, Lincolnshire, England, 1968

I was fortunate enough to have been sent the three new sheets from Xtradecal for review, so I was spoilt for choose really in terms of markings. I wanted to represent a camouflaged version for my first build and selected decals from sheet 48-159. For this review I elected to use all the decals from the Airfix sheet for the national insignia and stencilling.

As with many jet powered aircraft there were many stencils to be added, but I only picked out the most prominent as the model soon started to acquire a cluttered look. Three separate sittings at the bench were still needed though before the basic decals were all added. They responded well to Daco Red 'strong' setting



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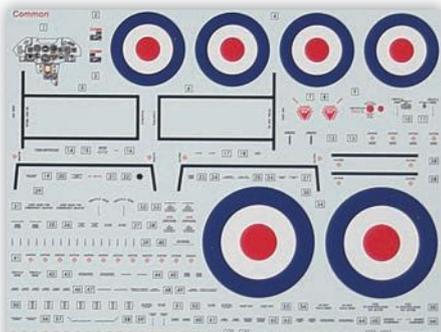
32801 Felixstowe F.2A & Hansa-Brandenburg W.29 "The Duellists" 1/32



Sopwith F.1 Camel 1/32

B6313, WG Barker (50 victories),
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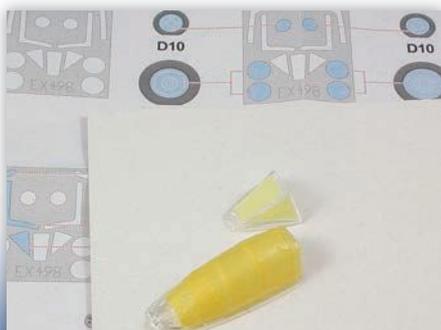
The kit supplied decal sheet



The undercarriage parts - note that the wheels can be added after painting with some modification



The completed undercarriage once in position captures the look of the real thing well



Eduard masks made a quick and easy job of the canopy masking



With the canopies in the open position the seat, enhanced with the belts, provides an excellent focal point

solution and snuggled down into the panel lines without protest. The black walk way lines were a pain to keep straight, a down side to the minimal carrier film present on them, however the parts that cover the inboard wing do have a larger amount of carrier film present. They covered the raised blisters on the inboard wing sections well and needed no further treatment other than an application of setting solutions.

When dry the kit markings exhibited a matt finish and were sealed in with a locally applied coat of Klear covering these decals only. The Xtradecal markings were used to portray aircraft VZ494 of 501 Squadron Royal Auxiliary Air Force RAF Filton in February 1957. Once applied they really did look painted on, a testament to the quality that we have become accustomed to from this brand. No adverse reaction was noted from use of Daco Orange 'medium' setting solution.

The undercarriage was next on my agenda. The instructions would have you trap the made up wheels between the mud guards as you build up the undercarriage legs but this can be avoided on the main gear by simply removing the pin on one side of each main gear leg. Don't remove the rectangular stub as this will be adequate to hold the wheel in place on its own and orientates the wheels as well, as they are not handed and both face the same way.

The nose gear wheel assembly can be carefully prised apart after completion to allow the nose wheel to be inserted. With this fathomed out the components were quickly built up and prepared for painting.

The undercarriage legs were assembled and given the same Alclad treatment as the wheel hubs to offer that little variation in colour from the undersides of the airframe. As before these were given a thin dark coloured wash to accent the detail found on them. It took a couple of attempts at dry fitting to make sure I knew where everything went but once I had worked out the sequence the fit was excellent and the parts formed a strong well-built unit for the model to sit on. The main gear doors were added and the model was then left overnight for the undercarriage parts to set fully, before adding the main gear wheels to their respective sides.

Two types of canopy are supplied in the kit, catering for early and late production aircraft. They are incredibly clear and thin and scale like in appearance and with this they become very fragile so handle them with the utmost care. The front section was quickly masked using the Eduard masking set and the rear section was masked by using thin strips of Tamiya tape as it proved even quicker than the Eduard set. Once dry the masking was removed to reveal an excellent looking canopy.

The rear decking was prepared and painted black to be added to the inside of the rear sliding section and the front has a frame that sits over the front of the instrument panel and gun sight.

This needed careful alignment to avoid fouling the fit of the forward canopy, however I still could not get the canopy to sit right at the front, with a small step resulting.

With everything now more or less completed I made up the ejection seat next. Airfix supply two seat cushions one with and one without seat belts but I used the one without as I was going to use the Eduard seat belt from their zoom set. The kit parts are well moulded and capture the look of these early Martin Baker seats well.

To complete the cockpit a thin coat of matt varnish was airbrushed on to blend everything together and with the office now complete the front canopy section was attached and the paintwork around the seam blended in.

The wing mounted speed breaks on both the upper surface and lower surface of the wings can be attached in either the deployed or streamlined positions. They were troublesome to fit at this stage of the build as they were fiddly and slightly too deep. I only noticed this when I had actually installed them and was in the process of painting them to match the camouflage pattern. For my next build I think I would add them retracted and thin them down slightly before attachment.

I added a brown wash from the MIG Ammo range to the panel lines, and with this process completed the model was given a coat of Xtracylix satin varnish to tone down the gloss look a little and keep it in scale. All that remained for me to do was to add the wing mounted pitot tube, aerials, and the pilots step to finish off the build.

Summing Up

Looking at the dates on the photos I started this kit on the 30th March, today is the 16th May, which adds up to a considerable amount of bench time. I did not expect to have to invest so much time in the construction side of things to be honest as most of the recent Airfix offerings I have had the pleasure to build have exhibited a near faultless fit. I was disappointed with the fuselage parts in my example as they were warped and had to be corrected due to the inconsistencies mentioned in the text but I'm pleased to find that the panels do close up with a little effort but nothing that is too problematic unlike other some other kits. There are some annoying features though like the arrangement for the separate nose cone and nose gear. Airfix I'm sure will have their reasons for this and looking at the parts left on the clear sprue a photo recon airframe has been considered as the clear camera window parts are provided.

The cockpit looks busy for the scale and has all the major features present and really does look good built up. The seat is well detailed and with the addition of the Eduard seatbelt set really becomes the focal point in the cockpit. The stressed metal effects found around the airframe are to be applauded and accurately replicate these areas on the real machine. The clear parts are worthy of a mention and I have to say I feel Airfix have made great improvements with the parts in this kit compared to some of their past examples.

The kit a bit of a challenge to assemble but your effort will be rewarded with a truly stunning rendition of this iconic British Jet. While the model frustrated me to begin with, on reflection I enjoyed the build and with having all those options on the Xtradecal sheets then more F-8s will be joining this one soon.

Overall a great kit of a great subject, I would recommend this model to experienced modellers only as a result of the detail it contains or the work required in closing the panels up if not utilised.

Until next time...





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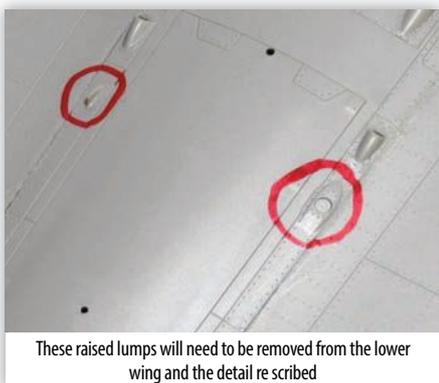
By Yoav Efrati



Isracast's resin ejection seat was painted up and used to good effect



The finished cockpit tub and rear bulkhead build up well from the box but Eduard have now released etched detail sets that will look very effective in this area



These raised lumps will need to be removed from the lower wing and the detail re-scribed

Kit No: 2505

Scale: 1/32

Type: Injection Moulded Plastic

Manufacturer: Italeri
The Hobby Company/MRC

Aftermarket:

IsraDecal #IAF-94 IAF Dassault Mirage 3C set for the Italeri kit

IsraCast #32037 Martin Baker Mk 4 seat for Dassault Mirage 3C
Hannants/Sprue Brothers
www.isradecal.com

To Israelis of my generation the name Mirage is as much of an icon as the Spitfire is to the British. Between 1962 and 1974 Israel's seventy five Mach 2 capable Mirage 3B/CJ fighters participated in three wars, accounted for over 250 air to air kills and enabled nineteen pilots to attain ace status. The most famous of all Israel Air Force Mirages was number 59 which became a legend. It was the first Mirage in the world to attain an air to air kill, it was the first airplane in the world to down a MiG-21 and between the years 1966 and 1973 held the record for the most kills attained by the Mirage. For the past thirty five years that I've been building models there has been one machine I have always aspired to build - Mirage 259 as it appeared in the summer of 1970 wearing a natural metal finish with ten kill markings and fitted with three external fuel tanks and wing tip AIM-9D Sidewinder missiles. Italeri's release of their 1/32 Mirage IIC gave me the opportunity to fulfil my childhood wish.

On a store shelf or amongst a colourful box art display on a dealer's website Italeri's 1/32 Mirage box art cannot be ignored. A desert camouflaged *Armée de l'Air Escadron de Chasse 3/10 Vexin* Mirage IIC ejects a pair of 1,300 litre fuel tanks as it comes at you with guns blazing, low over the sands of Djibouti during 1980. The excitement continues as one opens the box lid to discover two colourful Cartograph printed decal sheets that feature six different subjects with both natural metal and camouflage versions, along with full stencils for the kit's external stores, fuselage and pylons. A forty four page full colour A4 instruction booklet provides assembly instructions as well as full colour four view painting drawings, with colour call out by name, United States Federal Standard (FS) 595, and Italeri acrylic paint colour standards. The six painting options include the subject of the kit's box art *Armée de l'Air 16 Escadron de Chasse 10/1 Valois* in blue gray over silver, *Armée de l'Air 17 Escadron de Chasse 2/5 Ile de France* natural metal, South African Air Force 805, 2 Squadron Flying Cheetahs sand and green over light blue

gray, Swiss Air Force J-2201 natural metal, and *Shahak* 259 of the Israeli Air Force 101 Squadron.

The markings provided by Italeri for *Shahak* 259 are inaccurate and in order to depict the markings applied to Mirage 259 correctly IsraDecal's latest sheet IAF-94, sized to fit this kit, is a must. The kit provided kill markings depict three stars in each roundel worn by the Syrian Air Force at the time, whereas Mirage 259 had only one Syrian and nine two star Egyptian roundels applied in the summer of 1970. The font used for the tail number is incorrect as well as the squadron insignia, which is accurately printed by IsraDecal.

Five sprues hold 261 light gray parts featuring recessed panel lines and rivet detail. The clear sprue of thirteen parts is packed separately to prevent scratching the crystal clear canopy and windshield. A brass photo etched set provides the engine support ring, seat belts, rear view mirrors, afterburner exhaust detail, landing gear door hinges and intake fuselage supports. A fully detailed Atar 9B engine is provided that once installed inside the fuselage, and supported with the brass photo etched ring (part 17PE) cannot be removed. The external stores options are applicable to the non Israeli Mirage versions with the exception of the 1,300 litre fuel tanks and pylons, which I used but in order to use the kit's 500 litre supersonic wing tanks, three stabilizing fins need to be added at their aft end.

To use the kit's Matra 530 radar guided missile, its single rocket motor exhaust needs to be removed, and three flush exhaust openings drilled at the aft end. The use of the Matra 530 on IAF Mirages was very limited and was considered ineffective even prior to the introduction of the *Shafir II* and AIM-9D sidewinder in 1969. The kit provided AIM-9B missile was used by the IAF for a limited time while the French produced Matra 550 Magic missile was never used by the IAF. The kit provided JL100 rocket pods never saw service with the IAF and are best relegated to the spare parts box.

For the air to air configuration I wanted to depict I needed a pair of AIM-9D air to air missiles and rails, the pair of 1,300 litre fuel tanks found in the kit and a centreline 825 litre fuel tank, which is not currently available. To simulate the centreline tank I cheated by using one of the kit's 500 litre fuel tanks instead. A pair of AIM-9D missiles was taken from an out of production Cutting Edge set. These were painted overall Tamiya X2 gloss white, with Humbrol 116 FS 34079 nose section, H53 gun metal forward fins, H16 brass proximity section bands, H186 brown exhaust cover, H11 silver forward tip seeker holder, H127 seeker tip, and Xtracolor X508 burnt metal aft fin rollers.



Kit Assembly

The first items to be attended to are the stepped mould ridges atop the fuselage halves. The existing recessed panel lines and rivets were deepened prior to sanding down the ridges. By marking the ridge line with a thin marker pen it is easier to see the removal of this unwanted ridge during the filing and sanding process.

To allow ample time for cement to cure, subassemblies not requiring painting were joined together using Tamiya extra thin welding cement. My method for making seamless joints is to form a welded bead at the joint line. After letting the beaded plastic set for several days to the hardness of the surrounding plastic, it is sanded smooth with no gaps or a shallow recessed joint line to be dealt with. Fuel tanks, wheel wells, vertical fin, and pylons were cemented and set aside to harden.

The upper wing surfaces each have reinforcement bulges, which were not typical to operational Mirage airframes. These bulges were sanded off with a coarse nail sanding stick and smoothed with finer wet and dry sand paper. The recessed panel lines and rivet detail at these locations were restored with a razor saw, needle scribe and fine drill. A sanding stick, pin punch, drill bit and my trusty *Scale Aircraft Modelling* steel template helped locate, mark and drill lost rivet detail. Since no detail is given inside the speed brake recesses, speed brake parts 35B, 40B, 41B and 42B were cemented closed. At the centre of the lower wing the surfaces have two round plastic risers that also need removal. The lower wing roots have a triangular antenna and bulged round camera fairing, which were not found on this aircraft, and they too were sanded off and the rivet detail restored.

Wing trailing edge control surfaces were attached to the wing trailing edges after the wing and fuselage were cemented together. Each control surface was attached to the wing trailing edge using flexible brass pins inserted into two corresponding holes made in each side. The control surfaces attachment sequence went from outboard to inboard, to ensure symmetrical spacing. Ailerons 16C and 25C were attached first, mid wing flaperons 18C and 23C next and inboard flaperons 20C and 21C added last. Sheet plastic strips and cyanoacrylate cement were needed to fill the gaps between the inboard flaperons and the fuselage. Be careful not to confuse parts 20C and 21C when adding them to the wings, due to their contour. Joining the mid wing flaperon and aileron actuator fairings to the lower wing fairing and pylons ahead of them, respectively, requires enlarging the opening at the trailing edges of parts 50D and the outboard wing pylons in addition to trimming the length of the forward rounded

ends of parts 36D and 50D.

The vertical fin halves were joined together and to this assembly the forward dorsal fairing was added. To ensure alignment of the dorsal fairing with the fin, as well as a proper spread at the base, a wooden tooth pick was inserted between both subassemblies. This was cemented in place with cyanoacrylate glue and reinforced with two part epoxy cement. To reinforce the rudder to fin joint, brass wire pins were cemented to holes made in the fin's trailing edge and rudder leading edge. The gap at the upper rudder line was filled with a strip of 0.010' x 0.080' sheet plastic. Instruction steps twelve and thirteen show the addition of the engine and vertical fin to the fuselage. In order to enable access to the vertical fin base, do not add the engine prior to installing the vertical fin. The base of the fin requires reinforcing from the inside as well as filler on the outside, at the base of the fin to fuselage joint. I would advise adding the rudder to the fin during the fin assembly. This is due to a gap at the upper joint with the fin and the need to match the fin's trailing edge width to the rudder's leading edge width.

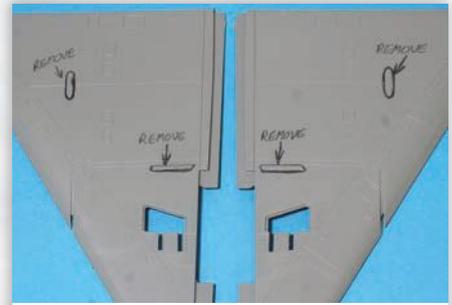
Main intake parts 37A+44A, 7A+20A, 22A, 45A and 46A have ejector pin recesses on their inner surfaces which need filling and sanding prior to airbrushing them with Testors Model Masters 1781 Aluminium. The boundary layer air ramps (parts 20A and 37A) have raised pins, and these need to be trimmed off and the remaining stub gently sanded down to avoid chipping the thin leading edge of the intake duct's boundary layer wall. In order to ensure a smooth intake duct forward intake parts 46A and 45A should be dry fitted in place, and the inner leading edges of parts 7A and 44A thinned down to ensure a smooth ducting. Parts 8B and 9B are not optional or alternative parts to the Mirage and they should be added at this stage, prior to cementing the step 8 subassemblies to the fuselage.

Only after joining the fuselage, wings and nose sections did I add the photo etched intake to fuselage supports (PE 13 through 16) which appear in steps twenty five and thirty one. The location of the lower supports (PE13 and PE14) is ambiguous and reference should be made to the photos in this article. The upper supports (PE15 and PE16) are too wide to fit the space between the intake and fuselage so their bendable flanges were removed with a sharp razor blade and they were added atop .015' x .040' plastic rod supports cemented to the intake and fuselage, with thick cyanoacrylate cement and gap filler.

Twenty grams of fishing weight was added to the lower forward fuselage, attached first with cyanoacrylate glue and then two part epoxy glue. Sheet plastic dams were used to keep the epoxy glue mix around the weights.

Wing assemblies minus the main gear struts were attached to the lower fuselage using liquid weld and a touch of cyanoacrylate glue. Once their positions were set the lower wing to fuselage gaps ahead and aft of the wheel well were cemented with two part epoxy glue, which also acted as filler on the main gear wheel well joint. Step nine shows subassembly B (part 52A) installed in the fuselage upside down.

The first items to be painted were the intake duct, nose gear wheel well, nose gear main gear and nose gear door internal surfaces and wheel hubs, all painted using Testors Model Masters Aluminium 1781. The kit's Atar 9B engine fan



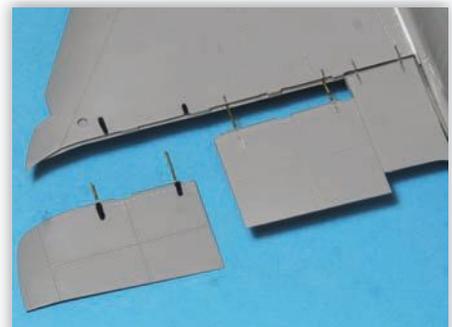
Further modifications were required to the upper wings for this build as the upper wing surfaces each have reinforcement bulges, which were not typical to operational Mirage airframes



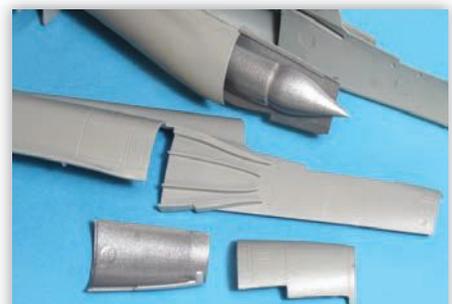
In order to spread the base of the tailplane a cocktail stick was used as a spacer between the two halves



A good overall fit was achieved with just a bead of filler along the wing roots and in a few other places



Control surfaces were added to the wings using brass pins inserted into pre drilled holes



In order to ensure a smooth intake duct the forward intake parts should be dry fitted in place, and the inner leading edges of parts 7A and 44A thinned down to ensure a smooth ducting



The Cutting Edge resin missile rails were very good items though out of production now



Time spent on detailing under wing stores is never wasted. These AIM-9Ds also came from an old Cutting Edge set



The patchwork bare metal effect was achieved using multiple shades of Alclad II

and compressor section were also sprayed aluminium. The turbine, flame arrestor and exhaust halves were painted Testors Model Master Burnt Metal. A coat of acrylic Klear barrier was applied prior to the dry brush application of Van Gogh Permanent Green Light atop the corrugated afterburner section. Over the oil paint a wash of Tamiya Smoke was used to accent the perforation holes on the corrugated segment of the afterburner and engine fan blades and stator vanes. The fan section was washed with Van Gogh Transparent Oxide Yellow oil paint.

The radome's shallow rivet and recessed panel lines were deepened and the plastic pitot tube was used as dimensional reference for a metal rod and tube replacement. For strength, the metal rod and tube extended inside the radome to the same length as outside and held using two part epoxy cement. The radome subassembly was added to the fuselage after the fuselage, vertical fin, wings and control surfaces were cemented in place. The radome fit with the forward fuselage was very poor, with a substantial height mismatch between them. After cementing the radome to the forward fuselage with cyanoacrylate cement, I sanded the radome base to match the contours of the forward fuselage. Substantial scribing and drilling was required to restore lost surface detail.

The lengthy time period it took me to complete this model was due primarily to problems encountered in applying the multi shade natural metal finish (NMF). Prior to paint application the entire model was scrubbed with a toothbrush using washing up liquid and warm running tap water. The windshield and cockpit were masked and painting began with a spray application of Alclad black primer over the entire fuselage. The rudder was painted X2 gloss white and vertical fin antenna fairings Humbrol 146 gray. The radome attachment ring was masked off and the radome painted with a lightened shade of flat black. After painting the radome I removed the Tamiya tape I applied around it and to my rude surprise the underlying Alclad black primer lifted with it. Using a strip of two inch wide masking tape, rapid removal pull tests were made to the entire model, revealing additional areas of poor primer adhesion. The cause for the inconsistent primer adhesion may be attributed to a bad batch of primer, low temperature during application (below 15C/65F) or a once opened bottle whose

useful life has expired. This layer of primer was removed to the bare plastic using automotive brake fluid, which dissolves the paint without damaging or weakening the plastic underneath.

Another round of soap and water wash and

the model was ready for another round of primer. The second time around I applied Klear tinted with acrylic black paint. This concoction bonded well to the surface and the application of the Alclad metal shades that followed looked smooth on the surface. Problem arose when I lifted the Tamiya Tape used to mask several of the different shades, as the Alclad did not bond well to the hardened Klear coat and the metal coats lifted off with the tape. This time the Klear and acrylic black mix was removed using pharmaceutical alcohol.

For my third round with the Alclad NMF paints, I started with a new tin of Alclad Gloss Black Primer. After a couple of day's drying time the primer stayed put during the masking tape peel test. Confident of the new primer coat I burnished it smooth with a lint free cloth dipper. The fuel tanks were the first items to be sprayed this time around, with ALC-119 Airframe Aluminium. Spraying the Airframe Aluminium fogged on the surface without bonding to it, but this finish was easily removed by burnishing with a cloth dipper and they were repainted ALC-109 Polished Aluminium, which adhered to the primer. Alclad shades applied to the airframe were first applied to the lower fuselage and wings, moving up to the upper wing surfaces, vertical fin and finally to the polished aluminium aft fuselage and chrome forward fuselage and intakes. To minimize metal paint pull up Tamiya and ordinary masking tape were first applied to my bald forehead, to remove tackiness as much as possible, yet have the tape mask the intended areas. Once all shades were applied the model was sprayed with a tough protective coat of Klear.

The kit's Cartograph printed decal sheet stencils and medium blue Star of David markings were used, while all other markings came from IsraDecal's decal sheet IAF-94, tailor made to fit the Italeri 1/32 Mirage. The kit's cockpit and red intake trim decals did not match the kit's contours, and the red rudder stripes are of incorrect proportions. These were replaced with IsraDecal's markings. The intake decals required softening with Solvaset to conform to the kit's contours, with touch

up painting applied to the intake leading edges and rudder trailing edge using Revell 330 Red. IsraDecal's authentic markings were used in place of the kit decals for the squadron insignia, tail number, Mirage IIIC logo and kill markings.

All markings were applied layered between brush coats of Klear, with the exception of the nose trim noted above.

Once decal application was completed a mixture of Van Gogh Ivory Black and Burnt Umber artist oil paint and turpentine was used to accent the kit's recessed panel lines and rivet detail. After a couple of day's drying time, the oil weathering was sealed in place with a sprayed on layer of Klear.

The main landing gear axle appeared a bit weak to me so I drilled a couple of holes through the main wheels and struts to reinforce their joint. Pre painted landing gears, doors and actuators were attached next using two part epoxy glue, requiring minor trimming and adjustment to fit in place. The centreline fuel tank was added prior to attaching the landing gear doors to ensure proper clearance between them. The vertical fin tip clear light upper halves are red, so Humbrol 20 Deep Red was brush painted prior to attaching the clear parts with clear epoxy glue. Instead of using the kit supplied round clear wing tip lights I imbedded blue reflective lenses in their place. Tamiya clear red and clear blue were used for the triangular wing tip position lights.

Attachment of the polished aluminium 1,300 litre fuel tanks to the wings required the use of two part clear epoxy to fill the wing joint line. Photo etched windshield and canopy rear view mirrors were added at this stage along with an IsraCast resin Mk 4 ejection seat, metallic red throttle and black painted joystick. Last to be added were the kit provided angled probes at the nose section and rear engine cowlings, along with the pre painted Cutting Edge AIM-9D Sidewinder missiles and rails.

Conclusion

Italeri's 1/32 Mirage IIIC is the only model offered of the type in this scale. It requires prior model building experience and plenty of patience to assemble properly.

Painting the model in a natural metal finish requires a strong black primer bond, which must be tested using a masking tape pull test. To depict the Italeri Mirage accurately as one of Israel's Mirage IIICJs IsraDecal sheet IAF-94 is a must.



M I G K I L L E R

The story of 059

By Yoav Efrati



Mirage 259 seen here in March 1970

Mirage 59 was added to the inventory of the IAF's first Mirage squadron, the First Fighter Squadron during 1963. In the summer of 1966 tensions were high along Israel's border with Syria as the latter made efforts to divert Israel's supply of fresh drinking water from flowing to the Sea of Galilee. The Israeli Air Force was called to intervene and in the dogfights that ensued on July 14th 1966 Yoram Agmon of the First Fighter Squadron, flying Mirage 59, downed the first kill for the Mirage type, a Syrian MiG-21F-13. As one incident followed another, tensions escalated between Israel and Syria up to a point where the latter joined Egypt in a mutual defence treaty against Israel. Thus threatened the Israeli Air Force launched operation Mocked conducting simultaneous air strikes against all of Egypt's air bases at the same time. The first wave launched to strike the Egyptian Air Force at 8am was followed by a second and third, which eliminated Egypt's offensive fighter and bomber capability within three hours. During the first strike on the Egyptian base of Jabel Libnie, Ilan Gonen of the First Fighter Squadron, downed an Egyptian IL-14 transport using the cannons of Mirage 59. The following day, June 6th 1967, Uri Shachar of the First Fighter Squadron downed an Egyptian MiG-19 using the same aircraft.

In response to France's Arab allies' protests, French president Charles De Gaulle imposed an embargo on the transfer of fifty Mirage 5 jets paid for and co-developed by the Israeli Air Force. The embargo was to continue even as hostilities against Israel were renewed in a new round of fighting known as the War of Attrition but initially did not include spare parts and support equipment, which allowed Israel Aircraft Industries and Bet Shemesh Engines to establish Mirage V engine and airframe subassemblies in Israel.

In reprisal for repeated PLO attacks on El Al civilian airliners throughout Europe, the IDF conducted a helicopter raid on Lebanon's Beirut International Airport, destroying the aircraft parked there. For this raid, the IDF made use of French built Super Ferlon helicopters. This enraged the French government, which on January 3rd 1969 retaliated against Israel by extending its embargo to include spares and support for all French armament supplied to Israel so by January 1969 the IAF had twenty Atar 9C engines at hand, with no Mirage 5

airframes to put them in. With spare parts shortage looming near, the IAF initiated a program to fit these spare Atar 9C engines into Mirage IIIC airframes. Changes required included modification of the engine's gear box, relocation of the fuel hose attachment to the engine, relocation of the engine's aft airframe attachment point, shortening of the aft tail section and tilting the parachute housing several degrees above the tail pipe. Atar 9C evaluation trials on the Mirage IIIC airframe were successfully completed in two months, and engine refit was commenced on First Fighter Squadron Mirage III fighters soon after.

The War of Attrition took place between July 1967 and August 1970, seeing IAF fighter planes used as flying artillery against Egyptian targets across the Suez Canal. Daily air strikes took place across the canal with Mirage fighters providing air cover for slower A-4 Skyhawk, Mystere IV and Super Mystere attack planes. To prevent Egyptian fighter pilots from taking the initiative IAF pilots staged ambushes for the Egyptians by sending a slow flying plane as bait. As the Egyptian planes reached the vulnerable aircraft, Mirage (and later F-4 Phantom) interceptors came up at them from below, undetected by Egyptian search radar.

To make the Mirage less conspicuous from above the IAF introduced the same four colour camouflage introduced to its attack planes in the summer of 1967 and soon after the IDF took control of the Sinai desert at the end of the Six Day War. These new desert colours conformed to German RAL standards that were in use by Israel's local paint manufacturer Tambour. The upper surface colours consisted of RAL 1001 Beige/FS 33531 Sand, RAL 6011 Resedagrün/FS34227 Grass Green, RAL 8024 Beigebraun/FS30219 Tan with RAL 7035 Lichtgrau/FS35662 Sky Blue applied underneath.

Between July 1969 and July 1970 Mirage 59 led the IAF's kill records by downing eight Egyptian aircraft. On July 7th 1969 Oded Marom downed an Egyptian MiG-21 with cannon in the ambush air corridor nicknamed Texas and Arizona. On July 20th 1969 Giora Yoeli downed an Egyptian MiG-17 using cannons during the Boxer 1 bombing campaign and on September 11th 1969 Giora Epstein downed an Egyptian Su-7, which was one of eleven Egyptian fighters downed that day. On November 11th 1969 Yair Sela downed an Egyptian MiG-21, on January 4th 1970 Oded Marom downed an Egyptian



Mirage 259 seen here in March 1970



A close up of the ten kill markings carried in March 1970 also shows the high polish on the aircraft's metal surface



Oded Marom alongside a well worn Mirage 259 here sporting seven kills in November 1969



The aircraft's war damaged fuselage following its crash on take off in October 1973



Gun camera film of Mirage 259's first kill on 14th July 1966



Mirage 59 seen here now in the four colour camouflage scheme now carrying twelve kill markings



Mirage IIIc 159 seen after the 1973 war with all thirteen kills displayed

MiG-21 using cannons and on March 6th 1970 Yiftach Spector repeated the feat by downing another MiG-21 again using the aircraft's cannons. On July 10th 1970 Israel Barhav was on an A-4 escort mission into Egypt. During that mission Barhav accomplished the aircraft's first two kills mission by downing a pair of MiG-21s, one using an AIM-9B Sidewinder and the other using cannons. At the time Mirage 59 was still wearing a highly polished aluminium finish and as such was displayed to the general public during that summer with only ten kills instead of eleven and an obsolete Matra 530 missile under the fuselage.

On August 8th 1970 a cease fire agreement was signed by Egypt and Israel that put an end to the War of Attrition. With this round of fighting over Mirage 59 entered depot level maintenance where it was fitted with an Atar 9C engine and a brand new four colour camouflage. The erroneous kill markings were corrected and the aircraft was again on display in the summer of 1972 wearing the correct eleven kill markings.

The lull in fighting was short lived and on September 13th 1973 IAF RF-4E Phantoms and Recon Mirages conducted a photo recon mission along the Syrian and Lebanese Mediterranean coast. The Israeli jets were challenged by Syrian MiG-21s that downed recon Mirage 799. IAF Rescue efforts to pick up the downed pilot were challenged by the Syrian air force, which resulted in further dog fighting. By the end of the day, twelve Syrian MiG-21s were claimed for the loss of a single IAF Mirage. Of the twelve Syrian planes downed one was claimed by Abraham Solomon who shot down his MiG-21 using an AIM-9D Sidewinder.

The defeat suffered by Syrian air force did not remain unchallenged as Syrian president Hafez Assad demanded that Egypt's Anwar Sadat join forces under the two countries mutual defence treaty. Between September and October 1973 Syrian and Egypt troops held intense manoeuvres on their side of the international border. These forced the IDF repeatedly to call reservists to duty, only to return them home time and again as the tensions eased. The ruse worked well, and by the Yom Kippur holiday, which also fell on a Saturday, most of Israel's ground forces were at home or at synagogues across the country, cut off from transportation and communications due to religious tradition. Early morning IAF recon flights along Israel's northern and southern borders revealed that the Syrian Army and the Egyptian 3rd Army had again taken an offensive posture along the borders. IAF pilots and ground crew reservists were called to duty and the aircraft made ready for Dogman 5 and Teegar pre planned pre-emptive strikes against Syrian and Egyptian surface to air missile sites, but government indecisiveness put off the strikes time and again that morning and by 2pm of October 6th 1973 it was already too late. As Egyptian and Syrian fighter planes invaded Israel at 2pm on Yom Kippur, Mirage, Nesher and F-4E Phantoms were scrambled to intercept the incoming threats. First Fighter Squadron pilot Ethan Karmy was scrambled in Mirage 59 to intercept a hostile aircraft heading for Tel Aviv. Karmy described Mirage 59's 13th kill:

'We were scrambled to intercept a threat flying towards Israel from the Mediterranean coast. We looked up and found a glinting object in the sky, high and far and flying towards Tel Aviv. We climbed towards it believing it to be a MiG-25 Foxbat that was coming in for a recon pass. We

made a wide turn to head south in order to cut him off as he turned back to Egypt. After several moments we saw that the target was not turning south, so we turned back and climbed directly towards it. By this time the object was more defined as it took the appearance of an airplane trailing a plume of flame behind it. As I flew above it, I saw that it was a pilotless jet and soon realized it for what it was (a KS-5 Kelt radio guided air to ground missile). No sooner did I recognize the threat, the missile's rocket engine cut off and a white vapour trail came out from behind the engine – most likely the remains of unburned fuel vapours. At 400 metres I fired a heat seeking Shafir II at the guided missile, but it failed to lock due to lack of an exhaust trail. I closed range behind the missile to 250 metres and downed it with cannon fire. The Kelt was hit immediately and its right wing detached from its root. I was lucky that the missile did not explode near me. The missile lowered its nose, entered a spin and impacted the water below in a huge explosion that threw up the sea water very high into the air.'

The following day First Fighter Squadron pilot Israel Barhav was scrambled for an intercept mission in Mirage 59, which was fitted with a pair of 1,300 litre wing tanks, an 880 litre centreline fuel tank, later seen on Kfirs, a pair of wingtip mounted air to air missiles (AIM-9D or Safir II - the type could not be confirmed) and a full load of rounds for the aircraft's twin 30mm DEFA guns:

'The scramble siren sends me off at the head of a four plane formation. The airplane is still hot because it was landed from its previous mission only minutes ago. I strap in, start the Atar 9C engine and leave my gloves off until after I take off in order to save time. A scrambled takeoff is a flight towards the unknown, which always leaves a knot in my stomach. The takeoff run begins as the airplane's speed increases. I pull on the stick to rotate the nose up... and suddenly I feel the airplane pulling to the right. Unbelievable, the right tire just blew with the airplane's speed too high to stop yet too low to take off. I continue with the takeoff as the runway below me quickly runs out of tarmac. The plane is too heavy and I plan to drop the external fuel tanks as soon as the wheels lift off the runway. Maybe a few more kilograms of muscle on the throttle will squeeze out a few more pounds of thrust. Nothing, the airspeed indicator is stuck at 155 knots as the damaged machine continues its roll along the runway. I tug on the stick and feel the airplane lifting up just as I reach the end of the runway. The left hand leaves the throttle and reaches for the external stores jettison buttons. I'm having difficulty keeping the airplane aloft. The airplane's nose points up yet the Mirage fails to pick up altitude. I find myself in a vicious circle - if I attempt to point the nose a bit higher to gain altitude I'll lose speed, yet at this speed I cannot gain sufficient height to jettison the external stores. The plane and I ran out of runway and hit the ground. I want to eject but couldn't leave the controls for the fear that the airplane will tumble out of control. The landing gear tore off from the airplane as it began a violent skid on the uneven ground below. The shallow hills tear off the external fuel tanks and the plane continues its rough slide on its belly, like a crab walking sideways on a sandy beach. One of the wing tips begins to plough into the ground as I fear it will dig deeper and flip the plane over. I resign to myself that this will be the end of me as metal and flesh will become one. Suddenly I feel something pushing my body aft, the tail snags onto something, putting the plane to a stop. Just as I begin believing that there is hope, everything

around me catches fire. The heat becomes intense and I try to push the canopy open to no avail. The intense heat just fuses the canopy frame to the fuselage forming a death trap. The intense heat begins to deform the acrylic clear canopy above me and I punched out a hole through it with my bare hands. The melted plastic charred my hands as I make it out of the burning wreck. The rescue crew finally arrived to my aid and dosed down the Mirage that was ablaze.'

The heavily damaged Mirage 59 was transported to Israel Aircraft Industries for a rebuild. Initial assessment was not optimistic. The electrical wiring was burned out, the fuel system and hydraulic tubing were wrecked, the fuselage was damaged, with the cockpit area especially severe. The aircraft was completely rebuilt and returned to full combat status by the end of 1974. Its first flight after the rebuild was conducted by Israel Barhav who came out of the war as a twelve kill Mirage ace with the unique distinction of all kills being MiG-21s.

Mirage 59 was returned to the First Fighter Squadron where it was fitted with a recon nose to serve alongside another thirteen kill Mirage, 58, in that role. In 1981 these two recon Mirages were replaced by recon capable Kfir C2 airframes and were returned to the interceptor role with the Negev squadron based at the Sinai base of Eitam. After the June 1982 Falklands War between England and Argentina, Mirage 59 was sold to Argentina along with eighteen other Mirage IIIC and three Mirage IIIB airplanes. The Mirages arrived in Argentina on February 1st 1983 and were given numbers C-701 through C-722. Mirage 59 was given identification number C-713 and entered service with Argentina's 55 Fighter Squadron based at El Plomrio in the

Mendoza province. Mirage 59 logged 2,620 flight hours in 591 flight cycles with this squadron until it was removed from flight status on December 13th 1990.

During an Argentinean air force commander visit to the Israeli Air Force museum that same year, IAF museum curator colonel Jacob Turner requested return of Mirage 59 to Israel. Argentinean president Carlos Menem approved Turner's request and it was resold to the IAF for the symbolic price of \$1. The aircraft was officially declared as Israeli Air Force property and was preserved in a closed hanger awaiting delivery to Israel. Three years after its request for return the IAF museum finally gathered the funds required to ship the Mirage back to Israel. On May 20th 2003 an impressive ceremony attended by IAF and Argentinean dignitaries as well local Jewish community leaders the 13 kill

Mirage, believed at the time to be Mirage 58, was formally handed to the IAF for disassembly and shipment to Israel. Upon arrival at the IAF museum, the airframe was identified as Mirage 158, but following a confirmation of the manufacturer's data plate in the nose wheel well, revealed it to be Mirage 159 and not 158 as initially believed. Mirage 159 made headlines again; Israel's most famous Mirage had returned home.

Acknowledgments

Yehuda Borovik, Bif Air and Space Magazine for photos and research information

Raanan Weiss, IsraDecal Publications for Mirage decals and Atar 9C exhaust resin conversion



The aircraft is seen in a mix of Argentinian markings and IAF kill markings at the Israeli Air Force museum in 2004

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Mk.4 Makes Way for Merlin

By Chris Ayre



Sea King Mk 4+ ZG821/G flies past local landmark Glastonbury Tor just over a month before the type retired from Royal Navy service



The 'Junglie' nickname stems not from the Mk 4's green colour scheme, as some seem to think, but was inherited from a much earlier period when FAA helicopters (the Wessex in particular) operated in the jungles of Borneo



As can be seen from the shadows on the fields below, a pair of 848 NAS Mk 4s took part in the close formation flight that allowed me to capture some of these images in February 2016

The almost ubiquitous Sikorsky/Westland Sea King seems to have been around for most of my life. From the big yellow budgies practising their offshore rescues back in my youth, through a great variety of colour schemes and variants seen and photographed at many locations ever since, to the massed Commando assault displays at RNAS Yeovilton's Air Days, the Sea King has just always been there. It therefore feels very strange to realise that this superb helicopter's days in UK service are numbered and in fact it was to Yeovilton (HMS Heron) that I travelled recently in order to take a final look at the Fleet Air Arm's Mk.4, the Junglie, before the subtype bowed out of service at the end of March 2016.

Although the Sea King design originated with Sikorsky in the United States, the aircraft was also built under licence in several other countries including Italy and Japan. With Westland Aircraft in Britain the type underwent significant development, the manufacturer taking an independent approach that resulted in the Westland Sea

King becoming a rather different beast to the original US model. The initial Westland built helicopters were designed for antisubmarine warfare and incorporated British avionics systems, Rolls-Royce Gnome engines in place of the American General Electric T.58s, and an automatic flight control system. The Royal Navy took delivery of its first Sea King HAS.1 in 1969 and Westland went on to produce some 330 airframes in total, encompassing a wide variety of versions including many for export.

The Junglie is of course a different kettle of Sea King to the majority of variants, having started life in response to an Egyptian Air Force requirement for a troop carrying helicopter. This explains one of the most obvious identifying features of the subtype; with a fixed landing gear it lacks the side floats of most other Sea King variants. Amphibious capability wasn't specified for operations in Egypt. The resulting aircraft was officially christened Commando by Westland and entered service with the Royal Navy in 1981 as the HC.4. Although widely known by its Junglie



To commemorate the Sea King Mk 4's retirement, 848 NAS decorated two cargo doors, as seen here. Although these were fitted to ZA295/U and ZA299/D on the day of my visit, the doors are completely interchangeable and were seen on other airframes



'Y' is ZA298, the 'King of the Junglies' (see text), seen here in July 2015. It's difficult to appreciate that the area of the forward fuselage shown here had undergone an extensive eighteen month repair following the serious damage sustained in Afghanistan



Turning and burning... Sea King Mk 4 ZD627/WO of 848 NAS prepares to launch from the deck of HMS Illustrious in October 2009



In October 2009, 848 NAS was the Commando Helicopter Training Squadron. ZD479/WQ is seen taking off from HMS Illustrious



The recent Airfix kit would have you paint the Mk 4 in Light Olive, presumably the Humbrol equivalent of Olive Drab. Note though how the finish on these machines can differ markedly and that some have a very matt appearance whilst others appear glossy



ZE427/K of 848 NAS in February 2016. Note that these hard-working machines often had a 'patchy' appearance - and that not all parts of the airframe were necessarily Olive Drab



Yeovilton is one of the busiest military airfields in the UK. ZG821/G awaits clearance to taxi as an army Wildcat AH.1 comes in to land



Westland Sea Kings are fitted with an automatic blade folding system, seen in operation here on ZG821/G

epithet, it is my experience that crews invariably referred to it as the Sea King Mk.4.

The role of the Mk.4 in RN/FAA service was essentially that of tactical mobility which translates as the movement of troops, specifically the Royal Marines, in a battlefield situation. To enhance this role the aircraft carried a sophisticated array of self-protection sensors and countermeasures and could be equipped with a door mounted 7.62mm GPMG or more recently a .50" calibre machine gun. The Mk.4 had the ability to carry under slung loads, including artillery pieces and medium size vehicles, and could also be used for search and rescue (SAR) thanks to the winch located above the cargo door. This feature also aided abseiling and fast roping as alternative means of delivering troops into a 'hot' location, with parachuting as another option. Casualty evacuation was also a job that the aeroplane undertook. In more recent times this most adaptable platform was upgraded to Mk.4+ standard with improvements including tougher rotor blades and more powerful engines, allowing operations in the hot and high land environments of Iraq and Afghanistan. Night vision goggles (NVGs) were also

introduced, along with NVG compatible instrumentation. The overland operational scenario was somewhat removed from the amphibious assault role that the Commando Helicopter Force (CHF) crews were originally trained for but both they and the helicopters proved very adaptable.

Having been operational with the Fleet Air Arm for some thirty six years, as of 31st March 2016 the final few airframes have been retired making way for the ex Royal Air Force Merlin HC.3s to completely take on the CHF mantle. As much as this is a sad occasion, it's also a time to reflect on the work that this Commando variant of the venerable Sea King has performed around the world. It's a remarkable fact that prior to retirement the Mk.4 had been constantly on ops for an unparalleled twenty five years, performing sterling work in Northern Ireland, Iraq, Afghanistan and Bosnia as well as on numerous smaller missions across the globe. The helicopter was also famously employed shortly after its introduction to service in the Falklands Conflict.

The drawdown marks the end of an era and the end of a legend. Although there have been accidents over the years, not a single Mk.4 was lost in a fight and despite a



The 'Bosnia' scheme (often erroneously referred to as the 'Arctic' scheme) was applied to several airframes, including ZF115/R, which also carries Sea King 40th Anniversary markings. This aircraft is featured in the recent Airfix kit

number of aeroplanes have been hit by enemy fire, with several rounds passing through various bits of kit from time to time, the Junglie has generally just kept on flying. At the time of writing one Mk.4 has been earmarked for preservation in a UK museum and that particular aircraft illustrates just why the

Sea King Mk.4 deserves the legend status. Still in service until the end ZA298 is known as the King of the Junglies, having survived some serious battle damage over its thirty five years. On 13th June 1982 whilst serving in the Falklands campaign 298 received fire from an Argentine A-4B

Skyhawk, a 20mm cannon shell passing through the spar of a main rotor blade. After making an emergency landing the aircraft flew back to San Carlos just two hours later after a blade change. The following day saw the Argentine forces on the islands surrender and despite having white recognition panels painted on the nose and fuselage sides, ZA298 missed out on the honour of carrying Major General Jeremy Moore into Port Stanley to accept the surrender due to appalling weather conditions. On the 15th June however the aircraft did carry General de Brigada Menéndez and four other senior Argentine officers to HMS Fearless.

subsequently returned to the UK, 298 underwent an eighteen month rebuild and returned to service with the CHF in January 2012. The aircraft will move across to the Fleet Air Arm Museum, co-located at Yeovilton, in due course to be displayed along with the damaged panels.

A number of events marked the drawdown of the Mk.4 fleet and I was very lucky to be invited to RNAS Yeovilton and 848 Naval Air Squadron in order to experience one of the final sorties by these hard-working and much loved aircraft. At the time of my visit in early February 848 NAS had only seven serviceable airframes on strength and this was due to reduce to five by mid month. Those five aircraft took part in a Farewell Tour flight around south-west England on 21st March giving the local population a last opportunity to see Junglies in flight. Just a few days later, with more aircraft standing down, the remaining three helicopters performed a final flypast at 848's decommissioning parade.

Whilst serving in Bosnia during the 1990s ZA298 was peppered with small arms fire but it was in Afghanistan that the most devastating damage was done. In May 2010 the aircraft was on approach to land when it was struck by a rocket propelled grenade (RPG). The missile struck the starboard fuselage just behind the cockpit, causing extensive structural damage. The pilot was luckily uninjured although the Royal Marine door gunner was slightly wounded and the RPG exited through the port side. After being airlifted back to Camp Bastion and

I am extremely grateful to have gained just a taste of the Junglie experience and my thanks are due to Tracey Clempson, RNAS Yeovilton PRO, the CHF PR staff and to 848 NAS for their hospitality.



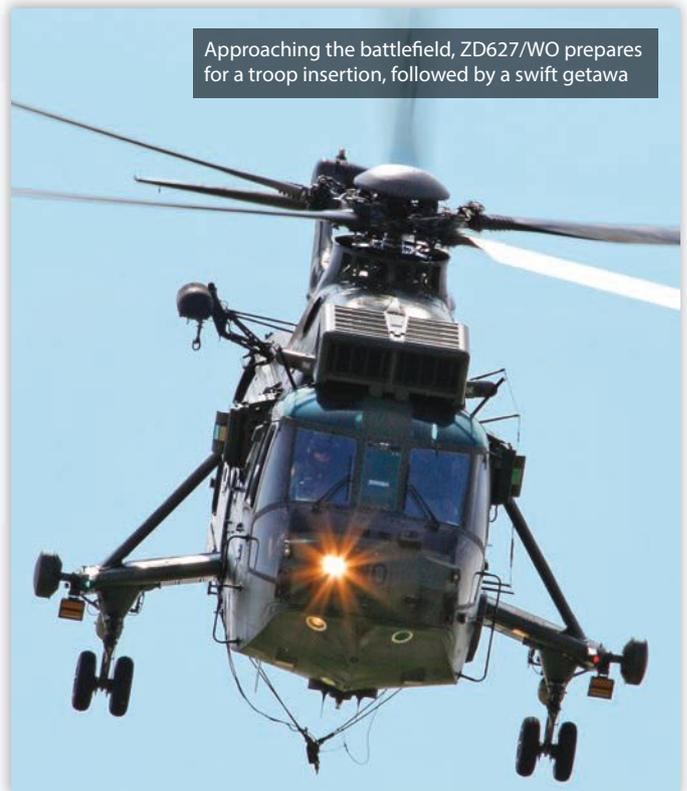
With all of its lumps, bumps, aerals and cables the Mk 4 makes an interesting subject for a model. Time spent adding these details to the Airfix kit would pay dividends. This is ZE427/K of 848 NAS



Demonstrating its primary role of tactical mobility, ZA296/Q is seen taking part in the Commando Assault at the 2014 RNAS Yeovilton Air Day



848 Naval Air Squadron has had a somewhat irregular history since its inception in World War II, having been disbanded and re-formed a number of times. Serving as the Commando Helicopter Training Squadron for the comparatively long period of eighteen years, the unit stood down again in December 2013 as the Sea King HC.4 training requirement reduced. However, in May 2015, the unit 'numberplate' reappeared as 848 NAS became the last operational HC.4 squadron. This was essentially a re-badging exercise, allowing the frontline 845 NAS to convert onto the Merlin HC.3 at RAF Benson, taking possession of the former 28 Squadron (RAF) machines



Approaching the battlefield, ZD627/WO prepares for a troop insertion, followed by a swift getawa

Plateau Eagle

Trumpeter's
PLAAF JL-9

By Rick Greenwood



Kit No: 02879

Scale: 1/48

Type: Injection Moulded Plastic

Manufacturer: Trumpeter
Pocketbond/Stevens
International

The JL-9 is derived from the MiG-21 Mongol two seat airframe, also known as JJ-7 in the Chinese inventory, and is intended to be used as an advanced lead in trainer for new types entering service in the People's Liberation Army Air Force such as the Chengdu J-10, Sukhoi 27/30 and the J-11.

The kit's eight sprues feature the usual standard of tooling by this brand, with engraved panel lines and rivet details that are consistent and not overdone. Clear parts for the canopy and other smaller items such as the Heads Up Display (HUD) are well moulded and crystal clear. Markings are provided for two examples in slightly differing colour schemes for Chinese operators.

Section one in the instructions deals with the construction of the well detailed cockpit, ejection seats and instrument panel. I built up each section as per the kit instructions, following Trumpeter's suggested colours for the seats and cockpit tub. The detail on the sidewalls and consoles was good and a careful painting and weathering process provided excellent results. Decals are provided for the instrument panels and the

side walls but to be honest these looked clumsy and toy like so were discarded.

Before the fuselage sections can be joined together a number of internal parts need to be added. An engine is provided but I elected only to paint the jet pipe and exhaust as nothing else can be seen on the completed model. The landing gear bays were built up and added to their respective locations and I found that the nose gear leg could be left out at this stage as it will fit towards the end of the build avoiding damage.

In a very rapid build the main components were added to see the airframe complete, a very trouble free process so far.

I prepared the model surface with Alclad Grey filler primer and checked for flaws in the build. Once a few were rectified the whole model was washed in warm soapy water and scrubbed with a tooth brush to remove any trace of build debris etc. from the panel lines. Once dry a final check was carried out before applying the main colour coats. Trumpeter offer two schemes in their kit, one suggested as overall white and the other in an overall grey scheme. I could not really confirm the colours of each airframe to my satisfaction, so working on the photo reference I had I decided on the white scheme with red fuselage side numbers. On closer inspection of the online photos this scheme perhaps is a light grey shade based on the fact the aircraft colour was darker than the white contained on some of the warning stencil data, and the white helmets worn by the pilots. Looking through the paint rack I elected to use RAF Light Aircraft Grey. This came from the Xtracolor range of enamels. I applied this by airbrush thinned with cellulose thinners and a couple of drops of driers added for an accelerated drying time.

As expected this paint produced a really

smooth gloss surface and was left to cure for a few days. On my return to the workbench the model was then treated to an application of Klear ready for the weathering process. As these airframes are relatively new weathering was kept to a minimum as the photos show a quite clean appearance although some variation was added to the upper surface colour to add a little depth and break up the pale expense of the continuous colour scheme. Some structural details were highlighted with a very weak mix of Tamiya smoke to complete this stage of the build. Other smaller areas of colour were now masked and painted such as the green dielectric panel on the fin top and the bare metal engine area at the rear of the fuselage.

As no other source of decals was available at the time of the build I was forced to use the kit supplied markings. In the past I have had a torrid time with Trumpeter's decals so wasn't expecting a good result. (Caracal decals have just released set 48105 for the prototype airframes.) The main markings were applied first and with a bit of care they could be made to work well, but they don't favour being moved about too much as they stretched and deformed unless well lubricated with water or decal solutions. The smaller stencil data was applied onto a drop of Klear and left to dry.

To blend every thing in, as the stencil data looked quite stark against the pale grey background, a very weak solution of the original Light Aircraft Grey top coat was misted over all the decals to lower their visual impact.

The under wing tanks were attached to their respective pylons and added to the airframe at this point. I was a little confused in their placement as it could be possible that the wing is only plumbed for tanks on the outer pylons but

Trumpeter have you add them inboard. A representative load of missiles was added to the outer positions to add visual interest. Trumpeter doesn't stint on ordnance and a whole plethora of pylons and missiles are included, many of them ending up unused in the spares box.

The undercarriage was built up as per the kit instructions and is quite well rendered. All were added without incident and capture the stance of the aircraft well. The canopy is only shown closed in the instructions but can be posed in the open position as well with no extra work required. This was added in the open position on my model with the retaining stays being made from heat stretched plastic sprue.

Finally the smaller breakable bits such as nose pitot were added and the model finished with a coat of matt varnish.

Conclusion

This was a really fuss free build and the end result captures the look of the real machine in my opinion. The level of detail is adequate coupled with an easy build, just the way we like it. An unusual model too of what could be the ultimate MiG-21 upgrade. Recommended to all. Until next time...



PULPIT FIGHTER

Converting the Airfix BE2c in to a BE9

By Dave Hooper



Kit No: 02101

Scale: 1/72

Type: Injection Moulded Plastic

Manufacturer: Airfix

In the days before the synchronised machine gun came into general use aircraft manufacturers looked at various ways of designing aircraft with forward firing capability. The initial approach of this period was the pusher configuration, but the pusher would never be as aerodynamically efficient as the tractor type of aeroplane. One of the most novel approaches to solving this problem was the Pulpit design in which the tractor propeller sat behind a forward observers section. This layout had first been utilised by the French Spad aircraft and it's likely that the Royal Aircraft Factory used the Spad A4 design as inspiration for the BE9, which was essentially a modified Be2c with a larger wing span. The single BE9, 1700, a converted Bristol built aircraft, was obviously considered promising enough to be sent to the western front in September 1915 for evaluation with 16 Squadron where the aircraft saw action on more than one occasion. However the BE9 was considered too slow and sluggish by the pilots that flew her



and she was returned to Farnborough by the beginning of 1916.

The Kit

I have a bit an affinity for the odd and unusual, which probably accounts for my interest in aircraft of the World War I period in general as this was a period when absolutely anything and everything was tried. As such I've always wanted to build a model of the BE9 so when I purchased the new Airfix BE2c earlier this year I knew exactly what I wanted to do with the kit.

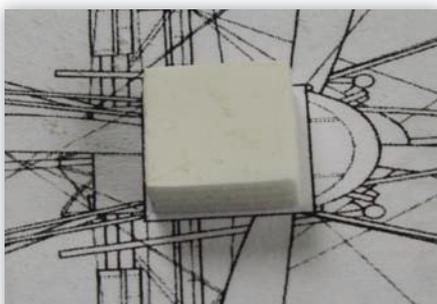
I have already provided a short in box review in an earlier edition of *SAM* so I will not go over old ground other than to summarise that the kit is generally acceptable and definitely a step up from the old Airfix World War I models that I guess we all grew up with. If you want to read a very good build review of the kit the I would recommend Paul Thompson's excellent build published in a recent Great War SIG newsletter *Cher Ami*, which is available directly to download from the Great War SIG website. Plug over – on with the show.

In order to build the BE9 I would first need a set of plans and luckily there are a few very good sources. *Windsock International* published

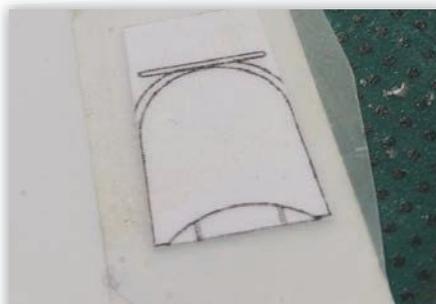
some drawings by Martin Digimayer many years ago, while a *Cross and Cockade* issue from 2011 also has some excellent drawings by Mick Davis. Of the two I personally prefer Mick Davis' offering and it was these that I based my model on.

The Pulpit

I decided to begin by building the pulpit as I reasoned that if this was beyond my skill as a modeller to replicate then I would not have wasted time and effort destroying my nice new Airfix kit. The main section of the pulpit is a simple box shape so well within my comfort zone, but the challenge would be to replicate the nose section and so it was here that I began work. I started by cutting out a square piece of Plasticard which was the forward view shape of the nose. This was built up with further pieces of Plasticard until the depth of the nose section was achieved. I then shaped the nose section using a sanding stick so that it replicated the shape indicated on the drawings and suggested by period photos. Once I was happy with the general shape of the nose section the main box section of the pulpit was built up with more pieces of Plasticard. I originally intended to cut the rounded coaming at the rear of the pulpit from unused bits of the BE2c fuselage, but



The nose of the pulpit begins with a block of plastic, which is first shaped to match the side profile and then shaped to match the downward



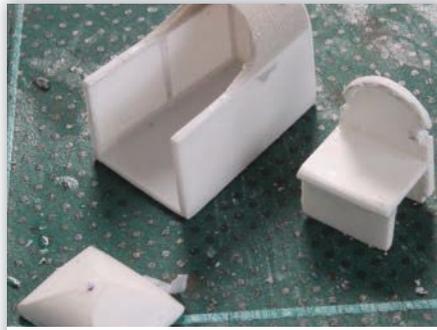
I make photocopies of the plans and use these as templates for the Plasticard pieces taking in to consideration the thickness of any connecting parts



The basic box and nose parts of the pulpit



I used a spare part from the Roden SE5a kit for the coaming at the back of the pulpit



The internal seating was based loosely on the observer's section of an FE2b



The completed pulpit



The Airfix fuselage halves showing the marked off sections to be removed



The internals are painted and the observers station filled with Plasticard



The basic fuselage section assembled

unfortunately lost one of these bits while preparing. Luckily my spares box came to the rescue in the form of a Roden SE5a coaming section, which when cut down, sanded and filled was perfect for use on the BE9.

There are no photos of the seating arrangement in the pulpit so I used the FE2b as inspiration for my purely conjectural observer's cockpit. At this stage the nose part that I had prepared earlier was glued directly on to the front of the pulpit box. I found some bits of old photo etch, which I shaped to make a foot step and fitted and shaped (rounded) a strip of thin Plasticard around the pulpit opening to represent the collar.

The Fuselage

The BE2c fuselage needs some surgery in order to be suitable for use on the BE9. Basically it needs to be cut back to a position at the front edge of the original observer's opening and a new box like cowling is built from Plasticard. The observer's opening and a window in the coaming forward of the pilot's position needs filling in and the easiest way to do this is to cram the area full of odd bits of Plasticard built up in layers. I prefer to fill these areas with plastic rather than filler as filler is usually softer than the surrounding area, so it's much more difficult to get a smooth shape, although I obviously use filler in small doses to obtain a clean finish without any telltale lines.

The Airfix fuselage is supplied in three parts, the idea being that all of the internals fit on to the base part prior to fuselage assembly. The observer's area does not need to be assembled and I took the opportunity to use the observer seat in place of the kit's pilot seat as I felt the observer's seat was a better representation of the type that would have been used in the real aircraft. The kit's control panel is moulded to the cabane struts and as these are in a different position on the BE9 they were removed. I also replaced the kit control column with an item made from brass rod as one of the least

appealing features of the Airfix kit is its tendency for some of the smaller parts to look slightly toy like.

With the internals fitted and painted, the three fuselage sections were assembled and cleaned up. The elevator control brackets are moulded in to the side of the fuselage and as my intention was to replace these parts I took the opportunity to remove the moulded detail. I also filled in all of the undercarriage slots as the undercarriage is in a different position on the BE9. The front underside of the fuselage needed a little building up with Plasticard to conform to my set of plans. A new box shaped cowling section was then built up and fitted to the fuselage in readiness for the kit engine. Finally new elevator control brackets were made from a combination of Plasticard and brass rod.

The Engine

The kit's RAF 4a engine is in my opinion one of the better areas and assembles into a neat looking replica bearing in mind the scale of the kit. The BE9 originally had a V8 RAF1a engine but externally this is very similar to the 4a. The kit engine is surprisingly detailed and can be built from the box without any additions to a very good standard. The L shaped exhausts are pre moulded to the cylinder parts and these need to be removed for the BE9. I chose to lose the exhausts completely but in reality only the upwards vertical portion needed removing as I used the horizontal section of the exhausts in the rebuild. To replace the sections that I had removed I fashioned two downward facing exhausts from brass rod; however these were

not refitted until later in the build. My new

engine cowling section needed two strips of Plasticard added along the inside of the top edge to act as engine bearers.



Tail Section and Wings

The BE9 had a much larger tail fin than standard BE2s of the period.

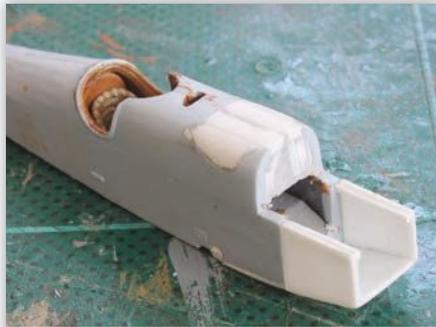
The kit provides examples of a standard early fin and the later slightly larger and more round version, but neither of these are suitable so a new fin needed to be manufactured. This was made from laminated strips of Plasticard. A base strip of the general shape of the fin was cut from 10 thou Plasticard. This was laminated each side with thinner strips made from 5 thou card. Rib lines had been embossed in these using a thin blunt object (I used a sewing needle) prior to fitting the lamination. The lamination was then superglued to the base strip of card so that the opposite (raised) side of the emboss was facing outwards. The fin was then cleaned up and the edges rounded off.

The rudder and tail/elevator kit parts are perfect for the BE9. The Airfix tail section is designed to slot into the fuselage from the underside and a small piece of fuselage underside then fits over the slot. This worked reasonably well although the fit of the underside part was not perfect initially.

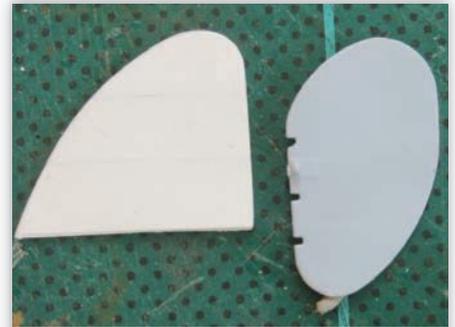
As I mentioned earlier the wing panels on the BE9 were extended by nearly four feet (120cm) so you have two choices here - either use two donor kits or scratch build the extensions. For reasons of consistency I opted for the first option as I already had a second BE2c kit in my stash. I already have some BE2e wings in my spares box



The underside at the front of the Airfix fuselage needs deepening, which was achieved with Plasticard



A new cowling section is manufactured and fitted to the kit fuselage



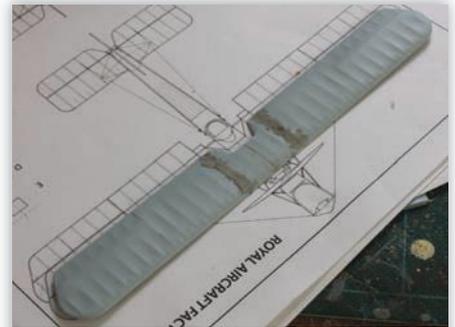
A new tail fin and the kit's rudder



The RAF 4A engine is one of the best parts of the new Airfix kit



The tail section slots in to the fuselage from underneath



Extending the top wing

so the rest of the unused second kit will not go to waste.

Back to the wings and for my purpose the kit upper wings were the most useful shape for both the upper and lower BE9 wings while only the centre section of one upper wing would be required. The lower wings were the easiest to convert. These could simply be cut down from a kit upper wing ensuring that the trailing edge part that is initially part of the kit's cabane strut part is utilised. New extended frames were fitted made from metal strips that I once purchased from a railway model supplier and the underside lugs intended for struts were filled in. In addition Airfix have moulded some rather unsightly small dimples on each aileron. I'm not sure what these are intended to be and they were summarily executed.



The BE9's upper wing was made up from a combination of the outer sections of the other kit upper wing and a combination of centre bits from the upper and lower kit wings all sandwiched together and cleaned up. Again the strange aileron dimples were removed. According to Mick Davis' drawings the rib spacings on the centre section are different so I did a lot of splicing and filling to create a section that mirrored the drawings. Finally all rigging points were drilled completely through each wing and the fuselage using a 0.40 twist drill.

With all of the wings built I fitted the lower wings into the fuselage and all the major parts of my model were then ready for some paint.

Colours and Markings

While there was ever only one BE9 there are two colour options that could be applied. The initial scheme is a natural one consisting mainly of clear doped linen, varnished wood and bare metal. There is also a service scheme, which was in place during the

BE9's short service life in France. Photographic evidence of this scheme is very sketchy as it consists of one very bleary photo of the BE9 in flight but is generally considered that during this period the entire aircraft was doped in PC10.

I chose to paint my model in the aircraft's initial scheme although colours, even for this, are by no means certain. There are two main areas for debate. One is the decking around the cockpit opening. This is a very pale colour on period photographs although very slightly darker than the clear doped linen parts. This could mean that the decking was either doped or that the decking was a natural light plywood colour. I opted for the later. The other area of uncertainty is the pulpit nose. This appears in most photographs to be a similar shade to the CDL and could in fact possibly be CDL although I very much doubt this as I believe the upper edges of the nose shape were rounded. In Paul Hare's excellent article on the BE9 in *Cross and Cockade Vol 42/3*, Paul states that the underside of the pulpit was designed to have a steel sheet to protect the observer, although whether this was ever fitted is unclear. However I decided that the nose would likely be an extension of the steel sheet and while the hue of the nose section did not match the bare metal sections of the fuselage on my photos I reasoned that this was likely to mean that the steel section in the pulpit



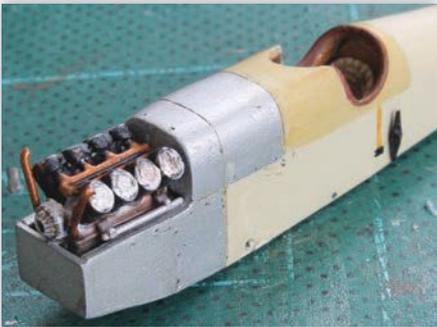
New lower wings are made from the kit's upper wing



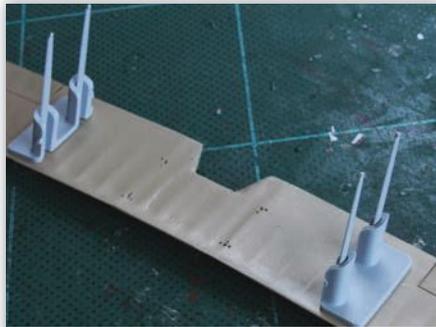
The fuselage section ready for paint



New elevator control brackets made from Plasticard and brass rod



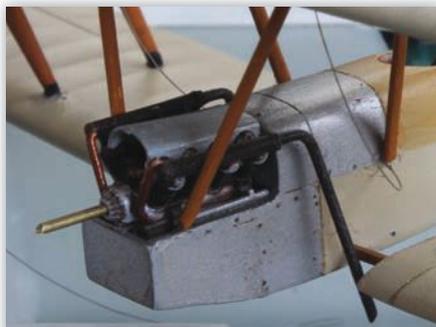
The engine is fitted



Inner bay interplane struts are fitted to the upper wing using the extremely useful kit strut jigs



Upper to lower wing assembly. Note that the rear cabane struts have also been fitted



Replacement exhausts are fitted

had been painted a pale grey commonly used to cover bare metal areas on early BEs. For markings the BE9 only had a serial number and small union jack positioned on the rudder. The serial numbers were printed on clear decal paper while the union jack was sourced from a Pegasus sheet of early RFC/RNAS markings, which I believe is still available from Freightdog.

Main Assembly

With all the major sections painted I was ready for the main assembly of the parts. First the engine was fitted and a piece of brass rod long enough to fit in to the back of the pulpit was fitted into the engine for use as a propeller shaft. Next the kit propeller was assembled, painted and fitted on to the propeller shaft. I drilled a hole into the back of the pulpit and this was glued to the propeller shaft. Next the four inner bay interplane struts were fitted to the underside



of the upper wing. Airfix has thoughtfully supplied a pair of plastic jigs to aid positioning and these are also suitable for the BE9. These jigs are also useful for supporting the bendable plastic struts when initially dropping the upper wing to the lower wing and in this case the jigs were held in position by a strip of masking tape. Before assembly each of the interplane struts need the lower locator to be modified so that it would fit into a round drilled location point on the lower wing rather than the wide location

lugs of the original kit part. Once all this was done the upper wing was carefully fitted to the lower wing via the interplane struts.

New cabane struts made from brass 'strutz' material were then spring fitted between the fuselage and the

upper wing and once the glue on these was completely cured the outer bay interplane struts were also added. I then fitted the exhausts



On goes the prop



The prop is followed by the pulpit

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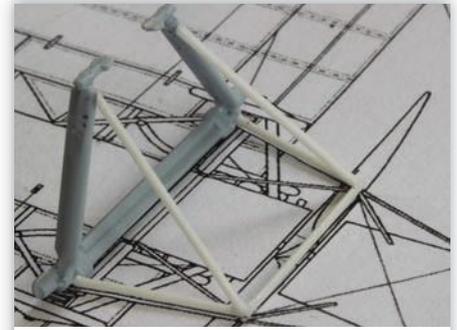
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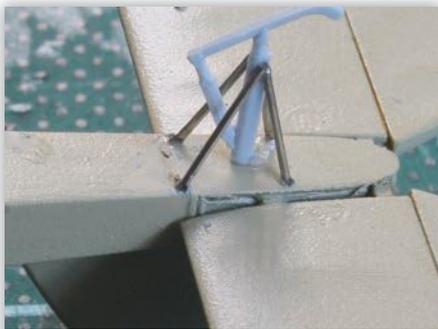
Rigging in process



Excess rigging has been removed and the rigging points cleaned up



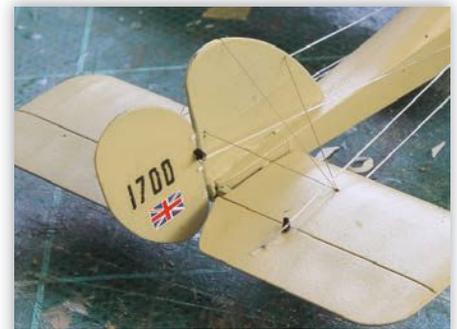
Assembling the undercarriage



The tail skid with replacement supports



New underwing hoops made from brass rod are added



The tail section including control wires

before turning my attention to the rigging.

The act of rigging can be as difficult or as simple as you want to make it if that makes sense. For small scales such as 1/72 my preferred method is to thread smoke coloured mending thread through small holes pre drilled into the plastic. In small scales the holes are usually drilled completely through the plastic so that I can thread the monofilament through the holes and pull it taught. For wings I usually begin on the inner bays and work outwards and each thread end is carefully locked off with a tiny bit of superglue. Once all the rigging is done, the excess thread poking through the outer side of the wing is trimmed off and the area around the rigging point carefully cleaned up. The model is then masked so only the outer sections of the wings are in view and the section is resprayed.

Undercarriage Assembly

The undercarriage section is quite complex and uses very little of the original Airfix arrangement, which is supplied in two parts, unusually as front and a back sections rather than the sides and axle that we usually see in kits. Only the front section was used in its entirety for this model. The struts in this section have an annoying seam running down through the middle that needs sanding out and the shape of the struts themselves needed slight revision to comply with Mick Davis' plans. I also needed to revise the fitting lug on the end of each strut so that the section would fit snugly to the underside of the fuselage. The only part that I used from the back section of the kit undercarriage was the back half of the axle. The rear kit struts are too small to be of any use. You need to be very careful removing the back undercarriage section from its sprues as the plastic is very brittle and my axle split. Not a problem but it did highlight the fragility of the kind of plastic that Airfix are using these days. Once I had fitted the rear axle part (or in my case parts) to the front section I added the forward base framework, which I made from 0.20 plastic

rod. I would usually use brass rod for such things, but unless you go down the soldering route you can never get such a good bond with brass. I then fitted this revised front section in position onto the sides and underside of the fuselage. New rear struts were cut from contrail plastic strut stock and fixed in place. It was then just a simple process of fitting more plastic rod between the pulpit and the framework section forward of the main undercarriage struts.

For the tail skid I used the kit's centre part, but replaced the supporting rods with much thinner and less toy like pieces of thin brass rod.

Final Touches

At this stage I fitted the rudder. Control horns were also fitted to the ailerons and elevators although I did not need to do this on the rudder as control horns were already moulded into the part. Why Airfix did this on one part and not the others is a mystery. Control wires were fitted using elastic EZ-line, which I always find is easier to glue than mending thread and therefore perfect for things like control wires. Underside wing hoops were made from brass rod, replacing the kit parts, which look a little thick for my liking. I used one of the windscreens from the kit for the fuselage and manufactured a simple windscreen for the pulpit by cutting out a small circle of acetate using a rotational cutter and splitting the circle in half. Finally the kit wheels were cleaned up and added and as an afterthought I fitted a pitot tube made from guitar string to the outer port forward interplane strut.

Conclusion

So there you have it! I'm not sure how much I can say about the original Airfix kit as I made so many changes to it that it's difficult to make any meaningful judgement other than to say that it makes a

superb base for conversion. And that really was the point of this build.

Airfix have reportedly said that if the new BE2c and Eindecker kits sell well enough then they would consider other World War I subjects. The great thing about both of these subjects is that they can be easily converted into a whole host of interesting prototypes and variants meaning that you need never be content with just buying one kit – buy many! The BE9 is perhaps the worst example as the process for conversion is reasonably complex - especially for a first conversion - but there are some excellent BE2 subjects that spring to mind that would be easy to do, for instance the armoured BE2s, which were essentially production BE2s encased in a coffin of armour. Interestingly when I recently looked at the Airfix website the original BE2c kit released in January was already listed as being out of stock. Does this mean that Airfix underestimated how many original units would sell or has the kit been flying off the shelves? I would guess the former but this in itself is good news, which hopefully makes further World War I subjects a more viable prospect.

References

Cross and Cockade Vol 42/3 - The Pulpit by Paul R.Hare

Windsock International Vol 17 No.6 - Royal Aircraft Factory BE9 by J.M.Bruce



LEVEL 5

NEW



Avro Shackleton Mk.2 AEW

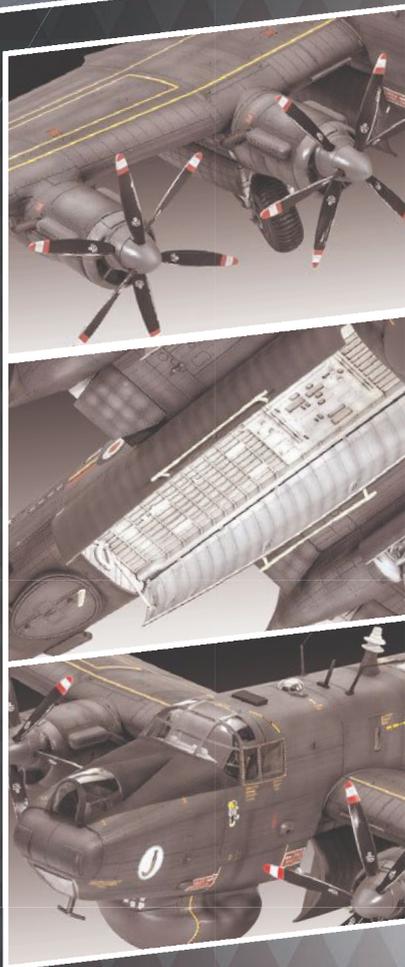
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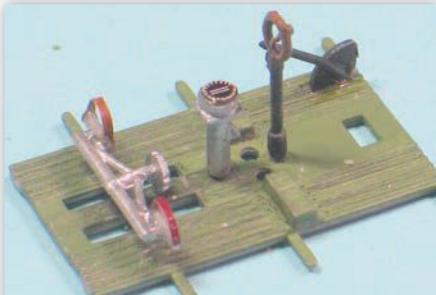
Build Your Dream!

A MONUMENTAL BASH ON THE HEAD

Roald Dahl's Gladiator
By Tony Grand



Instrument panel in place. Note the rather too obvious ejector pin marks



The office floor



Some of Eduard's etched parts add nice touches to the kit plastic



Kit seat and scratch built replacement

Kit No: 1145
Scale: 1/72
Type: Injection Moulded Plastic
Manufacturer: Eduard
www.eduard.com

September 20th 1940. Two Gloster Gladiators left the RAF base at Abu Sueir in Egypt bound for a forward airfield at Sidi Haneish on the Libyan Plateau.

After intermediate stops for fuel the two planes arrived at Fouka near the Egyptian coast where the pilots were given the co-ordinates for the forward airfield at which the squadron they were joining, 80, was operating. The aircraft took off from Fouka at 18.15 local time with a little over an hour of daylight left. The flight was estimated to take about fifty minutes. After the estimated arrival time had passed the pilots were unable to sight the airfield. With insufficient fuel to return to Fouka and daylight rapidly running out, the two pilots had little choice but to attempt an emergency landing in the desert. One of the Gladiators landed safely but the other, K7911, struck a boulder with its undercarriage and crashed, bursting into flames. The pilot suffered serious head injuries, which left him temporarily blinded, but he was able to get clear with the assistance of his colleague. Pilot Officer Roald Dahl recovered from his injuries and took part in the air fighting over Greece the following year where he was credited with five air victories. He survived the war and became a famous writer. The colleague was Douglas McDonald, who tended Dahl through the night till help arrived.

This is the actual report sent in by 80 Squadron the next day:

'P/O Dahl posted to this squadron from T.U.R.P. for flying duties w.e.f. 20th September. This pilot was ferrying an aircraft from No. 102 M.U. to this unit, but unfortunately not being used to flying

aircraft over the desert he made a forced landing two miles west of Mersa Matruh.

He made an unsuccessful forced landing and the aircraft burst into flames. The pilot was badly burned and he was conveyed to an Army Field Ambulance Station.' (PRO Air 27, 669)

Dahl's injuries in addition to the burns were severe, involving his spine and a hip, on both of which during the rest of his life he had a series of operations, and facial reconstruction was necessary. He was semi-conscious for a month and left blind by his concussion for the best part of that. He did, as we have seen above, return to flying but eventually severe recurring head pains and blackouts led to him being declared no longer fit to fly and in due course appointed Assistant Air Attaché in Washington DC.

The above is the story as set out by Dahl's latest biographer, Donald Sturrock, based on thorough research. Not by accident is Sturrock's book titled Storyteller, as a major problem for him was sorting out what had happened in Dahl's life, as opposed to what the storyteller himself had set down, often in different forms, in different places. This was true not least of the crash in the desert, since Dahl started reinventing history in his earliest public account of it. Later he says he was shot down, also that he was alone on the flight. And so forth. As Dahl himself says in one of his notebooks 'I don't lie. I merely make the truth a little more interesting...' But his eventual reference to it as 'a monumental bash to the head' was in every sense correct.

My attention was first drawn to Dahl (he was not an author we read to our children) by wondering why an area of Cardiff was named after Dahl, and what the Norwegian link was. Following this up I discovered the account of the crash in his memoir Going Solo. Why not build his Gladiator? I thought.



The Kit

I was all set to build the Airfix 1/72 kit, when the Great Helmsman, at Telford 2015, said 'Build this Eduard 1/48, go on, you know you want to.' This is the 2002 Roden kit with added etch, masks and decals for eight subjects, issued as a limited edition by Eduard in 2015.

Lots of detail but not overwhelming, was my first impression on opening the box. By that I mean that there was a fighting chance of my actually finishing the plane. I'm less put off by a kit I really have to work hard on to correct say, than over facing numbers of parts. I was tempted for a while to jettison the Dahl link and build the version on skis as that looks really cool. Plenty of detail on the kit parts where necessary but restrained representation of fabric and what looked like clear instructions, melded I assume from the original Roden instructions and those for the Eduard etch. One minor bleat is that the moulding stubs intrude rather a lot onto the parts and this was a nuisance throughout the build. But there are nice details like the pilot's handgrips on the upper wing and the lifting points on the rear fuselage.

The Build

The build was overall straightforward. Dahl's was a Gladiator I and the instructions make it pretty clear, by reference to the colour views of the various options, which parts are appropriate at any given stage for the Gladiator I, II or Sea Gladiator catered for. The cockpit builds up easily, adding the etched parts to Roden's originals as necessary. I particularly liked the straps for the rudder pedals, the compass face and the map case. Having the etched, pre painted instrument panel attach to the Roden transparent item helps a lot in fixing the panel in the fuselage. The jumbo ejector pin marks on the cockpit walls are not visible in the closed up fuselage, so I did not try to fill them. I used Humbrol Cockpit Grey Green overall. I discarded the kit seat as it looks as if it's made from boilerplate and its shape is very little like the real thing. Referring to photos in the MMP *Gladiator Vol 2*, I scratch built a replacement from thin brass sheet. This to my mind is one item that Eduard could have usefully added to their etch.

Time to close up the fuselage. I had a little trouble with that, the surface area of the join in front of the cockpit being so minimal that it kept on opening up, which was also true of the 'hump' behind the cockpit. Next time I'll back it up with a strip of styrene. A little filling was needed there and at the roots of the lower wings which I now added, but Editor please note, not enough to make me weary. The undercarriage legs needed a little shaving to get them to fit appropriately into the recesses in the forward fuselage but they finally settled in snugly. I put the main interplane struts on at this stage before painting. Their extremities have the

appropriate fairings but they don't sit well on the wings. I fettled them a little - perhaps not enough but I was wary of compromising the separation and sit of the wings by overdoing it.

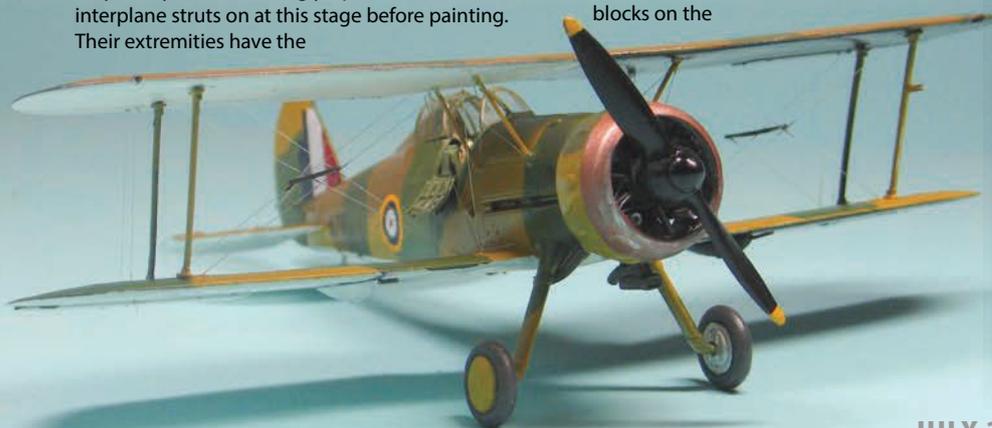
I then painted the wing and fuselage undersides black, with brush painted Xtracrylic Night Black, and white with a Humbrol rattle can Matt White, which I understood from the MMP volumes to be correct, though I have yet to read Paul Lucas's verdict in his latest article! Moving to the upper surface camouflage, I brush painted Mr Hobby Aqueous H71 Middle Stone and H303 Green on the lower wing and parts of the fuselage, and H72 Dark Earth and H73 Dark Green on the upper wing, following the call out on the Eduard instructions. Possibly the worst combination for someone (me) with red/green colour blindness to have to cope with.

I next drilled holes in the wings for the rigging and then fitted the upper wing. It fitted nicely onto the interplane struts but the cabane struts turned out to be too long (I hadn't considered that. Doh!) and as the plastic was rather delicate, two broke. I replaced all four with styrene rod sanded a little to the oval section of the kit items. A little late I discovered from photographs that preserved Gladiators show the struts to have an aerofoil section, which my dwindling stash of Aeroclub strut stock could have supplied. I used nylon thread for the main rigging and lengths of thin stainless steel wire for that between the cabane struts themselves and between the cabane struts and the wings. Nylon was used for the aileron cables and tailplane supports and stainless steel for the rudder actuation cables. The tailplanes fitted on firmly and I introduced a slight droop on the elevators as in reference pictures. A very slight droop on the ailerons too.

Meanwhile back at the ranch I had built the engine; nicely detailed and not as daunting as it looked. However I now will insert advice from Tom Cleaver's build, in *Modeling Madness 2002*, of the base Roden kit, which I wish I'd seen before this stage:

'When assembling the cowling and engine, you should follow these steps in this order:

1. Assemble and clean up the cowling and paint the interior
2. Paint, assemble and clean up the engine, without the exhaust stacks
3. Once the engine is set up, sand down the blocks on the



The black and white lower wing and fuselage undersides and main undercarriage fitted



Camouflaging in progress



Ready for the upper wing to be fitted with the nicely detailed engine assembled



Upper wing fitted and rigging in progress



Wing and cabane strut rigging complete

GLADIATOR

ends of the sleeve valves, until the engine will slide easily into the cowling

4. Attach the exhaust stacks
5. Attach the engine inside the cowling'

I didn't test fit well enough and had to trim the engine and the inside of the cowling after everything was painted and ready to go, splitting the cowling at one of its three joints. I had to insert a styrene shim at that joint to enable the fit.

The final fuselage painting stage was attempting to reproduce the heat affected appearance of the cowling over the exhaust collector ring. I mixed

some Copper and Burnt Iron, painted that on and subsequently dry brushed on some Aluminium (all Mr Hobby) and finally some Tamiya Clear Blue, trying to capture the look of the Shuttleworth Collection's plane which I'd seen a couple of weeks previously. Close but no cigar. The propeller

was going on at the end of the build but I prepared it by painting it overall Night Black, with yellow tips. That is my assumption of the colours; someone will know for certain somewhere but I couldn't ascertain it from pics. Another detail, the colour of the wheel hub covers. I painted them insignia yellow, as I'd seen a reference to that in one of the MMP volumes. Drops of Tamiya clear colours were used for the wing tip lights.

Markings

Ah now here's a thing. We know the serial number of Dahl's Gladiator and the 80 Squadron letters were YK but we don't know its individual letter. This does not appear in Dahl's log book. A very interesting discussion on *Britmodeller* concerning this matter in 2014 came to the conclusion that as Dahl was flying the plane back from probably deep maintenance at the Maintenance Unit, no codes at all would have been applied. The worthies on *Britmodeller* agreed that application of squadron codes was done at squadron level. So rather than making up a letter or leaving it off, I ran with that idea. My only problem was decals to use for the serial number. I had none in stock

exactly like any of the fonts I could see in the references, so I used Carpena sheet 48.48A *RAF Serials*, unspecified period but which I think I bought as post World War II some time ago. The kit decals went on very well. Ever the forward planner, it hadn't occurred to me that I should have fitted the fin/tailplane braces after applying the fin stripes.

The final steps were adding the wing to tail aerial wires, the underwing machine gun pods (I'd left them, as I knew the guns themselves would be broken off), and the rods joining the main bracing wires between the wings, using lengths of styrene rod. They are not supplied in the kit.

Conclusion

I was quite pleased with the build. Not my usual scale and only the third biplane I've ever built. An unusual build for me in another way. With previous builds of mine associated with individuals, I've warmed to the people concerned (Saint-Ex, Clostermann, Lindbergh) but I can't say that of Dahl. But he was brave. He played his part and you're allowed to be a little odd after a monumental bash on the head.

References

- Storyteller: the Life of Roald Dahl* by Donald Sturrock, 2011
- Gloster Gladiator Vols 1 and 2* MMP White Series 9106 and 9114
- The Irregulars: Roald Dahl and the British Spy Ring in Wartime Washington* by Jennet Conant, 2008



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With over 36,000 produced during the course of the Great Patriotic War the IL-2 represented the Red Army Air Force's principle strike force. Known to its pilots by the diminutive 'Ilyusha', the aircraft played a crucial role on the Eastern Front, Stalin himself referring to the type as 'essential to the Red Army as air and bread.' Thanks to the heavy armoured protection, the IL-2 could take a great deal of punishment. One aircraft was reported to have returned safely to base despite receiving more than 600 direct hits and having all its control surfaces completely shredded along with other structural damage but despite this heavy losses resulted from its vulnerability to fighter attack. Growing Soviet air superiority increased the average sortie per combat loss for the type from 26 sorties in 1943 up to 85-90 sorties in 1944-45 and the number of ground attack aircraft lost to fighters fell dramatically. Those lost to anti-aircraft fire in contrast rose in line with an increase in the number of sorties. This latest Warpaint from Russian author Oleg Rastrenin is a fresh and authoritative look at the type, including completely new drawings based on primary sources that promises to offer a highly accurate picture of this significant warplane.



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ISSUE 05

First Blood

Heinkel He 51. The Luftwaffe's First Fighter in Combat

By **Richard Mason**



He 51s equipped six Jagdgeschwader through the mid to late thirties, their streamlined profile and flamboyant markings proving popular during fly pasts and rallies

Although the fledgling Luftwaffe had been surreptitiously cutting its teeth for a decade or more its early activities have gone largely unremarked by the model kit industry. While hardcore fans of the service might dream of a state of the art kit of the Fokker D.XIII, its aircraft remain obscure and there is little to show, or indeed to build, in most scales that predates the Bf 109E. With even the early variants of the famous 109 barely covered outside of a handful of limited run toolings in 1/72 only Heinkel's singular He 51 biplane seems to have attracted any attention.

Given that the He 51 is associated by many

with the early genesis of the Luftwaffe it is worth recalling that German pilots trained in violation of the Treaty of Versailles in secret, and that a clandestine training airfield was established at Lipetsk in Russia, operating between 1924 and 1933. For purposes of cover this base was officially known as 4 Squadron of 40 Wing of the Red Army but hundreds of Luftwaffe pilots and technical personnel trained here, and at Soviet air force schools in other locations in Central Russia, including many of the future aces who had their first taste of combat in Spain flying the Heinkel 51.

Design and Development

The Heinkel 51's development seems to have dovetailed neatly with the official birth of the Luftwaffe, with the first flight of a pre production prototype taking place almost immediately after the *Reichsluftfahrtministerium* was established in April 1933. The RLM was in charge of development and production of aircraft, and the merging of all military aviation organizations in the RLM took place on 15th May 1933, which was to become the Luftwaffe's official birthday. With all pretence now cast aside the subsequent arrival of the He 51, which with its inline engine was a singular looking machine for its time,

The traditional colours on the cowling and upper fuselage to combine with the gruppe and staffel markings to make the early Luftwaffe He 51s a colourful and attractive subject for a modelling project





The He 51A was quickly superseded in service by the structurally strengthened He 51B



The Bulgarian Sokols were former Luftwaffe He 51B-1s sold for export in late 1936

made a definite impression and confirmed the potential of Germany's 'new' air force as a weapon to be taken seriously.

Heinkel had recruited aircraft designers Walter and Siegfried Günter in 1931, and their first major design was the Heinkel He 49, ostensibly an advanced trainer but very much a fighter in reality. Its BMW VI engine gave it a top speed of almost 199mph (320km/h) and the first prototype, the He 49a, flew in November 1932. The He 49 was a single strut biplane of composite structure with a BMW liquid cooled engine and was instantly recognisable by its clean aerodynamic contours and retractable radiator.

Two more prototypes were built, the He 49b which featured a lengthened fuselage and was first flown in February 1933, and the He 49e which introduced the faired landing gear. The type was ordered as the He 51, with the initial He 51A-O pre production machine making its inaugural flight in May 1933. This was followed by eight more unarmed pre production machines and deliveries of the initial He 51A-1 production variant began in July 1934.

The dimensions and the design of the aircraft remained almost unchanged from the He 49, but the He 51A differed in various details. The tailplane was completely redesigned and the retractable radiator replaced with a ducted one. The new ailerons had balance and trim tabs, and the parallel struts were replaced with an N type design. The landing gear noticeably changed to individual V struts and a tail skid was fitted in place of a tail wheel. The new aircraft was fitted with a 500hp Bayerische Motoren Werke BMW VI twelve cylinder liquid cooled engine and was armed with two fuselage mounted synchronous 7.92mm Rheinmetall-Borsig MG 17 machine guns with 500 rounds each.

The He 51 was a conventional single bay biplane, with all metal construction and fabric covering. Introduced as a replacement for the already outmoded Arado 65, it was to serve alongside the Arado 68, the two types together constituting the cutting edge of the new Luftwaffe's fighting arm. Despite this the original run of 150 production He 51As was soon superseded by the modified He 51B, of which some 450 were built, some forty six of which were He 51B-2 float planes

The He 51 B-1 was launched into production in the spring of 1935 differing from the A version with its reinforced twin braces and a fuselage rack to mount a 170 litre external fuel tank, but the aircraft's initial fame as the Luftwaffe's main front-line fighter was already being cast into doubt. In January 1936 a series of training duels took place between the He 51 and the Ar 68. Controversially the series was lost by the Heinkel, which proved significantly inferior to its opponent in manoeuvrability, rate of climb and maximum speed.

Use of the He 51 in Spain was to demonstrate its shortcomings further. Aircraft were sent to Spain to equip the Legion Condor and Nationalist Air Force and in November 1936 the aircraft clashed for the first time with

Polikarpov I-15 fighters supplied to the Republicans by the Soviet government. This was to prove a turning point for the He 51 as the I-15 was superior in speed, manoeuvrability and rate of climb while at the same time its four PV-1 MGs not only outgunned the Heinkel's two MG 17s in terms of fire power but its greater magazine capacity enabled it to engage in combat significantly longer. As a result of this experience the role of the Heinkel was revised and the He 51 C-1 variant was launched into full scale production. These aircraft carried bomb racks which were able to carry six 10kg fragmentation bombs mounted under the lower wing panels. Earlier He 51 fighters were modified in the field to carry bombs and the type achieved a measure of success in this role during the war in Spain and the experience of combat with the He 51 in the ground attack role had a significant influence on the future development of the Luftwaffe, and its tactical use of aircraft such as the Ju 87.

As the pace of new aircraft development accelerated and the fighter arm re-equipped with the new Bf 109 variants the He 51 was relegated from the front line fighter role, initially to ground attack units, albeit briefly, then to training units, in which role they continued until the end of World War II.

735 aircraft of all versions were built, with 135 eventually delivered to Spain, where the survivors of the Civil War, less than fifty in all, continued to serve initially as ground attack machines and then trainers until 1946.

Operational History

The Heinkel 51 was to equip six Jagdgeschwadern in the emergent Luftwaffe, each assigned a different traditional colour, and these early squadron markings make for some very colourful schemes as the aircraft

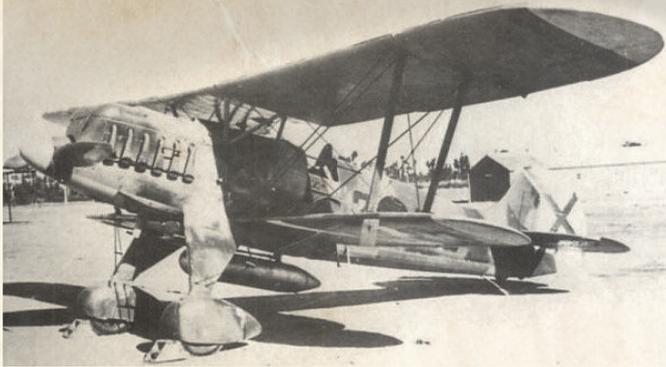


A trio of He 51B-1s formatting on a training flight over Germany in the early 1930s

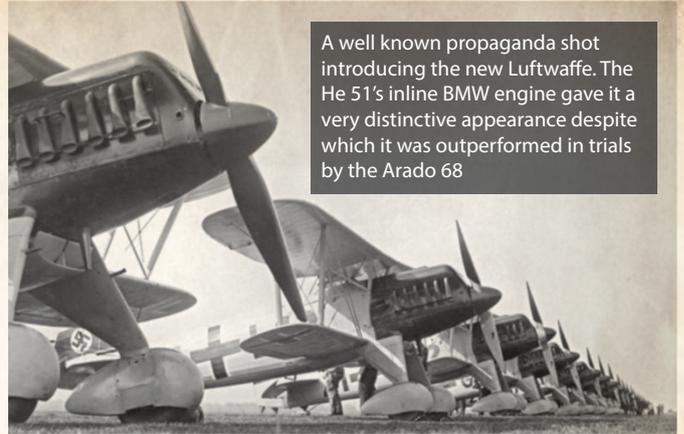


A pair of He 51As of JG 132 showing the earlier markings carried prior to the reformation of units and the adoption of traditional colours

Aircraft in service in Spain were initially painted all over light grey but once transferred to the ground attack role a variety of camouflage patterns was employed



A well known propaganda shot introducing the new Luftwaffe. The He 51's inline BMW engine gave it a very distinctive appearance despite which it was outperformed in trials by the Arado 68



were further marked with bars to show which gruppe it belonged to, and circles and stripes to indicate the staffel as well as individual aircraft numbers. The type's service history on the home front was largely unremarkable although it served admirably in the propaganda role, giving an impression of speed and power with its sleek appearance and flamboyant markings but it was the Spanish Civil War that was to prove the decisive factor in the aircraft's career.

On 6th August 1936 six He 51s were delivered to Spain as part of the growing German support for the nationalist cause. Initial operations were successful, with the Heinkels meeting and defeating a number of older biplanes of the Spanish Republican Air Force. Deliveries continued as the hostilities increased, with two nationalist squadrons equipped by November, and the Legion Condor forming three squadrons of twelve aircraft each manned by German pilots.

Before long however the arrival of large numbers of modern aircraft from the Soviet Union saw the Heinkel quickly outmatched. The Polikarpov I-15 biplane and Polikarpov I-16 monoplane were to outclass it as fighters, while even the Tupolev SB bomber was to prove faster. The He 51 was unable to protect the bombers it was tasked with escorting, while as an interceptor it was unable to catch the SB and was relegated to the ground attack role, replaced as a fighter by the Fiat CR.32 in the Nationalist Air Force, while the Legion Condor began receiving Bf 109s from April 1937, which allowed it to engage successfully in fighter operations.

The initial six He 51s had been shipped together with eleven of the Ju 52 transports used to ferry personnel from North Africa to Spain. The initial volunteer fighter pilots included Oberleutnant Herwig Knüppel, Leutnant Ottheinrich Freiherr von Houwald, Leutnant Ekkehard Hefter, Oberleutnant Johannes Trautloft, Leutnant Alfons Klein and

Oberleutnant Krafft Eberhardt. Eberhardt was in command of the flight, while von Houwald was in charge of training Nationalist Air Force pilots. On arrival the Heinkels were assembled at Seville's Tablada airfield by German mechanics and were paraded over Seville on 12th August. Initially the aircraft were handed over to Spanish pilots as the German fighter pilots were forbidden to fly operational sorties, except to escort transport aircraft. The inexperienced Spanish pilots soon crashed three of the six machines after which the authorities relented and gave permission for the German pilots to fly operational sorties. Most of the missions were flown by Eberhardt, Knüppel and Trautloft, who became known as the Hunters of Guardaramma after the mountain range among which so many of their combats were fought.

The three Heinkels first engaged the enemy on 25th August 1936, when Trautloft began the scoring by shooting down a Breguet XIX two seater bomber/tactical reconnaissance biplane. Eberhardt downed a second Breguet during the same encounter while the following day saw Knüppel and Eberhardt dispatch one Breguet each, and on 27th August Knüppel shot down a Nieuport fighter. Two days later Eberhardt destroyed a French built Potez bomber.

On 30th August Knüppel, Eberhardt and Trautloft each destroyed a Potez 54 but Trautloft, having been the first German fighter pilot to shoot down an enemy plane over Spain, in turn gained the distinction of being the first to be shot down. He survived the experience and downed another Nieuport fighter on 1st September to even the score.

The Soviet Union quickly dispatched further aircraft to counter the German fighter force with eighteen Polikarpov I-15s arriving in October 1936, and a further forty following shortly in two shipments. Meanwhile six new Heinkel He-51 fighters and ten pilots with mechanics had arrived in Spain but this force was inadequate against the

Forty six He 51Bs were built as B-2 floatplane variants



Ground handling of a He 51B-2 on its beaching trolley



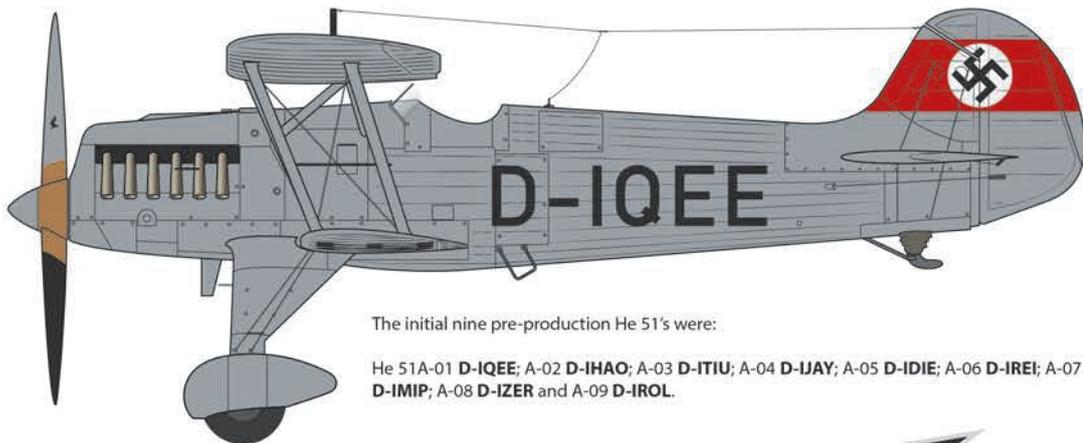
Aircraft in Spain carried the nationalist markings of a white rudder, with a black cross and black discs on the wings and fuselage. Later white wing tips and white diagonal crosses were also added to the wings to further aid in identification

He 51C showing the splinter camouflage that many later Condor Legion machines carried



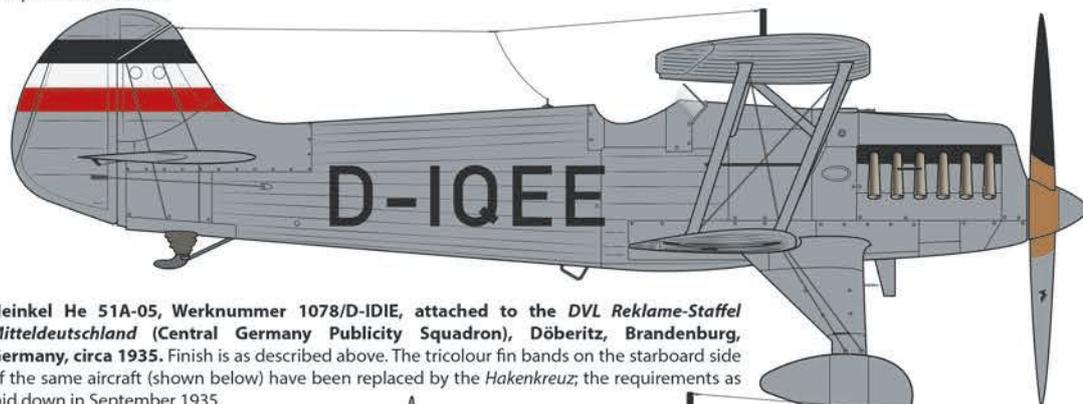
AIRCRAFT IN PROFILE

Heinkel He 51A-01, Werknummer 1046/D-IQEE, attached to the DVL Reklame-Staffel Mitteledeutschland (Central Germany Publicity Squadron), Döberitz, Brandenburg, Germany, 1934. Finish is in overall L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The civilian registration is in RLM 22 *Schwarz* (Vallejo 71.057 Black) and is repeated on the upper and lower wing surfaces. At this point, aircraft were carrying a fin marking consisting of National Socialist 'Blood' banner on the port side and the Imperial German flag on the starboard, as seen by the profile of the same aircraft below. Note the darker exhaust outlet panel. The propeller blades and spinner are in L40/52, Schwarz and Natural Wood (Vallejo 71.077 Wood). D-IQEE was one of nine pre-production aircraft.



The initial nine pre-production He 51's were:

He 51A-01 **D-IQEE**; A-02 **D-IHAC**; A-03 **D-ITIU**; A-04 **D-IJAY**; A-05 **D-IDIE**; A-06 **D-IREI**; A-07 **D-IMIP**; A-08 **D-IZER** and A-09 **D-IROL**.



Schwarz propeller logo



Heinkel He 51A-05, Werknummer 1078/D-IDIE, attached to the DVL Reklame-Staffel Mitteledeutschland (Central Germany Publicity Squadron), Döberitz, Brandenburg, Germany, circa 1935. Finish is as described above. The tricolour fin bands on the starboard side of the same aircraft (shown below) have been replaced by the *Hakenkreuz*; the requirements as laid down in September 1935.



AV71.062
Natural Metal
(Vallejo Aluminium)



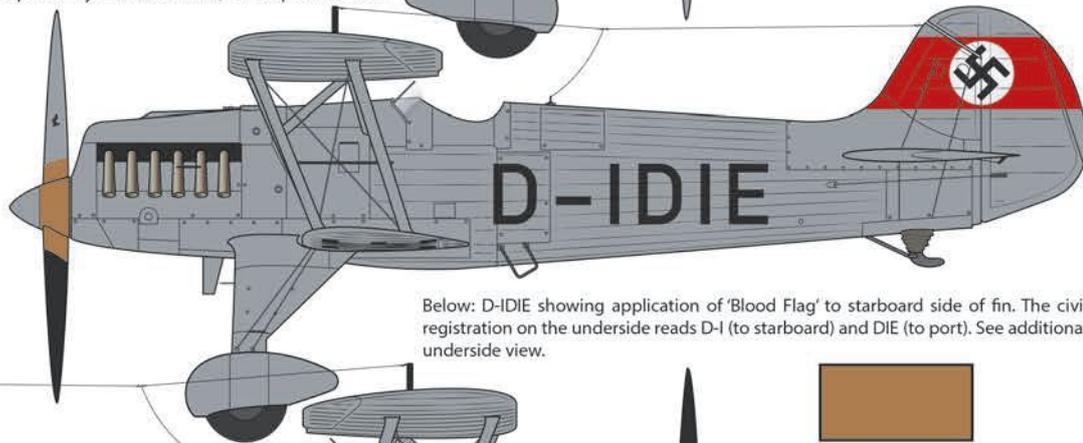
AV71.033
RLM 23 Rot
(Vallejo RLM 23 Red)



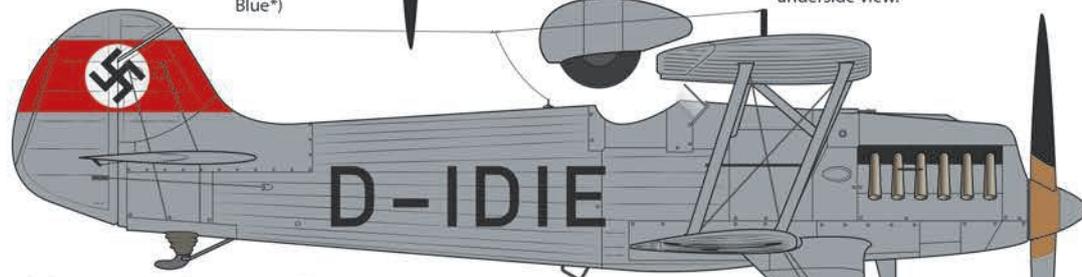
AV71.001
White
(Vallejo White)



AV71.091
Dark Blue
(Vallejo Insignia Blue*)



Below: D-IDIE showing application of 'Blood Flag' to starboard side of fin. The civil registration on the underside reads D-I (to starboard) and DIE (to port). See additional underside view.

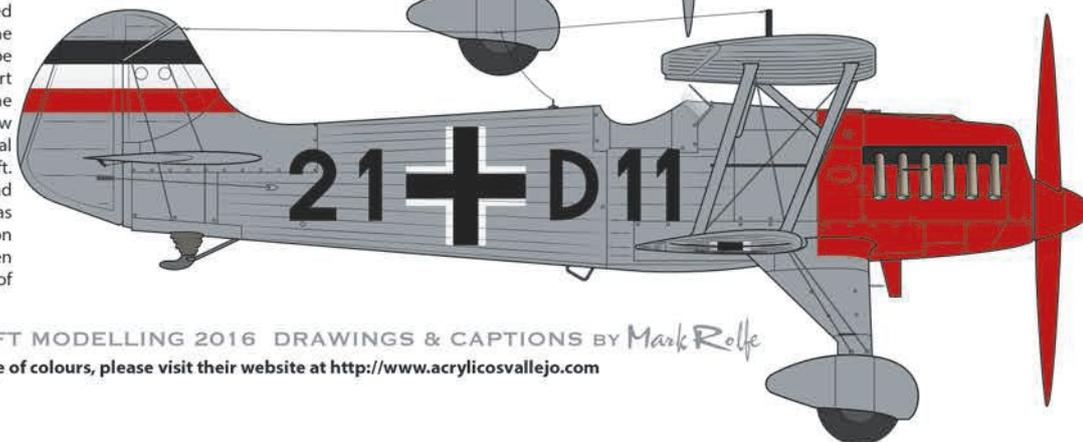


AV71.077
Natural Wood
(Vallejo Wood)



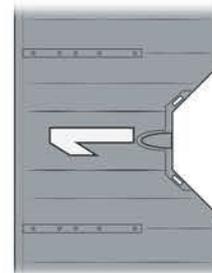
AV71.078
RLM 04 Gelb
(Vallejo RLM 04 Yellow)

Heinkel He 51, Werknummer unknown/21+D11, operated by I./JG 132, Döberitz, Brandenburg, Germany, circa 1936. Finish is as described above. In September 1935, a directive was issued calling for *Balkenkreuz* to be applied to the fuselage sides and wing surfaces. At the same time, the starboard tricolour was to be replaced with the 'Blood Flag' as seen on the port side of the fin. Following on from this, in June 1936, a directive was issued calling for a new alphanumeric system to replace the original civilian registrations on military aircraft. However, the transition was a gradual one, and as can be seen here, the starboard tricolour was retained for a while. The port side of the fin on this aircraft would carry the 'Blood Flag' as seen on D-IQEE above. The nose is in the unit colour of Rot (Vallejo 71.003 RLM 23 Red)



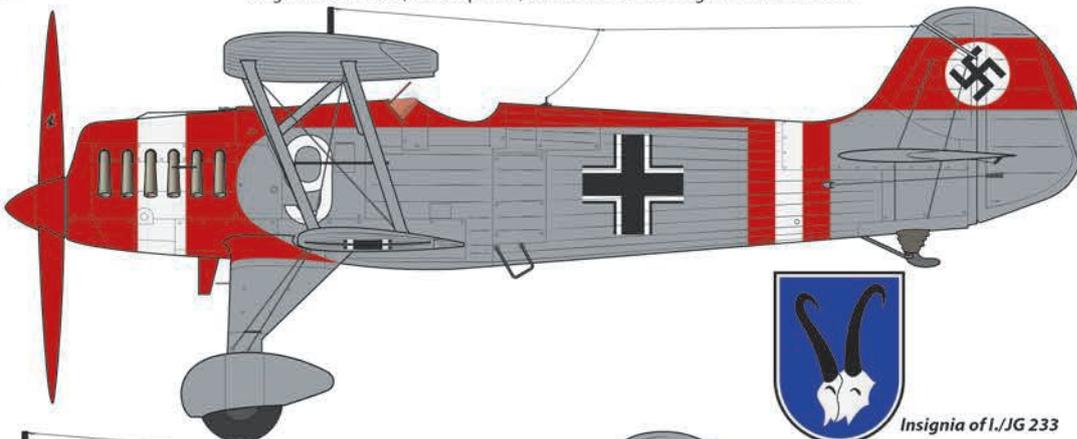
ARTWORK © SCALE AIRCRAFT MODELLING 2016 DRAWINGS & CAPTIONS BY Mark Rolfe

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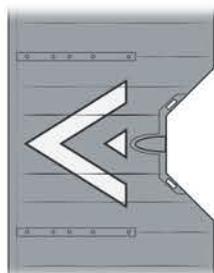
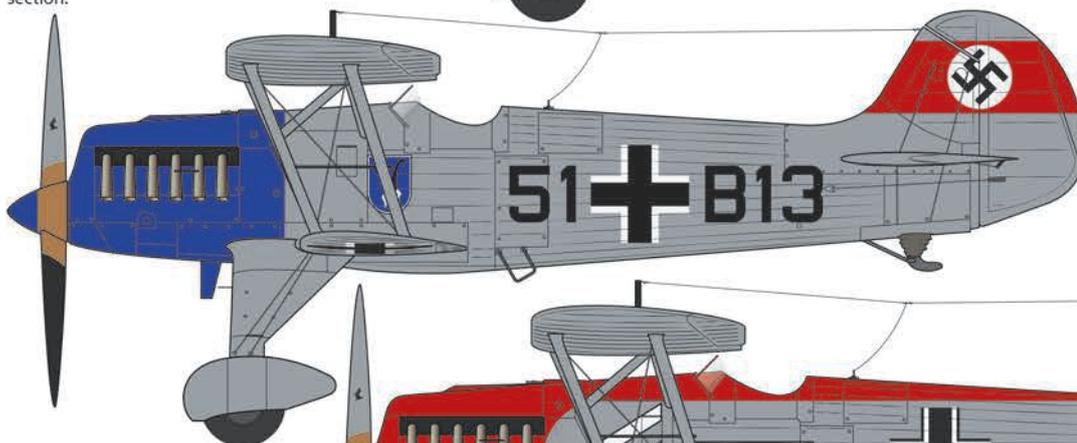
Above: Heinkel He 51B-1, *Werknummer* 2150/1', operated by 3./JG 134, based at Dortmund, Germany, 1936. Finish is in overall L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The *Weiß* discs are applied to the fuselage and nose sides, upper fuselage, nose underside and mid fuselage underside. The 'Blood Flag' is carried on both sides of the fin. The aircraft number is repeated on the upper wing centre section (see scrap view) and between the wings on the underside.

Heinkel He 51A-1, *Werknummer* unknown/9', attached to II./JG 132 'Richthofen', Döberitz, Germany, 1936. Finish is in overall L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The nose, upper fuselage and entire propeller assembly are in *Rot* (Vallejo 71.003 RLM 23 Red). The *Weiß* fuselage and nose bands denote the second *Staffel*. The aircraft number is in *Weiß* edged in *Schwarz*. The starboard side of the fin carries the Imperial flag as previously described. The aircraft number is repeated on the upper wing and lower fuselage centre section.

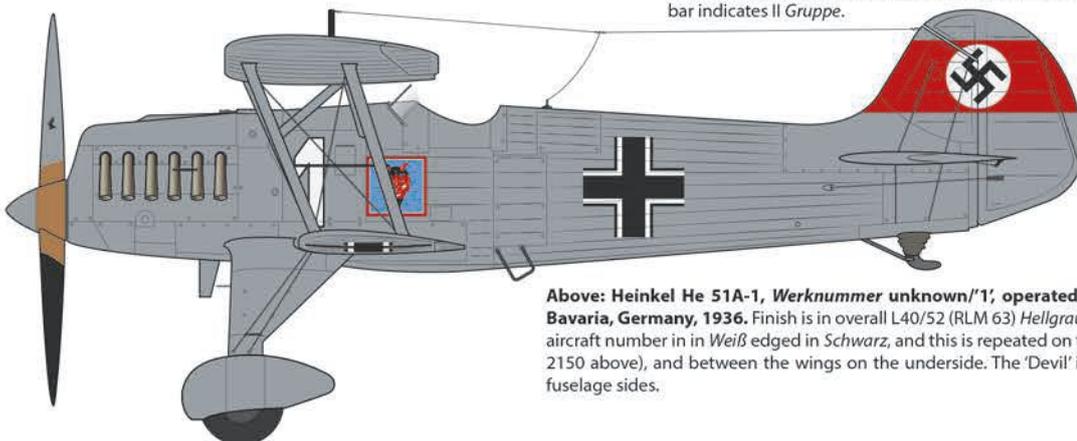


Insignia of I./JG 233

Heinkel He 51A-1, *Werknummer* unknown/51+B13, attached to I./JG 233, Vienna Aspern, Austria circa 1938. Finish is in overall L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The nose is finished in the *Geschwader* colour, in this case, Medium Blue. The 'chamois' shield marking of I./JG 233 is carried on the forward fuselage.

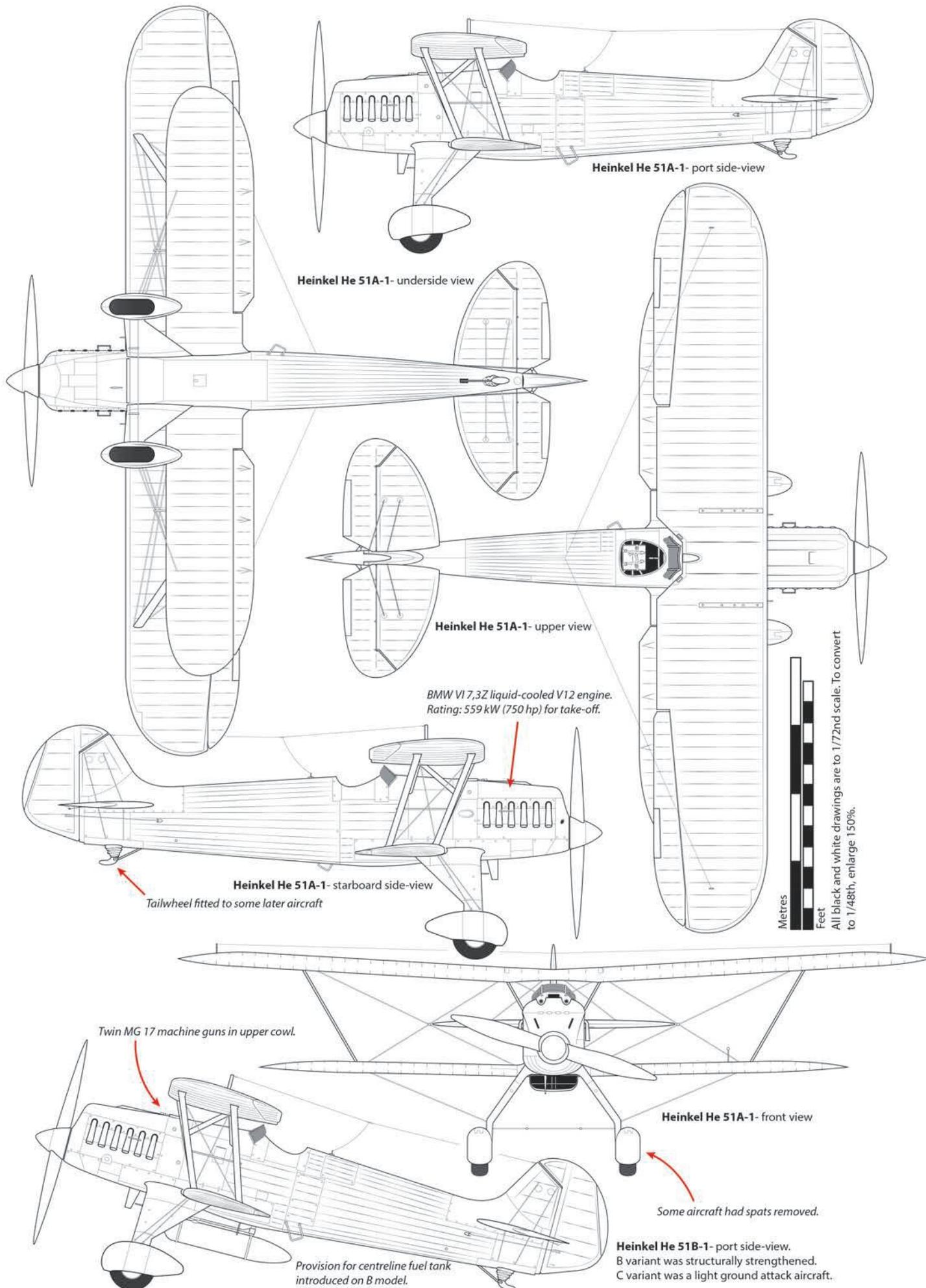


Above: Heinkel He 51B-1, *Werknummer* unknown, flown by *Gruppenkommandeur* Carl August von Schoenebeck, of II./JG 132 'Richthofen', based at Jüterbog-Damm, Brandenburg, Germany, circa 1936. Finish is in overall L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The nose, upper fuselage and spinner tip are in *Rot* (Vallejo 71.003 RLM 23 Red). The double chevron applied to the fuselage sides denote this is the *Gruppenkommandeurs* aircraft. This marking is repeated on the upper wing centre section (see scrap view at left). The bar indicates II *Gruppe*.



Insignia of 1./St.G. 165

Above: Heinkel He 51A-1, *Werknummer* unknown/1', operated by 1./St.G. 165, based at Kitzingen, Bavaria, Germany, 1936. Finish is in overall L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The aircraft number is in *Weiß* edged in *Schwarz*, and this is repeated on the upper wing centre section (see W Nr 2150 above), and between the wings on the underside. The 'Devil' insignia of 1./St.G. 165 is carried on the fuselage sides.



SHIPPING FORECAST

An occasional foray into the world of ship models and modelling

Edited by Jonathan Tarr



Coastal Craft introduced the first, in what is now a rapidly growing range of 1/72 scale, mixed medium (resin and etch brass) MTB and MGB construction kits a couple of years ago. Their first releases, on which the models in this feature are based, represent the Vosper 1941 Class, '72 foot 6 inch' design, with integrally-moulded basic deck fittings specifically representing the MTB 73 to 98 and MTB 222 to 245 production boats.

The kit includes a one-piece resin deck and a one-piece hull. Being such large resin castings, the heat generated during the cooling-curing process, can slightly distort their mating edges and therefore careful test-fitting and judicious sanding and filing will almost certainly be required to attain a perfect fit.

Indeed before the deck is glued to the hull, the portholes need to be drilled out – they're marked by indentations on the inside of the hull. However, not all 72ft 6in Vospers were fitted with portholes, so if you're modelling a different boat to the one in the kit, you'll need to check whether portholes were fitted or not. As the boats I was modelling were, I duly drilled them out.

Also, the rear of the hull moulding is slightly longer than the deck moulding. This is another legacy of large resin castings, where the shrinkage rate during the cooling-curing process can vary slightly, so casting allowances were made and the modeller is required to trim the hull to match the exact length of the deck. A transom, made from plastic card, cut and sanded to shape, can then be fitted.

The next job is to fill, sand and file smooth the 'staggered' forward deck/hull join line to erase any indication of it. That done, the etch brass porthole surrounds can be super-glued on, plus the exhaust ports. Note again, not all 72ft 6in

Vospers were fitted with the same style and indeed number of exhaust ports, depending upon the boatyard and how many engines were fitted, so again, if you're modelling a different boat to the one in the kit, you'll need to check whether this style, and how many, exhaust ports were fitted. Similarly with the propeller and rudder fittings – if you're modelling a full hull. In my case I left off the propellers and rudders as I was mounting my models on a sea base.

All the resin parts were cut/sawn from their pouring blocks and any excess flash removed. Then the parts were undercoated, along with the hull and deck. I used Halfords acrylic Grey Primer for this job.

The 'Coastal Craft' kit instructions are more than adequate, so I won't bore you with a 'blow-by-blow' account of the build, suffice to say that after fitting the deck to the hull and sanding down the forward join line, the rest of the construction is basically an attaching of parts exercise.

Painting the MTB

Due to the difficulties in painting all the fittings when they are attached to the deck, I found it best to paint them *all* before they are attached. This allows for neater paint demarcation lines, especially as some of the parts are quite

small and are located close to other parts.

As regards paints, 'Coastal Craft' market their own range of acrylic Royal Navy MTB/MGB shades under

the 'AKAN' label, and this was the range I used.

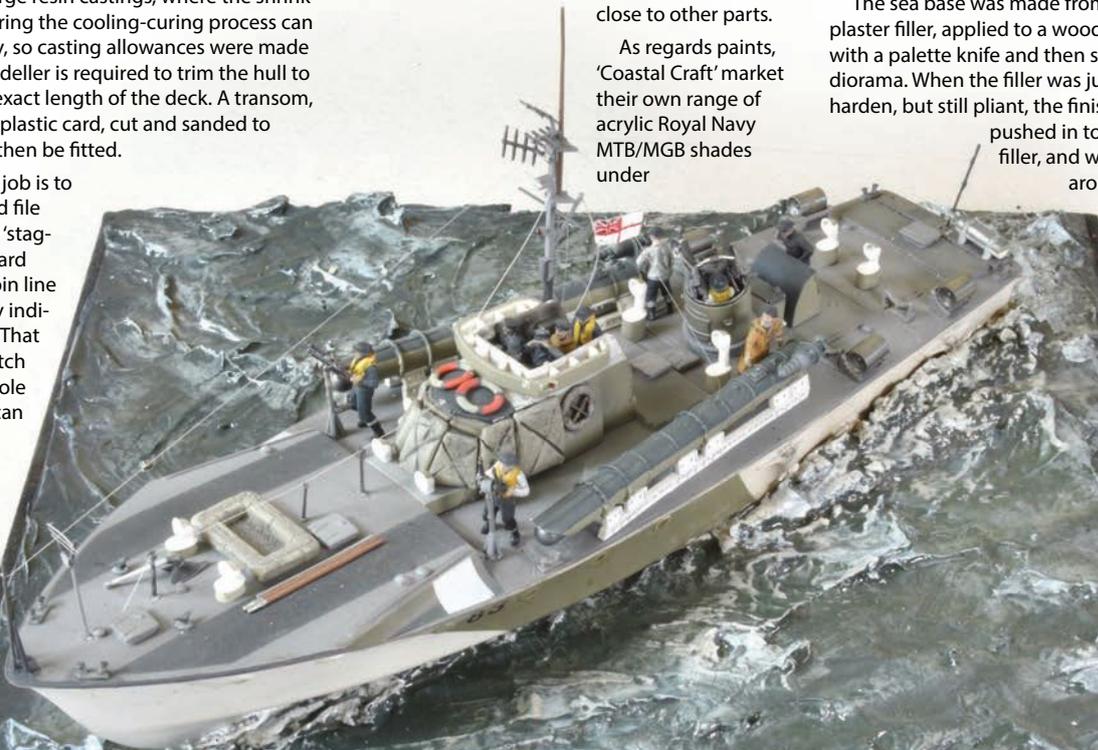
In mid-1943, the Coastal Forces Craft camouflage schemes were introduced. These schemes were designed for MTBs, MGBs, HDMLs and the larger Fairmile gun boats and brought a degree of camouflage standardisation to Coastal Forces craft. There were three styles of camouflage pattern, using three basic colours – White, G45 (a grey-green/slate grey shade), and B15 (a blue-grey shade).

I finished my model as MTB 83 of the 22nd MTB Flotilla, based at HMS Mantis, Lowestoft, commanded by Lt J D C Coombs, in the mid-late 1943 period. By the summer/autumn of 1943, MTB 83 was finished in the 'Light Design', comprising a white hull with a trapezoidal shaped G45 slate grey panel amidships. The decks and the various deck fittings were a mixture of B15 and 507A, a dark grey shade. The wheelhouse/bridge was G45, with a B15 wheelhouse roof. The torpedo tubes were white underneath with horizontally-stripped G45 along the middle, and B15 on the top.

I fashioned shrapnel mats from squares of Milliput, lightly scored and creased to represent the 'mattress' material, which I fitted around MTB 83's wheel/charthouse. The Pennant Number '83' was positioned on either side of the hull just under the torpedo clearance cut-out, and on the transom.

The sea base was made from ready to use plaster filler, applied to a wooden base board with a palette knife and then sculpted in to a sea diorama. When the filler was just starting to harden, but still pliant, the finished boat was pushed in to position in the filler, and waves flicked up

around the hull. Additional filler was added, as needed, to make bigger bow waves and to create an impression that the boat was floating in the sea. My artistic



MTB 83 of the 22nd MTB Flotilla, based at HMS Mantis, Lowestoft, UK, commanded by Lt J D C Coombs, mid-1943, setting of on another patrol of the North Sea. Built by the parent company, Vosper, this boat was powered by three American-built Packard V-12 1,250hp supercharged engines, and could attain a maximum speed of nearly 40 knots. With a full load of 100 octane petrol, it had a radius of action of around 140 miles, cruising at 25 knots.



MTB 83's main armament was two 21 inch LC Mk VIII torpedoes, fitted with a 750lb warhead, which ran at 45 knots. The 'gun tub' mounted amidships was armed with a pair of Vickers 0.5 inch machine guns and twin Vickers 0.303 inch machine guns were mounted on pintels on the deck either side of the wheelhouse. Up to four Mk VII depth charges could be carried.



MTB 83 was finished in the the Coastal Forces Craft Light Design, with white hull and the trapezoidal shaped G45 grey-green panel amidships. The decks and various deck fittings would almost certainly have been a dark grey shade with the wheelhouse/bridge in G45 and white and the charthouse roof in B15. The torpedo tubes were white on the undersides, G45 along the middle and B15 along the top. From the reference photos I used MTB 83 appears to have been fitted with Type 286 radar, the V-shaped mounting being located at the bow

skills in creating a seascape are still very much in the novice stage and are best regarded as an ongoing work in progress.

Determining the colour of the North Sea was also fun! Depending upon lighting conditions it can change from a muddy brown, through olive drab, dark green and blue-grey to a dark blue-green. I settled for a mix of them all, topped with white bow waves and liberally covered in gloss varnish to make it look wet. Representing a realistic bow spray is beyond my (current) skills, but I'm working on it and experimenting with various mediums, but at the moment, and in this particular case, I know the seascape looks a bit naff.

As I was mounting the model on a sea base, and 'in action' it needed a crew. The figures came from a mix of the Airfix Vosper 73 foot and RAF Air Sea Rescue Launch kits, and the superbly

sculpted and cast, white metal figures from Gunthwaite Miniatures, who make several sets of 1/72 white metal figures in a variety of poses, which are unreservedly recommended. As with the seascape base, my figure painting skills need some, (for 'some' read 'a lot of'), work, but if nothing else they do give a sense of scale to the models.

Although I'm not yet ready to swap modelling aeroplanes for boats/ships entirely, especially as I generally model in 1/48 and these boats are 1/72, I will certainly be making some more – in fact I have already started on another two Vosper MTBs and a British Power Boat Company MGB, which is one of the latest releases from 'Coastal Craft', which may yet make its way on to these pages...

www.coastalcraftmodelsuk.com



On MTB 83 shrapnel mats were attached around the charthouse windows, and to represent these I fashioned squares of Milliput, lightly scored and creased to represent the 'mattress' material. Additional life belts were added to the charthouse roof and a Carley life raft was carried on the fo'c'sle

EDUARD



Eduard have new sets out for two key nautical releases this month. Revell's impressive 1/72 Type IX U-Boat gets the works with three sets for the exterior while the Japanese Kagero in 1/350 from Tamiya gets two very full sets that will make a huge difference in the smaller scale. Eduard's sets are very well designed

and tend to be very user-friendly. Instructions are clear and precise and any modeller not familiar with etch as a medium is not recommended these products as a first foray into the field. The only problem is that when you have tried it once you will never be able to live without it again!

- 1/72**
- #53158** German Submarine Type IX C/40 hull pt. 1 for Revell kit
- #53159** German Submarine Type IX C/40 hull pt. 2 for Revell kit
- #53160** German Submarine Type IX C/40 tower for Revell kit

- 1/350**
- #53161** IJN *Kagero* pt.1 for Tamiya kit
- #53162** IJN *Kagero* pt.2 for Tamiya kit

Looking ahead to future releases

the following sets are due from Eduard in the next couple of months:

- #53110** 1/200 *USS Arizona* Part 4 - main top (for Trumpeter kit)
 - #53163** 1/72 DGzRS *Hermann Marwede* 150 Jahre (for Revell kits)
 - #53164** 1/72 DGzRS *Hermann Marwede* 150 Jahre (for Revell kits)
 - #53165** 1/350 *HMS King George V* Cranes and Railings (for Tamiya kits)
 - #53166** 1/350 IJN *Mikuma* Railings 1/350 (for Tamiya kits)
 - #53167** 1/350 IJN *Mikuma* Superstructure (for Tamiya kits)
 - #53168** 1/350 *HMS King George V* (for Tamiya kits)
 - #53169** 1/350 *HMS King George V* Lifeboats (for Tamiya kits)
- Hannants/Creative Models/Sprue Brothers/Squadron*
www.eduard.com

PONTOS MODEL



23007F1 1/200 *HMS Rodney* 1942 Detail Up Set
 New from Pontos is this stunning set for the 1/200 Trumpeter *HMS Rodney*. The comprehensive package include nearly 400 etched parts on fourteen frets, thirty four resin parts, brass screws, gun barrels and stained wooden deck. Pontos have really 'pushed the boat out' with this set, and the extent of

the detail is staggering – right down to the canopy framing and rigging wires for the ship's Walrus floatplane.

A truly classic set for one of the great British Warships, and an awful lot of modelling for your money. These are premium sets and offer excellent value for money, as well as the potential to build a breathtaking model that will be light years 'beyond the box'.

Hannants/Sprue Brothers
www.pontosmodel.com

ACADEMY



#14216 ROKS Dokdo (LPH-6111) Amphibious Assault Ship Dokdo Class Landing Platform Helicopter Academy's latest kit in 1/700 is a contemporary ROK assault ship. The kit is a full-hull release and comes with stand, helicopters and a choice of waterslide transfers or stickers.

The ROK Navy required a versatile landing ship with amphibious capabilities in its program to build a blue-water navy. In the end Hanjin's Dokdo design was chosen for this need. LSF-II 631-also built by Hanjin- was chosen as the LCAC to operate from the ship.

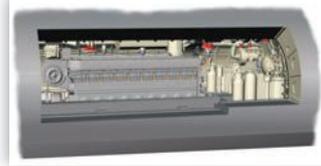
As a high-speed amphibious ship, LPX was based on the concept of 'over-the-horizon assault - military operations in which an amphibious landing is conducted with high-speed air-cushioned vehicles and helicopters from beyond the horizon, where they can't be easily detected or attacked by the enemy.

The LPX can carry 720 marines (+300 crew members), ten tanks, ten trucks, seven AAVs, three field artillery pieces, and two LCAC hovercraft capable of landing on enemy shores doing forty knots - a mix that enables it to launch troop landings from both sea and air. She can also carry ten helicopters when there are no ground vehicles on her hangar deck.

The flight surface is also sprayed with urethane, which can support VTOL jets, and South Korea is considering the purchase of F-35B fighters to operate from its Dokdo-class ships. Currently the LPX operates mainly UH-1H and UH-60Ps however, both of these are designed for land-based operations and lack abilities for ship-borne operations such as protection against salt corrosion but the KUH-Amphibious, the sea-based amphibious variant of the KAI Surion, is now under development. The vessel is similar in size to light

aircraft carriers derived from the Sea Control Ship such as the Spanish Navy's former aircraft carrier *Príncipe de Asturias* and the Royal Thai Navy's *Chakri Naruebet*.
Creative Models/MRC

CMK



New releases from CMK offer some excellent details and upgrades in 1/72 for Revell's Type IXC U-Boat:

#72017 Type IXC engine section Highly detailed set for the compartment housing the diesel engines that propelled the submarine on the surface. The set contains the engine section floor with an alleyway between the engines, two pressure bulkheads with hatches and water-tight doors (with option to leave them open or closed), air-distribution pipings and fans, fuel and oil pumps and pipings and one of the diesel engines (the port one). The other engine is left out to make all the aforementioned details nicely visible. If you wish to fit both engines to your model CMK recommend set **#72027** WW II Diesel Engine MAN M9V46.

#72018 Type IXC Weapons Set Includes single 37mm and 20mm AA cannons.

#72020 Type IXC Weapons Conversion Set Includes new 105mm cannon and Flak Vierling 4 x 20mm gun

#7222 Type IXC Galley This highly detailed set covers the submarine's galley and contains two watertight bulkheads with sealed doors, floor, ladder to the upper manhole with watertight hatch, stove, sink, fridge with compressor and vents, all necessary for the kitchen operation during the cruises.

www.cmkkits.com
Hannants/Squadron

FREEDOM MODELS



The latest 1/700 release from Freedom is **#83001**, the FREMM D650 *Aquitaine*. The FREMM (*Frégate européenne multi-mission*) is a class of multi-purpose frigates designed by DCNS/Armaris and Fincantieri for the navies of France

and Italy. The lead ship of the class, *Aquitaine*, was commissioned in November 2012 by the French Navy. Italy has ordered six general purpose variants and four anti-submarine variants while France has ordered six anti-submarine variants, and two air-defence. Freedom's kit can be built as either a full hull or a waterline model and includes etched parts and a stand.

Hannant/Sprue Brothers
www.freedommks.com

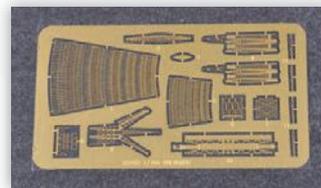
REVELL



Revell have reboxed their 1/144 LSM as a postwar German *Eidechse* Class landing ship, now depicting one of the vessels that was taken over from the US Navy's inventory in 1958.

Kit features include:
Two part hull
Detailed propulsion unit
Moveable ruder
Detailed cargo deck
Opening bow doors and ramp
Authentic 40 mm twin cannon
3x M47 Patton battle tanks
3x HS 30 Armoured personnel carriers
3x 5t gl Emma cargo vehicles
The L750 version includes a helicopter landing platform and a Bristol 171 Sycamore helicopter – something many small scale aircraft modellers will be looking to see released on its own!
www.revell.de

TRUMPETER



#05782 USS Tennessee
Trumpeter's new kit is a 1/700 model of the USS Tennessee, laid down in Brooklyn shipyard in 1917 and launched in 1920. In 1941, the Japanese Navy attacked Pearl Harbor but *USS Tennessee* escaped with comparatively minor damage and returned to the US for repair before taking part in the subsequent Guadalcanal campaign. Following a

further refit this ship participated in the Aleutians, Gilbert and Marshall Islands campaigns, the Mariana Islands and Palau, the battle of Leyte Gulf, Lingayen Gulf and the battle for Iwo jima. During the battle of Okinawa the ship received some damage from a kamikaze aircraft attack, but survived the war to return home in 1947 where she was retired and subsequently scrapped in 1959.

Trumpeter's kit allows full hull or waterline options and includes etched parts and two OS2U floatplanes.

Pocketbond/Stevens International

MERIT



Two kits to look out for from Merit:
#62004 1/200 Japanese Battleship Mikasa (1905)

Built for the Imperial Japanese Navy (IJN) in the late 1890s, the ship served as the flagship of Admiral Tōgō Heihachirō throughout the Russo-Japanese War of 1904–1905, including the Battle of Port Arthur on the second day of the war and the Battles of the Yellow Sea and Tsushima. Days after the end of the Russo-Japanese War, *Mikasa's* magazine accidentally exploded and sank the ship. She was salvaged and her repairs took over two years to complete. Afterwards, the ship served as a coast-defence ship during World War I and supported Japanese forces during the Siberian Intervention in the Russian Civil War.

After 1922, *Mikasa* was decommissioned in accordance with the Washington Naval Treaty and is now fully restored as a museum ship and can be visited at Mikasa Park in Yokosuka.

#65307 1/350 HMS Ark Royal 1939
Designed in 1934 to fit the restrictions of the Washington Naval Treaty, *Ark Royal* was built by Cammell Laird and Company Ltd. at Birkenhead, England, and completed in November 1938. Designed to carry a large number of aircraft, she had two hangar deck levels. *Ark Royal* served in some of the most active naval theatres of the Second World War and was involved in the first aerial U-boat kills of the war, operations off Norway, the search for the German battleship *Bismarck*, and the Malta Convoys. She was torpedoed on 13 November 1941 by the German submarine U-81 and sank the following day.

Pocketbond/Stevens International

MK.1 DESIGN



New releases from Mk.1 offer a mass of excellent details for the 1/200 HMS Rodney from Trumpeter:

MD-20012 1/200 USS CV-8 Hornet Wooden Deck

MD-20013 1/200 HMS Rodney DX Pack

MD-20014 1/200 HMS Rodney Value Pack

MS-20012 1/200 WW II US Deck Plane Set 1

MS-20013 1/200 HMS Rodney Armament

MS-20014 1/200 HMS Rodney Mast and Radar Set
www.ka-models.com

SQUADRON SIGNAL



Littoral Combat Ships In Action - Squadron Signal - SS14036

Sea power in the 21st Century is rapidly taking on a new look, vastly different from the massive and ponderous navies of the past. Littoral combat ships or LCSs are a class of small surface vessels that are meant to operate in coastal areas where they can neutralize the many fluid localized threats that are so characteristic of the modern age. Designed for deployment in place of the destroyer or cruiser, the LCS was envisaged by the Navy as a networked, agile, stealthy surface combatant capable of defeating anti-access and asymmetric threats in the littorals. The US Navy operates two basic classes of LCS: the Freedom class and the Independence class, the latter being characteristically a trimaran. In keeping with the basic LCS concept, crew size, like the size of the vessel itself, is to be small. Deployments will thus involve fifty percent fewer ships and twenty five percent smaller crews than previously as the technical sophistication, versatility, and speed of the LCS is to make up for the difference in quantity. LCS versatility partly consists in the vessel's ability to be reconfigured for different duties and roles by changing mission modules. Mission modules consist of weapon systems, sensors, etc, that are

designed for specific types of task. Specific personnel will accompany relevant modules. Modules have been designed for anti-submarine warfare (ASW), mine hunting (MCM), surface warfare (SUW) and special warfare missions. *Littoral Combat Ships in Action* puts you inside these cutting-edge fighting ships and introduces their various configurations and their modern weapons systems. Includes over 250 photographs and eighty pages.
www.squadron.com

COASTAL CRAFT



The next release in 1/72 from this source will be **#72006**, the Thornycroft CMB 65A
www.coastalcraftmodelsuk.com

HASEGAWA



Few ships afloat have given rise to as many stories as the legendary *Mikasa*. Not only can we look forward to the Merit 1/200 kit, but Hasegawa have a 1/700 waterline kit due as well. Such is the reverence for this vessel in naval circles that it is still on display over 100 years after it was commissioned. It is the last pre-dreadnought battleship in the world and now you can build a waterline-hull version of your own! The kit features two sets of decals: IJN Combined Fleet Flagship The Battle of the Japan Sea May 27-28, 1905
IJN Combined Fleet Flagship The Battle of the Yellow Sea August 10, 1904
www.hasegawausa.com

L'ARSENAL



One of the most essential sources of ship-modelling kits and accessories is this French manufacturer, and a tour of the website can be a real eye-opener as to what is possible in this branch of the hobby nowadays. New items due soon are:
#400 19 1/400 Georges Leygues frigate

Leading ship of a series of seven ASW frigates, the *Georges Leygues* remained in service with the French Navy for about thirty years and was decommissioned in 2014. The upcoming 1/400 model from L'Arsenal has been CAD designed, with prototype parts printed with the best 3D printers on the market. The kit will contain many resin and PE parts. It will be possible to put the stern sonar in either the stored or operational position, and a very detailed Lynx helicopter will be provided.

The kit represents the frigate as commissioned, but the manufacturer plan to release the other versions in the months to come.

#48 10 1/48 Guinault Starting Unit
The Guinault starting unit is among the newest material in service in the French armed Forces (Air Force, Navy and Army) to support aircraft and helicopters. Resin kit, with PE parts and decal.
www.larsenal.com

GALLERY MODELS



Gallery Models is a concept developed by Model Rectifier Corporation (MRC) together with prominent designers, mould-makers, historians and modellers. Gallery's new 1/350 kit of the USS New York really goes to town in this larger scale.

USS New York, LPD-21, is remarkable for having been partially forged of steel from the Twin Towers. To honour the victims of 9/11, the bow was formed using around seven tons of steel salvaged from the World Trade Centre. The *USS New York* is the fifth ship in the San Antonio class of Landing Platform Dock vessels.

The kit comprises over 700 parts and includes two LCAC hovercraft, one LCU landing craft and two USMC AAV-7 Amphibious Assault Vehicles. Ship's aircraft include two AH-1W Cobra gunships, two MV-22 Osprey tilt-rotors, two CH-46E Sea Knight helicopters, two Sikorsky CH-53E Helicopters and two UH-1N Huey helicopters. All rotary aircraft have optional parts to display the aircraft with rotors stowed.

Additional features include positionable stern ramps opening to the detailed well deck for the two LCAC hovercraft, a fully detailed aircraft hangar deck with positionable door, multiple small Zodiac-type boats, life rafts and the latest in self-defence missile, gun and electronic systems. The kit also includes two photo-etched frets for ladders, railings and vent grilles

and a length of real chain for the anchors. Completed model length: 23.5 inches; beam: 3.6 inches.

www.modelrectifier.com
Pocketbond/MRC

IBG



Two new arrivals from IBG depict the Hunt Class WW2 escort destroyer. The kits are nicely detailed little waterline models and it is good to see another boxing added to this range offering HMS *Badsworth*. Of note is the etched fret included, offering handrails, ladders and various other parts that will add superb detail to this little model.

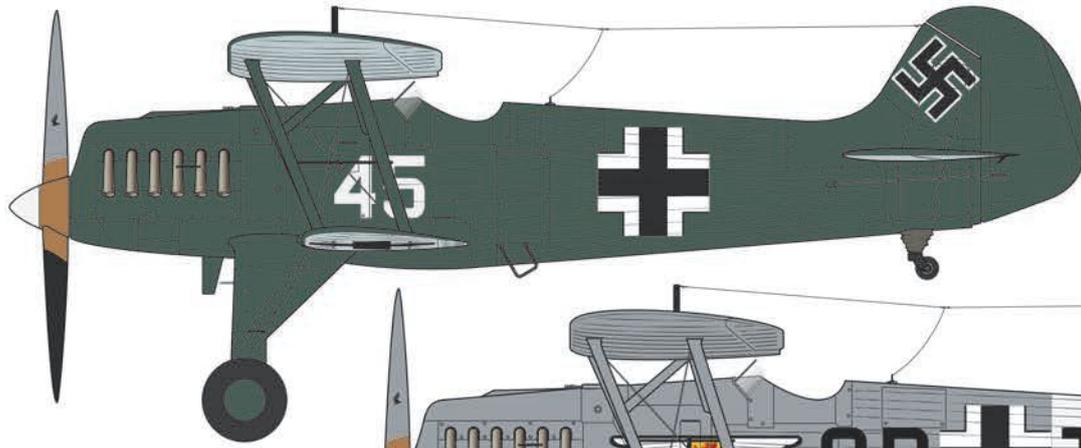
The Hunt was one of best known class of destroyer escort of the Royal Navy from the conflict. Eighty six were completed, of which seventy two were commissioned into the Royal Navy and the remaining fourteen were transferred to allied navies - Norwegian, Polish, Greek and Free French. Armament was six QF 4 inch Mk XVI guns on twin mounts, four QF 2 pdr Mk VIII's on quad mounts, 20 mm Oerlikons on single mounts and depth charges. Seven ships of this type were lost in World War II.

HMS Badsworth service started in March 1942, when she began her convoy duty in the North Western Approaches. In June 1942 she was transferred to the Mediterranean to take part in Operation Harpoon, an attempt to bring vital supplies to the island of Malta, besieged by German and Italian forces. The operation ended with heavy losses on the Allied side - only two out of six transport ships reached Malta. *HMS Badsworth* hit a mine, sustaining heavy damage, and was towed back for necessary repairs. She re-entered service to join a convoy headed to Murmansk in November 1942. In March 1943 she was ordered to join another convoy to Malta, where she was damaged on a mine again. After being repaired in Liverpool she was transferred to the Royal Norwegian Navy, where she served under the name of *HNoMS Arendal*.

New releases are:

#70003 1/700 *ORP Krakowiak* 1944 Hunt II class destroyer escort

#70004 1/700 *HMS Badsworth* 1941 Hunt II class destroyer escort
Hannants/Steven International



Heinkel He 51C, '45', operated by JG 101, based at Zerbst, Saxony-Anhalt, Germany 1943. Finish is believed to be RLM 72 Grün (Vallejo 71.263 RLM 72 Green), with the undersides of the wings and tailplanes in RLM 65 Hellblau (Vallejo 71.255 Light Blue). The aircraft number is in Weiß. Later in service, many He 51's had their wheel spats removed to ease 'in field' maintenance. Note also the fitment of a tailwheel.



Insignia of Flugzeugführerschule A/B 71

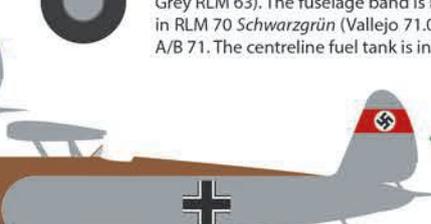
Geschwader colours



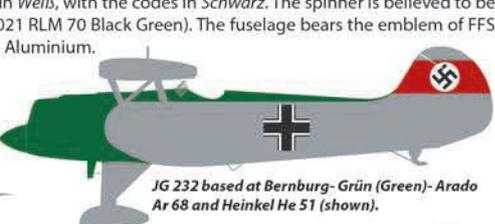
Heinkel He 51B-1, OB+TG, operated by Flugzeugführerschule A/B 71 (FFS A/B 71), based at Proßnitz, Czechoslovakia, 1942. Finish is in overall L40/52 (RLM 63) Hellgrau (Vallejo 71.260 Light Grey RLM 63). The fuselage band is in Weiß, with the codes in Schwarz. The spinner is believed to be in RLM 70 Schwarzgrün (Vallejo 71.021 RLM 70 Black Green). The fuselage bears the emblem of FFS A/B 71. The centreline fuel tank is in Aluminium.



JG 131 'Richthofen' based at Jesau-Schwarz (Black)- Arado Ar 68.



JG 134 'Horst Wessel' based at Dortmund, Werl, Döberitz, Lippstadt, Köln-Burzwilerhof and Barth-Brün (Brown)-Heinkel He 51 and Arado Ar 68E (shown).



JG 232 based at Bernburg-Grün (Green)- Arado Ar 68 and Heinkel He 51 (shown).



JG 132 'Richthofen' based at Döberitz, Lippstadt, Köln and Jüterbog-Damm-Rot (Red)- Heinkel He 51.



JG 135 based at Bad-Aibling, Straubing, Eger and Herzogenaurach- Blau (Blue)- Arado Ar 68 and Heinkel He 51 (shown). Became JG 233.



JG 234 'Schlageter' based at Köln-Butzweilerhof and Düsseldorf- Orange- Heinkel He 51 and Arado Ar 68E (shown).



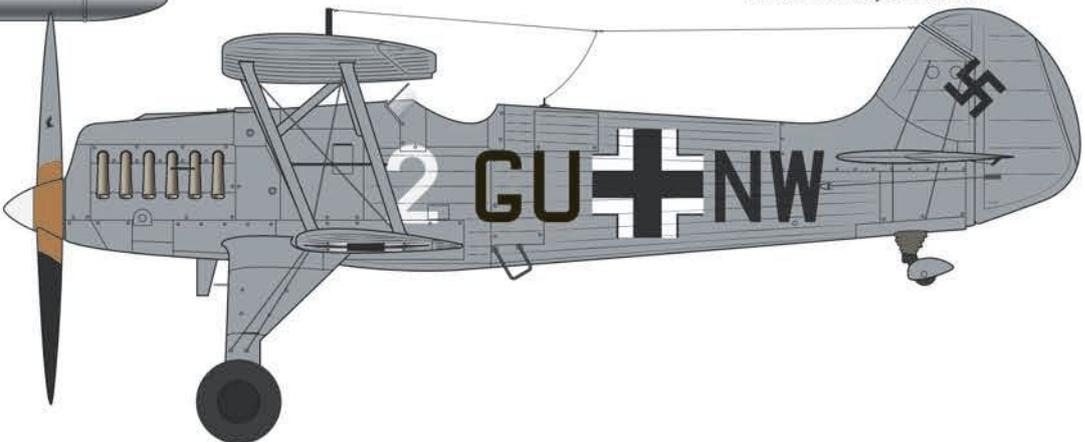
Insignia of Flugzeugführerschule A/B 123

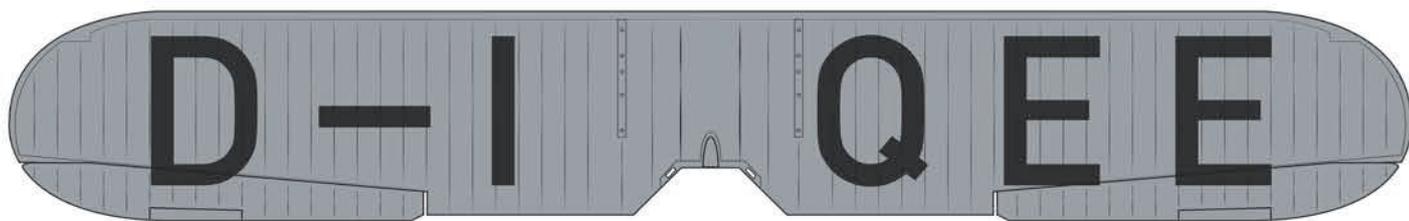


AV71.263 RLM 72 Grün (Vallejo RLM 72 Green)	AV71.255 RLM 65 Hellblau (Vallejo Light Blue)

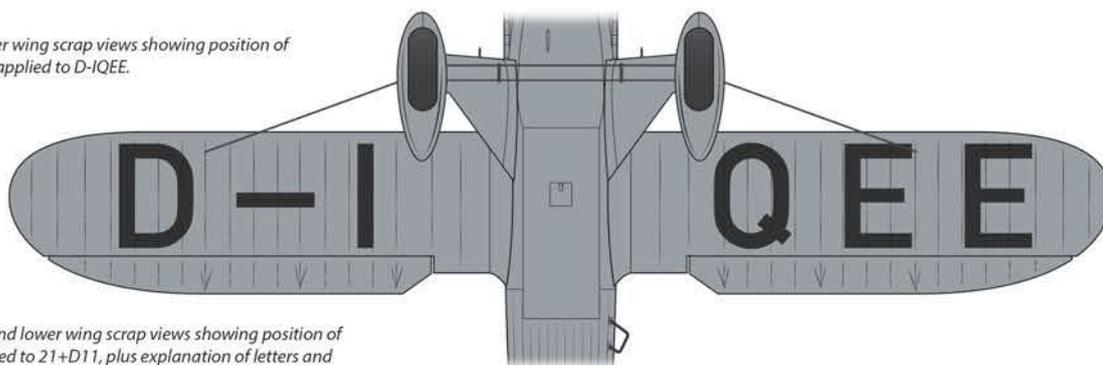
Heinkel He 51B, GA+VK, operated by Flugzeugführerschule A/B 123 (FFS A/B 123), based at Agram-Borongaj, Croatia, 1942. Finish is in RLM 72 Grün (Vallejo 71.263 RLM 72 Green), with the undersides of the wings and tailplanes in RLM 65 Hellblau (Vallejo 71.255 Light Blue). The aircraft code is in Schwarz with an outline in Weiß. The fuselage band is in RLM 04 Gelb (Vallejo 71.078 Yellow RLM 04). The insignia of FFS A/B 123 is carried on the forward fuselage. This consists of the Croatian Ustasha and a stylised 'AB' fez.

Heinkel He 51B-1, GU+NW/2', (possibly operated by Flugzeugführerschule A/B 121 (FFS A/B 121), based at Straubing, Bavaria, Germany circa 1942-43. Finish is in overall L40/52 (RLM 63) Hellgrau (Vallejo 71.260 Light Grey RLM 63). The aircraft code is in Schwarz, with the aircraft number and spinner tip in Weiß. The mainwheel hubs are believed to be finished in Schwarz.

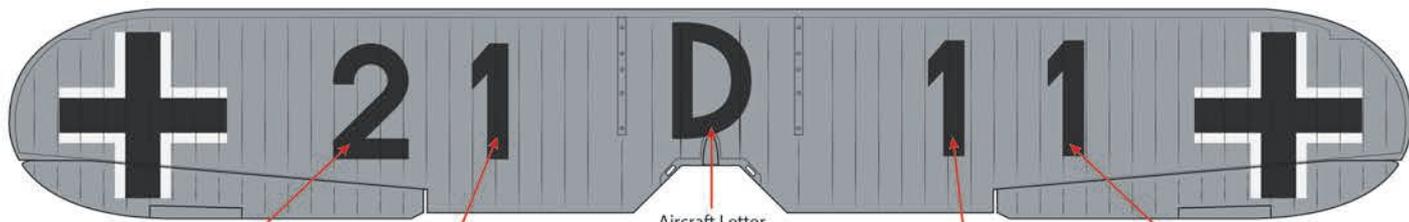




Upper and lower wing scrap views showing position of registration as applied to D-IQEE.



Below: Upper and lower wing scrap views showing position of coding as applied to 21+D11, plus explanation of letters and numbering system.



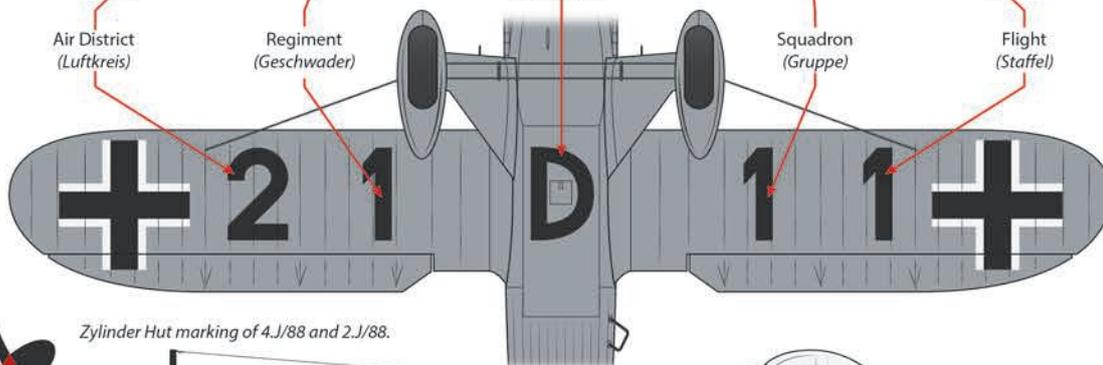
Air District (Luftkreis)

Regiment (Geschwader)

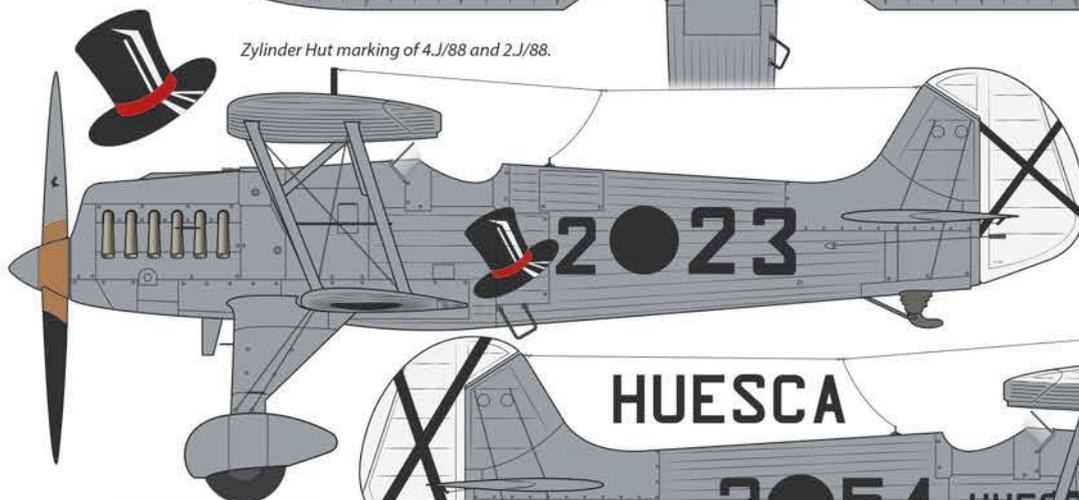
Aircraft Letter

Squadron (Gruppe)

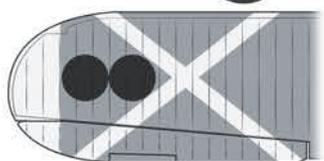
Flight (Staffel)



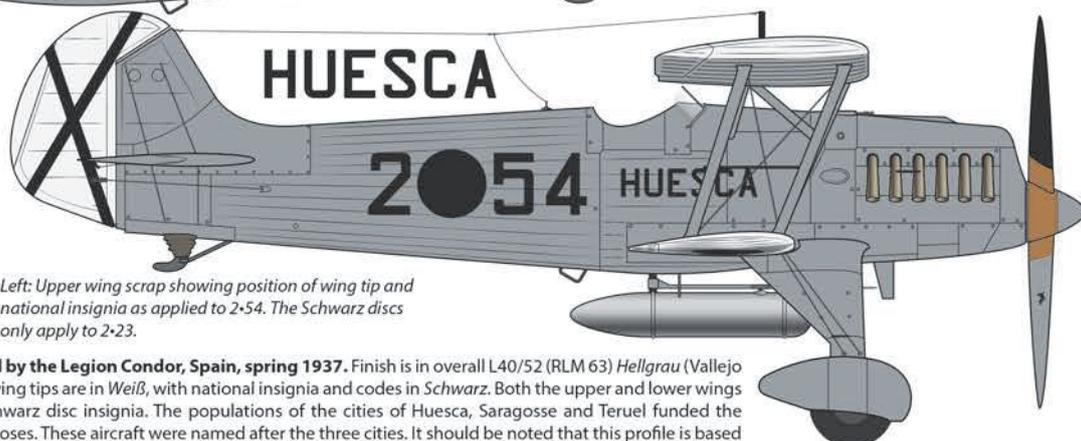
Zylinder Hut marking of 4.J/88 and 2.J/88.



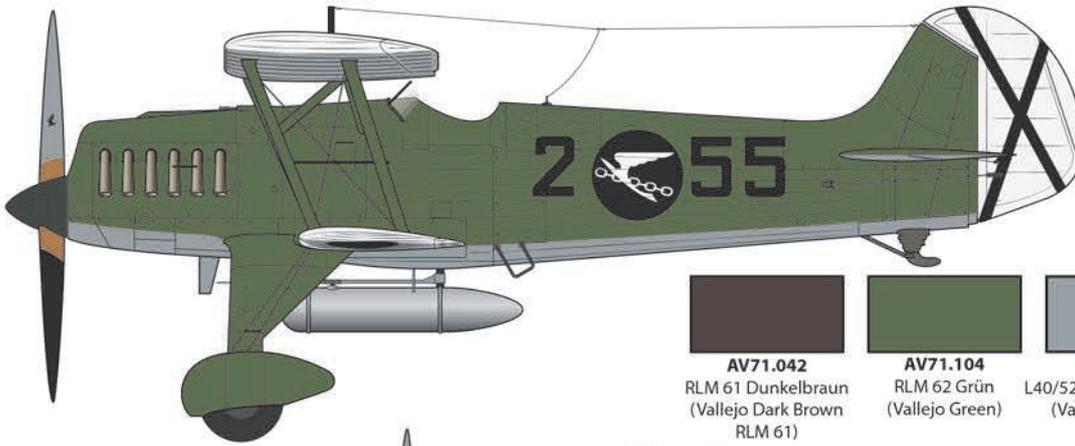
Heinkel He 51B-1, 2-23, operated by 4.J/88, Legion Condor, Spain, spring 1937. Finish is in overall L40/52 (RLM 63) Hellgrau (Vallejo 71.260 Light Grey RLM 63). The rudder is in Weiß, with national insignia and codes in Schwarz. The aircraft carries the Zylinder Hut (Top Hat) marking of 4.J/88, which was also later used by 2.J/88.



Left: Upper wing scrap showing position of wing tip and national insignia as applied to 2-54. The Schwarz disc only apply to 2-23.



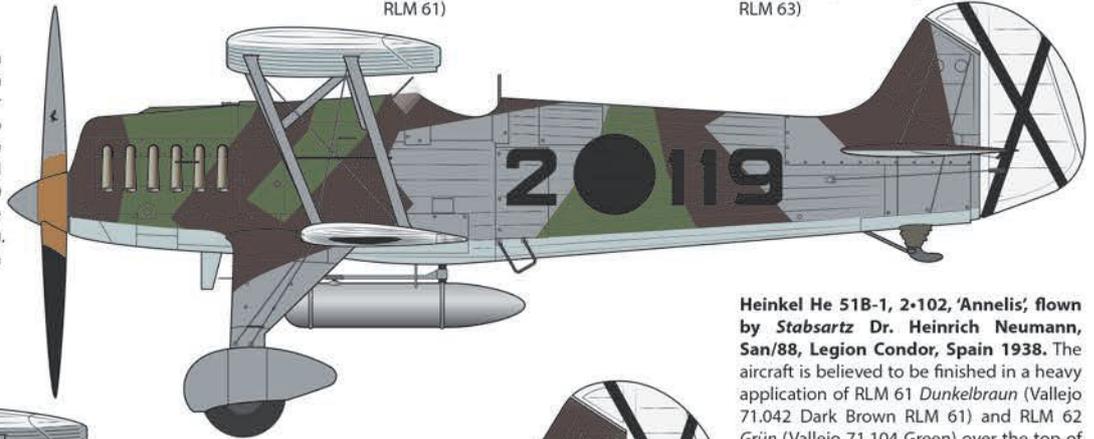
Heinkel He 51B-1, 2-54, 'Huesca', operated by the Legion Condor, Spain, spring 1937. Finish is in overall L40/52 (RLM 63) Hellgrau (Vallejo 71.260 Light Grey RLM 63). The rudder and wing tips are in Weiß, with national insignia and codes in Schwarz. Both the upper and lower wings display Weiß crosses in addition to the Schwarz disc insignia. The populations of the cities of Huesca, Saragosse and Teruel funded the acquisition of three He 51's for defence purposes. These aircraft were named after the three cities. It should be noted that this profile is based on a partial photograph.



Heinkel He 51B-1, 2-55, operated by Grupo 1-G-2, Spain, circa 1938-39. Finish is overall RLM 62 *Grün* (Vallejo 71.104 Green) with the undersides in L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63) finish. The wing tips are in Weiß, with the spinner believed to be in RLM 70 Dunkelgrün (Vallejo 71.021 Black Green).



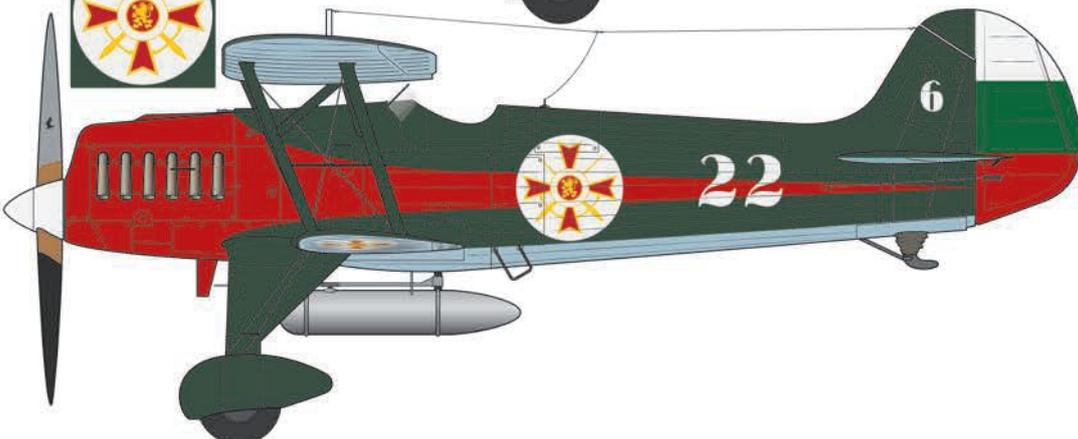
Heinkel He 51C-1, 2-119, operated by an unknown unit, Legion Condor, Spain 1938. The aircraft is finished in a splinter scheme of RLM 61 *Dunkelbraun* (Vallejo 71.042 Dark Brown RLM 61) and RLM 62 *Grün* (Vallejo 71.104 Green) over the original L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63) finish. The undersides are in RLM 65 *Hellblau* (Vallejo 71.255 Light Blue). All other markings are in Schwarz. Note the in field-applied head armour plate.



Heinkel He 51B-1, 2-102, 'Annelis', flown by Stabsarzt Dr. Heinrich Neumann, San/88, Legion Condor, Spain 1938. The aircraft is believed to be finished in a heavy application of RLM 61 *Dunkelbraun* (Vallejo 71.042 Dark Brown RLM 61) and RLM 62 *Grün* (Vallejo 71.104 Green) over the top of the original L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The undersides and wing struts appear to have been left in L40/52. There also appear to be small areas of RLM 22 *Schwarz* (Vallejo 71.057 Black). The codes are also in Schwarz. Note the 'Mickey Mouse' emblem, personal name and the inscription, *Tut mir nicht's ich tu' Euch auch nicht's!* (Rough translation: 'If you do not harm me, I will not harm you!'). Neumann was actually the medical officer of the Legion Condor, a point eluded to not only by this description, but also by the red cross marking.



Heinkel He 51B-1, 2-111, operated by 4J/88, Legion Condor, Spain 1938. The aircraft is finished in a heavy application of RLM 61 *Dunkelbraun* (Vallejo 71.042 Dark Brown RLM 61) and RLM 62 *Grün* (Vallejo 71.104 Green) over the top of the original L40/52 (RLM 63) *Hellgrau* (Vallejo 71.260 Light Grey RLM 63). The undersides and wing struts appear to be in RLM 65 *Hellblau* (Vallejo 71.255 Light Blue). The codes are also in Schwarz. Note the *Pikas* emblem.



Heinkel He 51B-1, '22/'6', attached to an unidentified unit, Bulgarian Air Force, mid-1930's. The aircraft is finished in Dark Green (Vallejo 71.007 Olive Green) with Light Blue (Vallejo 71.046 Pale Blue Grey) undersides. The fuselage flash is in Red (Vallejo 71.084 Fire Red). The aircraft numbers are in White, and the spinner is thought to be similarly finished. The rudder is in White, Green, and Red. The national insignia (derived from the royal coat of arms) were replaced in 1941 when Bulgaria joined the Axis powers.

overwhelming Soviet reinforcements and the control of Spanish skies by the Germans and Italians was soon to end. This obvious imbalance precipitated crisis talks between Franco's putative government and Germany, which led to the establishment of the Condor Legion in November 1936.

That November was another turning point for air combat in Spain. Ju 52s were bombing Madrid in mid November when a new combatant swooped in and shot down one of their number. This was the first appearance of the Soviet Polikarpov I-16. Heinkel and Soviet fighters met on 13th November 1936, when Eberhardt led nine He 51s to escort five Ju 52s and three Heinkel He 46 reconnaissance planes. A mixed formation of twenty four Soviet fighters intercepted them and in the ensuing combat Eberhardt and one other German pilot were lost but despite growing evidence that the Heinkel biplane was becoming obsolete a further sixty had already been dispatched to the Legion, arriving crated at Tablada on 18th November. He 51 pilots were subsequently forced to fly against a numerically and technically superior air force with the result that Condor Legion daylight bomber escort operations were restricted to dawn and dusk sorties. Eventually when Luftwaffe officials finally realized the quantity and apparent quality of Soviet aircraft, they decided to supply the Condor Legion with the new Bf-109 even if it meant depriving Luftwaffe fighter units of the new aircraft and in March 1937 the Condor Legion began to equip with the new type, gradually switching the He 51 to ground support operations.

This ground support task was to prove extremely dangerous as the low flying formation attacks precluded any evasive manoeuvring. Massed small arms fire was the usual response from

Republican troops under attack, and on 1st April 1937 Leutnant Wilhelm Blankennagel was shot in the head by an infantry rifle bullet during an operation. His Heinkel crashed into a ridge with the dead pilot still strapped in his seat.

Despite its relegation to such duties the He 51 continued its association with pilots who would go on to become top scoring aces in the wartime Luftwaffe. Oberleutnant Adolf Galland arrived in Spain on 7th May 1937, and as was the procedure for new Condor Legion officers was promoted to Hauptmann. Galland was assigned to command the maintenance and repair division and his tasks included the supervision of the assembly and testing of newly arrived aircraft, repair and testing of damaged planes, major overhauls and vehicle maintenance. He also flew a He 51 for a short time before the arrival of further Bf-109B-2s in late August 1937.

Galland felt that the small 10kg bombs carried by the He 51s lacked the destructive power to destroy anti-aircraft and machine gun installations. Upon consultation with his mechanics, they developed the Devil's Egg, filling the long range forty five gallon drop tanks with a twenty five gallon mixture of gasoline and used engine oil with a 10kg bomb tied to each side of the tank. When the new weapon struck the ground, the tank burst open and the bombs detonated, igniting the mixture into a sticky, flaming mass, a crude but effective early version of napalm.

By May 1938 only one staffel remained equipped with the He 51, and at the end of hostilities in Spain on 1st April 1939 surviving airframes were turned over to the victorious nationalist government where they continued in service in second line roles.

The He 51 remained in front-line use with the Luftwaffe until 1938, although towards the end of World

War II some limited use was made of the type as light night bombers against Red Army units and partisans, although their utility in this capacity seems to have been limited and little record remains. The Spanish interlude remains the aircraft's only significant combat use and even here its limitations saw it quickly superseded and like so many interwar biplane types its service has been overshadowed by the rapid development of the monoplanes that replaced it.

Export and Foreign Users

Spain of course operated the He 51 almost by default, with surplus Condor Legion machines remaining in use for some years after the end of the Civil War. In 1935 having failed to obtain a licence for the Polish P.24 monoplane, the Hungarian government approached Heinkel with a request to consider production of the He 51 with an 850hp Gnome-Rhone 14K engine. Despite this innovation the aircraft's test results proved unsatisfactory to the Hungarians, who acquired Italian CR.42 fighters instead.

The Bulgarian Air Force acquired twelve He 51s in 1936, in which service they were given the name Sokol (Falcon). The twelve He 51B-1s were ex Luftwaffe aircraft. Delivered and assembled in late 1936, they were in service by 1937 in the fighter role. Withdrawn from front-line service in 1940 they continued in use as advanced trainers by the Fighter School at Stara Zagora.

Variants

He 49a First prototype with shorter fuselage

He 49b Second prototype with stretched fuselage

He 49c Third prototype with revised glycol cooled engine installation

He 51a Fourth prototype with revised tail, wings and undercarriage, and new radiator

He 51A-0 Pre production aircraft nine built

He 51A-1 Initial production version, 150 built

He 51B-0 Structurally strengthened version of He 51A-1 pre production aircraft twelve built

He 51B-1 Production version of He 51B-0 twelve built

He 51B-2 Single seat floatplane fighter reconnaissance version forty six built

He 51C-1 Ground attack version seventy nine sent to Spain

He 51C-2 Improved version of C-1 with revised radio equipment twenty one built

SPECIFICATIONS (HE 51B-1)

Crew: One

Length: 8.40m (25ft 6¾in)

Wingspan: 11m (36ft 1in)

Powerplant: 1 × BMW VI 7,3Z liquid V12 engine, 559kW (750hp)

Maximum speed: 330km/h (178kn, 205mph)

Range: 570km (308nmi, 354mi)

Service ceiling: 7,700m (25,256ft)

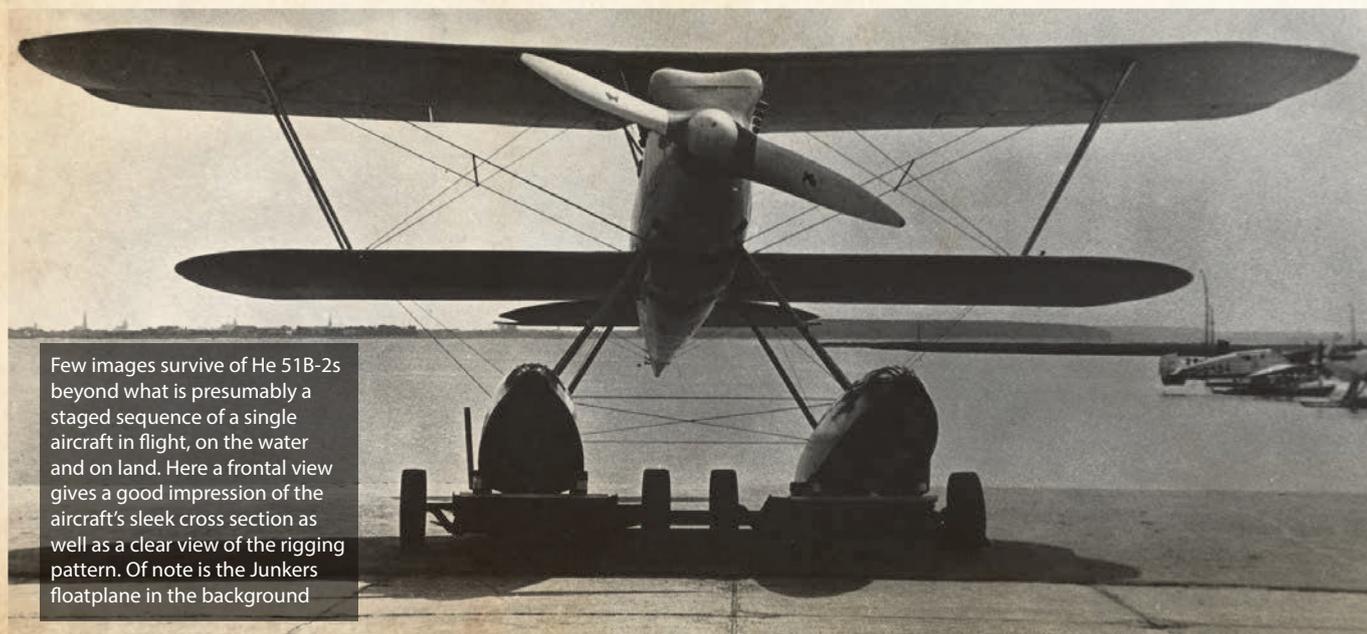
Climb to 1,000m (3,300ft): 1.4min

Climb to 6,000m (19,700ft): 16.5min

Armament

Guns: 2 × 7.92mm MG 17 machine guns in nose with 500rpm

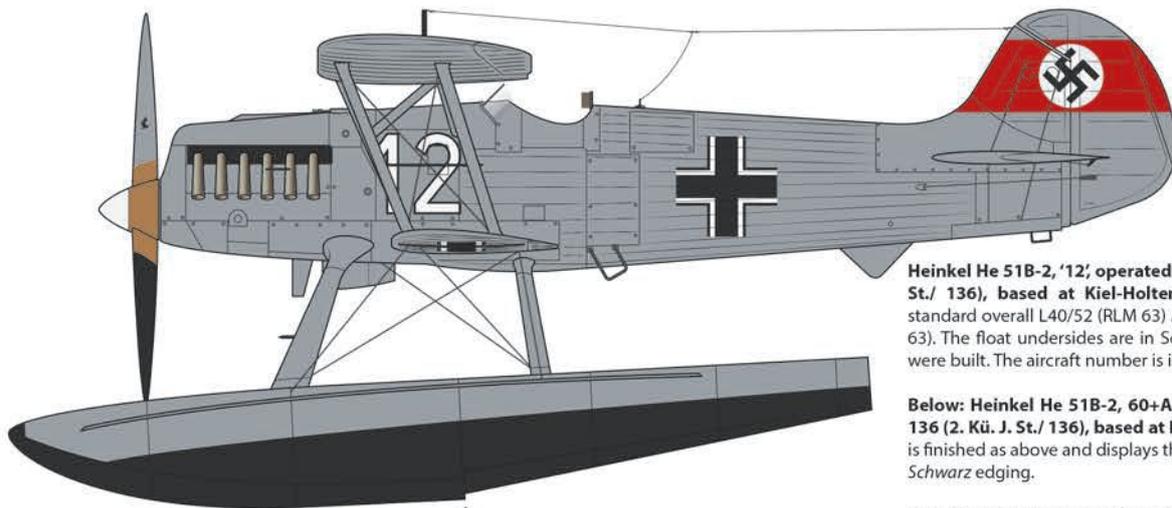
Bombs: 6 × 10kg (22lb) bombs



Few images survive of He 51B-2s beyond what is presumably a staged sequence of a single aircraft in flight, on the water and on land. Here a frontal view gives a good impression of the aircraft's sleek cross section as well as a clear view of the rigging pattern. Of note is the Junkers floatplane in the background



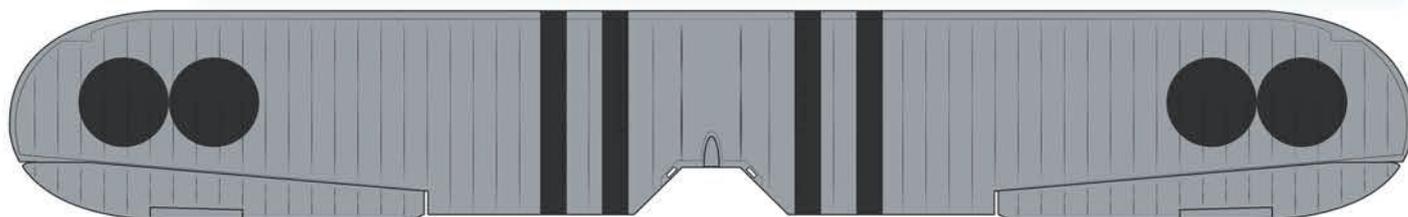
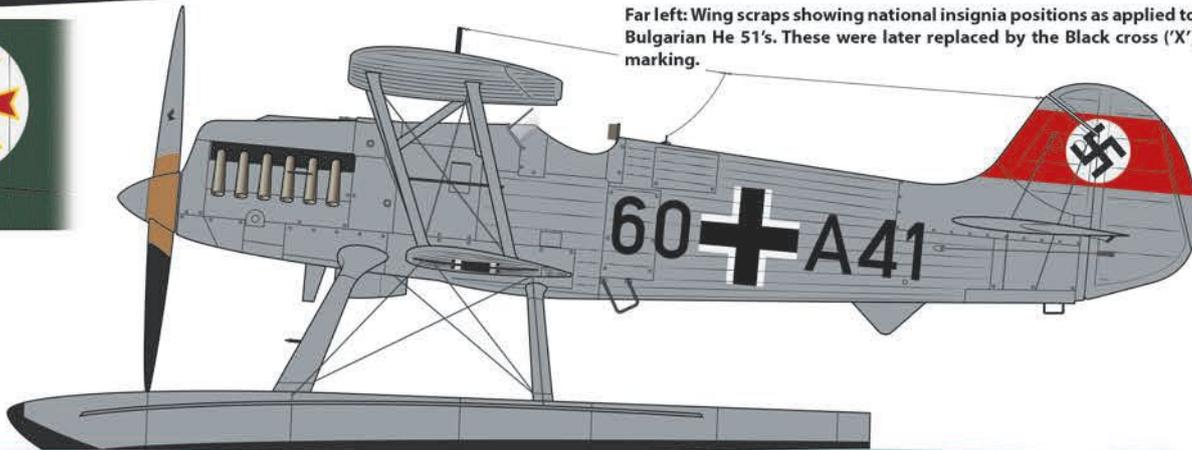
AV71.078
Golden Yellow
(Vallejo Gold Yellow)



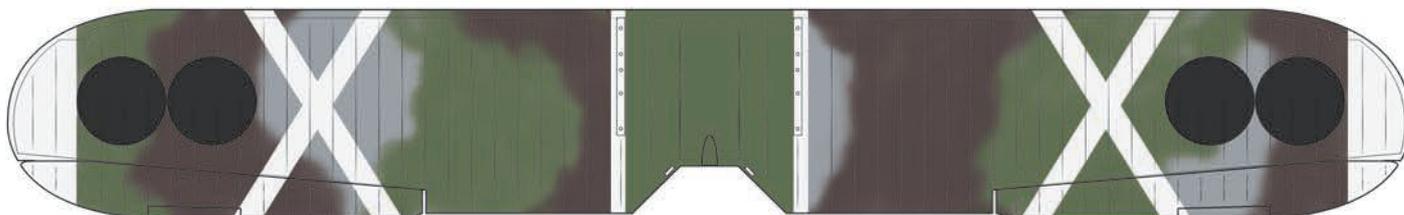
Heinkel He 51B-2, '12', operated by 1. Küstenjagdgruppe 136 (1. Kü. J. St./ 136), based at Kiel-Holtenau, summer 1936. Finish is in the standard overall L40/52 (RLM 63) Hellgrau (Vallejo 71.260 Light Grey RLM 63). The float undersides are in Schwarz. A total of forty six B-2 variants were built. The aircraft number is in Weiß thinly outlined in Schwarz.

Below: Heinkel He 51B-2, 60+A41 operated by 2. Küstenjagdgruppe 136 (2. Kü. J. St./ 136), based at Kiel-Holtenau, spring 1936. Th aircraft is finished as above and displays the earlier variant of Balkenkreuz without Schwarz edging.

Far left: Wing scraps showing national insignia positions as applied to Bulgarian He 51's. These were later replaced by the Black cross ('X') marking.

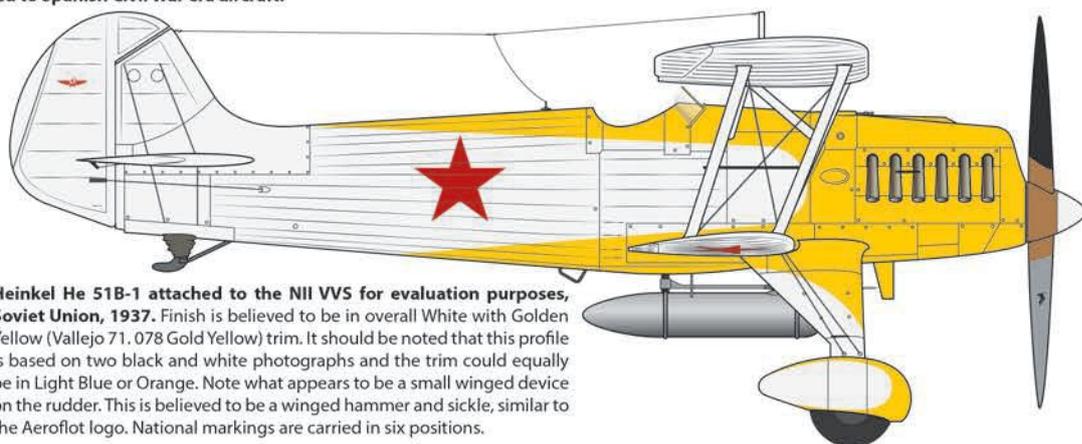
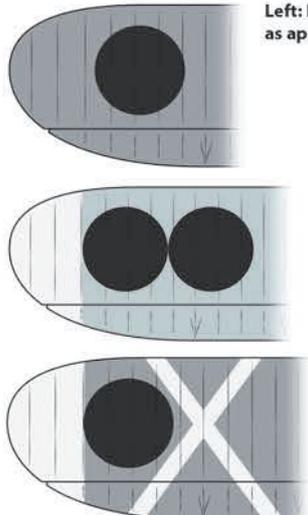


Above: Upper wing scrap as applied to He 51B-1, 2-23.



Above: Upper wing scrap as applied to He 51B-1, 2-102.

Left: Lower wing tip scrap views showing variations in markings as applied to Spanish Civil War era aircraft.



Heinkel He 51B-1 attached to the NII VVS for evaluation purposes, Soviet Union, 1937. Finish is believed to be in overall White with Golden Yellow (Vallejo 71.078 Gold Yellow) trim. It should be noted that this profile is based on two black and white photographs and the trim could equally be in Light Blue or Orange. Note what appears to be a small winged device on the rudder. This is believed to be a winged hammer and sickle, similar to the Aeroflot logo. National markings are carried in six positions.

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36	Handley Page Victor	73	B-25 Mitchell		
37	Gloster Gladiator	74	Harrier P 1127		

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Bottisham Blue

Upper Surface Camouflage for the P-51 Mustangs of the 361st Fighter Group, 8th Air Force, USAAF, based at RAF Bottisham, England, June-July 1944

By Paul Lucas

Quite where the idea that some of the P-51 Mustangs of the 361st Fighter Group of the 8th Air Force USAAF based at RAF Bottisham in England during the summer of 1944 were camouflaged on their upper surfaces in a shade of blue first originated is obscure. The earliest reference to such a camouflage scheme seen by the author at the time of writing is to be found in Bruce Robertson's book *Aircraft Camouflage and Markings 1907-1954* published by Harleyford in the Autumn of 1956. On page 146, Mr Robertson stated that 'During June, 1944, many fighters had 'A.E.A.F. stripes' amongst them some of the newly arrived P-47C-25 and P-51D fighters just entering operational service. Some groups added irregular colours to their aircraft like the high gloss blue upper surfaces seen on the P-51Bs and P-51Ds of the 361st Fighter Group at Bottisham, for example on P-51D-50-NA 41376 E9-O.'

This book remained in print for a relatively long time, reaching its fifth impression in 1964. By this time, the idea that the 361st FG had used blue camouflage on its upper surfaces had taken sufficient root that a P-51D, which had been restored to flight in the United States, registration N6160U, was flying in a scheme based upon Lt Col. Thomas Christian's *Lou IV* 44-13410, the leading aircraft in the well-known series of colour photographs sometimes referred to as 'the Bottisham four'. This same aircraft was illustrated in *IPMS Quarterly Vol.1 No.3* in 1965 being annotated as having 'gloss blue' upper surfaces. There was no mention of exactly which shade of blue was supposed to have been applied.

By the early 1970s with the idea that blue had been used firmly established, some opinion as to what shade of blue it had been began to emerge. In the March 1972 edition of *Scale Models* magazine there was an extensive feature on the Mustang written by R.C. Jones with scale drawings by Pat Lloyd, which used a black and white print of 'the Bottisham four' as its heading photograph. Both the main body of text and the captions to the artwork refer to Mustangs of the 361st FG having medium blue on their upper surfaces. The caption to the photograph stated that 'Aircraft are natural metal with upper surfaces of wings, fuselage and tailplanes in medium blue, several sources state that it is similar to HUMBROL RAILWAY ENAMELS' GARTER BLUE colour - semi-gloss finish.'

The following year in the February 1973 issue, a review build of the then new Airfix 1/24 P-51D kit was depicted as 44-13926 coded 'E2-S' of the 361st FG, which appears in the photograph of the 'Bottisham four' referred to previously, finished on its upper surfaces with Humbrol LNER Garter Blue. It was at about this time that Ducimus were publishing their series of *Camouflage & Markings* booklets. No.16 featured the P-51 and F-6 Mustangs of the USAAF in the ETO and MTO 1942 - 1945 and was written by Roger A. Freeman of *The Mighty Eighth* fame. On page 86 (the Ducimus booklets had page numbers that ran consecutively, the numbered pages in the Mustang volume running from 74 to 95) a photograph of 44-13568 coded E2-C named *Sky Bouncer*, another of the 'Bottisham four' appeared with the caption stating that 'Insignia Blue camouflage patches on a 361st FG P-51D were actually applied over part of the black and white invasion stripes.' In the main body of the text on the same page Mr Freeman stated that 'In the 361st FG some aircraft received Insignia Blue camouflage patches in lieu of dark green.'

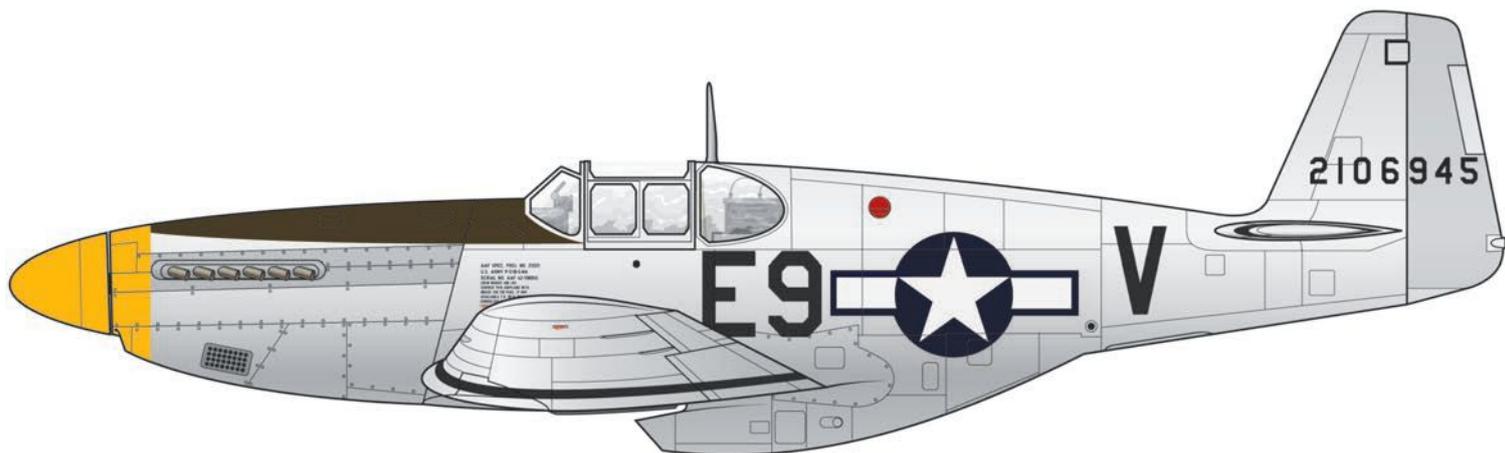
Unfortunately it is not known exactly which sources stated that the shade of blue used by the 361st FG resembled Humbrol LNER Garter Blue (which is similar to RAF PRU Blue) or from where Mr Freeman got the idea that Insignia Blue was used. These two shades are quite different, so which, if either, is correct? Were there two shades of blue, or is the whole thing nothing more than a mare's nest based on a single reference in an old book?

As stated previously, the 'Bottisham four' were the subject of a series of colour photographs, so surely, the matter should be easily resolved? Unfortunately, this is far from the case as various reproductions in books and magazines over the years have simply poured fuel on the fire of the debate as to whether this blue camouflage scheme ever existed. This is due to the vagaries of colour printing and reproduction, which has seen the upper surface camouflage on these aircraft reproduced as a variety of shades from blue to green to brown. Examination of the original colour slides is also said to have been inconclusive due to their deterioration though it is said that the impression that they give is of a green rather than a blue colour being present. When asked about the blue camouflage, veterans who served with the 361st FG

including Lt. Urben Drew who was flying 44-13926 coded 'E2-S' on the day the photograph was taken, are said to have denied that such a scheme ever existed and that all the 361st FG Mustangs were an olive drab or green sort of colour.

As far as the author is aware at the time of writing, there are no official primary source documents that might shed any light on the matter. There are however said to be at least four unofficial primary sources that do describe a blue finish on the upper surfaces of 361st FG Mustangs in the form of the notebooks of aeroplane spotters, which were compiled at the time. The only such account that has appeared in print, so far as the author is aware, was written by MJF Bowyer and was published in the October 1979 issue of *Airfix Magazine*. As part of an article entitled *Mustang Memories*, on page 83 Mr Bowyer wrote: 'Although I recorded many RAF Mustangs, my most vivid memory of the P-51s will always date from a clear, warm, sunny evening, that of July 9, 1944. I was in the same part of Bottisham airfield where, in 1940, I had tarried nervously at the sight of Tiger Moths bombed-up to meet the possibility of invasion. Now the tables were truly turned and Bottisham was certainly on the offensive. Here at hand was a clutch of three P-51s, natural finished at a time when about half the USAAF aircraft in Britain had shed camouflage. These were among those Bottisham Mustangs that had acquired a most superb blue upper decking to wings and fuselage. The colour was what I described in my diary as 'really Royal Blue'. I noted that it was not desecrated by the addition of invasion stripes above the main planes or wrapping around the fuselage. A generous American led me to 2106900:E2-H a P-51B-15-NA (which long serial I had to note very cautiously!) and then we went to 2103588:E2-P a P-51C-5-NT. Finally we wandered to one of the then new P-51D-50-NAs, 413765:E9-O, already resplendent in the blue scheme.'

From this account, it would appear that three different Mustangs were observed on a clear and sunny evening from a distance of a few feet, if not inches, over an extended period of time under the supervision of an American serviceman who allowed extensive notes to be taken including the radio call numbers and squadron markings. Under these circumstances, it is difficult to believe that a colour that was noted at the time to be a 'really Royal Blue' could have been mistaken for either Dark Olive Drab or any



North American P-51B Mustang, 42-106945/E9-V, operated by the 376th Fighter Squadron, 361st Fighter Group, based at Bottisham, circa early 1944. Finish is standard overall Natural Metal (Vallejo 71.062 Aluminium). The nose and spinner are in Identification Yellow 48 (Vallejo 71.078 Gold Yellow). The anti-glare panel is in Dark Olive Drab 41 (Vallejo 71.043 Olive Drab but darker*). The wing and tailplane bands are in Black. The aircraft was nicknamed *Smokey* later in its career.

other shade of dark green. In the author's opinion, this account is solid evidence provided by a credible witness of the application of a blue colour to the upper surfaces of some 361st FG Mustangs. The Bottisham Blue conundrum therefore appears to have not one facet - 'were the Mustangs blue?' but four facets - why were the Mustangs blue, which Mustangs were blue, for how long were the Mustangs blue and finally, which shade of blue was applied to the Mustangs?

Background

The 361st FG consisted of the 374th Fighter Squadron, which coded its aircraft 'B7', the 37th FS, which coded its aircraft 'E2' and the 376th FS, which coded its aircraft 'E9'. Assigned to VIII Fighter Command of the 8th Air Force the 361st FG arrived at RAF Bottisham in Cambridgeshire at the end of November 1943 and initially operated the P-47 Thunderbolt until re-equipping with P-51B Mustangs in May 1944.

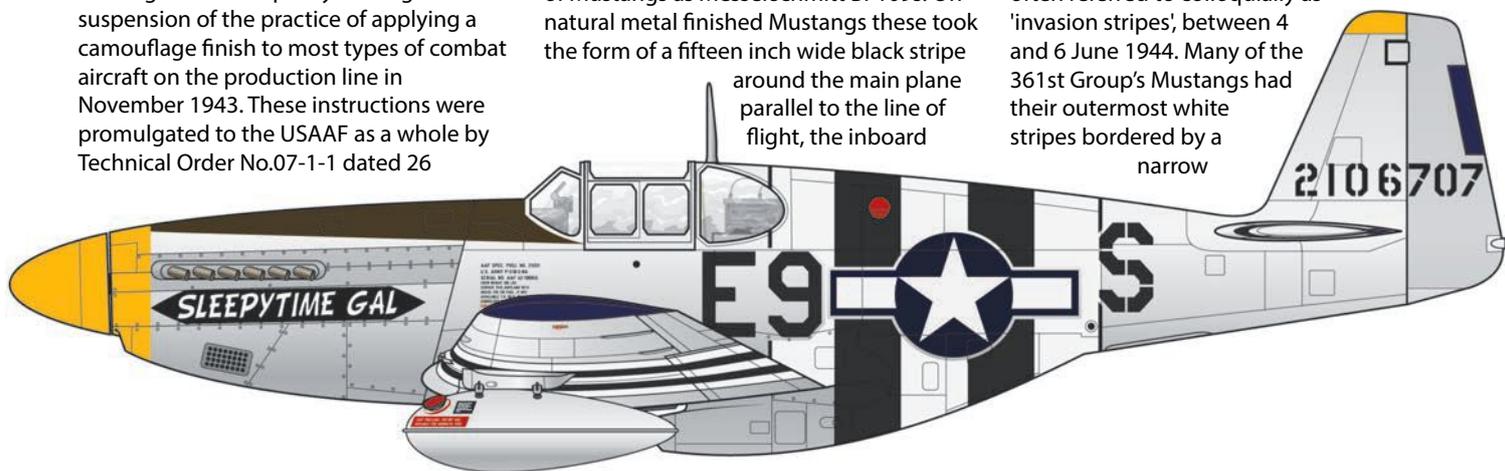
The Mustangs are said all to have been delivered to the 361st FG in the then new natural metal finish, which had resulted in a change in USAAF policy leading to the suspension of the practice of applying a camouflage finish to most types of combat aircraft on the production line in November 1943. These instructions were promulgated to the USAAF as a whole by Technical Order No.07-1-1 dated 26

December 1943. As far as USAAF units in the UK were concerned, on 2 January 1944, General Eaker informed the Commanders of 9th AF VIII Bomber Command and VIII Fighter Command that uncamouflaged aircraft would be arriving in the near future but that that they were free to determine their own policies regarding the use of camouflage. This was later followed by a letter from General Spaatz dated 15 March 1944 to both 8th and 9th AF that once again stated that Commanders were free to set their own camouflage policy. He stated that camouflage paint could be removed from aircraft that were currently painted or alternatively camouflage paint could be applied to unpainted aircraft according to individual tactical needs and desires.

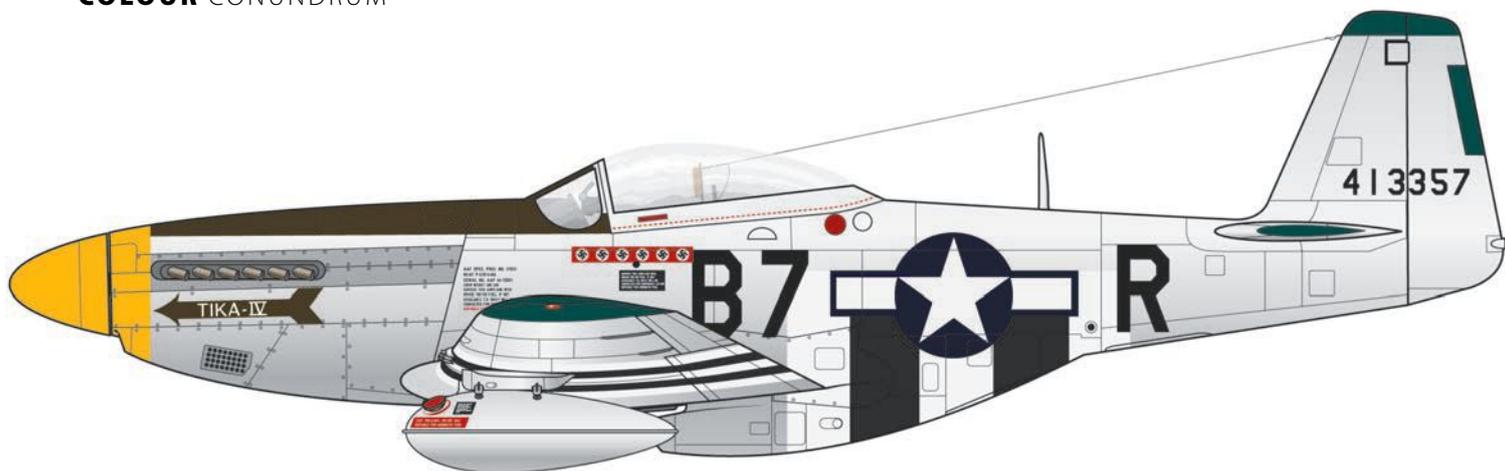
As far as the 361st FG was concerned, it would appear to have been considered acceptable for their Mustangs to be operated in the natural metal and silver paint finish embellished with the yellow spinners and the yellow one foot wide band around the nose introduced from 23 March 1944 that served to identify all the Group's aircraft. In addition they also carried special recognition markings intended to prevent the misidentification of Mustangs as Messerschmitt Bf 109s. On natural metal finished Mustangs these took the form of a fifteen inch wide black stripe around the main plane parallel to the line of flight, the inboard

edge of which was located approximately forty inches from the centreline of the aircraft and a similar fifteen inch wide black band around the tailplane and elevator, whose outboard edge was twenty seven inches inboard from the tip. A similar twelve inch wide black band had also been carried around the fin and rudder until orders were given for its removal at the same time that the coloured spinners and nose stripes were introduced on 23 March 1944. The usual national markings and radio call numbers were carried and the Group applied its squadron codes and individual aircraft letters in black.

Whilst some Fighter Groups are said to have adopted some form of upper surface camouflage on their natural metal finished aircraft in the weeks immediately prior to the Normandy landings in anticipation of operating from forward airstrips on the Continent following the invasion, it is not known if this practice was adopted by the 361st FG. Those photographs of 361st FG Mustangs seen by the author suggest that the natural metal finish was retained until the application of the black and white AEAF Distinctive Markings as specified in SHAEF Operational Memorandum No. 23, often referred to colloquially as 'invasion stripes', between 4 and 6 June 1944. Many of the 361st Group's Mustangs had their outermost white stripes bordered by a narrow



North American P-51B Mustang, 42-106707/E9-S *Sleepytime Gal*, flown by Lt. Clarence E Sullivan Jr. and operated by the 376th Fighter Squadron, 361st Fighter Group, based at Bottisham, June 1944. Finish is standard overall Natural Metal (Vallejo 71.062 Aluminium). The nose, spinner and fin tip leading edge are in Identification Yellow 48 (Vallejo 71.078 Gold Yellow). The wing tips and rudder trim tab are thought to be in Insignia Blue 47 (Vallejo 71.091 Insignia Blue). The anti-glare panel is in Dark Olive Drab but darker*). The aircraft carried full Black and White recognition banding but note the thin Black edged delineating the white from the natural metal of the fuselage. The tailplane bands are in Black.



North American P-51D Mustang, 44-13357/B7-R *Tika-IV*, flown by Lt. Vernon R Richards and operated by the 374th Fighter Squadron, 361st Fighter Group, based at Bottisham, August 1944. Finish is standard overall Natural Metal (Vallejo 71.062 Aluminium). The nose and spinner are in Identification Yellow 48 (Vallejo 71.078 Gold Yellow). The wing tips, tailplane tips and rudder trim tab appear to be in Dark (Bluish) Green (Vallejo 71.013 Yellow Olive but with a hint of Blue*), although some sources state Dark Blue. The anti-glare panel is in Dark Olive Drab 41 (Vallejo 71.043 Olive Drab but darker*). The aircraft carried half Black and White recognition banding. The tailplane bands have been removed. The background to the aircraft name is thought to be in Dark Olive Drab 41. Note the six 'kill' markings.

black line so as to delineate the marking as a whole from the natural metal finish. By this time it would appear that some of the squadrons within the Group were expressing some individuality by painting the wing tips and rudder trim tabs on some of their aircraft in various colours with the 374th Squadron applying black and yellow stripes whilst the 376th applied what might have been Insignia Blue.

Removal of Markings

Following the invasion, on 6 July HQ AEAF recommended to SHAEF that no further aircraft should have the distinctive markings applied and those that already existed should be allowed to fade out and not be renewed. That same day HQ AEAF gave permission for some aircraft to carry distinctive markings on their under surfaces only. It is thought that the removal of the distinctive markings from the upper surfaces of any aircraft that required tactical camouflage was authorised by SHAEF in Amendment No. 2 to Operational Memorandum No.23. This permission was officially extended to the 8th AF from 10 July though the 361st Group would appear to have begun to remove the markings at some time prior to this as witnessed by Mr Bowyer during his sighting during the evening of 9 July 1944.

It would appear that once the 361st FG were given permission to remove the distinctive markings from the

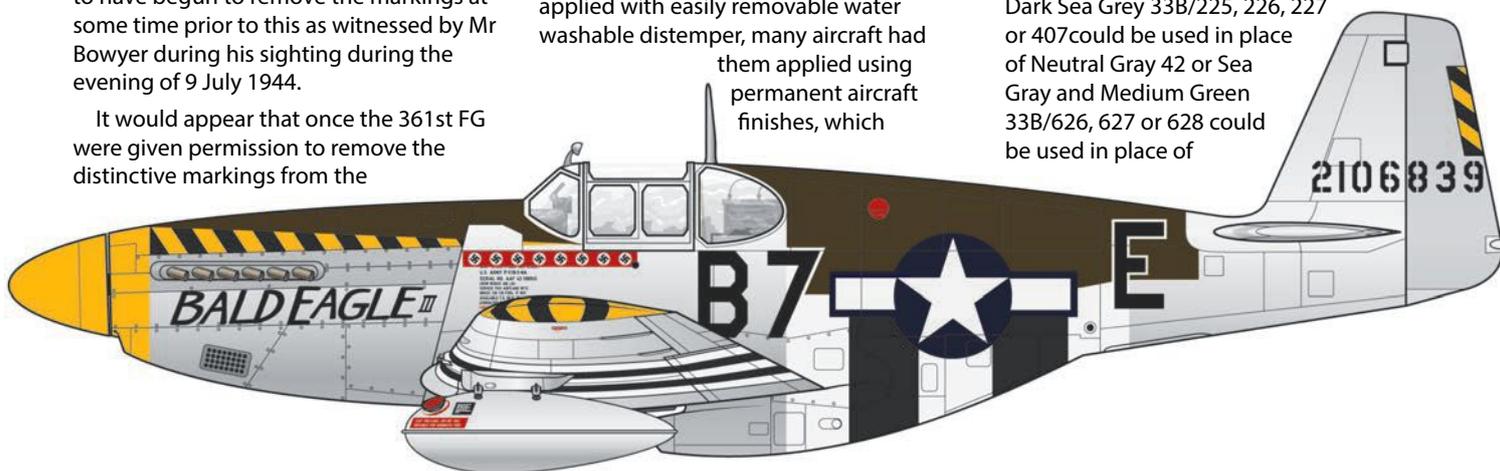
upper surfaces, they did so by a variety of means. Within the 374th FS, there are photographs of Mustangs such as P-51D 44-13357 coded 'B7-R' *Tika IV* that appear to have had the markings stripped off leaving all the upper surfaces in their original finish, P-51B 42-106839 B7-E *Bald Eagle III*, which had the distinctive markings on the upper surface of the wings and over the top of the fuselage over-painted with a single dark colour leaving those parts of the main planes outboard of the location of the distinctive markings and the whole of the upper surface of the tail plane in a natural metal or silver finish, and P-51B 42-106638 E9-R (which might have been named *Impatient Virgin*), which had all of the upper surfaces of the main planes and tail planes over-painted in a single dark colour but with the stripes apparently stripped from the top of the fuselage to leave that part of the airframe natural metal. Clearly, there was no uniform procedure even within a squadron for the elimination of the distinctive markings.

It may be the case that this ad-hoc approach was the result of several factors. It is known that whilst the distinctive markings were supposed to have been applied with easily removable water washable distemper, many aircraft had

them applied using permanent aircraft finishes, which

subsequently proved difficult and time consuming to remove. This problem might have led to the decision being taken simply to over-paint the markings. The finish of choice for this purpose has long been thought to have been the earlier Bulletin 41 Dark Olive Drab 41, the use of which had been suspended in December 1943 as mentioned previously. A sudden demand for a relatively large quantity of a finish that was in the process of falling from use might have led to a temporary shortage within the supply chain which meant that whilst some aircraft had their entire upper surfaces repainted, others only had parts of the upper surfaces re-painted. Such a shortage might have led to other colours being used instead such as the Royal Blue seen by Mr Bowyer.

An alternative solution to any shortage might have been the use of RAF Dark Green. This colour, 33B/183, 184,185 or 404 was authorised for use in place of Olive Drab during the servicing and maintenance of US types of aircraft operated by the RAF in American colourings by the Air Ministry in March 1944. It is interesting to note that the same document also stated that Extra Dark Sea Grey 33B/225, 226, 227 or 407 could be used in place of Neutral Gray 42 or Sea Gray and Medium Green 33B/626, 627 or 628 could be used in place of



North American P-51B Mustang, 42-106839/B7-E *Bald Eagle III*, flown by Lt. Robert Eckfeldt and operated by the 374th Fighter Squadron, 361st Fighter Group, based at Bottisham, August 1944. Finish is standard overall Natural Metal (Vallejo 71.062 Aluminium). The nose, spinner and fin tip leading edge are in Identification Yellow 48 (Vallejo 71.078 Gold Yellow). The wing tips, nose flash and rudder trim tab are thought to be in Identification Yellow with Black banding. The anti-glare panel and rear upper fuselage are in Dark Olive Drab 41 (Vallejo 71.043 Olive Drab but darker*). The aircraft carried half Black and White recognition banding. The Black tailplane bands have been removed but are still faintly visible. The aircraft carries eight 'kill' markings.



North American P-51B Mustang, 42-106839/B7-E Bald Eagle III, flown by Lt. Robert Eckfeldt and operated by the 374th Fighter Squadron, 361st Fighter Group, based at Bottisham, August 1944- upper view. Finish is standard overall Natural Metal (Vallejo 71.062 Aluminium). The nose, spinner and fin tip leading edge are in Identification Yellow 48 (Vallejo 71.078 Gold Yellow). The wing tips, nose flash and rudder trim tab are thought to be in Identification Yellow with Black banding. The anti-glare panel and rear upper fuselage are in Dark Olive Drab 41 (Vallejo 71.043 Olive Drab but darker*). The aircraft carried half Black and White recognition banding. The Black tailplane bands have been removed but are still faintly visible. The aircraft carries eight 'kill' markings.

Medium Green 43.

In considering this option, it should be noted that Britain and the US also had a reverse Lend-Lease agreement, sometimes referred to as 'Reciprocal Aid' by which goods and services provided by Britain to the US could be accounted, charged and offset against the debts Britain was incurring with Lend-Lease. These goods and services ranged in scale from the provision of sparking plugs to the construction of major airfields. The USAAF operated a considerable number of British aircraft in British colour schemes in the UK, which had to be maintained and the USAAF would presumably have had a mechanism by which they could obtain supplies of British aircraft finishing

materials from RAF Maintenance Command for this purpose. It is therefore possible that the 361st FG might have had access to British aircraft finishes if there was a shortage of materials from USAAF's own VIII Air Force Service Command. If all else failed there might even be a kernel of truth to the rumours of some form of unofficial 'barter' arrangement involving nylons and scotch!

Ultimately, the ad-hoc removal or over painting of the stripes was made more uniform by the widespread adoption of an 'olive drab' finish of some description by the 361st FG from about the middle of July. This was applied to all of the upper surfaces including blotches around the edge of the fin and rudder of some aircraft. It is thought

that this blotching might have been the result of the painters working to the same principle as the requirement from T.O. No.07-1-1 Section 1 Paragraph 3 which called for Medium Green 42 to be applied 'in irregular splotches...also, along all edges of both sides of the vertical outline of the tail assembly, extending inward from the edges for various distances up to 20 percent of the total width...'

Why were the Mustangs blue?

The use of a green colour on the upper surfaces makes sense if the tactical aim is to conceal an aircraft whilst it is either

stationary on the ground or whilst it is flying at low level. The principal role of the Mustangs of the 8th AF at this time however was as medium to high altitude escorts to B-17 and B-24s. Is it therefore possible that a small scale tactical trial was carried out by painting a number of Mustangs blue on the upper surfaces? Such a finish was not unknown in the USAAF, which operated a number of Lockheed F-5 Lightnings finished in Synthetic Haze and de Havilland Mosquitos finished in overall PRU Blue in the Photographic Reconnaissance role. When F-5 units began to receive natural metal aircraft in the spring of 1944,

they repainted many of them in the British overall PRU Blue finish, which neatly illustrates the validity of the suggestion that the 361st FG might have access to British aircraft finishing materials. In the absence of any hard evidence however, it has to be said that the reason for the application of the blue finish is currently unknown.

Which Mustangs were blue?

According to MJF Bowyer's account, he saw three Mustangs with the blue finish, a P-51B radio call number 2106900 coded E2-H, a P-51C radio call number 2103588:E2-P, and a P-51D radio call number 413765 coded E9-O. This latter

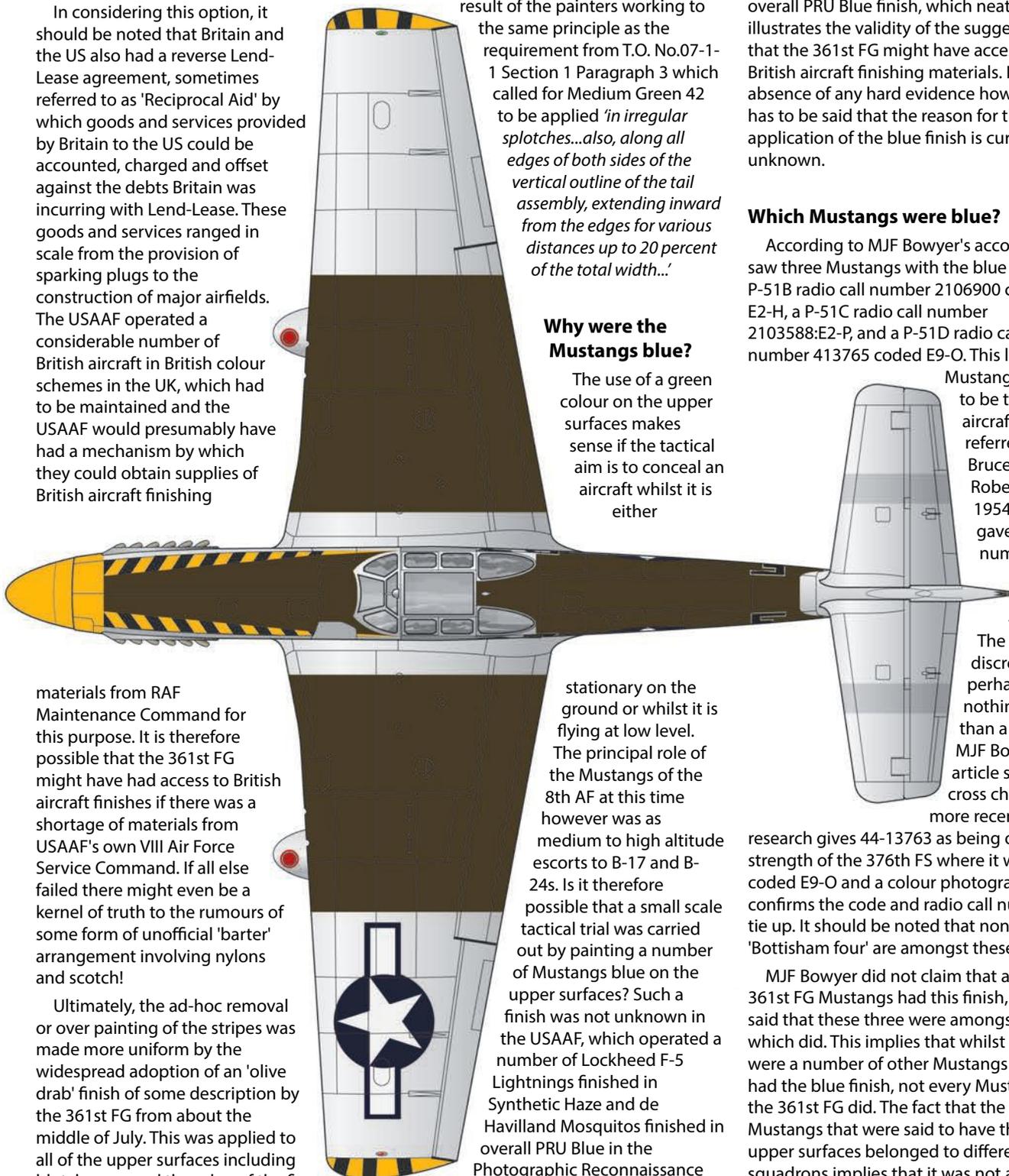
Mustang seems to be the same aircraft referred to by Bruce Robertson in 1954, who gave the number as being

413763.

The discrepancy is perhaps nothing more than a typo in MJF Bowyer's article since a cross check with more recent

research gives 44-13763 as being on the strength of the 376th FS where it was coded E9-O and a colour photograph confirms the code and radio call number tie up. It should be noted that none of the 'Bottisham four' are amongst these aircraft.

MJF Bowyer did not claim that all the 361st FG Mustangs had this finish, he only said that these three were amongst those which did. This implies that whilst there were a number of other Mustangs that also had the blue finish, not every Mustang in the 361st FG did. The fact that the Mustangs that were said to have the blue upper surfaces belonged to different squadrons implies that it was not a Squadron specific scheme. (concluded in next)



HATAKA

HOBBY

About Hataka

Hataka Hobby is a Polish producer of acrylic paints and auxiliary products for modellers. Their primary philosophy from day one was to concentrate on acrylic paint sets, covering the topics that are the most interesting for modellers. The Company started to conquer the global hobby market with first five sets in November 2014. Since then their range of products has significantly grown and is worth looking at in more detail.

Hataka Hobby started with dedicated aviation paint sets and today offers one of the biggest ranges on the market (already 31 aviation sets were available in mid-April, at the moment of writing this article). Some of the most intriguing products in their offer are two USAF aggressor colours sets – composed according to original Federal Standard colours, allowing for finishing any current USAF F-15 and F16 in aggressor scheme. For modellers interested in aircraft that took part in some particular conflicts Hataka Hobby adopted very clear “collection” approach. All of their sets are “stamped” with collection badge - be it either

“Battle of Britain”, “Vietnam War” or “War over Iraq”. They cover also some niche topics, like once very popular (especially for pre-desert storm era modellers) Falklands/Malvinas conflict theme. For this one Hataka Hobby prepared two sets: HTK-AS27 covering standard colours of Argentinean AF planes that took part in the Falklands / Malvinas war and HTK-AS29 for all types of British planes used at that time.

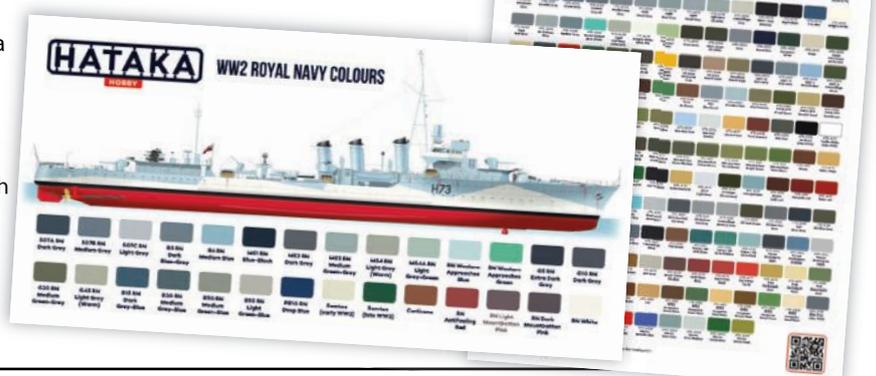
Apart from that the Company expands AFV paint sets line - currently 5 true colour and 6 panel lighting technique sets are available in their offer. The latter are dedicated to modellers that do not like preparing their own paint mixes for achieving realistic panel lighting effect (or simply do not have time for that), with clear step-by-step guide on the back of the box.

Recently Hataka Hobby also made the first steps towards needs of railway modellers (two sets for Polish locomotives already available) and marine modellers. The latter part is



particularly interesting, as the Company issued a full range of 28 colours used by the Royal Navy during World War II. Those are currently available as singular paints, so that anyone can choose and pick the colours necessary for a particular model.

In general Hataka Hobby sets consist of 4, 6 or 8 paints (called “mega set”). All attractively packed, carrying high quality profiles of aircraft or vehicles from the topic/era covered by the set on the box. Single paints are also offered and already available in many hobby-stores across Europe. All paints are packed in 17ml plastic bottles with a metal ball inside to make mixing easier. All in all Hataka Hobby’s offer today (in mid-April) consists of 46 paint sets and more than 200 singular colours and is definitely worth trying.



Recent products

In late April Hataka Hobby released two new aviation paint sets:

HTK-AS47 Polish Air Force Su-22M4 paint set – 6 standard colours of Polish Su-22M4 / UM3K fleet used from late 1990s to 2015

In 1990s Polish AF’s Su-22M4 / UM3K fleet started to undergo overhauls in WZL-2 in Bydgoszcz. In 1997 the new camouflage scheme (so-called “NATO scheme”) was tested on Su-22M4 “3214” and approved for use on all overhauled Su-22s. Since that time all operational Su-22M4s and UM3Ks had been repainted

using this pattern. In 2015 a decision was made to change the already classical “NATO scheme” for a two-tone grey camouflage (similar to the one used on Polish F-16s). The change being applied during the next round of periodic overhauls in WZL-2 to all aircraft remaining in service.

HTK-AS49 RAF Coastal Command & RN FAA paint set – 6 standard colours of British maritime planes during WW2

The Coastal Command was the RAF’s maritime arm tasked with protection of Allied convoys (most successful after 1943 when it finally received Very Long Range aircraft). The

Fleet Air Arm operated carrier-based fighters, torpedo bombers and recce aircraft. RAF CC planes wore firstly Temperate Land Scheme (except for flying boats) and from mid-1941 Temperate Sea Scheme (with Sky “Type S” and later

White undersurfaces). The same scheme was also widely used by RN FAA planes from the beginning of war (firstly with Sky Grey and then Sky “Type S” undersurfaces).



for more details contact www.hataka-hobby.com



HARROGATE

MODEL CLUB

Jetstream Believer

By Gary Hatcher



BAe Jetstream 31

Kit No: 72238

Scale: 1/72

Type: Injection Moulded Plastic

Manufacturer: AModel
Hannants/Stevens International
www.ibg.com.pl

BAe Scottish Aviation Jetstream T.1/T.

Kit No: 6672

Scale: 1/72

Type: Resin

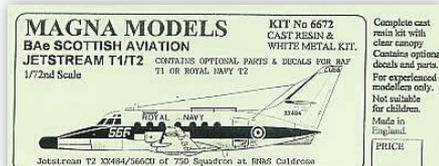
Manufacturer: Magna Models
Hannants

To recap briefly on this project which has cropped up in a couple of previous issues at various stages of construction, the plan was to build a Jetstream T.1, a task hitherto dependent on either the Magna resin kit or an ancient Airfix offering with the wrong engines, and for which a conversion set long out of production is required. Magna's resin is typical of their early output, and while not designed for the novice certainly contains everything you need to build either a RAF T.1 or a Royal Navy T.2. The downside is the solid fuselage halves which have no rear cabin window apertures. The kit offers decals integral with the fuselage stripe, but while this might pass muster in

1/144, in this scale they are simply large black spots.

Enter the new AModel kits of the Jetstream 31 and 32. These are good modern injection moulded kits with all the windows in the right place, a decent cockpit interior and... the wrong engines. Lacking the Airfix kit and crucially the correct engines for the British military version the solution seemed obvious. Kitbash!

Major assembly had proceeded without any real difficulties arising. The Magna engines and nacelles needed a little effort to clean up but an acceptable fit to the Amodel fuselage was achieved using talcum powder and superglue





A front end shot shows the Medium Sea Grey patch below the nose and the windscreen wipers made from stretched sprue. These were held in place by dipping the blades in Klear and allowing this to stick them to the windows



The chunky Magna prop looks better in context and from a discrete distance. The sleeve around the propshaft was wrapped in spare white decal cut from a Revell Red Arrows Hawk sheet. This was an easier solution than masking the whole thing up for the airbrush



The scratch built pitot tubes may look insignificant but their fabrication was a painstaking task. Items like these can really let down a model if they are over scale

as a filler for the somewhat noticeable seams. The interior had been decked out with Eduard seatbelts and the instrument panel is actually that of a Shackleton, but as all that is visible in the cockpit is the faintest hint of blue from the belts I think I may have managed to get away with it.

So the build had progressed to a point at which the canopy was in place and I left it back in the May issue with the windows masked and the first elements of the paint scheme being applied. This you might suppose may have suggested the end was in sight, but in actual fact as it turned out the real work was yet to come.

One aspect of modelling that I am constantly reminding myself needs to be borne at the front of the mind is planning. That I am constantly forgetting this and wasting time - and usually reams of masking tape - is one of the hallmarks of my modelling and is responsible for the many times I have finished a model, painted and decalced it, then stripped it down and repainted it immediately. More often than not this is because I make assumptions, and do not check facts or kit parts adequately before steaming into the build. The Jetstream was a classic case in point. It's not that I had actually assumed the Magna decals would fit the Amodel airframe - I simply hadn't given the matter any thought.

Enormous efforts went into painting the model even before I got as far as this

unfortunate lapse. Repeated coats of Halfords grey primer were sprayed on and sanded back to blend in the transparencies until they were seamless. The resin engine nacelles and their rather visible joint with the wings required a great deal of attention and even now I prefer to look at this area of the model without my spectacles on. Eventually however I was ready to switch to white primer, which was followed by Appliance White, which went on in several coats until the desired finish was achieved. This was then left to cure and masked up before application of the Light Aircraft Grey, for which I used Mr Hobby H332, kindly supplied by Albion Alloys, which I am pleased to say sprayed beautifully.

Next came the part I was looking forward to - adding the red. In previous builds of this trainer scheme I had, as I have mentioned, simply used Humbrol red on the assumption that red was red and that it looked like quite a lot of the pictures I was seeing at the time. Of course the camera cannot be trusted, and it was thanks to some helpful Britmodellers that I was introduced to Halfords Volkswagen Mars Red. Tentative tests on some spare plastic suggested this would really look the part and I was anxious to see some finished results. More masking ensued, ensuring all the grey and white areas were tightly covered before a first coat of red primer was sprayed onto the outer wing panels, the stripe along the fuselage side and the horizontal tailplanes. Looking at the red panels on the fin I decided the colour of the

Magna decals would match the Halfords paints so I would save myself a great deal of complex masking and simply apply these later.

So the basic red, white and grey scheme was finished and I was hugely impressed with the shade of red - so much so that I almost broke open an Airfix Bulldog to get another trainer under way. Recalling the dreadful Humbrol red efforts of yore I cannot wait to revisit the kit and do it justice, but a degree of restraint prevailed and I commenced glossing the airframe with Klear ready for the decals. Here was where the problems really began.

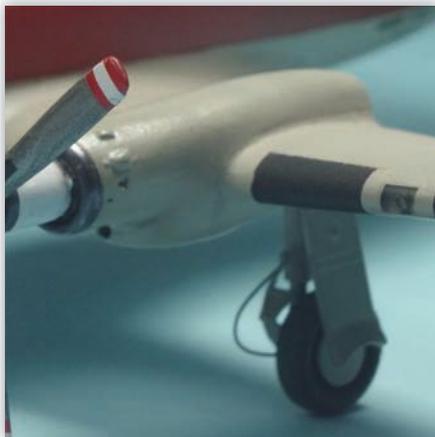
Firstly, the Magna tail is not the same shape as the Amodel part. My understanding is that differences between the -31 and the T.1 largely concern the engines and minor areas such as antenna. The tail, I had assumed (that word again), should be near enough the same to make any fit issues with the decals minor ones. Not so. I wanted to add the red panels to the tailplane first before pinning down an actual aircraft, as these are common to all. Finding that the Magna parts would be unusable I was obliged to re mask the entire back end of the aircraft and spray them instead. This was fairly traumatic as I was using the aerosols, and the Mars Red definitely needs the red primer underneath it too, so it was on the whole a rather ham fisted operation.

Once this was done I was confronted with the next problem. The fin flashes were likewise the wrong shape, and as they are unique to the





The precise form and location of the towel rail proved elusive so I made something that seemed to look the part. Magna do not provide a part and few pictures seem to focus on it at all



The landing lights made a huge difference to the finished model. Memo to self - make sure these are done earlier in the build next time



Left over parts from the two kits and technically there is all you need to build a Royal Navy Jetstream T.3. Good luck with that...

rake of the Jetstream's tail there was absolutely no possibility of finding any in my spares box. An initial attempt to mask up and spray the red sections proved unfortunate so I stuck the model back in its box and pondered the matter for a couple of weeks before coming up with what is actually a fairly simple and obvious solution.

First I cut plastic card shapes to size, testing them against the fin until I had a perfect template for the area I wanted to be red. This took a number of attempts but by cutting it too large and trimming it down eventually I had a piece of plastic exactly the same size and shape as the red section of the fin flash. Searching the spares box I discovered some *hinomaru* left over from an Italeri Ar 196 that were the correct shade of red. The plastic card shape was attached to one of these with clear Sellotape and a sharp No.11 scalpel blade was used to trim around the edges of it. The end result was a perfect red trapezoid that not only fitted the AModel fin perfectly but also covered up the bodged attempts at painting it. This process was then repeated for the blue sections of the flash, using Dutch markings from a Special Hobby Meteor, with the base Appliance White remaining as the centre part. Job done...

At this point I was ready to pin down a specific aircraft to model. The Magna decal sheet supplied markings for XX495, complete with fin flashes for 45 Squadron. Unfortunately it does not include the squadron's winged camel badge and I was unable to find any photographs of Jetstreams whatsoever in which the fin stripe was applied without the badge. I did find some that seemed to pass muster but continuing searches suggest that many aircraft had the badge on the starboard side only, and I was not satisfied that images showing port side views of XX495 with the flashes and no badge could be accepted as proof that the badge was not presented to starboard. In the end I found a series of images showing a farewell flypast including XX495 now minus the fin flashes and coded C. This was well within my capabilities, and while I would have preferred the 45 Squadron trim by this point I was itching to get the masks off the windows and simply wanted to get the decals on and finished.

Not yet though! The next issue was the fuselage roundel. A little forethought would

have made me mask a white disc over the red fuselage stripe. Once again I had assumed I could cut the part out of the Magna decal sheet, where the fuselage roundel is integral with the strip and the black spot windows. Futile attempts with a compass cutter saw the decals crumble at the edges and they were unusable. I managed to cut some white circles from a Revell Red Arrows Hawk sheet and applied these but they weren't very tidy and eventually I had to bite the bullet again, mask up the rear end of the aircraft, taking care not to damage the decals on the tail, and spray on coats of white primer and Appliance White. This would have been much tidier had it not been done retrospectively but after decalling, coats of Klear, and matting down it has blended in enough to be unobtrusive.

Roundels were sourced from an Xtradecal Hawk sheet and the Magna stencilling went on without any problems and at last the decalling was finished.

A thinned down satin coat gave me the finish I wanted, after which it was time to get the masking tape out again and crack on with the tedious chore of painting on all the de-icing

strips along the wings and tailplanes, as well as the black panel in front of the windscreen. This latter was masked up and sprayed. Initially I left the white strips between the red and the black too wide, so was obliged to re mask and respray the panel. I agonised over doing this but the difference it makes to the overall appearance of the aircraft and the perception of its shape is profound.

The strips on the wings and tail were brush painted and turned out quite nicely, but this process led me to the next little issue...

Magna's kit does not include any parts for the landing lights in the leading edge of the wings. There are some lines inscribed representing them and I had largely overlooked the matter, figuring it was a minor issue that I would deal with when the time came. The time came. With the separate de-icing strips on the outer wing panels painted there is a glaring gap, which should be filled by the landing lights. The strips, now painted on, led my eye to focus horribly on the omission. Had the main transparencies and the overall scheme not looked so pleasing I might have bodged something up with a piece of decal and some



gloss varnish but it was not to be. Despite sleeping on it for a couple of days I knew what I was going to have to do – retrospective surgery to the wings of my beautifully painted and painstakingly decal Jetstream.

In the end it was surprisingly painless. I used a fine CMK razor saw to cut out the blocks from the resin wings, masking all around the edges of the area carefully and ensuring no tape was actually applied over any decals without them being masked carefully with paper first. I cut two small pieces of clear sprue to fit, sanding one edge flat and drilling a hole into the back. These were then painted with silver paint, which filled in the hole, making the bulb, and when this had dried they were superglued into the recesses cut in the wings, whittled to the leading edge profile with a scalpel and covered with filler.

Careful sanding back, initially with a blue Albion Flex-I-File stick (essential kit) and then with Micro Mesh, resulted in a couple of beautiful little landing lights which were masked and the area resprayed with the Mr Colour Light Aircraft Grey. Luckily this matched the original coat in spite of subsequent coats of Klear and varnish, and the end result exceeded my most optimistic expectations and was well worth the effort and risk involved.

We now move into the end game.

Actually it was more of an end game, set, and match as it seemed to go on for an awfully long time. First up was the undercarriage, and I opted for the AModel plastic parts only using the scissors links from the NH Detail etched set. Most of the Magna metal parts needed a lot of cleaning up, and fitting the AModel gear into the Magna wells was no problem. The wells themselves needed a bit of work as they looked like they had been carved out of soap, but eventually they scrubbed up well enough to pass muster. The main wheels themselves presented a problem. The T.1's wheels are completely different to those of the -31, although they seem to come in two styles, one of which seems to have a blank disc by way of a hub. Magna offer both styles in resin, but these were approximately bean shaped so I opted for the AModel parts, blessing the good fortune that made XX495 have the blank style hubs during the period I was modelling it. Grinding down the hub detail and substituting plain

plastic discs was a simple task and very soon I had the Jetstream standing on its undercarriage, gear doors – suitably thinned down – in place and another landing light added to the nose wheel with a little-cars 1mm lens for good measure. Please note that the odd angle at which the main gear doors sit is correct according to reference photos. I initially assumed it was a bad fit of the AModel parts to the Magna wings but thankfully not.

The props had been an ongoing labour of necessity for some weeks. Magna's metal parts were very rough and needed a lot of refinement, and the AModel four bladed types were of no use whatsoever. Many coats of primer, filler, superglue, thick enamel paint, and a great deal of sanding eventually got them into an approximate, if chunky, shape, and they were first sprayed silver, then the hubs hand painted matt black. The tips were effected by masking up and spraying first white primer then red and adding white strips of decal to both sides. The end result seen in context is acceptable but it was a wearisome task.

Gear and props in place it was time for the rear cabin windows. Earlier at the painting stage I had brushed matt black round the inside of these in preparation for glazing them with DeLuxe Materials Glue 'n' Glaze and I am pleased to say they turned out remarkably well and are a world away from the black spots provided on the Magna decal sheet. Real windows add an essential dimension to a model for me. Decal windows are just a compromise – like those landing lights I very nearly tried to bodge.

This left little to be done apart from antenna, pitots and the mass balances under the wings. By this stage in a build I usually have a list of jobs outstanding and tick them off as I go. Otherwise little necessities like the darker grey patch under the nose get left off. The pitots were tackled first as these promised to be a nuisance. They are small bare metal affairs protruding from the red fuselage side below the cockpit. NH Detail's set offered etched parts, Magna had some metal pieces, and AModel's kit had plastic ones but all were too large according to photos I looked at, and all seemed nearer to 1/48 than 1/72. I scratch built a pair from card and stretched sprue, leaving the sprue tube longer than needed to ease

painting and handling then snipping these to length once they were glued in place. The towel rail threatened to be another annoying little chore but in the end proved simple enough, largely because the rails on the real aircraft all look a little bent and battered so there was no onus on me to fabricate something that was perfect.

Which is pretty much the way this whole build has gone. Nothing about it is anything like perfect, and in fact there are areas that on a mainstream from the box build I would blush to contemplate, but the overall finished model affords me no end of pleasure, chiefly in the flush glazed cockpit transparency and the pleasing tones of the Volkswagen Mars Red with the grey, white and black. It is such a beautiful scheme and now I am satisfied I have a red that really fits the bill those Bulldogs will not be long in coming.

Accuracy in a conversion like this is always going to be an issue. Sources suggested to me that the tailplanes on the -31 remained unchanged from earlier variants, but the Magna and AModel parts differed significantly. Which to use? I did strive to make the model as accurate as possible in terms of shape and equipment fit but my chief interest has always been markings, so I spent considerably more time researching these than I did on worrying if I had the Magna wings sitting at precisely the right angle, or if the landing lights were exactly the right shape and size. That they are there at all is in my book an improvement on the blank spaces they replaced, but as with so many aspects of this hobby each to their own.

So it has not been an easy ride, but the finished model has both the look and the pert sit of the aircraft I wanted to model and while it is a blessed relief to get it off the workbench I am enormously pleased with the result. Only the second model I have completed this year, it has provided me with the impetus and enthusiasm to get cracking on a whole lot more so fingers crossed, the future looks red white and grey. For the moment at any rate...



CIVIL AVIATION

New Kits on the Market



Vickers Super VC10 Type 1151

Kit No: 313

Scale: 1/144

Type: Injection Moulded Plastic

Manufacturer: Roden
Pocketbond/Squadron

The Roden kit of the Super VC10 is a completely new tooling of this classic aircraft featuring seven sprues of grey injection moulded plastic, one clear sprue, one decal sheet, one set of masks, one set of assembly instructions and one colour painting and marking guide with paint references for Vallejo paints. The parts have very finely engraved panel lines and the clear parts include cabin windows, for which there is a set of masks for each and every window.

The build begins by assembling the tail planes, engines, tail fin and wings, and then work on the fuselage can commence. There are clear parts for the cabin windows but I did not use them as I suspect that the

decal will provide a clear covering for them. If not they can be filled with Micro Crystal clear.

The two fuselage halves were glued together and the joints cleaned up. The nose weight was added through the cockpit opening as there is no cockpit included,



extra spare rectangle of blue colour on the decal sheet just in case. One option is provided - G-ASGI BOAC late 1960s

A coat of dark wash was applied to the engines, wings and tail

planes and then a couple of coats of gloss varnish sprayed on. The undercarriage was now painted, assembled and fitted and the model was finished.

This is a long overdue new 1/144 injection moulded plastic model of the VC10. The Airfix model of the VC10 is more than a few years old and was also released as the RAF VC10 C Mk 1 Air Tanker, which if I am not mistaken will appear from Roden in the near future as the wings and fuselage have indentations for the refuelling pods and antennae so this is one to look out for. The VC10 is a classic British airliner and an attractive looking one as well



and then the cockpit windscreen was masked with the masks supplied and glued into position.

The pre assembled wings, tail fin, tail planes and engines were now fitted and any joints filled and sanded flush. The model was then given a coat of gloss white to the upper fuselage. This was then masked off and Revell 371 Light Grey sprayed onto the wings, lower fuselage and tail planes.

The masking was now removed and the decals applied, and no problems were encountered during their application, it would be nice however if Roden had included an

and the Roden kit captures its looks very well and looks very smart in its BOAC livery. Assembly is quick and the fit of the parts excellent and no problems were encountered during the build.

It's nice to see a new VC10 kit released as previous offerings from Frog and Airfix are now a little dated by modern standards. Welsh Models and Airways released vacform kits and Magna and Anigrand produced resin kits in the larger 1/72 scale, now Roden have weighed in (or should that be Weybridged in) with this new 1/144 model, which is also available with East African Airways decals.

By **Andy McCabe** **Embraer 195 Air Dolomiti****Kit No:** 04884**Scale:** 1/144**Type:** Injection Moulded Plastic**Manufacturer:** Revell GmbH

The Embraer 195 is one of the E series of narrow body medium range, twin engine jet airliners designed and manufactured by the Brazilian Aerospace company Embraer. The E195 aircraft is a stretched version of the E170/E175 models and has larger wings, horizontal stabilizers and new engines and can carry up to 124 passengers depending on the configuration with a flight deck crew of two. The E195 is powered by two GE CF34-10E Turbofan jet engines and has a maximum range of 2,300 nautical miles. To date 166 E195s have been ordered with 147 so far delivered, and amongst the major operators are Lufthansa, Air Europa, Air Dolomiti, FlyBe and LOT.

Revell's kit of the E195 consists of two sprues of white and one clear sprue of injection moulded plastic, one decal sheet and one colour instruction booklet in Revell's new style, the parts are cleanly moulded with finely engraved panel lines and the decals are superbly printed by Daco. The instructions have colour call outs for Revell paints at all stages of the build. First impressions are of yet another nicely produced airliner kit by Revell.

I began by painting all of the cockpit



parts, which in this case is a one piece cockpit and two fuselage halves. The cockpit part also incorporates the forward landing gear bay and slots nicely into position in the fuselage half. Nose weight was added as stipulated and then the two fuselage halves were glued together.

The main landing gear bay was fitted to the lower centre fuselage section, which was then fitted to the fuselage while the wings were glued together, the joints cleaned up and these were then fitted to the fuselage as well.

The tail planes were left off at this point as it will be easier to apply the decals first and then fit them afterwards. The cockpit windows were masked and then glued into position and then the flap actuators were fitted to the wings and before you know it the model was ready for a coat of primer.

The aircraft was sprayed with Halfords Appliance Gloss White and the wings and tail planes with Revell 371 Light Grey. The engines were now painted, assembled and fitted.

The decals went on very nicely

and settled well without the need for setting solutions. They are superbly printed with excellent colour clarity and registration. The cabin windows have decal outlines on the decal sheet but I printed my own solid decal windows. The

undercarriage was now painted, assembled and fitted and the model was complete.

One colour option is supplied with the kit for Italian Regional Air Line Air Dolomiti. The British Airways and Flybe models in this review have custom made decals by myself and are not supplied with the kit.

Conclusion

This is a very impressive model of the Embraer 195. The kit is up to Revell's now customary standard, with high quality parts and decals and the new style instructions. No problems were encountered during the build and the kit assembled very quickly and very nicely. I made my own decals for British Airways and Flybe but there are many more options available from the aftermarket and any of these will complement another excellent airliner kit from Revell.



LITTLE LION

Avant Garde's Kfir

By Dimitris Siolos



Kit No: 88001

Scale: 1/48

Type: Injection Moulded Plastic

Manufacturer: Avant Garde Model Kits
www.deknomodels.com
 Hannants/Joes Models

The Kfir, which means little lion, first flew in 1973 to replace the IAI Nesher. After the embargo from France it was decided to use the J79 engine, which was well known from experience with the Phantom, and the US permitted its construction. The Kfir entered service in 1975 and had its combat debut on 9th November 1977, when a Syrian MiG-21 was shot down. In 1982 the Kfirs were updated to the C.7 version, while in the mid 1980s twenty of them were leased to the US Navy and Marines to act as adversary planes at the famous Top Gun school. The Kfir is still in service with the air forces of Ecuador, Colombia and Sri Lanka.

AMK's Kfir was the first release from this new company in 1/48, and is a very nice kit, easy to build with lots of details, and looks good even built out of the box. Construction started with the cockpit, which was painted using Gunze H308 for the main colour and black for the side consoles. The seat was replaced with a resin one from Aires with photoetch seatbelts. The whole cockpit was weathered with a raw umber artist's oil wash and dry brushing with lighter tones of the basic colours. I continued with the landing gear, painting the wells white and the gears and cover interiors light grey.

The rest of the construction was very straightforward with almost no putty being used, and soon the model was ready to be painted. The undersides were sprayed with Gunze H308, while the upper ones received H310, H312 and H313. These were treated with lighter tones to replicate the extreme weathering due to the intense Israeli sun. Everything was sealed with gloss acrylic varnish, the decals were applied, and after another coat of varnish I did a wash with raw umber oil for the upper and dark grey for the underside surfaces. In the end the whole model was sprayed with matt varnish and the last small parts were put in place to finish a very easy build of a great kit.



MIGHTY MIDGET

Special Hobby's Gnat F.1

By Karl Robinson

Folland Gnat F.1 British Single Seaters

Kit No: 72322

Scale: 1/72

Type: Injection Moulded Plastic

Manufacturer: Special Hobby



The Gnat F.1 is very much a story of what might have been. Designed by Folland at their own expense by W.E.W. Petter and developed from the concept of the earlier failed Midge, the Gnat was proposed as a small light-weight, highly manoeuvrable single seat fighter. Despite

improvements the RAF once again declined to place an order due to the full commitment they had given to the Hunter. Folland were encouraged to seek out overseas sales and the Ministry of Supply was told to order six prototypes of the fully developed aircraft for evaluation. So successful were the trials that two further Gnats were ordered to join the preproduction aircraft already in service. Success at the 1959 Farnborough show re-

sulted in the single seat Gnat being sold to India, Finland and Yugoslavia, but its RAF service went no further. Folland and Petter were later gratified with official approval for the twin seater Gnat T.1 trainer for the RAF, which went on to serve admirably until the late 1970s.

Despite being around since the beginning of the 1950s injection moulded 1/72 kits of the Gnat F.1 have been rarer than the proverbial rocking horse excrement, seeing only one example released by Aero-club in the mid 1980s. It was extremely short run in nature and required a fair amount of work to make presentable, but served its purpose at the time. With this history in mind it is great to see that the single seat Gnat has finally

made its way into a mainstream production run. Special Hobby have recently upped their game on many of their new kits using full 3D CAD design and quality steel moulds, and the difference really stands out with excellent refined detail and beautifully crisp moulded parts.

This Gnat is no exception featuring 104 grey and nine clear parts across four sprues, which is a lot for such a small aircraft. There are also two resin parts. There are three different noses provided covering the fighter, reconnaissance and Ajeet specific options. Underwing stores include fuel tanks, rocket pods, and some superbly fine moulded air to ground rockets and rails. This boxing, SH72322, concentrates on

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British single seaters and features five different markings including XK740 as a preproduction aluminium/DayGlo red example, later in grey/green camouflage, plus the same aircraft in a fictional Red Arrows guise. Another fictional example is the wonderfully named Oscar EW-5894 Phallus from the spoof movie *Hot Shots*. The final option, and my choice for this build, is XN326, a full production aircraft in grey/green camouflage as seen at Farnborough in 1959. This example was later reworked into a reconnaissance aircraft and sold to Finland operating as GN-113 until its retirement in October 1972. It survives today stored at Malmi-Helsinki airport in Finland.

As with most kits we have the obligatory starting point of putting the cockpit together first. A separate instrument panel, control column, multi part seat and rear bulkhead all drop into the tub, which slots neatly around moulded sidewall detail on the inside of the fuselage halves. A simple but cool feature of the tub is that it has a nicely rounded bottom, which helps it sit perfectly in place in the fuselage eliminating any possible alignment issues. Once painted up and combined with the instrument decals provided it will easily pass muster in this scale. Slotting onto the back of the rear bulkhead is the nose gear bay, which again is rounded to fit perfectly within the curvature of the fuselage. A little work is also needed at the rear end before closing up the fuselage as the jet pipe needs installing. Strangely this is moulded as a four part section, which seemed overkill at first but looks great when installed and viewed from the back.

With the cockpit and jet pipe snuggled into place the fuselage closed up perfectly and I was soon racing onto putting the wing halves together. Testing the fit of these to the fuselage, along with the tail planes and separate tail fin, I realised that I had a real gem of a kit on my hands as they butted perfectly into place and stayed there. Absolutely no filler was used on any of these joins and exactly the same was true of the intake frontages and the nose-cone, which popped straight into place leaving the joint matching the surrounding panel lines perfectly. In truth the kit really does fit so well that

no filler is required apart from any you would use to eliminate the central seams along the fuselage and nose-cone halves, but this would be true of any kit so can be disregarded.

With everything sailing along beautifully I had the main construction completed in little more than three hours, excluding the necessary internal painting time with the cockpit. With no work being required anywhere on the airframe I would not even consider the need for priming, which I rarely do anyway. The lower airframe was given a coat of Vallejo Metal Colour White Aluminium to represent the painted aluminium finish, and the upper surfaces sprayed with Mr Hobby H330 RAF Dark Green and H331 RAF Dark Grey, using a combination of finely rolled white tac and masking tape to achieve the camouflage finish. With the Mr Hobby paint having a semi gloss finish, and combined with their excellent Mr Hobby Levelling thinner, no additional varnish was needed as it already had a perfectly smooth decal ready finish.

Rarely have I ever had any issues with decals provided by Special Hobby and these were just as trouble free, being very thin but strong, and settling well into panel lines and around details with the help of the Microset decalling solution combo. To finish up I used Mig Productions Neutral enamel wash to accentuate the panel lines, then sealed everything in using semi gloss varnish again thinned with Mr Hobby levelling thinner. Final construction steps were then completed by adding the undercarriage, which I had painted and prepared whilst waiting for the main paint to dry, and which slotted smoothly and firmly into place, as well as the prominent pitot tube under the starboard wing.

Every so often a kit comes along that can completely surprise you, and this certainly was true with this Gnat. With the clean moulding and the wonderful engineering that allows this kit to practically fall together it served to reinvigorate my modelling mojo and remind me that modelling is a truly enjoyable experience. Special Hobby can certainly be highly commended on their Gnat as it is a joy to build and makes a really pleasing looking model.



LE GANNET

Breguet 1050 Alize 1G France

By **Andy McCabe**

Breguet 1050 Alize 1G France

Kit No: 028

Scale: 1/72

Type: Injection Moulded Plastic

Manufacturer: Azur Fromm Hannants/Squadron

The Breguet Alize 1050 was a French Navy carrier based ASW (AntiSubmarine Warfare) aircraft derived from the Breguet 960 *Vultur*, which was an unsuccessful attempt at an attack aircraft and was limited to only three prototypes. The first production Alize was delivered to the French Navy on 15th November 1957 and replaced the Grumman Avenger in the Submarine Hunter Killer Role. 6 *Flotille* were the first squadron to receive the Alize in 1959 and served as an operational training squadron. The Alize served with numerous units throughout its

life on various aircraft carriers such as the *Arromanches*, *Clemenceau* and *Foch* and was finally retired in 2000. Eighty nine were built and served primarily with the French and also the Indian Navy.

The Alize was powered by a single Rolls-Royce Dart Rda.7 Mk 21 turboprop engine and had a crew of three, pilot, radar operator and navigator, and could carry torpedo or depth charges in an internal bomb bay and Bombs, Depth Charges, Rockets or Missiles on six underwing pylons.

The Fromm-Azur kit consists of four sprues of grey and one clear sprue of injection moulded plastic, one decal sheet and an instruction booklet. The parts are cleanly moulded with engraved panel lines and detailing and the decal sheet is nicely printed with decals for three options. The instructions have colour call outs for Gunze throughout the build process.



Construction

The cockpit/interior is the first stage for which the interior parts were sprayed with Revell XF69 Nato Black. The radar screens and instruments were painted in and then the interior/cockpit was assembled. While there is a nice amount of detailing to the interior it could probably do with the Eduard touch. The nose wheel was glued into position and the radar assembled. There are two positions that the radar can be fitted in, either up or down, so the up position for an aircraft on the ground was selected. This was installed in the fuselage half, nose weight added and then the exhaust was assembled and slotted into position and the two fuselage halves were glued together.

The instrument panel and navigator's panel were now glued into position in the cockpit opening. The wings were assembled along with the searchlight/main landing gear pods and then the wings were fitted to the fuselage along with the rudder and tail planes.

The cockpit canopy was now masked and fitted and a few vents and aerials also attached and then the model was given a coat of white primer. Any gaps were filled and unsightly joints

dealt with and then the underside was sprayed with Vallejo 70820 Off White. This was then masked and Mr Hobby H42 Blue/Grey was sprayed onto the upper wing and fuselage surfaces.

The wings, tail and tail plane leading edges were masked off and painted matt black and then the decals were applied. These are quite thin so care has to be taken when applying them but other than this there were no problems encountered during their application. A coat of Klear sealed them in place and then a dark wash was applied followed by a coat of satin varnish.

Three options are supplied on the decal sheet but the colour scheme is the same:

Breguet 1050 Alize 72 of *Flotille 4F*, Lann-Bihoué BAN, 1966/1970

Breguet 1050 Alize 2 Coded I of Squadron 10S (CEPA), St-Raphael 1959/1960.

Breguet 1050 Alize 16 of *Flotille 9F* Group ALFA 1966 aboard *Foch*, French Polynesia, May-September 1966

Final assembly now commenced by painting and fitting the undercarriage and prop and then fitting the underwing missiles.

Despite adding twenty grams of nose weight I still had tail sitter, hence the tail arrester hook being modelled deployed. I would recommend at least thirty five grams of nose weight to prevent this, which is far more than the eight grams the instructions recommend.

Conclusion

This is a very interesting model to make and an unusual subject as well. It will prove to be very popular with naval aviation enthusiasts I would imagine and will sit alongside the Fairey Gannet of the Fleet Air Arm very nicely in anyone's collection.

I cannot find any faults with the kit as far as assembly goes. The interior is well catered for but could probably benefit from etched upgrades though not much of it can be seen in any case once the model is finished.

This is a very nice model of a curious looking aircraft but nevertheless one that served for more than forty years. Also released by Fromm-Azur are the 1050 Breguet Alize ALM kit #29, Breguet Alize 1050 ALH kit #30 and Breguet Alize 1050 Alize 1G India kit #031.



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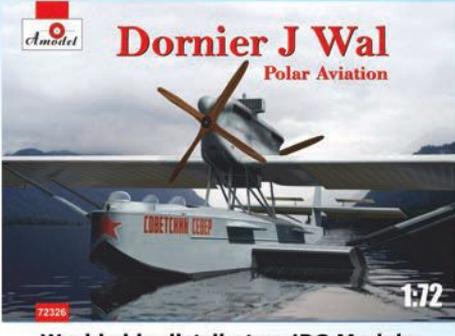


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IPMS (UK) Column

Presented By **Chris Ayre**



A Dozen (good) Eggs...

I thought I'd start this month with something a little more IPMS (UK) related. This is after all the IPMS (UK) column and I have been prompted by my attendance at the recent Annual General Meeting of the society to provide a brief introduction to the posts of Officers of the Society. An important part of the proceedings of the AGM is the election of officers to those posts that fall due and although there were no actual changes of personnel this time around there were some technical adjustments. It is not for me to provide an AGM report. Members will find that in the next issue of the IPMS magazine. What follows is a brief overview of the posts that exist and the roles that the post holders fulfil, something I felt might be of interest to members and potential members alike.

In simple terms IPMS (UK) is a very large model club, with well over 3,000 members and the world's greatest model show to organise. The very size of the society brings with it a certain amount of responsibility and quite a lot of admin and we are extremely lucky that a few amongst us volunteer their time and much effort to help ensure that IPMS runs smoothly for the rest of us. There are currently twelve Officers of the Society/Executive Committee (EC) members (the terms are interchangeable) and in fact as IPMS (UK) is a company limited by guarantee and therefore owned by its members, the officers are also directors of the company. Without further ado let me introduce the roles:

President. I've heard it said that this is a figurehead role but the reality is that the EC leader needs to be a diplomat, a negotiator, a mediator and a steady hand at the tiller. The current president, Paul Regan, is the longest serving member of the committee and has proven capable of steering the society through turbulent waters at times. Experience is a valuable asset for the presidential role. president@ipmsuk.co.uk

Honorary Treasurer. Some EC posts require more specialised knowledge than others and as you might imagine the society's finances need to be overseen by someone who has an understanding of accountancy, at the very least. Mark Hill is the current holder of this post. treasurer@ipmsuk.co.uk

Honorary Secretary. This role is sometimes thought to be simply one of taking minutes, organising meeting venues etc., and whilst this is a part of the job, organising the AGM and associated paperwork is perhaps the most crucial task for the current co-opted secretary, Peter Hyslop. secretary@ipmsuk.co.uk

Scale ModelWorld Manager. IPMS (UK) organises Scale ModelWorld, and all of the society officers along with a great many volunteer members are involved with running the event. However the SMW manager takes on the overall responsibility for ensuring that almost 400 exhibitors integrate happily into the venue and that all aspects of the show run as smoothly as possible. Fairly obviously organisational skills are a requirement and the experienced Richard Farrar currently holds this post. scalemodelworld@ipmsuk.co.uk

UK Liaison Officer. As mentioned above, IPMS

(UK) is a large organisation and almost 200 local Branches and SIGs (Special Interest Groups) are gathered under the umbrella of the national society. The UKLO, currently Andrew Armstrong, has the responsibility of ensuring that the status of these groups is recorded and validated. uklo@btinternet.com

Overseas Liaison Officer. IPMS (UK) is considered the mother society having been founded (as the British Plastic Modellers Society) way back in 1963, but there are IPMS bodies in many other countries around the world. These self-governing organisations have adopted the IPMS (UK) ideals and are granted their charter by IPMS (UK). Liaison and communication with these overseas groups is the responsibility of the UKOLO, a post that Gary Wenko has held for several years. overseas@ipmsuk.co.uk

Magazine Editor. Since its earliest days the society has produced a newsletter of some kind. This has been a primary means of communication with the membership but has developed over the years into a full colour professionally produced journal which is issued six times per year. As well as including society news and business, one of the unique aspects of the publication is that the content comes from the society members, under the banner 'Written by modellers, for modellers' reflecting the overall ethos of IPMS. Magazine production is overseen by the current co-opted editor, Don Carrick. editor@ipmsuk.co.uk

National Competition Secretary. For competitive members the heart of IPMS (UK) is the annual national competition and indeed many still refer to Scale ModelWorld as the Nationals. This is because the World's Greatest Model Show has evolved from what used to be a much smaller annual event, centred around the society's national competition. Now that SMW offers so much more and is so much bigger, the contest has actually become international in scope though all competition entrants are IPMS members, including those from overseas, and this prestigious event attracts competitors from all over the globe. Tony Horton has organised and overseen the national competition for a number of years. competition@ipmsuk.co.uk

Publicity Officer. This post carries with it the responsibility of selling IPMS (UK) to the world and there are many facets to the role, including advertising, raising public awareness, promotion of events, maximising press/media coverage, seeking promotional opportunities etc. This post is currently held by John Tapsell, who is also the nominated vice president. publicity@ipmsuk.co.uk

Membership Secretary. For many members Abigail Brewin may be the only direct contact they have with the EC. The holder of the post is the first point of call for those interested in joining the society and also takes on responsibility for maintaining the membership database, renewing existing subscriptions and sending out information packs, membership cards etc. membership@ipmsuk.co.uk

Technical Advisory Service. A slightly odd title that ought surely to include the word officer but doesn't. The post holder, currently Alfie Bass, provides a service to members (listed as a member benefit) which includes answering technical questions relating to the hobby or to



One of the unique exhibits on display at the Belgrade Aeronautical Museum, the Ikarus 451/II. Intriguing? (Chris Ayre)



Every picture tells a story... what do you think this one is saying? (Chris Ayre)



Also spotted in Belgrade... there is a good choice of targets at the Military Museum (Chris Ayre)

particular subject matter. Some of the queries received may be obscure and the TAS Officer (as I like to call him) has access to the society's library of reference material (as well as of course to the World Wide Web). In addition Alfie has taken on the task of organising and running the annual Kit Swap, a very popular feature of SMW. ipmstas@gmail.com

Webmaster. Last and certainly not least is the newest member of the committee. Pete Readman was recently elected to a role that has been vacant for a while and takes responsibility for the society's online presence. This involves maintaining the IPMS (UK) website and forum (currently being revamped by Pete) and taking a hand in the society's social media presence. ipmswebmaster@btinternet.com

As I've stated previously, all of these posts are filled by unpaid volunteers. This is something for which I think the rest of us should be extremely grateful as IPMS (UK) simply could not function without them. As in so many walks of life volunteers are difficult to come by and the society always welcomes interest in the various

posts. Each post comes up for election every two years and if you feel that you might be interested, the main criterion is that you have three years unbroken membership of IPMS (UK) and fairly obviously certain roles do require some specialist skills. However if you would seriously like to consider putting yourself forward but don't quite meet the criteria, feel free to contact the current post holder for further information. It may be possible to work towards a post by offering assistance and shadowing the present incumbent - what better way to get involved and learn the ropes?

Showtime

July is the month that causes me the most problems with clashing events as not only is it the busiest month of the air show season but there are more model shows than ever crammed into five weekends. Let's get on with it then. There are three shows on Sunday 3rd July, including two significant IPMS events. The North Somerset Modellers Society Model Show takes place at The Helicopter Museum, Weston-super-Mare, BS24 8PP, with doors opening to the public at 10.00am. This is IPMS North Somerset's 21st annual show, their second at this great venue and if you'd like to find out more your best bet seems to be to contact John Annegarn via email at john.annegarn@sky.com IPMS Staffordshire Moorlands open the doors to the Moorlands Model Show at exactly the same time and the venue for this one is the TA Centre in Cobridge, Stoke on Trent, ST6 3HJ. This one has been going for seven years and I can vouch that the club knows how to run a show. Have a look at smmc.moonfruit.com for further details. The final show of the weekend is smallspace 5 which is held at Hanslope Village Hall, near Milton Keynes, MK19 7NZ. This is a commercially run event for all things space, science fiction and fantasy and is none the worse for that. Details can be found at www.hamex.co.uk

The following weekend of 9-10th July sees two events on Saturday, the first of which is Hailsham District Model Club's Annual Model Show. I don't have a great deal of information on this one but it takes place at Hailsham Leisure Centre, BN27 2A) from 10.00am to 4.00pm and the club is IPMS East Sussex Branch. hailsham-district-scale-model-club.org/show%202015.html would seem to be the place to find more about this one. Muster on the Parade Ground appears to be a wargaming focussed event but I guess that doesn't mean modellers won't be interested, and there are traders whose names I recognise. The venue is Queen's Campus Sports Hall, Thornaby, Stockton-on-Tees, TS17 6BH and David Clemmet has provided his email address as a point of contact dclmnet@btinternet.com Being held on Sunday is a new event. The Hull Veterans Model Show 2016 is in support of Hull Veterans Support Centre/Hull 4 Heroes. It takes place at St Marys Sports Academy in Hull, HU6 7TN and is open to the public from 10.00am to 4.00pm. Peter Bowyer is the man to contact with any questions on bowyer616@btinternet.com

Saturday 16th July has the Romsey Modellers (IPMS Romsey) Scale Model Show which runs from 10.00am to 5.00pm at Ampfield Village Hall, a couple of miles outside Romsey, SO51 9BJ. This is a small local show with a selection of traders alongside several club displays. Take a look at the branch website for updated info www.romseymodellers.co.uk At the same time over in Oundle near Peterborough, FigureWorld 2016 will be taking place. This show caters just for figure modellers and is open from 9.30am to 4.00pm and note that the venue is different this year being the Laxton Cloisters, Oundle School, PE8 4EE. The event has its own Facebook page but you can also contact organiser Adrian Hopwood via email on adrianhopwood@hotmail.co.uk

Just the one show on the following weekend on Sunday 24th July to be precise, but it's a good

one. The Essex Modellers Show is organised jointly by IPMS South East Essex, IPMS Hornchurch and IPMS Chelmsford plus the Essex Branch of MAFVA. The event is well established at Hannakins Farm Community Centre, Billericay, CM12 0SY and doors will open at 10.00am. Contacts are Jim Smith (clubs) wifflesnoop@yahoo.co.uk and John Drummond (traders) drummond9@talktalk.net

The final two shows of July are biggies with the East of Scotland Model Show taking place at Marrayat Hall in Dundee, DD1 3BB on Saturday 30th July. There will be more traders and more club displays in 2016 and if you take a look at ipmsdundee.co.uk you can find out more. Open to the public from 10.00am to 4.00pm. The final day of the month, Sunday 31st July in case you're unsure, sees the annual show of IPMS Birmingham Midland Expo taking place at Leasowes Sports Centre in Halesowen, B62 8PJ. The organisers haven't told us the opening hours, which is a shame as I might actually make it along this year, but they may well update the information on their website sometime soon. Keep your eye on midlandexpo.blogspot.co.uk

Travels

Before I go, yes, I did have an enjoyable trip to Serbia, thanks for asking. I managed to fit in a visit to the Belgrade Aeronautical Museum, which I highly recommend and which I hope to feature in a photo report in a future issue of IPMS Magazine. In the meantime, I include here a couple of pictures to pique your interest - modelling reference!

Until next time, enjoy your modelling.

Chris

www.ipmsuk.co.uk

Membership enquiries: Abigail Brewin, 144 High Road, Weston, Spalding, Lincolnshire, PE12 6RA or email: membership@ipmsuk.co.uk

Reader's Letter

Knight Reply

I write in reply to the most interesting letter posted by Knight in the February 2016 edition. My qualifications and background are not aeronautical, but I have a background in electronic warfare by virtue of service in the British regular army, although now dated as it was from 1964 to 1971 as a regular soldier, and 1972 to 1984 as a reservist. I must also stress that this is not intended as criticism of any person, as anyone who has the courage to defend their country in time of war, especially as a pilot, is deserving of the greatest respect. Due to my ongoing interest in electronic warfare I did some digging, in various files I hold, about the letter and found the following:

The aerial attacks carried out by NATO on the night in question did not have the same amount of airborne ECM (Electronic Counter Measures) anti-aircraft defence suppression cover that was employed on the Iraqi missions. Search radar and anti-aircraft artillery were left largely intact, as were the mobile SAM batteries, one of which was to bring down the F-117 (Pilot Lt. Col. Dale Zelko, now retired) in question. (Source: Lt. Col. Dale Zelko)

On the mission concerned, due to weather the use of EA-6 Prowlers for ECM cover was

cancelled, as was the detachment of F-16 fighters, which were tasked with providing air cover for the F-117s. (Source: Lt. Col. Dale Zelko in recorded interview with media)

The officer in command of the SAM battery that brought down the F-117 is Colonel Zoltan Dani, now retired. This officer is credited with developing the device that enabled the SAM to bring down the F-117. In recorded interviews he refers only to it as The Innovation. There are several possibilities for bringing down an aircraft of this type. Most are familiar with the blanket cover given similar to that radiated by mobile phone networks. This is similar to an invisible man walking through rain, when the shape only will be visible. Could a device be adapted to use the radiated waves of iPhone networks for this? Vortices generated by wings and/or fuselage can possibly be detected much as weather disturbance is detected by Doppler radar.

The aircraft in the raid took off from Italy. Observers near the base could advise Serbian Air Defence of take-off and likely heading. This would not account for the shoot down but is an excellent Heads-Up! The design of the F-117 seems to direct radar reflected signals away from the receiver. Could remote receivers be employed to gather all such reflected signals?

(Sources: Recorded interviews with Lt. Col. Zelko and the programme made in Serbia called Golden Zoltan by Zelko Mirkovic)

Very Best Regards

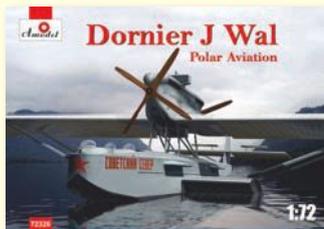
Gary



NEW KITS ROUND UP

Mach 2's Dassault Falcons seem to be dominating the list this month but there are plenty of other new issues around. One kit to look out for, if it hasn't sold out by the time you reach this, is the Simple Set sprues only version of the Special Hobby Mirage F1. Bargain price for a very highly rated kit. Hopefully the Czechs will release more in this vein...

In 1/48 take a look at the Lansan and AMX releases from HobbyBoss, while Fly take honours in 1/32 with a new Hurricane IIC.



AModel #48007 1/48 Yakovlev Yak-18T

AModel #72326 1/72 Dornier Do.J Wal polar aviation flying boat

AModel #72336 1/72 Dornier Do.J Wal flying boat Russia
Hannants/Stevens International



Academy #12313 1/48 Grumman F8F-1/2 Bearcat USS Tarawa

Academy #12529 1/72 McDonnell F-4J Phantom US Navy VF-84 Jolly Rogers

Academy #12531 1/72 McDonnell F-15C California ANG 144 Fighter Group

Academy #12532 1/72 Grumman F-14A USN VF-2 Bounty Hunters

Academy #12541 1/72 Lockheed-Martin F-16C USAF multi role fighter MCP
Pocketbond/MRC

Airfix #05129 1/48 Hawker Hurricane Mk I tropical
Hannants/Stevens International



Avis #72021 1/72 de Havilland DH.60C-II Finland & Canada
Hannants/Stevens International

Big Planes Kits #7209 1/72 CanadAir Challenger
Hannants



Bronco Models #7003 1/72 Blohm & Voss Bv P 178 with LTF5b torpedo
Hannants/Dragon USA



Eduard kits #1199 1/48 Mikoyan MiG-21MF in Czech and Czechoslovak service

Eduard kits #7066 1/72 Lavochkin La-7

Eduard kits #8191 1/48 Avia B-534/III serie

Eduard kits #8422 1/48 Nieuport Ni-11

Creative Models/Hannants/Sprue Brothers/Squadron

Fly #32014 1/32 Hawker Sea Hurricane Mk IIC
Hannants/UMM-USA



Hasegawa #02159 1/72 Bell-Boeing MV-22B Osprey US Marine VIP

Hasegawa #02180 1/72 Junkers Ju 188F long range reconnaissance

Hasegawa #02181 1/72 CF-18A Hornet Battle of Britain 75th Anniversary

Hasegawa #02182 1/72 McDonnell F-4EJ Kai 302SQ Good Bye Okinawa

Hasegawa #02183 1/72 Grumman EA-6B Prowler US Navy Farewell

Hasegawa #02184 1/72 F/A-18F Super Hornet VFA-41 Black Aces 70th Anniversary

Hasegawa #02185 1/72 Ki46-II TYPE 100 Commandant reconnaissance plane

Hasegawa #02186 1/72 Mitsubishi F-2B & Kawasaki T-4 ADTW 60th Anniversary

Hasegawa #07414 1/48 Hughes AH-64E Apache Guardian

Hasegawa #07418 1/48 Nakajima Ki43-III 48 Flight Regiment

Hasegawa #07419 1/48 McDonnell F-4 Phantom II Old Fashion

Hasegawa #07420 1/48 Kawasaki Ki61-I Tei TYPE 3 Fighter Prisoner of War

Hasegawa #07421 1/48 Nakajima Saiun 121 Flying Group

Hasegawa #07422 1/48 General Dynamics F-16B Taiwanese Force Flying Tigers

Hasegawa #07423 1/48 A-4KU (AF-1) Skyhawk Brazilian Navy VF-1 15th Anniversary

Hasegawa #07424 1/48 RF-4E Sea Camouflage 501 Squadron Air Reconnaissance Group

Hasegawa #07425 1/48 Messerschmitt Bf 109F-2 Barbarossa

Hasegawa #07426 1/48 Vought AU-1 Corsair Korean War

Hasegawa #10815 1/144 YS-11 JASDF 403 Squadron Farewell (Two kits in the box)

Hasegawa #MU01 1/16 Sopwith Camel F.1

Amerang/Hobbico



HobbyBoss #81752 1/48 SAAB J-32B/E Lansan

HobbyBoss #80377 1/48 Messerschmitt Me 262A-2a/U2

HobbyBoss #81715 1/48 PLA J-11B

HobbyBoss #81735 1/48 BAe Hawk T Mk 100/102

HobbyBoss #81741 1/48 AMX ground attack

HobbyBoss #81750 1/48 Messerschmitt Bf 109G-2

Creative Models/Squadron



Isracast #72006 1/72 Beechcraft T-6A/B/C Texan II

Hannants/Sprue Brothers

Italeri #1381 1/72 Dassault Mirage 2000C

Italeri #1382 1/72 Northrop F-5F twin seater

Italeri #2757 1/48 Douglas AD-4W Skyraider

The Hobby Company/MRC



Kinetic #48055 1/48 F-16A/B Block 20 ROCAF 70th Anniversary Flying Tigers

Hannants/Stevens International
www.luckymodel.com



Lukgraph #3206 1/32 Focke-Wulf Fw 58 Stosser

Hannants



Mach #GP007 1/72 Dassault-Mystere Falcon 20 Aeronavale

Mach #GP068 1/72 Dassault-Mystere Falcon 20 Belgian Air Force

Mach #GP069 1/72 Dassault-Mystere Falcon 20 Air France

Mach #GP070 1/72 Dassault-Mystere HU-25 Falcon US Coast Guards

Mach #GP071 1/72 Dassault-Mystere Falcon 20 Spanish Air Force

Mach #GP072 1/72 Dassault-Mystere Falcon 20 US Cargo Amistar

Mach #GP073 1/72 Dassault-Mystere Falcon 20 Portuguese Air Force

Mach #GP074 1/72 Dassault-Mystere Falcon 20 Norwegian Air Force

Mach #GP075 1/72 Dassault-Mystere Falcon 20 Pan American Airways

Mach #GP076 1/72 Dassault-Mystere Falcon 20 Australian Air Force

Mach #GP077 1/72 Dassault-Mystere Falcon 20 French Air Force

Mach #GP078 1/72 Dassault-Mystere Falcon 20 Canadian Air Force

Hannants/Stevens International



Modelsvit #7207 1/72 Sukhoi Su-7
Modelsvit #7226 1/72 Yakovlev Yak-1000 Soviet supersonic demonstrator
Hannants/Stevens International

Planet Models #26772 1/72 Miles M.35 Libellula
Hannants/Squadron



Revell #03957 1/48 Stearman PT-17 Kaydet
Revell #03958 1/48 Messerschmitt Bf 109G-10
Revell #03961 1/32 Glider Duo Discus with fuselage mounted engine
Revell #03968 1/144 Airbus A320 Etihad Airways
www.revell.de



Scale Resin #7201 1/72 Blackburn Buccaneer S.Mk 1
Scale Resin #7202 1/72 Blackburn NA
Hannants

Special Hobby #48175 1/48 Heinkel He 178V-1
Special Hobby #72074 1/72 Avro Anson Mk I

Special Hobby #72183 1/72 Messerschmitt Me 163A with Scheuch-Schlepper

Special Hobby #72289 1/72 Dassault Mirage F.1CE/CH

Special Hobby #72334 1/72 Messerschmitt Me 163A

Special Hobby #SS005 1/72 Dassault Mirage F.1C Simple Set
Hannants/Squadron

Trumpeter #01651 1/72 Chengdu J-10B

Trumpeter #01673 1/72 Sukhoi Su-24M Fencer-D

Trumpeter #01675 1/72 Mikoyan MiG-29C Fulcrum (Izdelye 9.13)

Trumpeter #02873 1/48 Douglas

ERA-3B Skywarrior
Trumpeter #02897 1/48 Sukhoi Su-9U Maiden
Pocketbond/Stevens International



Welsh Models #CLS7209 1/72 Boeing 737-230 Lufthansa
Welsh Models #CLS7227 1/72 de Havilland DH 106 Comet 1 BOAC
Welsh Models #SL324R 1/144 Basler BT-67 Dakota US Fire Service
Welsh Models #SL344R 1/144 DHC Dash 8 100 Jazz Air Canada
Welsh Models #SL349R 1/144 Saab 340 Delta Connect
Welsh Models #SL351R 1/144 Saab 340 Northwest Airlink
Hannants

Zvezda #7021 1/144 Boeing 787-9
Zvezda #7280 1/72 Petlyakov Pe-8 ON Stalin's plane
The Hobby Company/Dragon USA

UK IMPORTERS

Pocketbond:
www.pocketbond.co.uk 01707 391509

The Hobby Company:
www.hobbyco.net

01908 605686

Hannants: 01502 517444

Creative Models:
www.creativemodels.co.uk
 01354 760022

Amerang: *www.amerang.co.uk*
 01482 887917

US IMPORTERS

Dragon USA:
www.dragonmodelsusa.com
 626-968-0322

Linden Hill Imports:
www.lindenhillimports.com 914-734-9616

MRC: *www.modelrectifier.com*
 732-225-2100

Rare-Plane Detective: *www.rare-planedetective.com*
 702-564-2851

Sprue Brothers:
www.spruebrothers.com
 816-759-8484

Squadron: *www.squadron.com*
 877-414-0434

Stevens International:
www.stevenshobby.com
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UMM-USA: *www.umm-usa.com*
 847-537-0867

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XTRADECAL

May 2016 Releases

Three new sheets are released from Xtradecal this month, all in 1/32. X32060 features two display schemes from the 2015 season for the Eurofighter Typhoon, both from No.29 Squadron. One celebrates the 100th anniversary of the squadron whilst the second features the World War II camouflage of James Brindley Nicolson's Hurricane commemorating the 75th anniversary of the Battle of Britain. X32062 and X32063 feature six different options for the Hurricane Mk IIc, aimed presumably at the Fly Models new release, and including

the temperate day, desert, SEAC and nightfighter colour schemes. All sheets are printed by Microscale industries and are exceptionally sharp and in perfect register, as is to be expected from Xtradecal.

X32060 1/32 Eurofighter Typhoon FGR.4 Special Schemes Pt.2

1. ZK349 GN-A 29(F) Sqn Battle of Britain 75th Anniversary
2. ZK353/BQ 29(F) Squadron 100th Anniversary Flt Lt Jonny Downen

X32062 1/32 Hawker Hurricane Mk IIc Pt.1

1. BE643, AK-U P/O A.U.Houle 213 Sqn, Edku, Egypt, April, 1942

2. BD929, ZY-S 247 (China-British) Sqn, RAF Exeter, 1942
3. Z3574 OK-2 personal aircraft of Air Vice Marshal Keith R. Park, AOC

X32063 1/32 Hawker Hurricane Mk IIc Pt.2

1. Serial unknown, FM-E Flight Commander Gerald 'Stapme' Stapleton DFC & Bar 257 (Burma) Sqn, RAF Honiley, March, 1942
2. BP5 88, RS-X Sqn Ldr S.C.Norris, Benina, Libya, November 1942
3. LD726/Y 113 Sqn F/O Graham Skellam, Burma 1944

Hannants/Squadron
www.hannants.com



EDUARD

The big news from Eduard this month is the arrival of the new STEEL seatbelts range. This extremely thin steel plate, even colorized, looks very realistic as the thickness of the belt is only 0.04 mm and the buckles are 0.1 mm. There is a new style of colour printing involved, which includes very detailed stencilling and stitching and a shadow effect is also applied while the colour surface is very resistant to manipulation and bending. Eduard's already essential colour belts just became even more indispensable. Besides this innovative range the usual wide coverage of new kits continues with the 1/32 Kittyhawk F-86K in particular marked out for treatment. Full sets, masks, and ZOOM frets cover a really eclectic mix from WWI in 1/72 to the F-104 in 1/32. Check out all the new releases at the website and keep up to date with all the news at www.eduard.com

1/32

- 32389** F-86K exterior for Kittyhawk kit
- 32865** Luftwaffe instruments
- 32866** WWI instruments

- 32867** Seatbelts Luftwaffe WWII fighters STEEL
- 32868** Seatbelts USAAF WWII STEEL
- 32869** F-104G electronic equipment for Italeri kit
- 32870** F-86K ejection seat for Kittyhawk kit
- 32871** F-86K interior for Kittyhawk kit
- 33158** F-86K interior ZOOM for Kittyhawk kit
- JX191** F-86K Masks for Kittyhawk kit

1/48

- 48888** F-15I exterior for Great Wall Hobby kit
- 48889** Yak-38 exterior for HobbyBoss kit
- 49095** Seatbelts Luftwaffe WWII fighters STEEL
- 49096** Seatbelts USAAF WWII STEEL
- 49771** E8N1 Dave for Hasegawa kit
- 49772** F-15I for Great Wall Hobby kit
- 49773** Yak-38 interior for HobbyBoss kit
- 49774** F-4J interior 1975 modification for Academy kit
- 49775** Su-11 for HobbyBoss kit
- FE772** F-15I interior ZOOM for Great Wall Hobby kit
- FE773** Yak-38 interior ZOOM for HobbyBoss kit
- FE774** F-4J interior 1975 modification

- ZOOM for Academy kit
- FE775 Su-11 interior ZOOM for HobbyBoss kit
- FE777** Nieuport Ni-11 ZOOM for Eduard Weekend kit
- EX514 E8N1** Dave Masks for Hasegawa kit
- EX515** Su-11 Masks for HobbyBoss kit
- EX516** F-15I for Great Wall Hobby kit
- EX517** Yak-38 for HobbyBoss kit
- EX518** Nieuport Ni-11 for Eduard kit

1/72

- 73034** Seatbelts Luftwaffe WWII fighters STEEL
 - 73035** Seatbelts USAAF WWII STEEL
 - 73555** MiG-29 Izdelye 9-13 for Zvezda kit
 - SS555** MiG-29 Izdelye 9-13 interior ZOOM for Zvezda kit
 - CX445** Fokker E.II Eindecker Masks for Airfix kit
 - CX446** RAF BE.2c Nightfighter Masks for Airfix kit
 - CX447** MiG-29 Izdelye 9-13 Masks for Zvezda kit
 - CX448** Blenheim Mk IF Masks for Hasegawa kit
- Creative Models/Hannants/Sprue Brothers/Squadron



SCALE AIRCRAFT CONVERSIONS

Once again Scale Aircraft Conversions are quick off the blocks in providing white metal replacement landing gear sets for some of the latest kits to appear on our shelves. The Shackleton set should prove most timely for those building their Airfix examples and wanting a little more sturdiness to the undercarriage on this large aircraft:

May 2016 releases

48305 1/48 AMX, AMX-T Landing Gear

(Kinetic)

48306 1/48 SAAB J-32 Lansen Landing Gear (Hobby Boss)

72125 1/72 Su-24 Fencer Landing Gear (Trumpeter)

72126 1/72 BAe Hawk T.1 Landing Gear (Airfix)

72127 1/72 Avro Shackleton Landing Gear (Airfix)

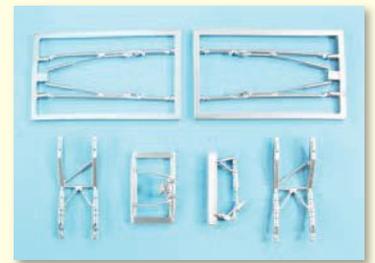
NOTE: If you have purchased either of the following SAC sets prior to 25th March 2016 they have faulty parts included:

48282 1/48 Spitfire Mk I/Vb (Airfix) has incorrect main gear

48297 1/48 MiG-31 Foxhound (AMK) has a mis-cast nose gear

Scale Aircraft Conversions have advised that you should contact them directly for free replacement of the faulty sets at www.scaleaircraftconversions.com or 9873 CR 2469 Royse City, Texas 75189

Look out for all of the new releases, plus the remaining SAC catalogue of sets, at both www.hannants.co.uk and www.oxonionplasticfantastic.co.uk



AVIATTIC

Aviatic 1/32 'Gotterdammerung' (Attres 024)

The title of this new figure set from Aviatic has been well chosen as the scene is almost operatic in its appearance and feel. You have a German Pilot in late war style flying gear preparing to board his aircraft via a wooden step ladder. The Pilot is looking up to the sky and you can almost imagine him breaking into an aria. Standing beside him, looking on, is his mechanic grasping a leather bag, ready to pass it to the pilot once he has boarded. That is at least how I imagine the scene to play out. The figures are nicely moulded resin pieces that have been sculpted by Doug Craner. Doug's style of sculpting suits

this kind of set very well as the faces of the figures are very expressive. Aviatic have got a real knack for producing creative pieces that are historically accurate and this set is as fine an example of this as you will find anywhere.

Aviatic 1/32 Anthony Fokker (ATTL 02)

The figures market is very vibrant at the moment, which has resulted in some very eye catching and original subjects. This latest piece from Aviatic is particularly pleasing and depicts the famous Dutch engineer Anthony Fokker looking up into the skies, holding a large scale model of the Fokker D.VII. The figure, sculpted by Doug Craner, is provided in four resin parts that all fit together well. As with Doug's previous historical personality figures the

likeness is very good and you can tell just by appearance alone who the figure is intended to depict. The D.VII model is 3D printed and very neat. It took me a few attempts to decide how Anthony was going to hold the aircraft as I think there is more than one way, but I chose for him to grasp the lower port wing. It's always the mark of a good figure if a bad painter like me can make a reasonable job of it but this really is a stunning addition to Aviatic's growing range of 1/32 WWI figures and I would recommend it to all.

Aviatic 1/32 Lt. Josef Jacobs (ATTL03)

Josef Jacobs is the latest figure in Aviatic's 'Legends' series, which aims to provide models of Famous aviators and figures from the WWI period. Initially the figure

MARKETPLACE

was to be teamed with a set of decals and resin upgrades for the Fokker Dr.1 but for various reasons this did not happen. The figure itself captures Jacobs' likeness extremely well and is based on a well-known photograph of him posing in front of his Dr.1 in the company of an Irish wolfhound. There are four main parts to Jacobs with the addition of alternative right hands, one holding folded headgear and the other empty. The sixth piece depicts Jacobs' canine buddy. There is also a small photo etch sheet containing parts that can be used to make up a small *Pour le Merit* and a choice of goggle frames. All the parts fitted together well but I regret not having had time to give it the once over

with a paint brush. If you have the Roden Dr.1 and intend to build it in to Jacobs' aircraft this figure is a must.

Aviattic Lozenge Decal Sheets: German Naval Hex and Irregular Painted Night Lozenge (ATT72027, ATT48036, ATT32056)

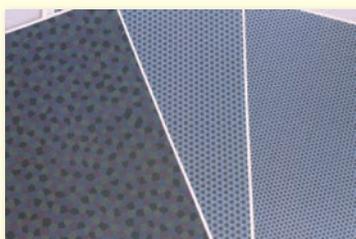
Aviattic continue to add to their huge range of lozenge decal sheets with these latest offering. First up are a pair of Naval hex sheets in 1/72 and 1/48 perfect for those seaplanes. The sheets are down-scaled versions of the previously released 1/32 set that I recently used on my Hansa Brandenburg W.29 to stunning effect. My review samples were provided on white backing sheet but I assume that the sheets

are also available on clear backs.

Also new from Aviattic is a 1/32 sheet of irregular painted night lozenge suitable for any aircraft with this pattern. In addition the size of the irregular patterns are not far off the size of hand painted shapes on the 1/72 Roden Staaken so could potentially be used as a replacement for the Roden kit decals if you are not too fussy. As with all Aviattic sheets the colour and quality of the sheets is absolutely first class and I have always found them very tough and easy to use. Highly recommended

www.aviattic.co.uk

Dave Hooper



EDUARD BRASSIN

This month's selection of Brassin items from Eduard continues adding to their impressive selection of resin missiles and bombs, with a particularly nice 1/48 Kormoran and some Mk 84s in 1/32. Elsewhere the new Bf 109G-6 gets a cracking set of fuselage guns and an engine so you can really go to town.

1/32

632075 Mk 84 bombs

632077 Mosquito FB.Mk VI nose guns for Tamiya kit

1/48

648242 MG 14 Parabellum WWI gun

648249 AS.34 Kormoran 1

648250 Bf 109G-6 engine & fuselage guns for Eduard kit

648252 Sniper ATP

648256 Bf 108 wooden propeller for Eduard kit

1/72

672104 R-3S / AA-2 Atoll-A

672105 RS-2US / AA-1 Alkali

Creative Models/Hannants/Sprue Brothers/Squadron
www.eduard.com



REVELL



Stearman PT-17 Kaydet

Scale: 1/48

Kit No: 03957

Manufacturer: Revell GmbH

Type: Injection Moulded Plastic

This is a reissue of Revell's recent Stearman Kaydet kit, which arrives in the new style end opening box with excellent full colour instructions, including a useful rigging

guide. The Kit itself is moulded in yellow plastic to provide that 'pre-painted' look for more family friendly fun, which also hides much of the fine surface detail. The kit's fifty eight parts are loaded with detail, including a full interior, however there is plenty of scope for upgrading should you wish to go down the superdetail route. The parts are precisely moulded and flash free as you would expect from a newer Revell release.

The decals provide options for two aircraft, the first being a US Navy coloured Warbird based in Germany during 2015, the second

a US Army Air Corps machine during 1941. There are also a number of aftermarket decal options available covering the Kaydet's use by numerous air forces and services should these not be to your taste. It's worth remembering that many of these also found service with flying clubs and private owners after their military lives were over, so there are many routes you could follow making this a model that can easily slot into many different collections.

Colin 'Flying' Pickett

www.revell.de

COPPER STATE MODELS

Sopwith 5F.1 Dolphin

Copper State Models as a company have been around for a very long time, making a name for themselves as a producer of very high quality resin kits of WWI subjects. I certainly remember drooling over magazine build articles long before I took up the call as a reviewer. Much more recently CSM have changed hands and I believe that the Dolphin is the first full aircraft kit from the new owners of Copper State Models. The kit is in CSM's traditional scale of 1/48 but unlike its predecessors the Dolphin is primarily an injection moulded plastic kit. There are two versions available - Standard and Premium versions of which I have been sent a sample of the latter. The kit comprises two large sprues of plastic parts, a pretty decent sized sheet of photo etched parts, and a rather nice decal sheet. In addition the premium version contains a resin Hispano Suiza engine, cast metal exhausts and additional decal options. The quality of the plastic parts is very

impressive. The moulding is sharp, crisp and free of blemishes. The detail on the parts is stunning and I particularly liked the subtle nature of the wing's tooling. Also particularly noteworthy is the stitching detail along the fuselage. The photo etch sheet is packed with small parts including a nice looking wicker seat and seatbelts.

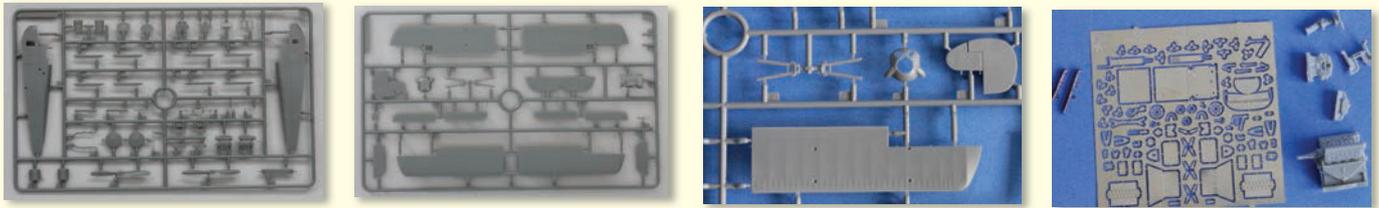
The premium version of the kit includes four decal options, all of which are RAF machines from the mid to late 1918 period of the war. The instruction booklet is about as close as you can get to a copy of a Wingnut Wings booklet without actually having the WNW logo on the cover. The only real difference inside is the lack of historical detail at which the WNW manuals excel. Finally the premium edition resin Hispano Suiza engine is a real gem although I'd almost be tempted to display the engine as a separate entity.

Accuracy wise there are a few issues, the most apparent of which is the shape of the cowling, which should curve into the nose but on this model follows the line of the

cockpit and as such was very noticeable on opening the box and viewing the sprues. Further comparisons to drawings and photographs in the Cross and Cockade monograph and the *Windsock Datafile* suggest that the main problem lies around the cockpit area which should curve outwards from the cockpit opening but on this kit drops straight and vertical in line with the cabane struts making the model narrower at this point than it should be and forcing the cowling to follow a straight line. There are other accuracy questions over the position of the interplane struts and the size of the horizontal tailplane however these are relatively minor.

In conclusion and the above accuracy issues aside this looks to be an excellent quality kit to a level that comes close to some of the best modern manufacturers and I look forward to seeing future releases from this company, which include an Armstrong-Whitworth FK8 and a Caudron G.4.

www.copperstatemodels.com

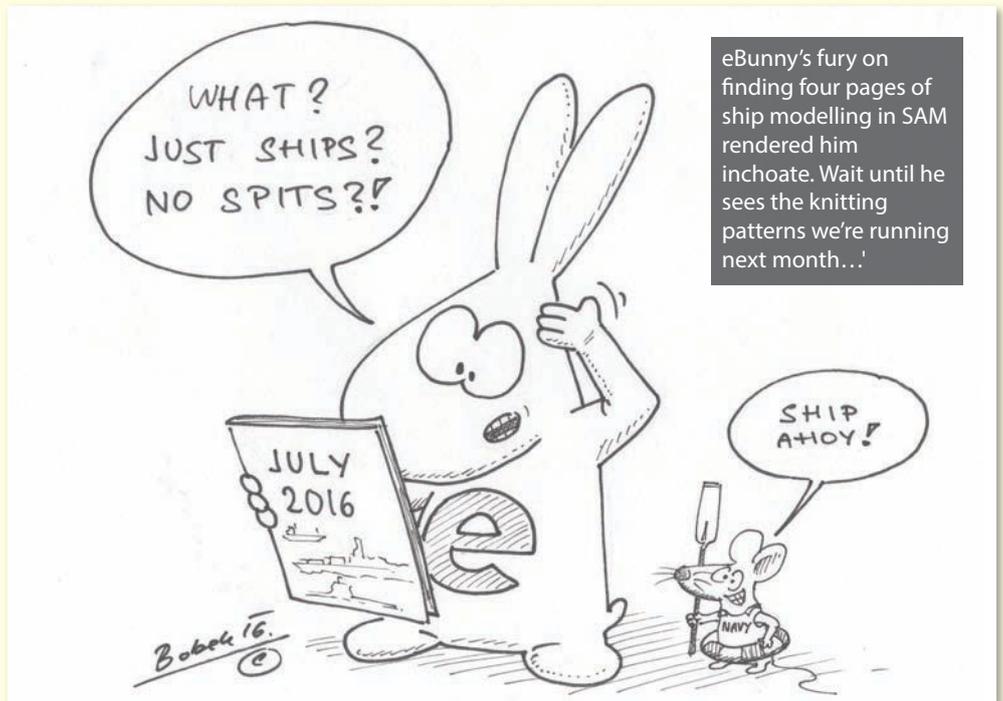


EDUARD

Bunny Fighter Club

The next limited edition kit from Eduard is a really comprehensive release packed full of extras in Eduard's signature format. This will be a special boxing depicting the MiG-21MF in Czech and Czechoslovak service in 1/48. Only 1500 pieces will be available and the kit will include a full-colour book about the type in Czechoslovak, Czech and Slovak Air Forces. Text is in Czech but a link is available for an English translation.

The kit includes the usual etch, Brassin resin parts, masks, and an incredible thirty nine options on the decal sheet. Definitely not one to be missed and exceptional value - especially if you join the Bunny Fighter Club. This will get you a 15% permanent club discount at Eduard's Store, unique valuable club kits and accessories, even better prices at the Eduard event stand and a BFC t-shirt with a unique design and special barcode, used for event discounts. This exclusive t-shirt will only be available to members of BFC. You also get free entry fee on E-day so check out the website for full details. www.eduard.com/bfc



eBunny's fury on finding four pages of ship modelling in SAM rendered him inchoate. Wait until he sees the knitting patterns we're running next month...!



Botswana Fighter

By Trevor Pask

**Kit No:** 48001**Scale:** 1/48**Type:** Injection Moulded Plastic**Manufacturer:** Tiger Models**After Market:** Quickboost #48484 F-5E Seat with Belts

Aztec Decals #4850 Freedom Fighters II

The Northrop F-5 lightweight fighter is a true aviation classic. Originally designed in the late 1950s, the concept behind the aircraft was to push back at the tendency for jet fighters to evolve inevitably into heavier, more complex machines. The same idea in Britain led to the Folland Gnat, but in creating the F-5, Northrop did not pare the design completely to the bone and as a result created a more capable and useful aircraft.

Development was formally started in the mid-1950s and the aircraft was originally called the N-156, a designation aimed at the US Navy who needed a lightweight jet to operate from smaller escort carriers left over from WW2, a requirement that disappeared when many of the old carriers were converted to carry out an anti-submarine role and the A4 Skyhawk became available. Northrop pressed on however and the design was selected by the USAF as an advanced two seat trainer, the T-38 Talon.

In 1962 the idea of developing a low cost fighter for the export market was taken up by the US government and a single seater derivative of the T-38, the F-5, went into production. Over the next ten years over 1000 aircraft were built and the design was subsequently developed into the F-5E Tiger, which led to another 1400 aircraft being produced up until 1987.

The majority of the better kits available of this classic design represent the later F-5E variant while in terms of the F-5A, the best kit available in 1/72 is from Italeri, which is actually an ESCI kit dating from the mid-1980s when the type was in widespread service in Europe. In 1/48 the field was limited to a number of kits dating back to the 1960s but Kinetic released a much better kit in 2013, which is probably the definitive tooling in this scale. However, like waiting for a 65 bus, when a good kit of the F-5A arrived after a long wait, another appeared just behind. This kit was marketed by Tiger Hobbies and was a something of an oddity as it was sold online in simple cardboard packaging for a very modest price.

The history of this kit is that it was a project originally started by Tan Models in Turkey but



cancelled following the appearance of the Kinetic kit. The project was subsequently taken over by Tiger and completed to a basic standard where it could be marketed. The net result is a kit that is dimensionally accurate, but a little rough around the edges. The packaging and instructions are also very basic but having said that, there is an awful lot of plastic in the box for the money, the detail sheet that comes with the kit is of aftermarket quality, and there is definitely a good project waiting to be built from the box.

Unlike the recent Kinetic kit, a modular approach was not adopted in the design and as a consequence the parts build up quickly rather like a simple 1/72 kit. The fit is good but some filler is required along the major joint lines. Cleaning this up is not helped by the soft plastic used in this model, which is rather like that used in a limited run kit. The main issues are around the nose and rear fuselage, but more or less every joint needs a little attention.

The cockpit area is akin to a scaled up 1/72 kit. The floor, sidewalls and instrument panel are acceptable, but the seat is poorly formed and is best replaced by an aftermarket resin alternative. This component needed a little trimming to fit, but offered a considerably higher level of detail than the item provided in the kit.

The chunkiness of the kit is also apparent in the undercarriage. This is solid and sturdy – like the real thing – but some of the details are rather soft and mould lines are present in rather unhelpful areas. The undercarriage doors are also thick and require careful sanding on the outside surface to improve their appearance. One of the trickier aspects of the build was the canopy which is a poor fit. To remedy this, the front portion was attached to the model at an early stage of the build and fared into the fuselage with filler and some very careful sanding. The main portion was polished with a nail buffer and trimmed very cautiously along the edges to achieve an acceptable fit.

The decal sheet provided with the kit is excellent, markings being provided for aircraft from Turkey, the Philippines and Norway. An aftermarket sheet from Aztec has options for some of the more esoteric operators including an ex Canadian Armed Forces machine operated by Botswana. Canada was a major operator of the F-5A and license built the type as the CF-5A and NF-5A for themselves and Holland. These aircraft remained in service in both countries

from the early 1970s through to the mid-1990s when the majority were sold on to other operators. A lot of aircraft went to Greece and Turkey, but some Canadian aircraft went to Venezuela and Botswana. Being a relatively simple and rugged aircraft, the F-5A is ideally suited to a small African air force and the type remains in service although a replacement is now being sought. What is interesting about the Botswanan aircraft is that they have retained their Canadian camouflage, which tended to be imitation Soviet schemes for aggressor training. These schemes were often worn in the high Arctic and have faded and been patched up in Africa.

A variety of Humbrol aerosol enamels were used to paint the model and Blue Tac was used to mask the divisions between the colors and to achieve a soft demarcation line. Once these layers of paint were thoroughly dry, the model was lightly buffed with a nail polisher and then some patches of the primary base colors were lightened and applied by hand randomly across the airframe to replicate the faded and patched appearance some of the Botswanan aircraft.

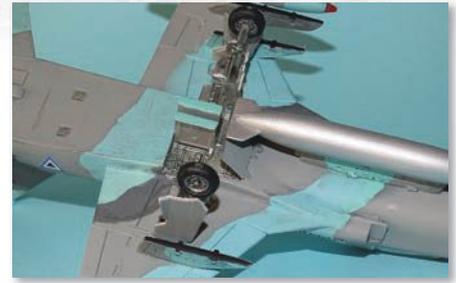
A mixture of Aztec and the kit decals were used – the latter mainly utilised for some of the key larger stencils not provided on the Aztec sheet. Both responded well and appeared to be of similar quality. The images were very thin and extreme care was needed with some of the stencils in particular, but as with all projects of this kind, the end result is worth the effort. A coat of super matt artists varnish was applied to seal everything in. This type of paint has a tendency to 'silver' so is not often used by aircraft modelers. The effect was not too dramatic with this model, but a little of this tendency was ideal as it gave a slightly dusty appearance that was well in keeping with the subject matter.

Unlike the Kinetic model, which has numerous stores options, the Tiger Hobbies kit is quite limited in this area, providing just the external fuel tanks typically seen on F-5As. These include the 'Coke Bottle' wing tip tanks that many F-5s carried semi-permanently, but in later years of service especially aircraft were as often seen with Sidewinder launch rails on the wing tips, and this option would have been welcome. This model was completed with just the center line and tip tanks. The two halves of the center line tank did not fit at all well and required some filler. The wing tip tanks however were easier to construct and come complete with a

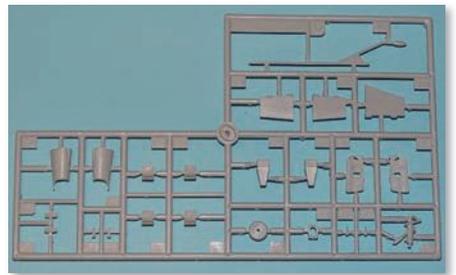
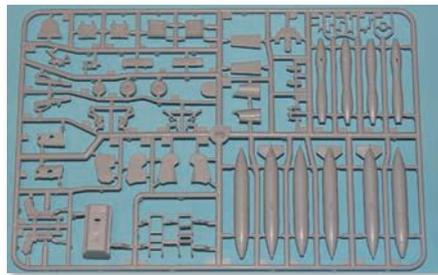
representation of the landing lights that are fairly prominent features.

The canopy was a little scratched but responded well to a smooth nail polisher and a coat of Johnson's Klear. Provision is made to model it open or closed, but the open option would require serious modification of the Aires seat so deciding at this stage of the project that less was probably more the closed option was chosen, and the model was completed.

While the Kinetic kit is a more refined product, the Tiger Hobbies kit builds quickly into a finished model is visually impressive and looks every bit a F-5A. Good aircraft last for decades, but Botswana is now looking for a replacement. Top of the wish list is the Saab Gripen, but more likely are F-16s or F-5Es with one careful owner, which may also be inherited with a finish designed for colder climes that will also weather nicely for modelers in the years to come.



One of the two seaters in Botswana service – this aircraft still wears a very faded version of the desert camouflage aggressor scheme worn in Canada



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PBY-5 Catalina 'Jumpie' Lt William Price VP-72 Funfuti July 1944.

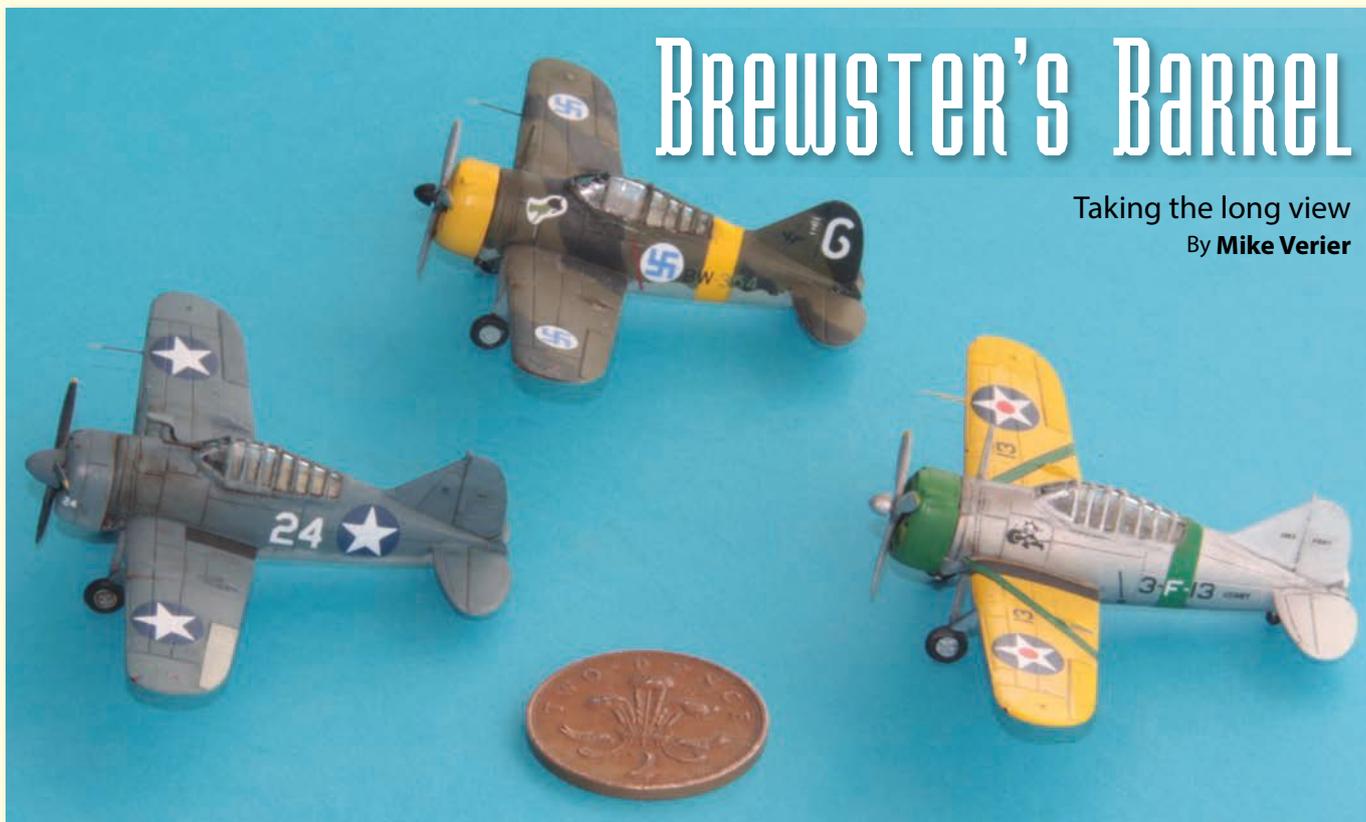


OA-10A Catalina 'Miss Pick Up' 5th Emergency Rescue Sqn, Halesworth Suffolk April 1945.



BREWSTER'S BARREL

Taking the long view
By Mike Verier



Brewster F2A-1 / 2 Buffalo

Kit No: 14444/14445/14446

Scale: 1/144

Type: Injection Moulded Plastic

Manufacturer: Mark 1 Models
Hannants/UMM-USA

Brewster's pugnacious F2A Buffalo was the US Navy's first monoplane fighter. An aircraft already obsolescent at the outbreak of WWII it was soon relegated to training duties. Consequently, apart from a brief moment of heroic combat at Midway, it saw little active service with the Americans. Normally the F2A would therefore be no more than a brief footnote in history. However such was the need for fighter aircraft of any sort by other nations until more modern equipment became available, that it went on to serve with some distinction in conditions ranging from arctic to tropical. The Buffalo thus played a fascinating, if small, part in naval fighter development and, operating land-based, proved formidable in the hands of others, notably Finland. From the modeller's point of view it also carried a remarkable range of markings during its brief career.

Mark 1's latest releases are no less than three boxings, each with two complete models in the box. Each offers four possible

colour schemes for F2A-1 and -2 (B-239/339) variants, covering a variety of American, Finnish, Belgian, Dutch, British and even Japanese machines. This is facilitated by alternative cowlings, propellers, tail wheels and tail-cones. The 10" longer F2A-3 variant would require some fettling albeit it boils down to a fillet to move the cowling and engine forward by the requisite amount.

Each model comes as two sprues of grey plastic and a clear one for the canopy and belly glazing. Very acceptable decals and concise instructions with the marking options in full colour (and in 1/144 scale) complete the package.

Sensibly a one piece wing ensures both accurate alignment and thin trailing edges. This piece includes the fuselage belly section into which the aircraft's distinctive lower glazing needs to be fitted. I found it best to do this before any further assembly as it needs a little fettling to get a snug fit. Some aircraft had this feature either painted over or fitted with metal panels. The profiles don't really make this clear either way and you will need to check your references for individual aircraft. As a rough general guide only the American and Dutch machines retained the clear belly glazing. This is quite relevant as masking the dense lattice of frames involved was something of a challenge. Before anything else I took the opportunity to drill the leading edge for the guns and pitot. With

the drill in hand I also marked the nav lights that appear inboard above each wing-tip as well as at the leading edge.

The fuselage is two halves into which fit a seat and instrument panel. There is moulded sidewall detail too. Once assembled and set a little gentle fettling is required to ensure that the wing and centre section fit snugly. The fuselage is completed by adding a long or short tailcone and the engine. This latter is quite well replicated although a little more detail does not go amiss, especially if you select a variant without the large spinner. Two alternative cowls are provided and being separate pieces makes for easier painting. Presumably not to compromise the 'common' fuselage mouldings no exhausts are given. They are only stubs but they are at different positions depending on the variant – and they still show - so I added some from tube anyway. I find aluminium best as it is easily worked and the ends can be polished to a scale cross-section and a very fine finish.

There may not have been many Buffalo variants but they had myriad subtle distinctions and you need to check references with some care to confirm the exact configuration of any aircraft modelled. The canopy is provided as one piece and again you need to check your references as some aircraft had the centre (sliding) section formed from glued perspex rather than metal framed construction.

Having built three of these my recommendation is to complete the fuselage, check the fit of the wings and canopy, fettling as required, then add the internal detail and fix the canopy before fixing the wings. This allows gentle blending of the canopy frames and fuselage.

There is a piece that represents the wheel well and cockpit floor to be fixed to the wing before attaching to the fuselage. The instructions suggest adding the undercarriage legs at this point but I felt they would be at risk and they can easily be insinuated in later. Once you get to this stage the exhausts can be drilled and all seams checked as required. The tail planes only butt-join to the fuselage. I left these and the cowling unfixed to ease painting.

For this build I selected three variations, a classic 'yellow wing' USN aircraft, a Finnish machine and a weathered blue over gray USN training airframe – the idea being to illustrate a widely different selection of schemes and configurations. Ostensibly the simplest scheme is the two colour training machine. Variety is provided by a replacement aileron in Neutrality Grey, and a good deal of weathering and shade variation. Other pictures of this unit's aircraft have been variously interpreted to show yellow wing-tips, rudders and cowling fronts. In one case, erroneously in my view, the whole cowling has been assumed to be red. As ever this is a subject fraught with pitfalls and in the absence of actual colour photos I can only suggest study and calculated assumption.

Mark 1 depict this aircraft with a spinner (possibly discarded after the accident in the photo), which I chose to stay with. The photo also reveals that in common with many aircraft of this unit White 24 carried a gun camera on a rather lash-up fuselage bracket fitted on the starboard side forward of the cockpit. I have attempted to replicate this. Finally this particular aircraft had the 'telescope' type sight, which I added after drilling the windscreen.

Unlike the immaculate Yellow Wing aircraft these old machines worked hard and were much knocked about by successive students. As a consequence the engine's ability to shed oil and fumes is very obvious aft of the cowling where the finish is notably darker and patchy – a challenge that I may or may not have risen too – but an instance where weathering is appropriate. As a last touch I used a post-it note to provide a soft mask level with the two lower points of the white star and just dusted some grey over the port insignia to replicate the overspray visible in the photo.

The yellow and silver scheme needed a little more planning. I painted the yellow topsides before attaching the wings as it's easier to mask them and paint everything else silver. In all cases I left the cowlings and tail planes off and painted them separately - less masking that way as well as clean colour separation. Don't forget (ask me how I know) either to chamfer or paint black (or both) the rear edge of the cowling where it meets the fuselage.

The Finnish scheme was perhaps the most complex requiring yellow wing tips and fuselage stripe. This latter comes with the decals and whilst I initially masked and painted it the decal proved to have ample colour density. I undercoated the 'busy' parts of the airframe with Alclad Airframe Aluminium first so that I could simulate some chipping later. A slightly high-risk strategy but it worked OK. The decals supplied incidentally performed flawlessly in every case. Cleanly printed and in register they are strong enough to allow positioning and responded perfectly to Micro Sol and Set.

After attaching the tail planes, propellers and other small items such as the pitot a little touching up and a dust of appropriate varnish to bring it all together just about wrapped it up. The only remaining job was to check the canopies for any overspray, and replicate the wing tip nav lights using pin-points of neat silver topped with red or green coloured clear varnish..

In conclusion a very satisfying build. The subject is well-chosen and the marking options should be enough to satisfy all tastes. The models are remarkably well detailed for limited run productions and can be heartily recommended. They can be built out of the box very quickly but are better savoured and detailed to taste. Either way you will not be disappointed and Mark 1 are to be congratulated on another excellent addition to the 1/144 lexicon – keep 'em coming chaps!

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Book Reviews

A look at some of the latest publications received for review Edited by **Ernie Lee**

Grim Reapers – French escadrille 94 in World War I

Author: **Colin Owers**
 Publisher: **Aeronaut**
 ISBN: **978 19358 814 07**
 Format: **Softback, 94pp**



Aeronaut have taken time out from their series of German Aircraft reference books to publish this interesting combat history of one of

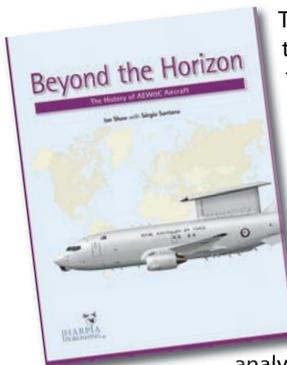
France's foremost fighter *escadrilles* of the Great War. The title 'Grim Reapers' refers to the famous squadron emblem and there are many photographic and painted examples of aircraft sporting this within the pages. The book takes the reader from the *escadrille's* formation as a Nieuport 24 squadron in May 1917 through to the end of the war and is reminiscent in many ways of the Osprey Aviation Elite series of books. Jon Guttman has produced a well-balanced and well researched chronological history that concentrates mainly on the squadron's combat history. As one has come to expect from an Aeronaut publication the book is lavishly illustrated with black and white period photos and a large number of colour profiles by Bob Pearson. To wind up the book there are appendixes that list all known members of Spa.94 and a combat log. I found the book to be a very enjoyable read and the photographs as ever very inspirational.

www.aeronautbooks.com

Dave Hooper

Beyond the Horizon

Author: **Ian Shaw with Sergio Santana**
 Publisher: **Harpia**
 ISBN: **978 09854 554 39**
 Format: **Hardback, 236pp**



This is one of the first books to present the development of Airborne Early Warning in any significant depth and offers a much deeper analysis than has

been seen before. There are very few books out there that examine this subject and

those that exist mainly concentrate on the technical aspects and do not cover the human or historical elements at all. The early operational story of AEW&C Operations hasn't really been told from the crew's perspective, with an emphasis on narratives from the actual aircrew members who took part in the AEW missions, and the primary reason behind this book was to tell the true story and to ensure that the men and women from all nations who spend, or have spent hundreds of hours staring at PPI's get the full recognition that they deserve for their dedication to duty and efforts to complete their mission. The book includes input from crews who flew PB-1Ws in Korea and the EC-121 Warning Star right up to the modern day E-3AWACS and E-2 Hawkeye. There are chapters per type from around the world from European manufacturers like the SAAB-340/2000 versions, the Russian made aerial AEW platform types and the more recent Brazilian Embraer-145AEW.

The project author is Ian Shaw a retired Warrant Officer in the RAF with a passion for AEW aircraft. He served five years at RAF Waddington working on two tours of duty with the E-3D AWACS fleet based there. The co-author is Sergio Santana (who lives in Brazil) and had already written and published a book on the Brazilian made Embraer-145AEW and its versions.

www.harpia-publishing.com

SBD Dauntless in Detail & Scale

Author: **Bert Kinzey, artwork by Rock Roszack**
 Publisher: **Detail & Scale**
 ISBN: **978 19358 814 07**
 Format: **Available in both Apple iBook (iPad/Mac) and Amazon Kindle formats**



The digital Detail & Scale Series continues with the newest title, SBD Dauntless in Detail & Scale, covering the development, history, and details of one of the few US combat aircraft to serve throughout World War II, from the attack on Pearl Harbor until VJ Day.

This title begins with a look at the developmental history of the Dauntless, from its beginning as a Northrop

design taken over by the Douglas Aircraft Company through its full operational life, including the pivotal role the Dauntless played in the defeat of the Japanese carrier force at the decisive Battle of Midway. Each variant of the Dauntless is covered in its own section, including the six main variants of the SBD and the A-24 Banshee version used by the United States Army Air Forces. The aircraft details chapter, long the hallmark of the Detail & Scale Series, covers the cockpit, canopy, fuselage, wings, landing gear, tail, engine, and offensive and defensive armament, and contains more than 140 photos, mostly in colour, that illustrate every aspect of this important aircraft. Another chapter covers the evolution of the colours and markings used by the Dauntless family, from the colourful pre-war 'yellow wings' era through the tri-colour scheme worn by the aircraft until the end of the war. Finally, as with all books in the series, a detailed look at all of the scale model kits that have been released of the Dauntless is presented.

The publication features 180 pages, over 220 photos (more than 170 in colour), colour detail drawings, and seventeen full colour aircraft profiles that accurately depict the Dauntless in a variety of schemes throughout World War II.

www.detailandscale.com

Sopwith Pup - Warpaint number 105

Author: **Matthew Willis**
 Publisher: **Warpaint Books Ltd**
 Format: **Softback, 36pp**



Warpaint have made a rare foray into a World War One subject, which is no bad thing, as the number of modellers devoting their time to this area of aviation now forms a significant part of the modelling scene.

This volume follows the usual format that we are used to with a description of the aircraft's development followed by its service history telling how it was replaced as a combat machine on the Western front to play its part in a defensive role in the UK and then as a trainer. In the latter capacity it is possible to make some very attractive models.

The book has plenty of good photographs and some particularly useful ones can be found in the three page 'In Detail' section. The photographs are of the example in the

Shuttleworth collection. Cockpit and rigging detail is invaluable. However don't forget the scale drawings. In this profile they are in 1/48 and cover a number of variants, including a machine fitted with skids for ship board landings.

When it comes to training aircraft the pilots sometimes got carried away. For example, one set of artworks depicts a four-view of a machine of 54 Squadron. This aircraft has a blue fuselage with five white stripes and PC 10 wing upper surfaces. The under surface of the upper wings are blue with white bands and the lower wing under-surfaces are clear dope with red stripes, as is the under-surface of the horizontal stabilisers. There are a number of other embellishments, but I will leave it to you to check them out. The twenty-eight colour profiles are plain in comparison, however if you want a completely different scheme then a Greek or Japanese machine might fit the bill. Manufacturers have produced kits of this aircraft in all the popular scales, so there is have no excuse not to have a go.

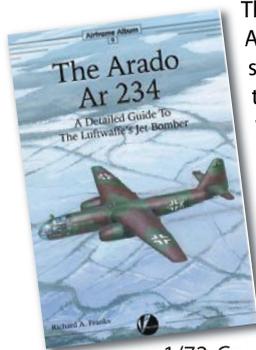
www.warpaint-books.com

Ernie Lee

**Airframe Album No.9:
The Arado Ar 234**

A Detailed To The Luftwaffe's Jet Bomber

Author: **Richard A. Franks**
 Publisher: **Valiant Wings**
 ISBN: **978 09935 345 08**
 Format: **Softback, 112pp**



This ninth title in the Airframe Album series is even bigger than previous volumes and will be an essential companion for anyone tackling the Fly (1/32), Hasegawa (1/48), Dragon and even the Frog kits in

1/72. Contents include a mass of historical photographs and detail images of the world's only complete Ar 234, period detail images taken during production and service use, isometric views by Wojciech Sankowski of all prototype and production airframes and colour profiles by Richard J. Caruana. For modellers the book features lists of all Ar 234, accessories and decals produced in all scales as well as kit builds of the Dragon 1/72 Ar 234B by Libor Jekl and the Hasegawa 1/48 Ar 234B by Steve Evans.

Another excellent book from this source and hopefully another step on the way to a long overdue volume on the Bf 110...

www.valiant-wings.co.uk

Air Combat: From World War I to the Present Day

Author: **Thomas Newdick (Editor)**
 Publisher: **Amber**
 ISBN: **978 17827 433 30**
 Format: **Hardback, 320pp**



The first aerial warfare took place in 1911, but since then the weapons, techniques and outcomes of air combat have changed immensely. This book is a comprehensive history of airborne warfare, from the

first pre-WWI skirmishes in converted reconnaissance aircraft to present-day operations in the Middle East and Asia.

Illustrated with both photographs and full-colour artworks, the chronologically ordered chapters outline the developments and landmarks in aerial combat through the decades, focusing on campaigns including the Spanish Civil War, the Blitzkrieg that began World War II, the Vietnam War, and the Falklands conflict. The book ends with an analysis of the use of US and allied air power to fight insurgents in Iraq and Afghanistan.

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Join us this September for Scale Scotland. We'll be having demos from world-renowned modellers **Adam Wilder, David Parker, Kristof Pulinckx and Lester Plaskitt**, as well as trade stands, a multitude of model displays, competition classes and much more!



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580 IPMS Modellers

Shropshire Model Show

By Geoff Cooper-Smith

The Shropshire Model Show, better known as 'Cosford!', because it is held in the RAF Museum, is one of the highlights of the modelling calendar. In terms of setting, atmosphere, ambience and aviation grandeur it cannot be equalled, let alone beaten as the plethora of exhibitors and traders are skilfully



As usual the competition was well attended and the quality of modelling very high. This rather wonderful 1/72 Airfix Vampire T.11 deservedly took first place in Class 10, Junior Modeller under 16 years of age and would have undoubtedly have held its own in the adult classes.



First place in Class 2, aircraft 1/48 or larger, went to a British classic in the form of this Eduard Spitfire Mk IXc with painted markings and a selection of panels removed or open to reveal plenty of resin enhanced detail

scattered amongst the exhibits. As a result it can take most of the day to see everything on offer, ensuring a very complete day out



Since the previous show, VC-10 C1K XR808, otherwise known as 'Bob', has arrived on site and been assembled, complete with its commemorative tail markings. It is to be used as a 'living classroom' to inspire young children to consider a career in aviation. The size of the 'all flying' tail is incredible and cannot be far off that of a Hunter's main wing in size. It also looks like space has been left for its counterpart, the Tristar, which will hopefully arrive once the Voyagers are in full service



Due to demand for space even the host club, and its satellites, reduced their exhibition space in order to allow more clubs and traders to be present. Nevertheless as in previous years they all put on a great display to show fine examples of their members interests and abilities. This Aeroclub vacform, 1/72 Varsity T Mk 1 of the Central Flying School at Little Rissington in 1971 particularly took your columnists eye

Attending Your Dragon – Show Economics Part 2

By Show Dragon 

This month, as promised, we are looking at show economics from the point of view of the traders. So whereas the organisers are OK if they break even and the clubs and SIGs are resigned to incurring a loss, traders are the part of this triumvirate who really do need to make money. They attend shows to sell things and in order for it to be worth their while income must significantly exceed outgoings if they are to survive and continue to frequent shows. Now for some this is a 'second job' to occupy the weekend but for others it is their sole source of income and this can, of course influence their outlook on whether a show is any good.

Ideally, a trader wants no competition at a show i.e. they want to be the only bookseller attending on the day, but that is not, of course what either the organisers or the exhibitors want. The more traders present the greater the guaranteed income for the organisers (in the form of rental fees for their space for the day) and the more choice for the punters. Generally however, the larger shows can sustain more than one of each type of trader and everyone manages to co-exist happily for the duration.

The biggest area of contention, that's between the traders, the exhibitors and sometimes the organisers, however, does tend to be the area of under-the-table sales. Now Show Dragon can remember, and it was not that long ago either, when there were virtually no 'pre-owned' kit traders. As a consequence under-the-table sales were the main source of 'pre-owned' kits. However, and particularly in recent years, the number of such traders has increased markedly and as a result, so has competition, which is evidently causing pressure as some traders are agitating about under-the-table sales, or at least the volume for sale by some clubs. Now Show Dragon, being part of an exhibiting club very much takes the view that 'under-the-table' sales are a necessary part of the show scene, for two principle reasons. Firstly, it allows the club members to 'claw back' some of the expense they have incurred in attending the show for the benefit of the organisers. Secondly, and this is from experience (both personal and observed), those club members who have made sales tend to go spend that money before it can burn a hole in their pocket i.e. at the end of the day they tend to leave the show with less money, but more boxes, than they arrived with! It is therefore arguable that 'under-the-table' sales are actually a revenue multiplier for the traders. Further many of these 'pre-owned' kit traders are not shy of combing the 'under-the-table' goods before the show even opens to see if there is anything worth snapping up. It then often appears (often immediately) on their own stand with a suitable mark-up. Perhaps what traders are really not happy about is that these 'under-the-table' sales are actually not priced low enough!

Next month we will finally have a look at a show from the visitors point of view.

If there is a topic or area you would like to discuss with Show Dragon, or even want to voice a point of view via this column, then please contact through: theshowdragon@gmail.com

SCALE AIRCRAFT MODELLING

VOLUME: 38 ISSUE: 05

**July 2016 Proudly
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**Published by Guideline Publications
& printed by Regal Litho**

Unit 3, Enigma Building, Bilton Road,
Denbigh East, Bletchley, Bucks. MK1 1HW
Ph: +44 (0) 1908 274433 Fax: +44 (0) 1908 270614
ISDN: 01908 640154

**Distributed to the UK and International news
trade by:**

Intermedia
<http://www.inter-media.co.uk/>
via

MarketForce (UK) Ltd.
110 Southwark Street, London SE1 0SU
<http://www.marketforce.co.uk/>

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Next issue

Planned for the Scale Aircraft Modelling
Volume 38 Issue 06: Aug 2016

Malta on a Pedestal

Operation Pedestal,
August 1942

By **Stephen J Di Nucci**

Operation Pedestal

Modelling the Axis
Bombers - He 111 in
1/72

By **Stephen J Di Nucci**

Pfalz E.V

Two takes on the Adler
kit

By **Dave Hooper** and
Paul Gilson

Aircraft in Profile

Douglas A-3 Skywarrior

By **Richard Mason**
With colour artwork
and scale drawings by
Mark Rolfe

Peacemaker

Monogram's
Magnesium Cloud

By **Ian Day**

Colour Conundrums

Bottisham Blue
Upper Surface
Camouflage for the P-
51 Mustangs of the
361st Fighter Group at
RAF Bottisham June-
July 1944. Part 2

By **Paul Lucas**
By **Chris Ayre**

**All this and more plus the
latest from the Newsdesk, the
continuing efforts of the
Harrogate Model Club, and
the usual Marketplace round
up and showcases.**

Please note we receive a constant stream of interesting and informative articles, and in the interest of balanced and up to the minute coverage content may change at short notice. The above listing is provisional and may be subject to change..



Model Show Listing

Compiled by Geoff Cooper-Smith of 580 Modellers
For shows this coming month see the IPMS(UK)
column. If you would like your show promoted in
this listing then please contact Geoff at 580Modellers@gmail.com or on 07841 417680.

07th August (Sunday) Plastic Model and Wargaming Show (IPMS Avon in association with Lincombe Barn Wargaming Society) at Thornbury Leisure Centre, Alveston Hill, Thornbury, South Gloucestershire, BS35 3JB.

20th and 21st August (Saturday and Sunday) 21st Anniversary Queensland Model Hobbies Expo and Queensland Scale Model Championships at Redbank Collingwood Park Sports Complex, 235 Smith Road, Redbank, Queensland 4301, Australia

21st August (Sunday) North West Kit Swap (IPMS Lancashire) at The Canberra Club, Samlesbury Aerodrome, Balderstone, Lancashire, BB2 7LF.

21st August (Sunday) Boscombe Down Aviation Collection Model Show at Old Sarum Airfield, Old Sarum, Wiltshire, SP4 6DZ.

03rd September (Saturday) Scale Scotland at the Hilton Edinburgh Airport Hotel, Edinburgh International Airport, EH28 8LL.

04th September (Sunday) East Riding of Yorkshire Model Show (Bridlington & Wolds Scale Model Club) at the Showground, Kelleythorpe, Driffeld, North Humberside, YO25 9DN.

04th September (Sunday) Fantastic Plastic (Aero Space and Vehicle Club, IPMS Wombourne) at the Community Centre, Church Road, Wombourne, South Staffordshire, WV5 9EZ.

11th September (Sunday) The Sutton Coldfield Model Spectacular 2016 (Sutton Coldfield Model Makers Society) at the Shire Oak Academy, St Marks Road Entrance, Walsall Wood, Walsall, WS8 7AQ.

17th and 18th September (Saturday and Sunday) Euromilitaire at Leas Cliff Hall, Folkestone, Kent, CT20 2DZ.

18th September (Sunday) Wings and Things (IPMS Fenland & Spalding) at University Academy Holbeach, Park Road, Holbeach, Spalding, Lincolnshire, PE12 7PU.

22nd to 24th September (Thursday to Saturday) National Airfix Aeronautical Model Engineering Competition 2016, ITE College Central Aerospace Technology, The Event hall, block A, level 2, 2 Ang Mo Kio Drive, Singapore, 567720.

24th September (Saturday) IPMS Farnborough Modelfest (IPMS Farnborough) at Kings International College, Watchetts Drive, Camberley, Surrey, GU15 2PQ.

25th September (Sunday) St Ives Model Show (IPMS Brampton) at the Burgess Civic Hall, Westwood Road, St Ives, Cambridgeshire, PE27 6WU.

NEW DECALS

AOA Decals

- AOA35001 1:32 Loach: Low Level Scouts - Bell OH-6A Cayuses in the in the Vietnam War. This 1/35 decal sheet includes 24 marking options for US Army OH-6A Loaches £16.99
- AOA48004 1:48 Douglas A-4 Skyhawk Airframe Stencils (Hi-Viz) £9.99

Authentic Decals

- AD4874 1:48 Digital Fulcrum, Ukrainian AF Mikoyan MiG-29 with digi camo (Great Wall Hobby) £16.60
- AD7274 1:72 Digital Fulcrum, Ukrainian AF Mikoyan MiG-29 with digi camo (ICM and Condor Ukraine) £13.20

Caracal Models

- CD144001 1:144 USAF KC-135R Stratotanker, 161 ARW, Arizona ANG, 157 ARW, New Hampshire ANG, 157 ARW, Maine ANG ("Maine Freeze" nose art), 97 AMW, Altus AFB, 121 ARW, Ohio ANG, 459 ARW, Andrews AFB, 100 ARW, RAF Mildenhall ("Wolff Pack" nose art), 434 ARW, Grissom AFB, 22 ARW, Mc Connell AFB, 127 Wing, Michigan ANG, 154 Wing, Hawaii ANG, 185 ARW, Iowa ANG, 126 ARW, Illinois ANG, 18 Wing, Kadena AFB, 128 ARW, Wisconsin ANG, 108 ARW, New Jersey ANG £11.20
- CD48083 1:48 Douglas AC-47 "Spooky" Multiple marking options for AC-47 "Spooky" gunship. "Puff (The Magic Dragon)", 1st ACS, 1964, "Get-Em Bullitt", 1st ACS, 1965, 4th ACS, Bien Hoa AB, 1966, 4th SOS (432 TRW), Udorn AB, 1967, 4th ACS, Pleiku AB, 1967, 3rd SOS, 1968, Royal Laotian Air Force, 1969, 4412 CCTS, 1971 £11.20
- CD48084 1:48 O-2 Splymaster, 67-21331, USAF, 67-21422, California ANG, 68-7602, USAF, 67-21402, USAF (Vietnam)(*), 67-21349, US Army, Reims-Cessna FTB337 Skymaster "13704", Portuguese Air Force, £9.60
- CD48105 1:48 Guizhou PLA JL-9 / FTC-2000 Markings for colorful prototype JL-9 / FTC-2000 fighter trainers. Designed for the Trumpeter kit. £6.40
- CD72024 1:72 B-58 Hustler, "Deputy Dawg", "Rapid Rabbit", "City of Kokomo", "The Firefly", "Ben Hur", "Champion of Champions" (as marked for the Jimmy Stewart promotional film), (early Carswell AFB scheme with red chevron on tail), "Bonanza / El Toro de Moron", "Hoosier Hustler", "Star Raker" (Bendix Trophy Winner), 2nd BW "winged Z" on tail, "Shackbuster", Convairst first flight scheme, Convairst later eval scheme, XB-70 chase aircraft, ARDC, B"Project Bullseye" SEA camouflage £11.99
- CD72043 1:72 USAF Convairst F-106A Delta Dart - Part 1 A total of six markings options for the F-106A Delta Dart in ANG/USAF service. Designed for the new Meng kit. £11.20
- CD72044 1:72 Dornier Do 228 Dornier Do 228 Finnish Border Guards, Indian Navy, Italian Army, Netherlands Coast Guard, Royal Thai Navy £11.20
- CD72047 1:72 McDonnell RF-101C Voodoo Multiple USAF marking options for the RF-101C tactical reconnaissance aircraft. Designed for the Valom kit. £11.20

DK Decals

- DKD72025 1:72 Supermarine Spitfire Mk.I/II of Czechoslovak pilots in RAF £9.99
- DKD72026 1:72 Supermarine Spitfire Mk.VA/VB of Czechoslovak pilots in RAF £9.99
- DKD72027 1:72 Supermarine Spitfire Mk.VC/Mk.VI/Mk.VII/Mk.IX/Mk.XVI of Czechoslovak pilots in RAF £9.99
- DKD72028 1:72 Piper L-4/NE-1 in USAAF and RAAF Service £6.99

Dream Model

- DM0811 1:72 Decal for Sukhoi Su-24MK in Iran £5.99

Iliad Design

- ILD48030 1:48 Stearman PT-17 Kaydet £9.60
- ILD72016 1:72 Berlin Airlift Douglas C-47 £9.60

Lifelike

- LL48048 1:48 North-American P-51D Mustang part 4 (Don Gentile "Shangri-La" (4FG and

- LL48049 war bond tour in USA), C. Kinnard "Man O' War", R. Rowland "Dirty Dick") £11.99
- 1:48 Republic P-47D Thunderbolt part 8 (F. Klibbe "Little Chief", F. Perego "Slick Chick", J. Reams "The Reamer") £11.99

Model Maker Decals

- D72061 1:72 Polish F-16C NATO Tiger Meet 2015 - F-16 Tiger Demo Team Poland (this is a full decal set with all decals for the tiger scheme, nothing else is needed to do model) £8.99
- D72063 1:72 Sukhoi Su-22 in Polish service part. I £7.80

Starfighter Decals

- SFD72148 1:72 USMC/USAAF at Midway. Vindicators, Buffalos, Dauntless, and Wildcats of the USMC combined with the B-17s and B-26s of the USAAF to defend Midway Island from 3 to the 7th of June, 1942. Add in the combat debut of the USN TBF-1 Avengers, and you end up with a selection of markings that should make any WWII Pacific buff happy. 13 different markings choices for 7 different aircraft types spread across two decal sheets. £9.60

Twosix Silk

- STS44251 1:144 Emirates Boeing 777-31H/ER £10.80
- STS44273 1:144 Aurigny Embraer 195 £10.80

Xtradecal

- X48161 1:48 RAF Update 2015-2016 (3) Eurofighter Typhoon FGR.4 ZK315 41(R) Sqn 100th Anniversary Wg/Com S.A. Berry RAF Coningsby 2015; Tornado GR.4 ZA548 31 Sqn 100th Anniversary Wg/Com J. Freeborough/Flt.Lt Lamb RAF Marham 2015; BAe Hawk T.1A XX188 or XX256 208 Sqn 100th Anniversary Wg.Com Kidd, S/Ldr Arlett RAF Valley 2016 £7.99
- X48162 1:48 For the new tool Airfix kit.Curtiss P-40B Tomahawk Pt 1 (6) RAF Tomahawk Mk.IIA AH893 RM-D 26 Sqn RAF Gatwick 1941; AK960 73Sqn S/Ldr P.Wykeham-Barnes, Egypt 1941; USAAC P-40B 20P100 55th PS 20th PG Hamilton Field CA 1940; P-40C 9184 X-804 Advanced Aerobatic Unit Luke Field AZ 1943; Russia P-40C 41-13390 53 20th Guards Fighter Regt Murmansk 1942; AH965 Moscow Air Defence Capt R.S.Grigorievch 1941-2. £7.99
- X48163 1:48 For the new tool Airfix kit. Curtiss P-40B Tomahawk Pt 2 (6) RAF AK578 Tomahawk Mk.IIB GA-V P/Off Neville Duke 112 Sqn Egypt 1942 with shark mouth; AH940 Tomahawk Mk.IIA XV-U 2 Sqn RAF Sawbridge 1941; AH822 P-40F 1683(Bomber Defence Training) Flight RAF Bruntingthorpe 1944; USAAC P-40C 9754P 54 Pursuit Sqn 1942; Turkish AF P-40B White 6 1942; R.Egyptian AF Tomahawk Mk.IIb 1942 £7.99
- X72244 1:72 Bristol Beaufighter Mk.VI/TF.Mk.X Thimble Nose (6) Beaufighter Mk.VIF No 308 Dominican AF 1948; Beaufighter TF.Mk.X RD351 QM-F 254 Sqn Coastal Command RAF North Coates 1944; RD427 EO-O 404 (RCAF) Sqn Coastal Command RAF Dallachy 1945 standard nose; RD515/Q 22 Sqn RAF Burma 1944; RD776 OB-B 45 Sqn RAF Tengah Operation Firedog 1949 overall silver; RD816 QB-D 45 Sqn RAF Tengah Operation Firedog 1949 camouflaged; £7.99
- X72245 1:72 Tupolev SB-2 (10) Russia 13th SBAP 1941 Green/Lt Grey; 41st SPAB In Finland 1939 Overall grey; Chinese Nationalist AF 1939; Finnish AF 2/LtLv 6 1942 SB-13 White/blue; SB-14 Olive green/blue; Spanish Republican AF 1936-37 No 2 Spanish Nationalist AF 1939 Avia B.71 Luftwaffe KG200 Rangsdorf SE+DP 1940; Czechoslovak Army III Sqn 6 L.P. 10K 1938; Slovak Air Force, Vzdušne zbrane V3 1943; £7.99
- X72248 1:72 Heinkel He 111H-5/H-5y/H-6 (10) H-5 or 6 1B+OH Wekusta 5 Spitzbergen 1941; 1G+KL 3/KG27 Poltava 1942; H-5y A1+AH 1st Staffel Russia 1942/3; H-6 1 H+IK 2/KG26 Bardufoss, Norway, Fw Otto Beau ship victories on rudder; 1H+GP 6/KG26 Italy 1943, white engines, rudder and fuselage band; 1H+BB Stab 1/KG26 Bardufoss Norway 1942 Maj Werner Klumper; G1+DC Stab II/KG55 France 1942 Lt Thross; 5J+ER 7/KG4 Nth Africa 19426N+DG Stab V/KG 100 Kalamaki 1942; A1+FN 5/KG 53 Lt Erich Horn 1942; £7.99

NEW KITS

AModel Aircraft kits (injection)

- AMU48007 1:48 Yakovlev Yak-18T £20.50
- AMU72326 1:72 Dornier Do.J Wal Polar Aviation flying boat £49.99
- AMU72336 1:72 Dornier Do.J Wal flying boat Decals Russia £49.99

Academy Aircraft kits (injection)

- AC12313 1:48 Grumman F8F-1/2 Bearcat USS Tarawa £14.99
- AC12529 1:72 McDonnell F-4J Phantom US Navy VF-84 Jolly Rogers £22.99
- AC12531 1:72 McDonnell F-15C California ANG 144th FG £16.99
- AC12532 1:72 Grumman F-14A USN "VF-2 Bounty Hunters" £16.99
- AC12541 1:72 Lockheed-Martin F-16C USAF Multirole Fighter MCP £10.99

Catalogues and lists

- CATA16 Academy Catalogue 2016 £2.50
- AIM - Ground Equipment Diorama accessories
- GE72049 1:72 RAF Super Taskmaster tractor. £20.70
- GE48048 1:48 RAF Medium (Taskmaster) tractor. £27.00
- GE48049 1:48 RAF Super Taskmaster tractor. £29.70

Airfix Aircraft kits (injection)

- AX05129 1:48 Hawker Hurricane Mk.I Tropical version £18.99
- AX73011 1:72 Shorts Tucano T.1 'Lest We Forget' Limited Edition £12.99
- AX82014 1:72 Operation Torch 'The Sparks of Liberation' - Airfix Club Special £9.99
- AX82015 1:72 Supermarine Spitfire LF.Mk.Vb / Mk.Vb Specialist Spitfires Airfix Club Special. £16.99

Avant Garde Aircraft kits (injection)

- AMK86001 1:72 Aero L-29 Delfin £9.99

- AMK88008 1:48 Mikoyan MiG-31B/BS Foxhound £45.99

Avis Aircraft kits (injection)

- BX72021 1:72 de Havilland DH.60C-II Finland & Canada £14.99

Big Planes Kits Aircraft kits (injection)

- BPK7209 1:72 CanadAir Challenger £51.99

Bronco Models Aircraft kits (injection)

- GB7003 1:72 Blohm & Voss Bv P 178 Torpedo Jet Bomber with LTF55 Torpedo £23.99

Eduard kits Aircraft kits (injection)

- EDK1135 1:48 Saab J-35 Draken; Hasegawa plastic; decals printed by Cartograf, 4 marking options; resin seat and wheels; photo-etched details and mask included; full color instructions £49.99
- EDK82112 1:48 Messerschmitt Bf 109G-5 Very first release of kit from Eduard tool made in 2016 £28.30

Encore Models Aircraft kits (injection)

- EC48007 1:48 Grumman F6F-5 Hellcat £31.99

FLY Aircraft kits (injection)

- YLF14421 1:144 Douglas DC-9-30 Kuwait Air Force £17.99
- YLF14424 1:144 Douglas DC-9-40 OZARK £17.99
- YLF14428 1:144 Douglas DC-9-50 Republic / North Central £17.99
- YLF32014 1:32 Hawker Sea Hurricane Mk.IIC £39.99

Hasegawa Aircraft kits (injection)

- HAQ2159 1:72 Bell-Boeing MV-22B Osprey US Marine VIP £32.99
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 A set for painting the RAF fighter aircraft which participated in the major air battle of all times, "The Battle of Britain", from the beginning in July 1940 to the final phase or "Night Blitz" in May 1941.



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BOMBER & TRAINING AIR COMMAND 1939-1945
 A set for painting all the bombers (light, medium and heavy) of the Bomber Air Command of the RAF from 1939 until the end of WWII. This set also includes "Trainer Yellow" which, combined with the other colors or by itself, can be used for most of the training aircraft and prototypes.



Art. 71146
RAF COLORS SEAC
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 A set for painting of all types of aircraft of the RAF in the SEAC (Air Command South East Asia) based in the British colonies in the Far East.



Art. 71147
FAA (FLEET AIR ARM) COLORS 1939-1945
 A set for painting the aircraft of the Fleet Air Arm (FAA) of the British fleet, for land-based aircraft as well as for aircraft, British or American, embarked on carriers from 1939 until the end of the War.



Art. 71148
RAF COLORS COASTAL COMMAND 1939-1945
 A set for painting the aircraft of the RAF Coastal Command, for land based aircraft as well as for seaplanes, from 1939 until the end of the war.



Art. 71149
RAF DAY FIGHTERS PRE-WAR TO 1941
 A set for the RAF fighter camouflage scheme "Temperate Land" in its different combinations from the years before WWII (starting in 1937) and the beginning of the conflict in 1939 until August 1941. Also includes the colors for the "Shadow Compensation" color scheme used in biplanes of all models and deployment.



Art. 71162
DAY FIGHTERS 1941-1945 & P.R.U.
 A set for painting the RAF day fighter aircraft from August 1941 until the end of the War, as well as the HF Interceptors (High Fighters). The set also includes the colors for the PRU (Photographic Reconnaissance Unit) aircraft.



ART. 71163
DESERT SCHEME & M.T.O. 1940-1945
 A set for painting of all types of RAF aircraft with the color patterns "Tropical Land Scheme", "Desert Scheme", "Special Coastal Scheme", etc. from June 1940 until the end of the War, in North Africa and the Mediterranean theatre.

Each set includes the colors for the airplane profiles and camouflage patterns drawn by Mark Rolfe and the collaboration of "Pieza a Pieza Modeling Workshop".



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