

189

INFO | **Eduard**

e-magazine FREE ■ Vol. 24 ■ November 2025

eduard

eduard

INFO | Eduard

e-magazine FREE ▪ Vol 24 ▪ November 2025

189



© Eduard - Model Accessories, 2025

FREE FOR DOWNLOAD, FREE FOR DISTRIBUTION!

This material may only be used for personal use. No part of the text or graphic presentations can be used in another publication in any other media form or otherwise distributed without the prior written permission of Eduard - Model Accessories and authors involved.

Editorial and Graphics - Marketing department, Eduard - Model Accessories, Ltd.



NOVEMBER 2025

CONTENT

4 ■ EDITORIAL

8 ■ E-Day

40 ■ ARTICLES

Air war over Ukraine - Russian drones over Poland

48 ■ BOXART STORY

Messers above the Negev Desert
The Burma Banshees
Against the Stukas on Eagle Day

52 ■ KITS

Avia S-199 ERLA canopy HYBRiD 1/48
MiG-21F-13 ProfiPACK 1/48
P-40N Warhawk ProfiPACK 1/48
Spitfire Mk.Ia ProfiPACK 1/48 Re-Release

74 ■ BRASSIN

88 ■ PHOTO-ETCHED SETS

92 ■ SPACE

102 ■ BUILT

ENSTROM 480 1/72
MiG-21bis 1/72

106 ■ ON APPROACH - November 2025

119 ■ TAIL END CHARLIE

EDITORIAL

Good day, fellow modelers!

Welcome to the tenth issue of our newsletter for this year. It is of course dedicated to October's new releases, which, like every month, are many and need to be reported on in detail. In addition, you will also learn something about November's new items, specifically about the Avia S-199 in 1:48th scale, the first kit of the new Eduard Brassin HYBRiD line. This kit, along with the entire new series, had its world premiere last weekend at E-Day in Litoměřice. We have been introducing this project on various occasions since the beginning of August, so it is unlikely that you would not have heard anything about it by now. Nevertheless, I will take the liberty of saying a few words about what you can expect from this new concept for kits.

These are composite kits manufactured using two technologies, the tried and true injection molding using metal molds along with 3D printing. Large and medium-sized parts are made of plastic, primarily the fuselage, wings, tail surfaces, propellers, as well as canopies and all other transparencies. Complete cockpit and landing gear strut assemblies will be manufactured using 3D printing, as well as some small parts, such as exhausts, antennas, or especially onboard weapons. Wheels will also be manufactured using 3D printing. The landing gear legs of the S-199 are made of a special material, used for the production of prostheses and implants within the dental industry. This material is characterized by high resistance to deformation, low flexibility and dimensional stability. It is therefore suitable for the production of parts that require load resistance and long-term strength overall.

The HYBRiD series kits use the good properties of both types of material. The plastic parts are precise with high quality surface details and feature perfect fit. The printed parts also have great precision and, compared to their predecessors, resin castings, also have perfect fit, but compared to plastic small parts, they have a much, much greater fidelity of detail. The printed parts and specifically the printing process provides advantages that allow parts to be produced as one without needing to make multiple parts that might be necessary because of things like undercutting. The result is a reduction in the number of small parts that the modeler has to glue together as with classic injection molded parts. The wheel wells in the first HYBRiD kit, the S-199 in 1:48 scale, consists of a single part that is simply glued into the wing, where it naturally fits perfectly. The same is



true of the cockpit, where the floor with pedals and seat, including the rear wall of the cockpit, is printed as one part. Other parts of the cockpit include the side panels, again each printed from a single piece, the rear cockpit wall, the control stick, the instrument panel, and the trim control wheels.

This concept allows for the reduction of the number of parts in the kit while raising the bar for the quality of the details. For comparison, in the 1:48 S-199, the number of plastic parts was reduced from 126 parts in the previously conceptualized all-injection molded kit to 56 in the HYBRiD series kit. In addition to plastic and 3D printed parts, the HYBRiD series kits will be equipped with a cockpit painting mask, a decal sheet for six color versions and instructions as standard. Photo-etched parts are not included in these kits. An important detail is that plastic and printed parts can be glued together with classic solvent adhesives, it is not necessary to use instant adhesives. But that is of course also possible, the results of both gluing techniques will be equivalent.

In terms of price, the first HYBRiD 1/48 kits will be in a similar price range to the 1:48 Profipack kits. The first EDUARD BRASSIN HYBRiD kit, No. 948011, the 1:48 scale S-199 Erla will cost 925 CZK (about 45 American Greenbacks). It is new for November 2025, but was sold for the first time last weekend at E-Day and during the associated Afterparty, and then will be again in November. In January, the second version of the S-199 with the sliding canopy will follow, and for 2026 we are also preparing HYBRiD 1:32 scale kits, which will be priced in line with classic kits of this scale available on the market today.

The concept of the new series is brought to you clearly and concisely by Jakub Nademlejnsky in his article about the new Avia S-199 kit. As a thank you for participating in the exhibition, modelers exhibiting at E-Day will receive another HYBRiD series kit, an Enstrom 480 helicopter in 1:72 scale. We have prepared

this kit as a technological demonstrator that will give its owners a good opportunity to try out exactly what the new series brings in terms of construction and utility properties.

Other November new releases will also be on sale at E-Day, but only in kit form. They are the MiG-21F-13 in 1:48 and the P-40N in the same scale, with both kits being members of the Profipack line.

This year's E-day, which took place last weekend in Litoměřice, was successful but cold. The influx of Arctic air and hurricanes across the Atlantic did their job. Fortunately, it didn't rain until Saturday afternoon, but even so, it was probably the coldest of all 22 E-Days to date. However, we had the most models and modelers on display, a total of 1,459 models, compared to 1,123 models last year, and we are very happy about that! There were always lots of people around them. The discussions with the MiG-21F pilots and even with one of them, Colonel Spinka, who flew the S-199, were amazing, and the modelers enjoyed other discussions and lectures as well. And we sold all the S-199s in the new Eduard Brassin HYBRiD series by 2 p.m. So, all in all, it was a good event, and if you weren't there this year, come next year!

Happy Modeling!
Vladimir Sulc



ALWAYS NEW MODELS, MASKS ACCESSORIES, DECALS

MN-MODELAR

follow us



-60%

-60%

100% OF GOODS IN STOCK, WE SHIP IMMEDIATELY

info@mn-modelar.cz

www.mn-modelar.com

Eduard Modeller's Den

NEW ON-LINE MAGAZINE
FOR HISTORY AND SCALE
PLASTIC MODELING.

COMMERCIAL SUPPLEMENT
TO INFO EDUARD MAGAZINE

FREE TRIAL OF ZERO ISSUE (12/2024)



Get a 10% discount on your purchase in the Eduard - Model Accessories
webstore when you buy any issue of Eduard Modeller's Den!

From the content of EMD 08/2025 release 7. 11. 2025

The IRIS-T Air-Defense System

Current Affairs / Petr Uzsák

A frequently discussed topic in recent weeks has been Russian provocations carried out by airborne assets across the borders of neighboring states — namely those European countries that are members of the North Atlantic Alliance. An important part of a clear response is having one's own air-defense systems. The most often mentioned system — also in connection with the war in Ukraine — is the American MIM-104 Patriot. However, in the European area this is not the only means of protecting allied territory from external air strikes, as the article will explain.



The Modern French Navy

World Naval Forces / Petr Uzsák

The naval forces of the country of the Gallic Rooster have a very long tradition, lasting almost four hundred years continuously. The French Navy was founded in 1626 during the reign of Louis XIII. and since then it has had many famous and defining moments. It is enough to recall the famous overseas expeditions of officers Jean Ribault, Louis Antoine de Bougainville and Jean-Francois de Galup de Laperouse to drive the point home. It can also be said that the French naval forces were pioneers in putting innovations into practice with, for example, ships with a steel hull, armored cruisers, the first seaplane carrier or the first mechanically propelled submarines.

45

MOEEL & STORY

Stanisław Skalski

Text: Vladimír Šulc

Model: Jan Baranec

41

MOEEL & STORY

Stanisław Skalski

Text: Vladimír Šulc

Model: Jan Baranec

31

HISTORIE

PLASTOS

DÍL č. 2

Tenkrát na Východě

Vladimír Šulc

22

HISTORIE

TAHKEP34

Text: Vladimír Šulc

19

HISTORY

ZKÁZA FLOTILY

CHRIS GOSS

20

HISTORY

ZKÁZA FLOTILY

CHRIS GOSS

Stanisław Skalski

Model & Story / Vladimír Šulc, Jan Baranec

The most successful Polish fighter pilot was definitely not an exemplary soldier at that time. He received several disciplinary reprimands, including two for insulting a superior officer, and a rather curious one for attempting to join the Chinese Army and take part in the war with Japan. On October 1st, 1938, he was appointed second lieutenant and assigned to the 4th Air Regiment in Toruń and attached as a pilot to the 142nd Fighter Squadron, armed with the famous Polish PZL P-11c high-wing aircraft. On the very first day of World War II, on September 1st, 1939, he jumped a Henschel Hs 126, the kill of which was credited to his colleague Marian Pisarek. Skalski then landed next to the downed aircraft, helped the wounded crew members and arranged for their transport to a military hospital, thus probably saving them from lynching by the local civilian population.

Plastos – History of Scale Plastic Modelling

Part Two – Once Upon A Time In The East / Vladimír Šulc

Arrival of the former British Frog kits on the Eastern European model market significantly accelerated international barter exchanges between modelers. Just as the industrial production of traditional plastic kits and the cottage industry epoxy kits and associated trade developed in Czechoslovakia, so too did the production of kits from Frog molds and the associated trade develop in the Soviet Union. And despite both doing so officially, some of that production certainly made it into the retail network, even though testimonials from that time say that Soviet stores were permanently empty. But the main thing was again that gray economy. I assume that a lot of what was produced was stolen, smuggled out of the factory and sold illegally.

Death of a Fleet

History / Chris Goss

On 8 November 1942, Allies forces landed in Morocco and Algeria as part of Operation Torch. The Luftwaffe's response was codenamed Stockdorf and a number of combat units quickly but temporarily moved to south-west France, at that time under Vichy French control, in response to the perceived threat of an invasion in southern France and to secure airfields and military stores

edday

international
model
exhibition

4/10/2025





CLUBS AND SIGS

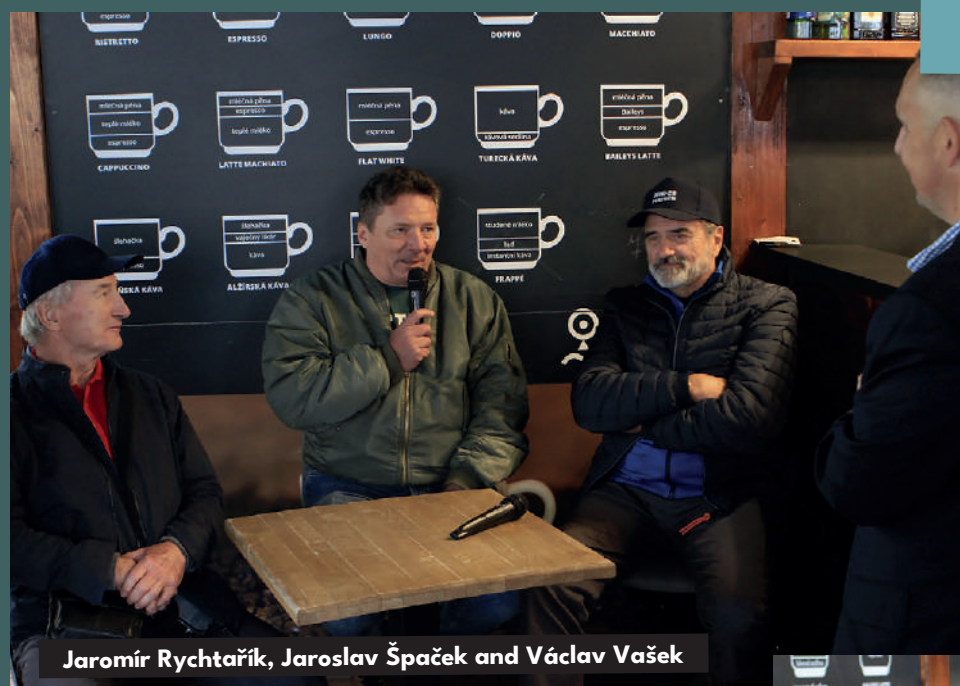






CONVERSATIONS

IN A CAFÉ





Stanislav Archman



Petr Švihovec

eday

Jaroslav Velc

| About paintings, airplanes, and cars...





WORKSHOPS





RETAILERS

















WINNING MODEL

Suchoj Su-22M4 'Fitter-K' - No. 3704/ 44 20.SBOLP, August 1993



Absolute winner
Christian GERARD

EDUARD NEWS 2026

E-DAY BRIEFING, LITOMĚŘICE, CZECH REPUBLIC, 4 OCTOBER 2025

MiG-21F-13 PROFIPACK 1/48



This is the November new release, however, **MiG-21F-13** in the Profipack 1/48th scale series made its sales debut at E-Day. A Weekend edition kit will also be launched in the summer of 2026.

EDUARD BRASSIN HYBRID AVIA S-199 1/48



The first model kit in the new **EDUARD BRASSIN HYBRID** series, the **Avia S-199** in 1/48 scale, also had its sales premiere at E-Day. This first boxing represents the first production version of the S-199 with the original German Erlahaube canopy.

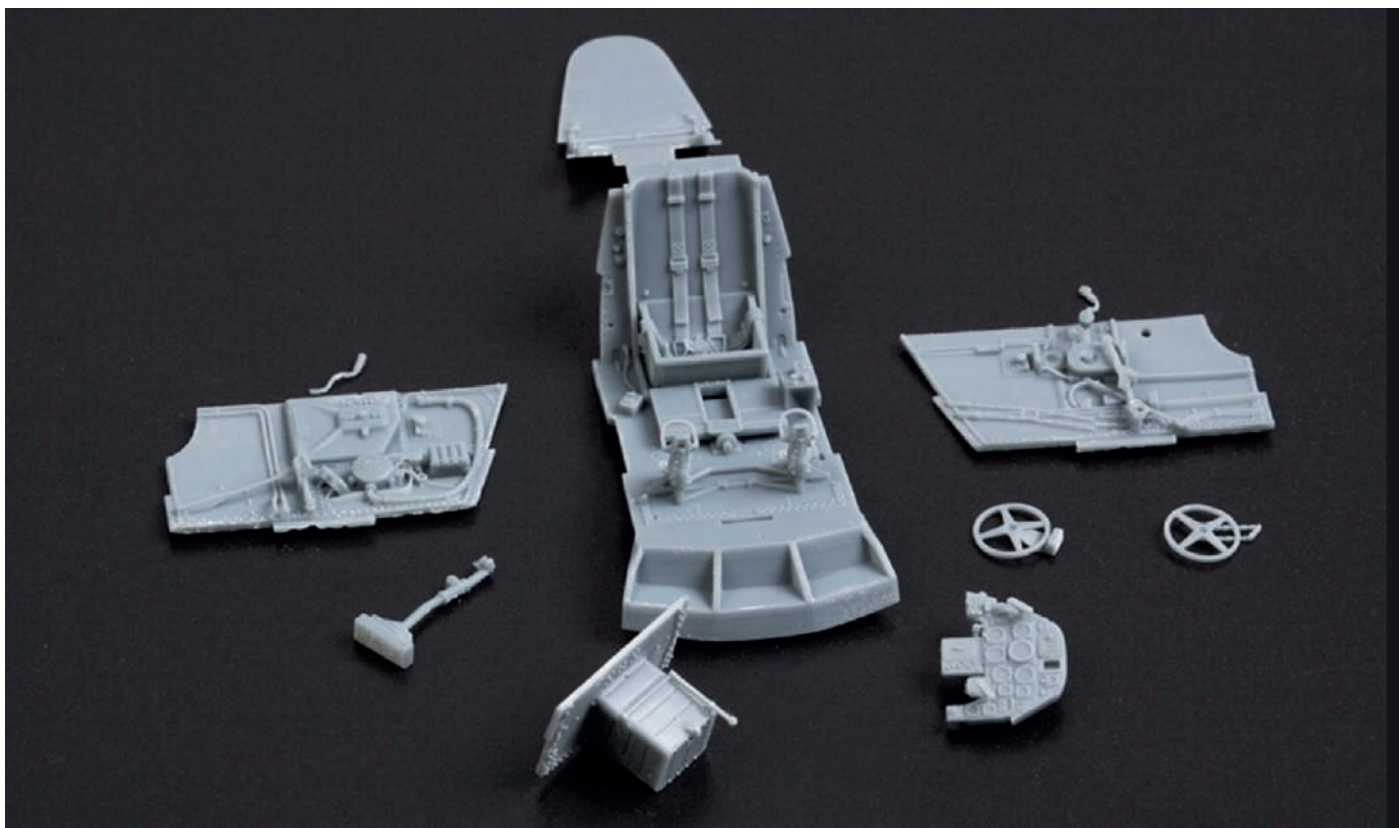
EDUARD BRASSIN HYBRID 1/48



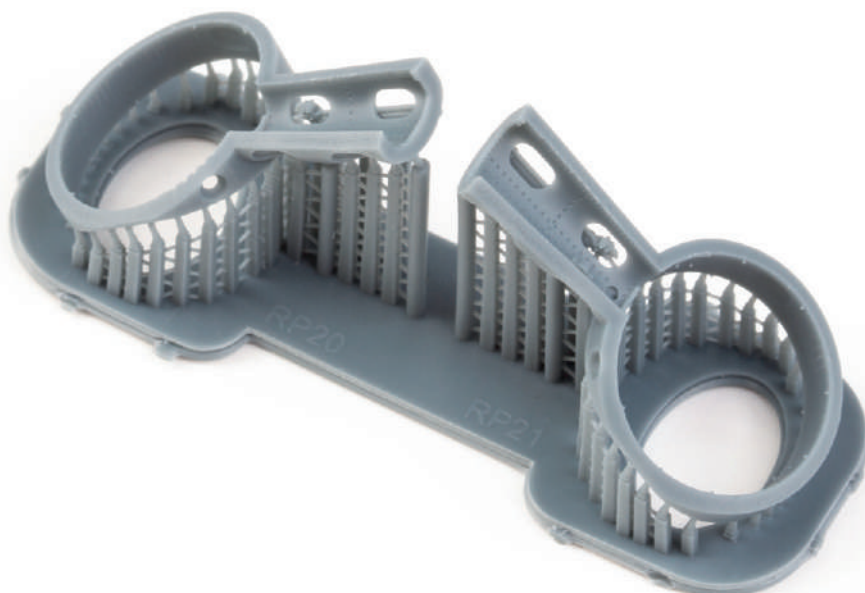
The new **EDUARD BRASSIN HYBRID** series presents composite kits manufactured using two technologies: classic plastic injection into metal molds and 3D printing. Large and medium-sized parts are made of plastic, primarily the aircraft fuselage, wings, tail surfaces, wing mechanisms, propellers, as well as cockpit canopies and all other transparent parts. Complete cockpit and landing gear bay assemblies, as well as some small parts such as exhausts, antennas, and mainly onboard weapons, will be produced using 3D printing.



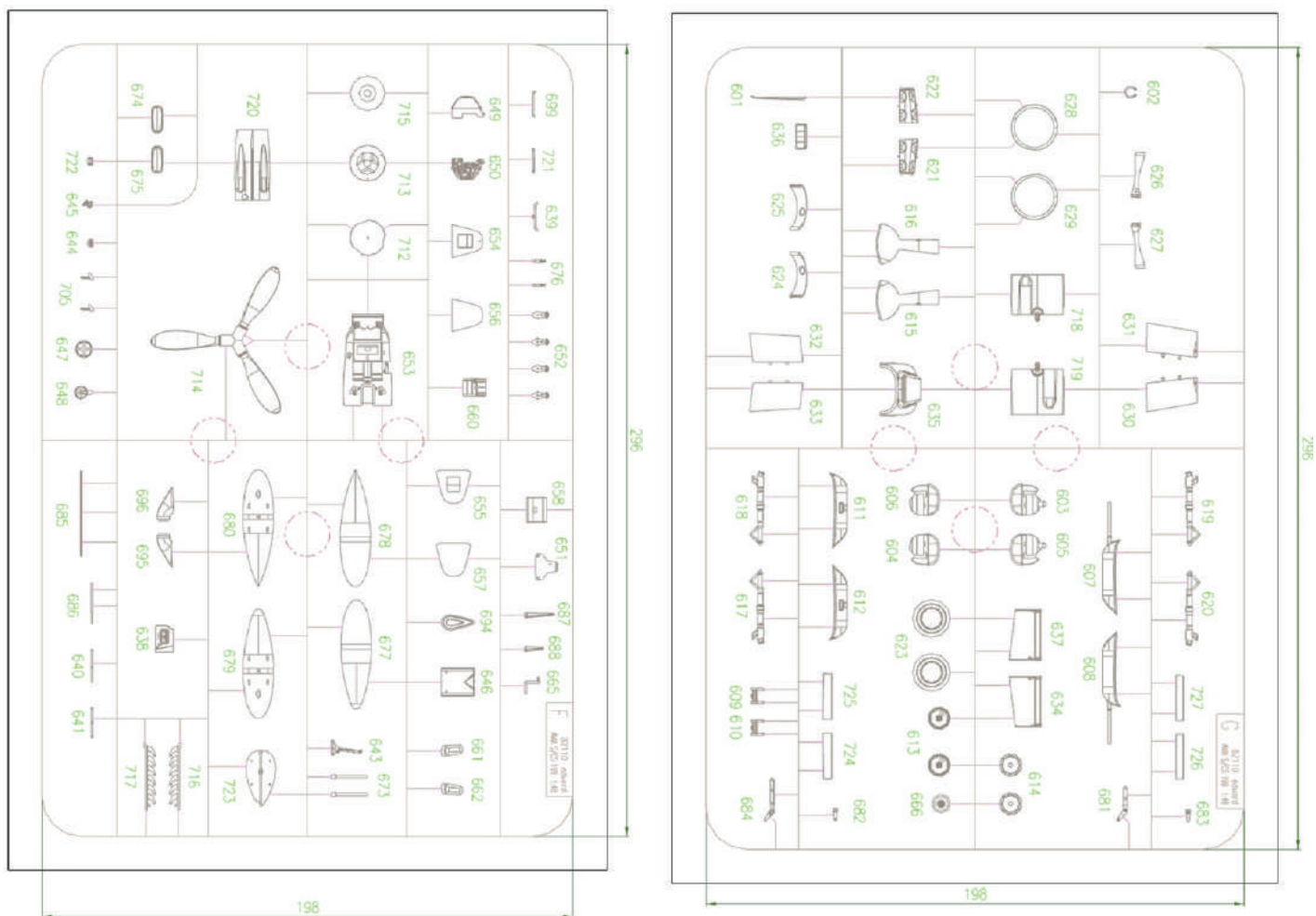
The wheels and landing gear legs are also made using 3D printing. The landing gear legs are made from a special material that is commonly used in the manufacture of dental prostheses and implants. This material is characterized by high durability, flexibility, and dimensional stability. It is therefore suitable for the manufacture of parts that require load resistance and long-term dimensional stability.



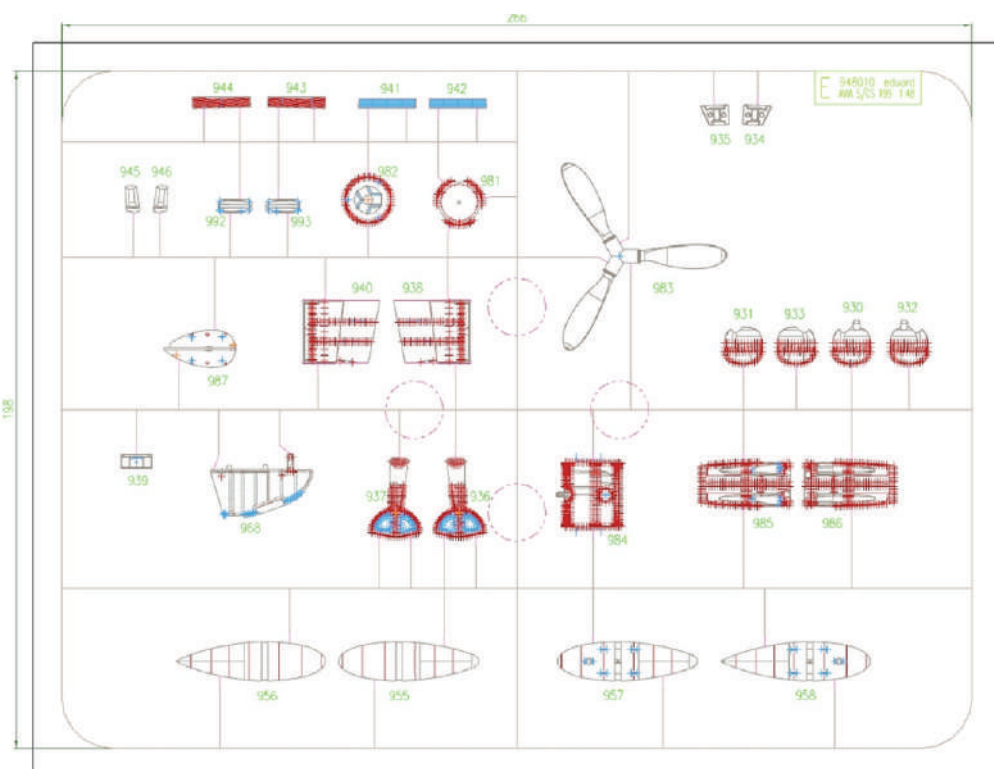
The Hybrid series kits take advantage of the best features of both types of material. The plastic parts are precise, with high-quality surface details and perfect fit. The printed parts are also very precise and perfect, but compared to the small plastic parts, they have sharper and finer details. At the same time, they allow details to be combined into a single part, eliminating the need to divide, for example, the landing gear bay or side panels in the cockpit into several parts due to technological limitations of molding. The result is a reduction in the number of small parts that the modeler has to glue together in a classic kit. The landing gear bay in the first kit of the Hybrid series, the S-199 in 1/48 scale, consists of a single part that is simply glued into the wing. Similarly, in the cockpit, the floor with pedals and seat, including the rear wall of the cockpit, is printed as a single part. Other cockpit parts include side panels, again each printed from a single piece, the rear cockpit wall, control stick, dashboard, and trim control wheels.



EDUARD BRASSIN
HYBRID



The difference in the number of parts between the **HYBRID** series and classic kits is shown by comparing the frames with small parts for the classic kit and for the Hybrid series kit. This sheet shows a drawing of two frames with small parts planned for the classic Avia S-199 kit in 1/48 scale. In the classic kit, these two frames would contain a total of 108 parts.



In this sheet, you can see a frame drawing with small parts for the S-199 kit in 1/48 scale in the **EDUARD BRASSIN HYBRID** series. This frame contains 32 parts and replaces two frames from the classic kit shown in the previous photo. A total of 6 frames with 136 plastic parts would be produced for the classic kit, while 4 frames with 63 plastic parts were produced for the Hybrid series kit.

AVIA S-199 1/48 JANUARY 2026



Another kit in the HYBRID series, the **Avia S-199** from later production series with a sliding canopy in **1/48 scale**, will follow in January 2026.

EDUARD BRASSIN HYBRID ENSTROM 480 1/72



As a thank you for their participation, exhibiting modelers received a **1/72 scale Hybrid Enstrom 480** model kit at this year's E-Day. Enstrom will be released in March 2026 as a 1/72 scale EDUARD BRASSIN HYBRID model kit and will be available for purchase.

EDUARD BRASSIN
HYBRID

1/32

EDUARD BRASSIN HYBRID 2026 ...



The **EDUARD BRASSIN HYBRID** series will continue with several kits in **1/32 scale**. The first of these will be the **P-51B Mustang** in the first half of 2026. The 1/32 scale kit is based on the design of the 1/48 scale P-51B kit, but has been technologically modified for both the 1/32 scale and the HYBRID series.

Next in the **HYBRID 1/32** series will be the **Spitfire Mk.IX** family. The expected release date is Summer 2026. The design is based on the Spitfire Mk.IX project in 1/32 scale, which was originally developed before 2010 but was suspended and changed to a 1/48 scale project. This project includes both the development versions of the Spitfire Mk.IX, namely the Spitfire F.Mk.IX, LF.Mk.IXc, and Spitfire LF.Mk.IXe, as well as the Spitfire Mk.XVI, Spitfire Mk.VIII, and Spitfire HF. Mk.VIII.

SPITFIRE Mk.IX 1/32



Fw 190 A 1/32

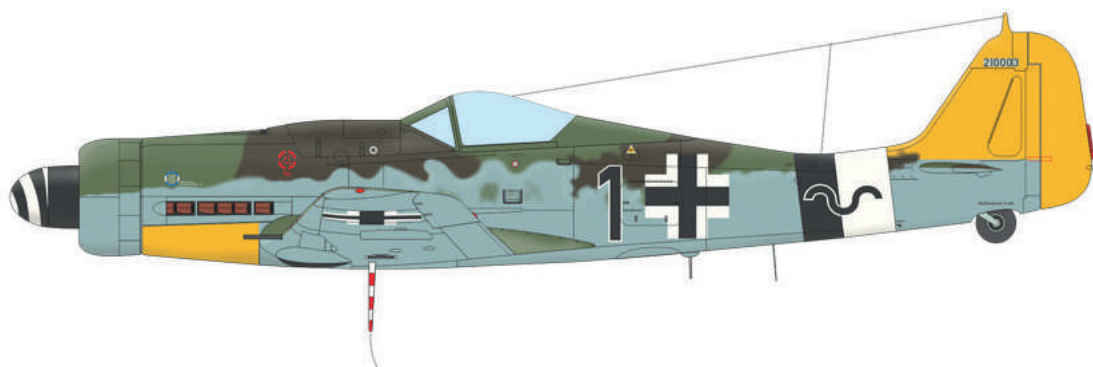


The third in a series of 1/32 scale kits from the **EDUARD BRASSIN HYBRID** series is the **Focke-Wulf Fw 190 A family**. The first of these will be the Fw 190 A-8/R2, which is expected at the end of 2026 or early 2027. The plan is to gradually release all development versions of the Focke-Wulf Fw 190A from Fw 190 A-2 to Fw 190 A-9, including Fw 190 F-8.

Fw 190 D 1/32



The Fw 190 D will follow on from the Fw 190 A. The **Fw 190 D** project is also based on a 1/48 scale model kit, but will be significantly modified and improved in terms of design. We will focus primarily on the shape deficiencies of the original design. However, this is a project for 2027.





EDUARD BRASSIN HYBRID LIMITED

EDUARD BRASSIN
HYBRID

We will also be releasing **EDUARD BRASSIN HYBRID** kits as **LIMITED** series kits. These will be based on similar kits in 1/48 and 1/72 scale.



B-25J MITCHELL 1/48 EDUARD HKM



We are preparing another new series of kits for 2026, EDUARD HKM. These will be 1/48 scale kits based on molds from the Hong Kong company HKM. The first will be the B-25J Mitchell with a machine gun nose, followed by the A-20G Havoc.

LANCASTER Mk.I 1/48 EDUARD HKM

We are preparing a **Lancaster Mk.I** kit for the **EDUARD HKM** series for 2027. We will probably not be able to release it in 2026, because two additional frames with parts that are not included in the Lancaster Mk.I kit from HKM will need to be produced for this kit, but they will be necessary for our kit in the joint EDUARD HKM series.



CLASSIC PLASTIC KITS 2025 / 2026

SPITFIRE Mk.Vb EARLY 1/72



We are also continuing with classic model kits. We are preparing a new 1/72 scale Spitfire Mk.Vb model kit for December 2026. First, we are releasing the Spitfire Mk.Vb Early in the Profipack 1/72 series in December, followed by a Limited series model kit called The Sweeps.

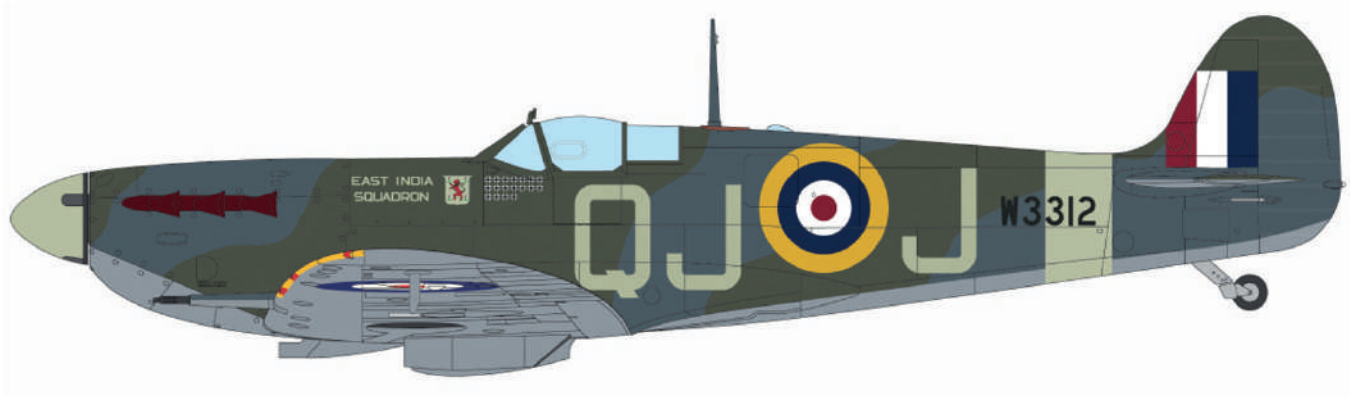
Color schemes selected for the new Spitfire Mk.Vb Early 1/72 kit:



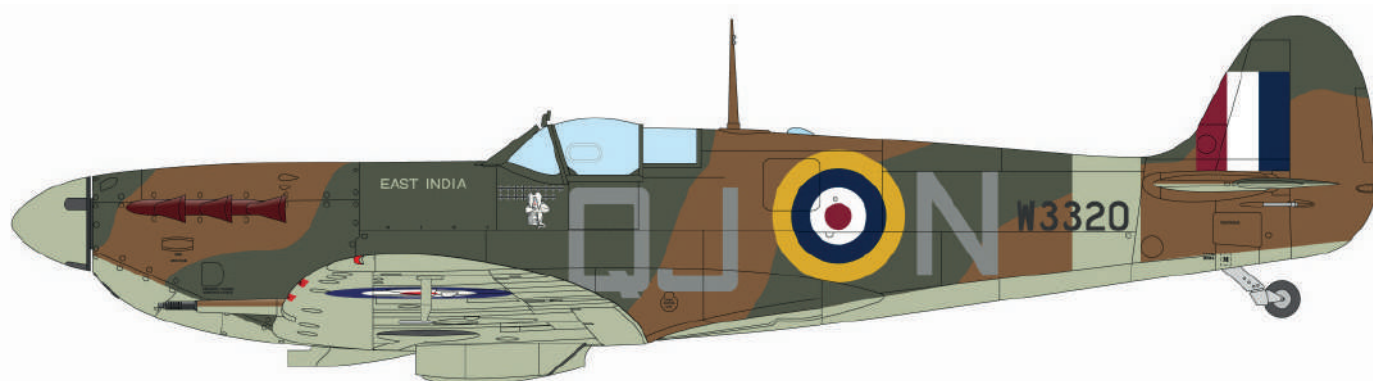
P8699, F/Lt J. Bisdee, No. 609 Squadron, Biggin Hill, July 1941, Vic: 8+2



W3257, F/Lt E.S. Lock, No. 611 Squadron, Hornchurch, July – August 1941, Vic: 26



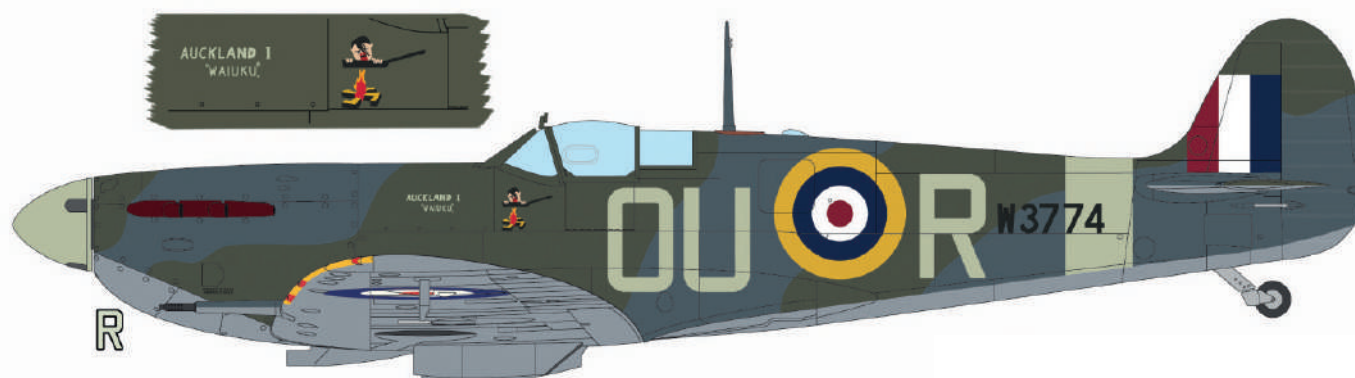
W3312, W/CDR J. Rankin, Biggin Hill Wing, September - December 1941, Vic: 17 + 5



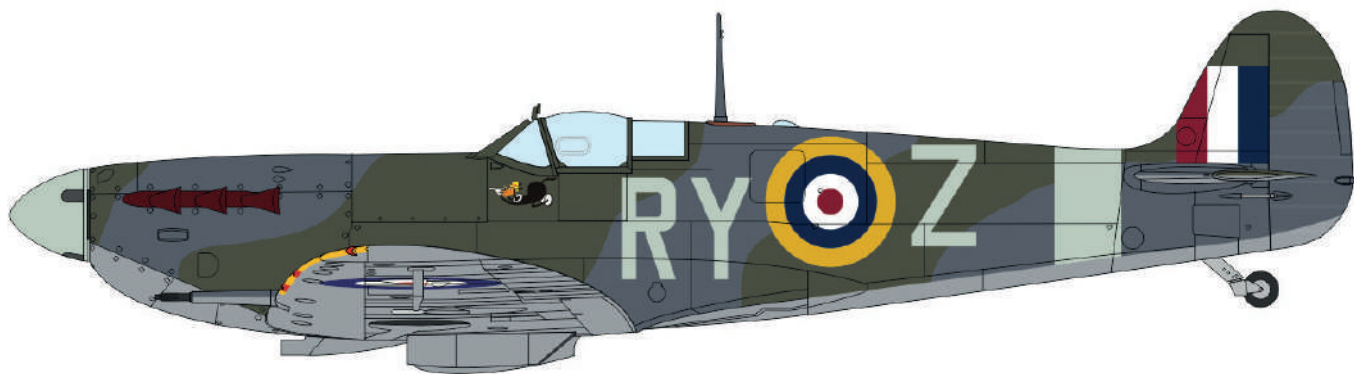
W3320, P/O D.E. Kingaby, No. 92 Squadron, Biggin Hill, July - August 1941, Vic: 21+2



P8783, Sgt D.R. Morrison, No. 401 Squadron RCAF, Biggin Hill, November 1941 - Feb. 1942, Vic: 4+3



W3774, P/O W.V. Crawford Compton, No. 485 Squadron, Kenley, Nov. 1941 - Mar. 1942, Vic: 21+1



P8537, Sgt J. Hloužek, No. 313 Squadron, Hornchurch, November 1941 – March 1942

SPRING 2026: Bf 109 K-4 1/72



We are preparing a 1/72 scale **Bf 109 K-4** kit for mid-2026, the last unreleased type from our Bf 109 F, G & K series.

SUMMER 2026: SPITFIRE Mk.I 1/72

In the second half of 2026, the Spitfire Mk.V will be followed by the first **Spitfire Mk.Ia** kit, also in 1/72 scale, of course.

In this case, too, it will be released as a **LIMITED** series kit, followed by Profipack and Weekend series kits.



SUMMER 2026: MiG-21R 1/72



We are preparing to release the **MiG-21R** in **1/72 scale** in our classic model kit series in 2027. A Limited series model kit with a book will be released gradually, followed by Profipack and Weekend series model kits.

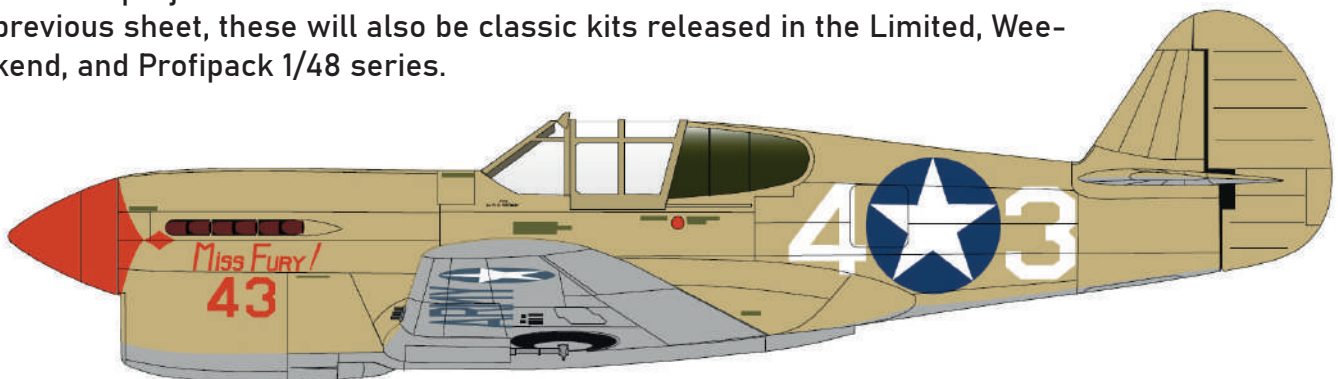
SUMMER 2026: P-40K 1/48



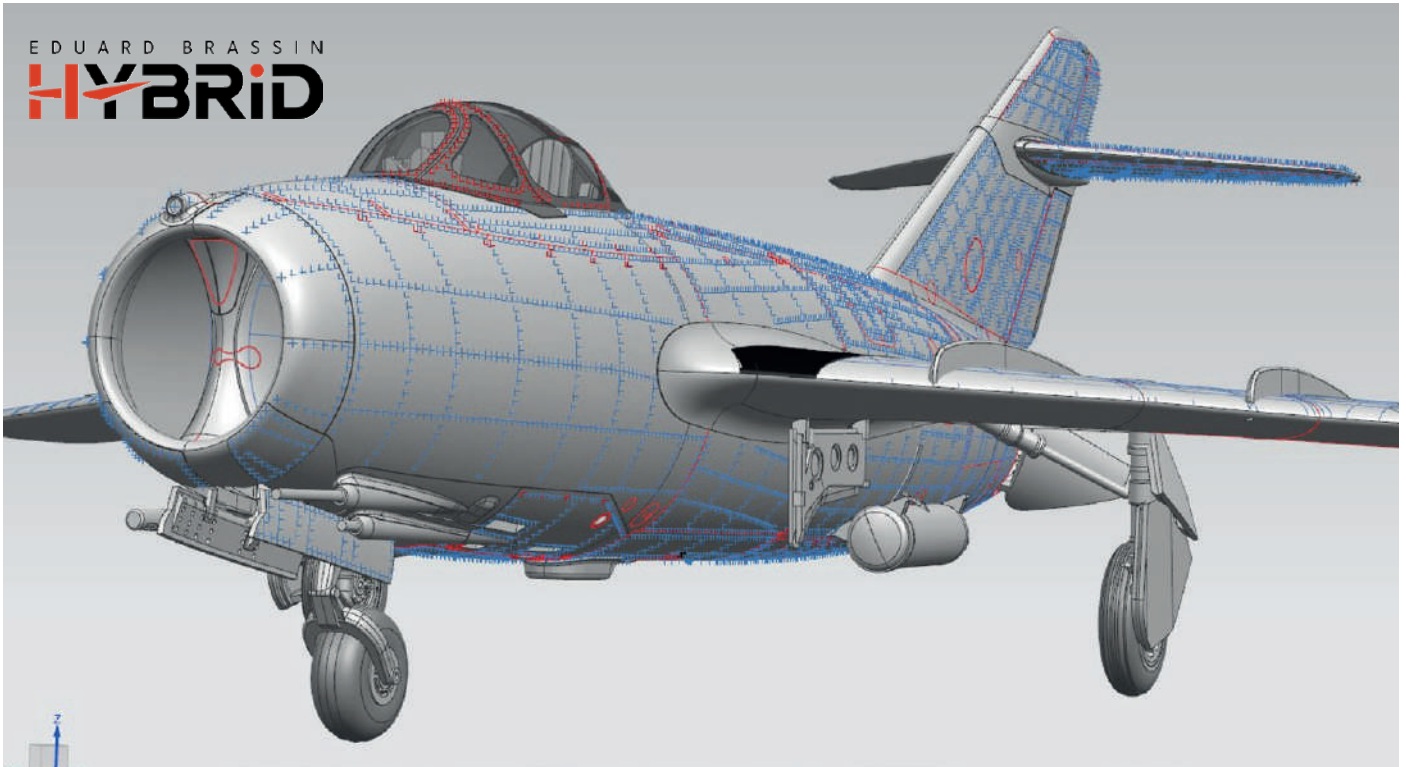
We are also working on **classic projects** in **1/48 scale**. For the second half of 2026, we are preparing the **P-40K** in both versions, long and short, with its characteristic tail keel. This project also includes the **P-40M** version, which is very similar to the long version of the P-40K.

FALL OF 2026: P-40F/L 1/48

The next projects in the P-40 series are the **P-40F** and **L**. Like the kits on the previous sheet, these will also be classic kits released in the Limited, Weekend, and Profipack 1/48 series.

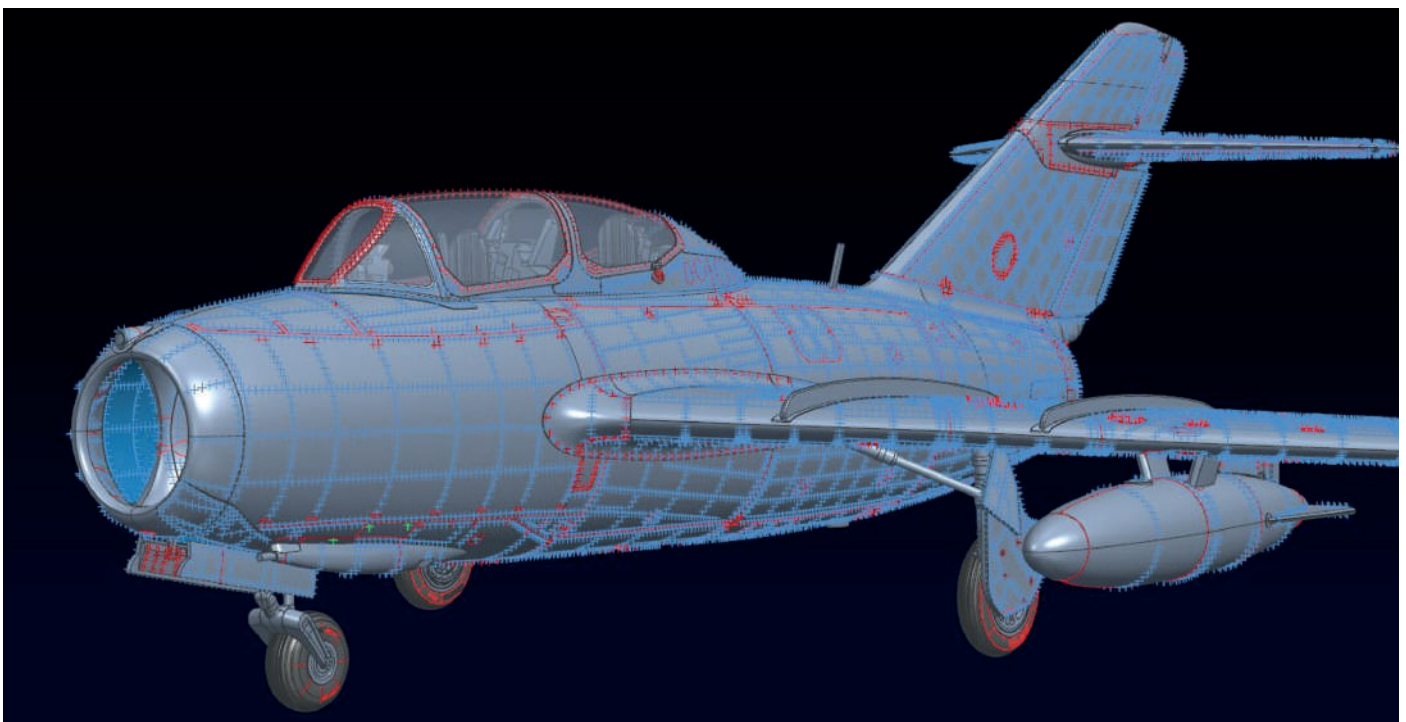


OCTOBER 2026: MiG-15 1/48



In our classic series, we are also preparing **MiG-15** and **MiG-15bis** kits in **1/48 scale**. These will again be classic kits in the Limited, Weekend, and Profipack series. We are preparing to release the first of these at the end of 2026. It will most likely be a kit from the LIMITED line named Czechoslovak Fifteen.

As part of the **MiG-15 1/48 project**, kits for the **UTI MiG-15** training version, as well as the **MiG-17F** and **MiG-17PF**, are also being developed. However, all of these kits will be released as part of the **HYBRID** series.



And that's all the news for next year. As every year, this is a preliminary schedule, and it is very likely that there will be changes. However, all these announced projects are already in various stages of the design and production process.

HOT OFF THE PRESS



PHOENIX

SCALE PUBLICATIONS

'Rozdmýchávání vášně pro modelaření!'

WHERE TO BUY ONLINE WORLDWIDE

www.phoenixscalepublications.co.uk

EU Retailer: Aviation Megastore www.aviationmegastore.com

USA Retailer: Sprue Brothers www.spruebrothers.com



AIRCRAFT | ARMOR | SHIPS | FIGURES | SCI-FI | BOOKS | PAINT

Squadron®

The Premier Source for **Eduard** in the USA



Since 1968 Squadron has been offering model kits and accessories from top manufacturers from around the world. Today, now located in Ringgold, GA Squadron continues the tradition of quality selection and service for today's model Kit building community.

Head over to Squadron.com to see why modelers choose Squadron time and time again!

Introducing the Latest
In Quality Airbrush Paint

SQUADRON

SCALE COLORS

 **SQUADRON**



Now Located Near Chattanooga, TN

WWW.SQUADRON.COM

Aerial War in Ukraine

Russian drones over Poland

Miro Barič

The biggest event during the period covered in this installment of the series (1 Sept. to 30 Sept.) was the massive violation of NATO airspace by Russian drones. It took place during the night of 9–10 Sept. in Poland. During a large-scale Russian attack on Ukraine, about two dozen unmanned aerial vehicles continued westward. While, as always, Moscow made excuses, Warsaw's officials say the Russian drones penetrated intentionally.

The alarm began on Tuesday 9 Sept. shortly before midnight and lasted roughly seven hours until the following morning. Poland closed the airports in Warsaw, Modlin, Rzeszów and Lublin and scrambled F-16 fighters. NATO allies also assisted — the Netherlands deployed F-35 fighters, Italy provided an airborne early warning and control aircraft, and Belgium sent an Airbus A330 MRTT tanker. Germany put its Patriot batteries stationed in Poland on the highest alert; they helped track the drones' movements.

At least four drones were shot down by fighters. This was the first time NATO had destroyed Russian drones over its territory. A kill marking later appeared under the cockpit of F-35 F-027 from the Royal Netherlands Air Force's 313 Squadron. Other drones crashed in various areas, mainly in eastern Poland. One,

however, flew as far as a field near Mniszków in the Łódź Voivodeship in central Poland, and another was found near the village of Oleśno in the north of the country. Both thus flew hundreds of kilometres within Polish airspace.

Searching for drone wreckage took several days, and in the end as many as 21 were found. Some sources even give the number 23. Most likely, however, those counts also include two cases where AIM-120 AMRAAM missiles struck the ground. One of those air-to-air missiles, fired from a Polish F-16 after missing a drone, deviated from its trajectory and hit a house in the village of Wryki-Wola. It heavily damaged the roof on impact but did not explode and no one was injured. Wreckage from the other AIM-120 was later found near the village of Choiny.

At least 17 of the drones recovered were the Russian Gerbera type; their serial numbers — found on the wrecks — are often known. Four drones could not be identified. At least two of those four were among those shot down and, after the explosion of the air-to-air missile, likely little remained to identify.

The Gerbera is a cheap drone with a wingspan of 2.5 metres. In shape it resembles the Iranian Shahed unmanned aerial vehicles, and at first it was used as a decoy to swamp Ukraine's air defences. Later it began to be used for reconnaissance, electronic warfare and kamikaze missions with small amounts of explosives.



Ukrainian Su-27 fighter jets



A Geran drone with serial number 31695 was found near the village of Oleśno in northern Poland.



A drone with serial number 32384 was found in Czosnówka, Lublin Voivodeship.



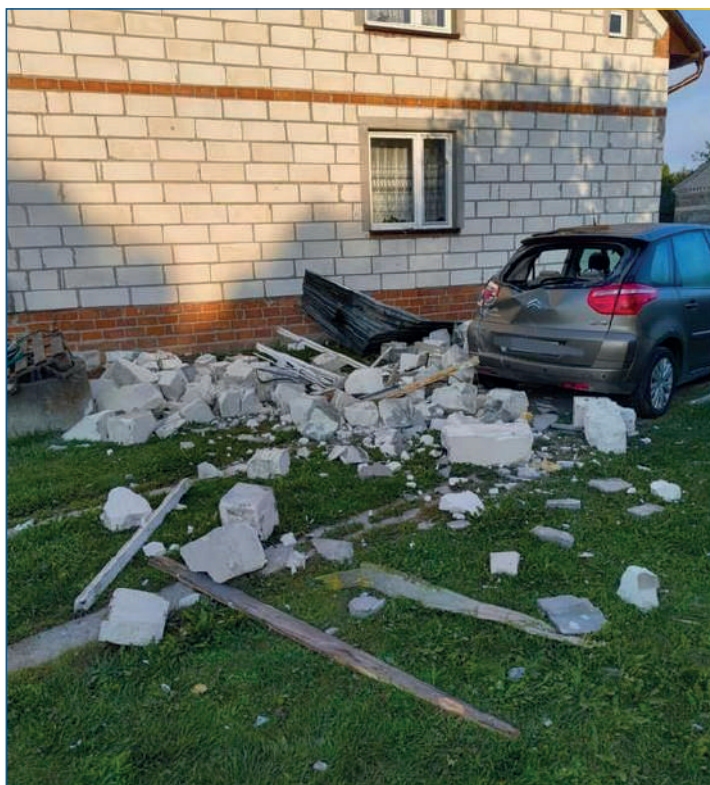
A Geran with serial number 32053 was found near the village of Rabiany.



A drone with serial number 31849 crashed near Nowe Miasto nad Pilicą.



During the repelling of a Russian drone incursion, a stray AIM-120 AMRAAM missile fell on a house in the village of Wyrki-Wola. 20 AMRAAM.





An F-35 marked F-027 from the 313th Squadron of the Royal Netherlands Air Force, with a marking of a shot down drone.

Intentional or not?

None of the drones found in Poland carried explosives. All, however, were equipped with additional fuel tanks to extend their range. That is an important detail. Russian officials claimed (and Russian propaganda happily spread this claim) that Gerbera drones have a range of less than 700 km and could not have reached Poland from Russia. Therefore, they argued, Ukraine must have launched them to draw NATO into war with Russia. Russian officials and propaganda conveniently “forgot” to mention the additional fuel tanks in the drones.

Other Russian officials tacitly admitted the drones were theirs, but categorically denied they were launched into Poland intentionally. Belarus also contributed to the version of an unintentional incursion by warning Poland in advance that stray drones were heading its way. That was an exceptional step. Many drones have previously ended up over Belarusian territory after being disturbed by Ukrainian electronic-warfare systems. Some were shot down by Belarusian forces in the past, some penetrated further into Poland or the Baltics. However, a warning from Belarus came for the first time. Warsaw politely thanked Minsk for the warning but at the same time indicated it believed the warning was an attempt to create an alibi for later claims that the incursion was not intentional. Polish officials publicly stated

that the incursion was a deliberate violation of airspace by Russia. Previous single-drone incursions could be considered accidents; this time, however, around two dozen drones entered Poland at once — which is hard to regard as a mistake. Russia probably wanted to test NATO's response and also to collect valuable electronic data during that response. Shortly thereafter, a large exercise involving Russian forces was beginning in Belarus, and this incident could have been part of it.

NATO's response

Subsequently, Russian drones also appeared in Romanian airspace, and on Friday 19 Sept. three Russian MiG-31 aircraft violated Estonian airspace. They remained there for 12 minutes and NATO fighters had to escort them out. Both Estonia and, earlier, Poland requested consultations under Article 4 of the North Atlantic Treaty, meaning they asked member states for consultations. In response NATO launched Operation Eastern Sentry, intended to increase protection of the alliance's eastern border.

Reinforcements from NATO member states headed to Poland — Sweden sent Gripen fighters, France sent three Rafale fighters, the Netherlands deployed air-defence systems, and the Czech Republic contributed three Mi-171 helicopters. Ukraine decided to help Poland with training on drone defence.

Unknown drones began to appear toward the end of the covered period over Denmark, Germany and other countries. NATO warned it would use force against intruders — drones or aircraft — and shoot them down if necessary. The European Union likewise decided to strengthen the defence of the eastern states and create a so-called “drone wall” there. Ukraine's experience and technologies are to help in building it.

One of the new technologies are so-called drone interceptors — small drones designed to destroy other drones. Their key characteristic is high speed so they can quickly catch their target. Several types exist and, where used, they show promisingly high effectiveness, but there are not yet as many of them as would be needed. In the fight against Russian unmanned systems, Ukraine therefore still has to rely on conventional ground air defence and airborne assets. In this series we have described the deployment of fighters and also light training, sport and agricultural aircraft against drones. Now we will take a closer look at helicopters.

Helicopters with dozens of „kills“

Helicopters are beginning to appear as one of the most effective weapons against drones. This is evidenced by the score markings seen in many photographs. On the sides of helicopters are dozens of silhouettes of Shahed drones, as well as heavier reconnaissance drones that



Ex-Czech Mi-24 helicopters bearing numerous kill markings.





This Ukrainian Mi-8 helicopter has a large number of Russian drones to its credit as well.



The Ukrainians also showcased a transport aircraft An-28, which they use as a gunship against drones.

operate well behind the front line. There are so many silhouettes that on some helicopters space ran out and further “victories” are recorded only with simple tally marks.

Helicopters have several advantages in the fight against drones. They have enough speed to catch their target, but are not so fast as jet fighters, which risk colliding with drones. Light aircraft risk damage from detonations and drone debris when firing at Shaheds. Helicopters fly parallel to drones at similar speeds and usually a bit higher. They therefore operate from a position slightly behind and above the drone. If a Shahed explodes, the helicopter is in a space that is least exposed to its debris.

The Mi-24 has the advantage of a movable rotating 12.7 mm machine gun in the nose and target-searching and aiming equipment. Some versions carry a twin-barrel 30 mm cannon,

with which they can engage Shaheds from greater distance.

Mi-8 helicopters have also proved effective against drones. They carry Soviet PKT or PKM machine guns of 7.62 mm in the nose or side windows. Ukraine began to upgrade its Mi-8s for counter-drone missions by installing American M134 Miniguns. These are also 7.62 mm but are rotary guns with a rate of fire of 3,000–6,000 rounds per minute, whereas the PK has only 500–800 rounds per minute. The Minigun therefore needs a shorter burst to shoot down a drone. Mi-8s also began receiving an optical station with day and night cameras mounted ahead of the front landing gear, and a searchlight to illuminate targets at night was added to their equipment.

A photograph also appeared of a light transport plane, the Antonov An-28, with a similar tally painted on its fuselage. This is

a twin-engine turboprop which Ukrainians modified to a gunship. Most likely it too uses 7.62 mm machine guns in side windows or doors. However, a video has also surfaced implying the An-28 is firing a weapon mounted at the front; that cannot be confirmed because the published photograph does not show the aircraft's nose.

At the same time, jokes began to spread comparing the Dutch F-35 fighter with a single kill marking to these helicopters or the An-28 with dozens of kills. Humor helps people to cope with stressful situations, but this comparison is not appropriate. If the F-35 had to face hundreds of drones every night, it too would rack up a large score.

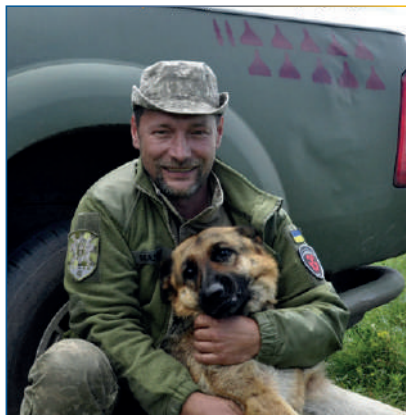
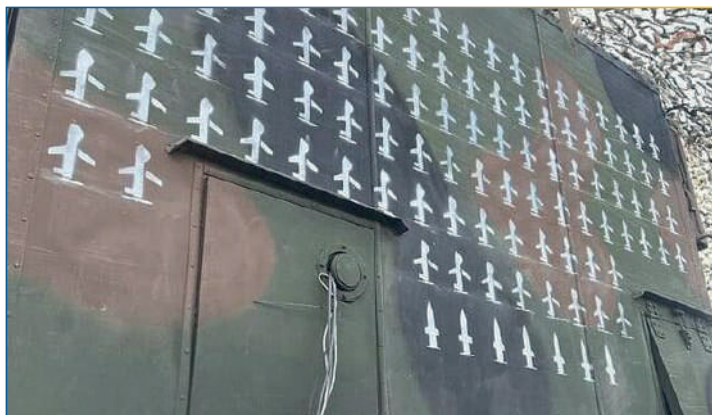
Massive Air Raids

Unfortunately, this is the grim reality in Ukraine. It became clear on the night



The score is rising also for ground-based air defense systems. Unfortunately, this is due to the increasing intensity of Russian attacks.





The score is rising also for ground-based air defense systems. Unfortunately, this is due to the increasing intensity of Russian attacks.

During the September 7 air raid, a government building in Kyiv was hit for the very first time.

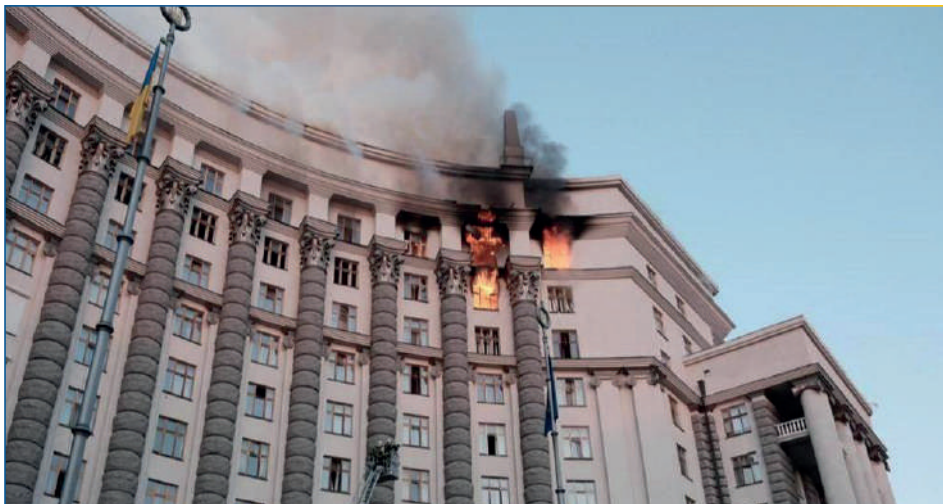
of Wednesday, September 3, when Russia launched 502 drones, 16 Kalibr missiles, and 8 Kh-101 cruise missiles. The main targets were in western Ukraine. Ukrainian defenses shot down 430 drones and 21 missiles. The remaining projectiles killed one person and wounded 35.

On the night of Thursday, September 4, another large-scale Russian air raid followed. Some Russian channels reported significant technical problems during the operation. Three Tu-160 bombers were supposed to participate, but only one managed to launch cruise missiles. The second was struck by lightning in flight and had to return to base; the third failed to take off. Despite that, the raid killed 15 people and injured 26. Two Russian drones also violated Polish airspace during this attack.

That same day, Russian forces committed another war crime — an Iskander missile strike on a group of Danish humanitarian workers clearing mines left by Russian troops in the Chernihiv region. The workers wore blue vests marking them as part of a humanitarian mission and used white civilian vehicles. The mission had been officially announced in advance via proper communication channels. The attack killed two people and injured eight. Russia cynically boasted about the strike in a video, calling it a “successful attack on enemy logistics.”

On the night of Friday, September 5, Russia launched 157 drones and seven missiles or cruise missiles, killing 11 people and injuring 32.

On Sunday, September 7, Russia once again broke its own record, launching a total of 818 drones and other projectiles at Ukraine. Ukrainian air defense shot down 747 drones and four additional missiles. Four people were killed, including a young mother and her two-month-old baby in Kyiv. Forty-four others were wounded. A horse-riding club in Kyiv was also hit, killing three horses. For the first time, a Russian air raid struck a Ukrainian government building. It was initially believed that a drone hit the Cabinet of Ministers’ headquarters, but it was later confirmed to be



an Iskander-K cruise missile. Its warhead did not detonate — the damage was caused by its kinetic impact and a subsequent fire from its fuel. During the same raid, one Russian drone again strayed into Poland and crashed 50 km from the Ukrainian border.

On the night of September 10, Russia launched 415 drones and 43 missiles or cruise missiles. The targets were infrastructure facilities in western and southern Ukraine. During this raid the incursion into Poland of about twenty drones occurred as described earlier in this article.

That same day, Russia committed another war crime. In the village of Yarova in the Donetsk region, a Russian aircraft dropped a guided bomb on a group of civilians waiting in line to receive pensions. Twenty-five people

were killed, mostly local elderly residents. Among the dead were two postal workers responsible for distributing the pensions. Nineteen others were wounded.

On the night of Saturday, September 20, another major raid came. Nine Ukrainian regions were hit — Russia launched 579 drones, eight missiles, and 32 cruise missiles. Ukrainian defenses shot down 552 drones and 31 missiles or cruise missiles. One projectile carrying cluster munitions struck an apartment building in Dnipro, killing three people and injuring dozens.

The final major raid in the period occurred on the night of Sunday, September 28, when Russia launched 595 drones and 48 missiles or cruise missiles. Ukrainian defenses destroyed 611 out of 643 projectiles. The main target was



Ukrainian MiG-29 fighter jets.



A MiG-29 releasing guided bombs on Russian positions.



A MiG-29 from the 40th Tactical Aviation Brigade with mission symbols.



This photo was published by the 114th Tactical Aviation Brigade. The MiG-29 likely originates from Poland and on its nose sports a painted image of a warrior with a spear.



Kyiv, where four people were killed, including a 12-year-old girl. The Cardiology Institute in Kyiv was also hit, killing one patient and a nurse and injuring 70 others.

The Battle for Fuel Continues

During the observed period, Ukraine continued its attacks on Russia's oil industry, which we covered in detail in the previous installment. Over three months (July, August, September), Ukrainian drones carried out 34 attacks on refineries (some of them multiple times). Between September 1 and 30, Ukrainians struck refineries 13 times. The Il'sky refinery was targeted twice, Saratov twice, and Salavat refinery in distant Bashkortostan twice as well.

In addition to refineries, Ukrainians targeted other facilities in Russia's oil and gas industry, which finances the Kremlin's war. A significant drone raid hit Primorsk near St. Petersburg, damaging an oil export terminal, pumping stations, and two oil tankers.

On Wednesday, September 24, Ukrainian naval and aerial drones attacked Russian Black Sea ports. Russia claimed to have neutralized at least five naval drones in Novorossiysk. Aerial drones damaged port infrastructure and started fires. In Tuapse, at least one naval drone penetrated the harbor (as confirmed by Russian videos) and exploded on a pier. Tuapse is also used for exporting Russian oil and gas.

Altogether, by the end of September, Ukrainian attacks had knocked out 40 percent of Russia's fuel production. This caused growing gasoline shortages at fuel stations across many Russian regions.

Losses on Land and in the Air

Besides targeting oil infrastructure, Ukrainian drones also struck Russian radar systems and airfields in Crimea, gradually

degrading the peninsula's air defenses. Several helicopters and aircraft were destroyed on the ground.

On Sunday, September 21, Ukrainian FPV drones attacked a Nebo-U radar, two Mi-8 helicopters at a former border guard training base in Shkilne, and another Mi-8 at the Simferopol airfield. Videos of the attacks were released by Ukraine's military intelligence agency (GUR). Satellite images and Russian footage confirmed that one helicopter in Shkilne burned completely, most likely belonging to the FSB Border Service. The fate of the other two helicopters is unclear.

On Monday, September 22, GUR released a video of another FPV drone strike — this time on Kača airbase in Crimea, targeting one Mi-8 helicopter and two Beriev Be-12 amphibious aircraft. The Be-12s were developed in the 1950s, but a few remain in service. After Russia's 2022 invasion, reports suggested they were used for patrolling the Black Sea to detect Ukrainian naval drones. The aircraft in the video appeared derelict — one lacked a propeller. One Be-12 bore the number 08 on its fuselage. In the footage, the attacking drone seems to dive toward the ground in front of the plane, but the operator corrected its course at the last moment, and it apparently struck the side of the fuselage near the landing gear.

The third consecutive successful night for GUR came on Tuesday, September 23, when Kača airbase was again targeted. An Antonov An-26, registration RF-46878, fuselage code "Blue 30," belonging to the 318th Independent Composite Aviation Regiment of the Russian Naval Air Force, was completely destroyed. The aircraft burned out after the strike. Another FPV drone targeted a second An-26, but the result of that attack remains unconfirmed.

The unfavorable chain of events for the Russian Air Force continued on Thursday,

September 25, when a Su-34 fighter-bomber was shot down near the village of Vasylivka in the Zaporizhzhia region. One of the two crew members was killed. Russian channels identified him only by his first name, Yevgeny.

A spectacular feat was achieved by a Ukrainian FPV drone operator on Monday, September 29, who struck a Russian Mi-8 helicopter in flight near the village of Nadiivka in the Donetsk region. Some media reported this as the first such case in history, though Ukrainians had previously hit several Russian helicopters with drones — some were only damaged, but at least one crashed after being hit. That was the case this time as well. Russian sources reported that pilot Lt. Mikhail Avramenko attempted an emergency landing in the burning helicopter to save his crew. However, videos show the helicopter hitting the ground at high speed in flames, with the wreck sliding for dozens or even hundreds of meters. In the end, two crew members survived with injuries, while Avramenko and seven passengers were killed.

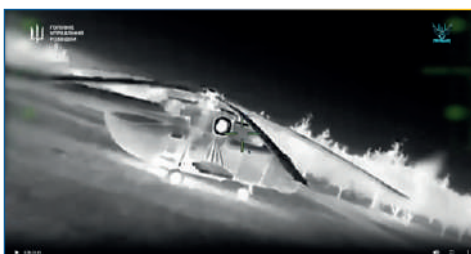
Russia also lost another aircraft in an accident during this period — at Kubinka Air Base, a Su-30SM or Su-35 fighter crashed during landing. The pilot, a colonel in the Russian Air Force, suffered severe injuries.

On the Ukrainian side, one combat loss was confirmed during this period. On Thursday, September 11, in the afternoon, a Su-27 fighter was shot down near Dobropillia in the Zaporizhzhia region. It was piloted by Major Oleksandr Borovyk of the 39th Tactical Aviation Brigade. He did not survive the crash.

On Wednesday, September 24, Russia launched a strike on the Kamyanka air base in Dnipro, destroying several light aircraft shelters. It is not known whether any aircraft were inside at the time.



One of the Russian Mi-8 helicopters attacked by Ukrainian FPV drones on September 21.



During the September 22 attack, this Be-12 seaplane, number 08, was also targeted.



View from the attacking FPV drone heading towards the second Be-12. Note that the seaplane is missing one propeller.



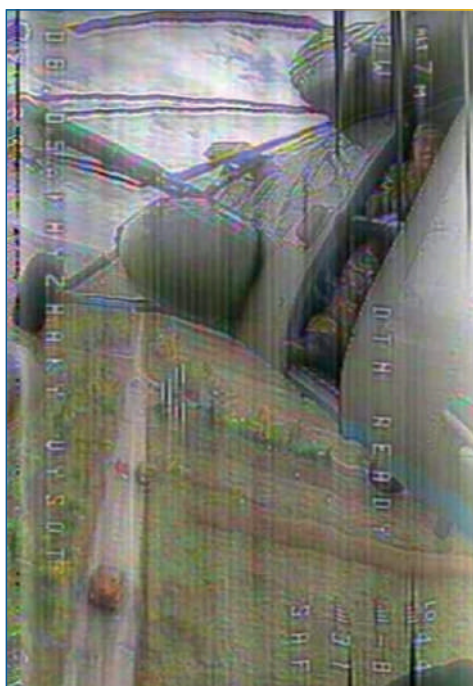
Attack on a Russian Mi-8 helicopter at the Kača air base in Crimea on September 22.



A Russian Antonov An-26, registration RF-46878, fuselage number "blue 30", which burned after the September 23 attack.



Another Russian An-26 caught during the September 23 attack on the Kača air base.



A Russian Mi-8 moments before being hit by an FPV drone on September 29



The burning Russian Mi-8 after being struck by the drone on September 29.



Wreckage of the Ukrainian Su-27 that was shot down on September 11 near Dobropillia.



Ukrainian Su-27 fighter jets



Major Oleksandr Borovyk was killed when his Su-27 was shot down.

Messers above the Negev Desert

Text: Jan Zdiarský

Illustration: Piotr Forkasiewicz



After the end of World War II, major political and territorial changes took place not only in Europe and the Pacific region, but also in the Middle East. The problems that this process brought to the latter region continue to this day.

One of the fundamental issues of the anticipated changes was the end of British control over the territory of Palestine. On November 29, 1947, the UN General Assembly issued Resolution No. 181, on the basis of which the territory of Palestine should be divided into two independent states, Jewish and Arab. While the Jewish side agreed to the proposal, the representatives of the Arab world rejected it. Months of armed clashes between the two sides followed, which escalated into open conflict after the British left in May 1948.

Based on the aforementioned UN decision, the independent state of Israel was proclaimed on May 14, 1948. The very next day, the armies of five Arab countries invaded its territory, and gradually some others became involved in the conflict to varying degrees. These were Jordan, Egypt, Iraq, Lebanon, Syria, Yemen, and Saudi Arabia. Thus began the first Israeli-Arab war, known as the War of Independence. The Arab world refers to it as An-Nakba – The Catastrophe.

At first, Israel had only a few tens of thousands of soldiers and very inadequate weapons. The Arab armies were more numerous and better equipped, but they lacked unified command and a clear strategy. The UN responded to the conflict by imposing an arms embargo on the entire region. The young state of Israel, which lacked its own production of heavy weapons, was thus left without the possibility of at least purchasing arms. Israel's requests for help were heard by Czechoslovakia, with the tacit consent of the Soviet Union, which was consolidating its influence in the Czechoslovakia after the communist

coup in February 1948. Czechoslovakia was thus the only European country to decide to secretly provide military aid to Israel. The process of supplying weapons and training Israeli pilots and technicians in Czechoslovakia was based on agreements that had been concluded even before the formal establishment of Israel. Czechoslovakia supplied Israel with some of its own Avia S-199s aircraft, along with light and heavy weapons with ammunition, many of which were of German World War II origin, and later also Spitfire Mk.IX aircraft, with which the Czechoslovak RAF squadrons had returned from Great Britain in the summer of 1945.

Mezek (Mule) in Czech, Messer in Israel – Avia S-199, a fighter aircraft with problematic characteristics, was created by combining a Bf 109G airframe and a Jumo 211 engine, designed for bomber aircraft. In the immediate post-war years, together with the Spitfires, it became the backbone of the Czechoslovak fighter air force. A total of more than 500 S-199 and CS-199 (two-seater training version) aircraft were produced in postwar Czechoslovakia.

During the secret Balak operation, 24 Avia S-199s were sold to Israel. Four of them carried out their first attack on May 29, 1948, against Egyptian columns heading for Tel Aviv. The militarily controversial result had a huge moral impact. Deliveries of Czechoslovak S-199s to Israel were gradual. The aircraft shown, marked D-123, was delivered on July 28 aboard Balak flight No. 79 and entered combat on August 15, 1948. It was assigned to the 101st Squadron, whose emblem at the time was a winged skull wearing a flight helmet and goggles. The skull symbolizes the Jewish belief in the resurrection of the dead, who will form a great army when the Messiah comes to earth. The D-123 aircraft took part in Operation Yoav, which took place over seven days in October 1948 in the Negev Desert. The aim was to divide the Egyptian forces located

along the coast and on the road between the cities of Beersheba, Hebron, and Jerusalem. The Mezek D-123 entered these battles on the first day of the offensive on October 16, 1948, when Israeli pilot Rudi Augarten claimed to have shot down an Egyptian Royal Air Force Spitfire Mk.IXc. The seven-day operation was successful and significantly strengthened Israeli positions.

In 1949, Israel began the process of concluding ceasefires with individual Arab states. However, the situation remained very fragile. The outcome of the conflict, namely the initial Arab rejection of the 1947 UN resolution on a two-state solution for the territory of former Palestine, and the subsequent attack on Israel, meant political and territorial strengthening of the Jewish state in the region. The first Israeli-Arab war was not only a clash for borders, but above all a question of identity and the right of the State of Israel to exist. For the Palestinians, it meant the loss of their homes and the beginning of refugee exile. The echoes of this war still resonate today in all other conflicts in the region. The 1948 – 1949 War of Independence claimed the lives of around 6,000 Israelis and 10,000–15,000 Arabs. About 700,000 Palestinian Arabs fled or were expelled from their homes.

Thanks in part to aid from Czechoslovakia, Israel was able to defend itself in this war. The same was true in subsequent wars, in which, however, aid from Czechoslovakia did not come. Under the rule of the communist USSR, Czechoslovakia gradually turned away from Israel. A return to normalcy, based on the fact that Czechoslovakia had helped Israel in the most difficult moments of its birth, came only after the collapse of the socialist block at the end of the 1980s.

The Burma Banshees

Text: Jan Bobek

Illustration: Gareth Hector



Burma (today's Myanmar) during the Second World War may have seemed like a less significant battleground. On the Allied side, however, a total of one million soldiers from several nations were eventually deployed on the Burmese front.

In 1942, the Japanese at first sought to maintain transportation links between their conquered territories in China and Burmese Rangoon (today's Yangon). Burma was to serve as a sort of buffer zone protecting further conquered areas in Southeast Asia. Before long, however, the Japanese, supported by armed forces of various puppet regimes, began to attempt an invasion of India, which ultimately did take place, though in a limited form.

After the fall of Singapore, the British had no intention of allowing a disaster on such scale, and they exerted maximum effort to defend India and to retake Burma. During 1942 and 1943, however, they had little success on the battlefield, and stabilization did not come until 1944.

This Sisyphean task would not have been possible without the support of air units. At the beginning of the fighting in Burma, the Japanese faced only a few dozen British aircraft from No. 221 Group RAF and a small contingent of "Flying Tigers" from the legendary American Volunteer Group (AVG).

The situation gradually improved, and by the autumn of 1943, under the command of the South-East Asia Air Command led by Air Chief Marshal Sir Richard Peirse, there were 48 RAF squadrons and 17 American squadrons deployed. By mid-1944, the number had increased to 64 and 28 respectively. The primary tasks of these units were supplying ground troops, conducting bombing and ground-attack missions, providing fighter

escorts, and carrying out patrol operations. Aerial reconnaissance was of course an indispensable part of operations, but aircrews were also assigned duties such as spraying insecticides to improve the living conditions of soldiers on the ground.

It may not be surprising that the British 14th Army fighting in Burma, nicknamed "The Forgotten Army," was considered "the the most air-minded army that ever existed."

By 1944, the Japanese Army air units in the region were already significantly weaker in numbers, and their aircraft lagged behind those of the Allies. Nevertheless, Japanese pilots remained dangerous opponents, as they mostly faced smaller, isolated engagements and did not suffer the extensive, devastating aerial battles that their naval comrades experienced around places such as Rabaul or the Marianas.

One of the American fighter units that reinforced other combat formations in the region was the 80th Fighter Group. Activated in February 1942, it arrived in India by sea in May 1943 and was assigned to the 10th Air Force. Initially it was equipped with P-40s, and in 1944 it transitioned to the P-47 Thunderbolts. One part of the 80th FG, the 459th FS, equipped with twin-engine P-38 Lightnings operated largely independently from the rest of the group and in 1945 was reassigned to the 33rd FG. If this separate squadron is excluded from the group's tally, the core of the 80th F, consisting of the 88th, 89th, and 90th Fighter Squadrons together with group headquarters, achieved 44 confirmed aerial victories, with 4 more aircraft probably destroyed and 27 damaged.

During its operations, the 80th Fighter Group wrote off approximately three hundred P-40 and

P-47 aircraft, and twelve of its pilots went missing in action. The only ace of the 80th FG flying single-engine fighters was 1st Lt. Samuel Eugene Hammer of the 90th FS, with five victories. Flying a Curtiss P-40 in March 1944, he scored two Ki-49 Helen heavy bombers, and in December of the same year he added three Ki-44 Tojo fighters while flying a Thunderbolt.

Striking white skull drawings soon appeared on the noses of the Curtiss P-40s of the 80th FG, giving the group its nickname, the "Burma Banshees." This name was reinforced by some pilots and mechanics who mounted air-driven sirens under the aircraft, producing a characteristic wailing sound. According to Celtic legends, the banshee, a female spirit, emits a terrible ear-piercing wail.

Gareth Hector's artwork portrays an aerial combat scene involving four pilots of the 89th FS on May 17, 1944, after they had bombed a bridge near Kamaing. They were attacked by about a dozen Ki-43s of the 204th Hikō Sentai. In the fierce dogfight, Lt. Philip R. Adair claimed two Oscars shot down, Lt. Thomas E. Rogers claimed one more and another one damaged, and Lt. Joel A. Martinez claimed two damaged. Two American aircraft were damaged and one pilot was injured, but both P-40s made it back to base. The Japanese suffered no losses and after the engagement claimed four P-40s shot down.

Lt. Philip R. Adair ended the war with three confirmed victories and three damaged aircraft to his credit. His aircraft is the one depicted on the box art.

Against the Stukas on Eagle Day

Text: Jan Bobek

Illustration: Piotr Forkasiewicz



The Battle of Britain is one of the legendary milestones of the Second World War and also the first battle fought entirely by air forces. From the RAF perspective, it began on July 10, 1940, and lasted until the end of October 1940. Its international impact is amplified by the fact that pilots from thirteen other countries fought on the RAF side. From the German point of view, the battle began almost a month later and ended with their first military failure since the outbreak of the war. After earlier fighting over the Channel, German command launched the Battle of Britain on 8 August 1940, with the start of the so-called "intensified air war against England" (verschärfte Luftkrieg gegen England), which lasted until the end of October 1940.

The Germans launched "Operation Eagle Attack" (Unternehmen Adlerangriff) on August 13, 1940, after two days of extensive air battles over England. The day had the code name "Eagle Day" (Adlertag) and brought a shift in German strategy. Instead of focusing on naval convoys, the Germans intended to systematically destroy airfields and other infrastructure of RAF Fighter Command. The selection of targets, however, suggests that Luftwaffe intelligence and strategic planners did not understand the purpose and importance of many RAF bases.

The long-planned Adlertag went awry for the Germans right from the start. The raids were supposed to begin in a coordinated manner at 07:00, but heavy cloud cover, ground fog, and poor visibility over occupied northern France hindered their execution. Although a recall order was issued, not all bomber units received it. The result was a series of isolated raids, some without fighter escort and sometimes without

even reaching the target. After the official renewal of the Adlertag order, the most concentrated series of raids began after noon, though again complicated by clouds and navigation issues. During this phase of the day, Stukas formed a significant part of the bombing forces.

Crews of St.G 1 and II./St.G 2 were assigned to strike Warmwell and Yeovil, but due to weather they ended up over Portland. Their escorts were Bf 109s from I. and II./JG 53 "Pik As." Their colleagues from JG 27 escorted a large formation of Stukas from St.G 77, while the fighters of JG 26 "Schlageter" provided free-hunt fighter cover for the Stukas of IV.(St)/LG 1, whose target was Detling. The latter formation hit its target very successfully and without losses. A total of 22 aircraft were destroyed on the ground, 67 service personnel and civilians, including the station commander Gp Capt. E. P. Meggs-Davies, were killed, and more than 40 people were wounded. The Coastal Command base was temporarily put out of action, but the strategic significance of the raid was minor, since the airfield did not fall under Fighter Command. The success can be attributed in part to cloud cover, which made it harder for defenders to spot the Stukas, and also to the freie-Jagd cover of all three Gruppen of JG 26, which were used together in action for the first time.

The difficulty of escorting dive bombers is described in the memoirs of Günther Rall (275 victories): "Escorting Stukas over the Channel could be likened to trying to get a family of hedgehogs across a highway. Stukas flew horizontally at some 250km/h, which wasn't much more than a fully loaded and fueled Bf 109 needed just to stay in the air...on the highway,

you can only save the hedgehogs by stopping traffic as far away as possible, and not by zigzagging through traffic with them."

The raid of II./St.G 2 went very differently. They were to be protected by free-hunt of JG 53, but the escort became entangled with RAF aircraft, lost situational awareness, and part of the escort arrived behind the bombers with several minutes' delay.

Pilots of Spitfires from No. 609 Squadron RAF, including Polish airmen, took advantage of this situation and attacked the Stukas near the Solent. They claimed nine bombers shot down for certain, three probably destroyed and three damaged. In reality, six Ju 87s were shot down, mostly from 5. Staffel.

One of the British pilots who scored victories in this action was F/O John Charles Dundas, DFC & Bar. His aircraft is depicted on the box art of the kit. This outstanding pilot was killed on 28 November 1940, in an air battle in which Kommodore of JG 2 Helmut Wick was also lost. Dundas's brother, Hugh Spencer Lisle Dundas, also fought in the Battle of Britain, survived the war, was awarded CBE, DSO & Bar, DFC, and was later knighted.

From 13 to 18 August 1940, German fighters (flying Bf 109s and Bf 110s) claimed 386 aerial victories, while losing 61 Bf 109s and 70 twin-seat Bf 110s shot down or heavily damaged. During less than a week, the Luftwaffe lost 93 twin-engine bombers and 42 Ju 87 Stuka dive bombers. The Ju 87s were no longer employed over Britain. However, this was not because of the losses, which were quickly replaced, but because of their short operational range.

spruebrothers.com

**Is North America's
Largest & Only
* Full Line Dealer For
eduard**

With more than **9000 SKUs** **IN STOCK!**

*ALL ORDERS SHIP IN
ONE BUSINESS DAY
OR LESS!*

ESTABLISHED 2004

**Sprue
Brothers
Models LLC**

** with the exception of Eduard apparel and posters which we do not stock.*



Our warehouse in Liberty, Missouri, USA

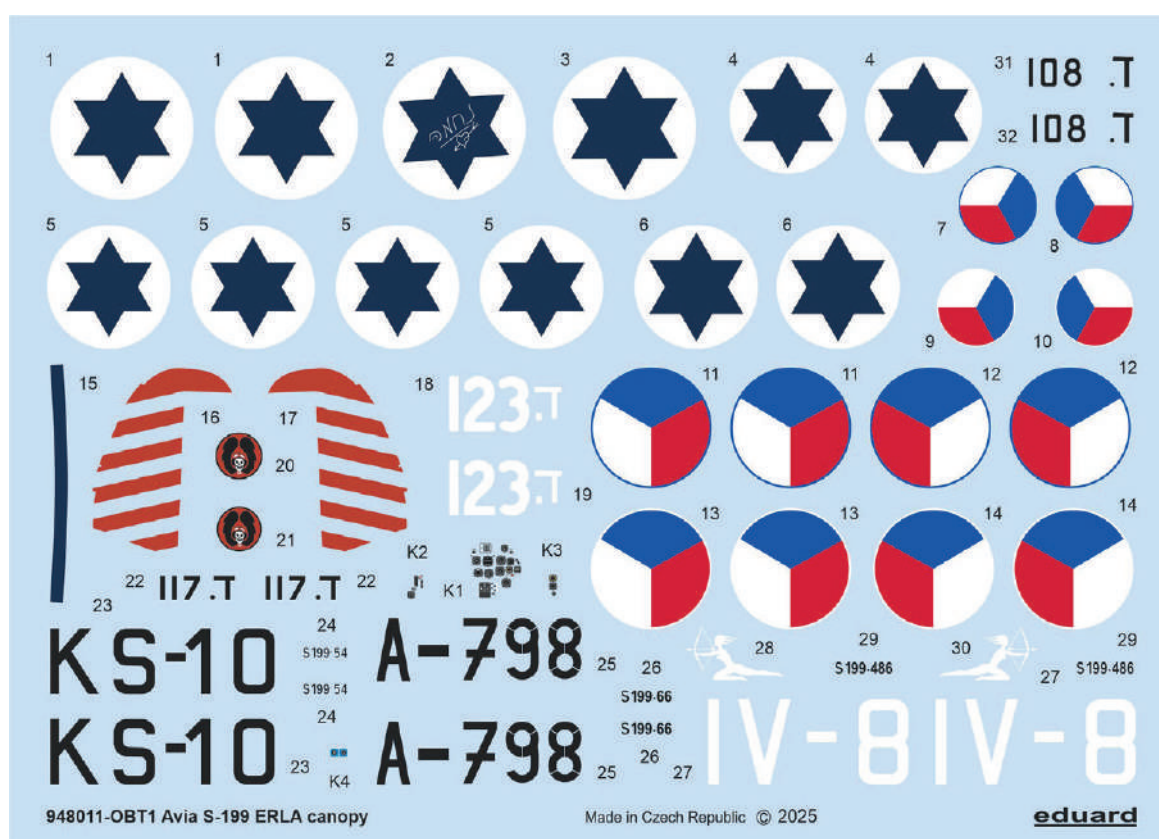
Avia S-199 ERLA canopy

1/48

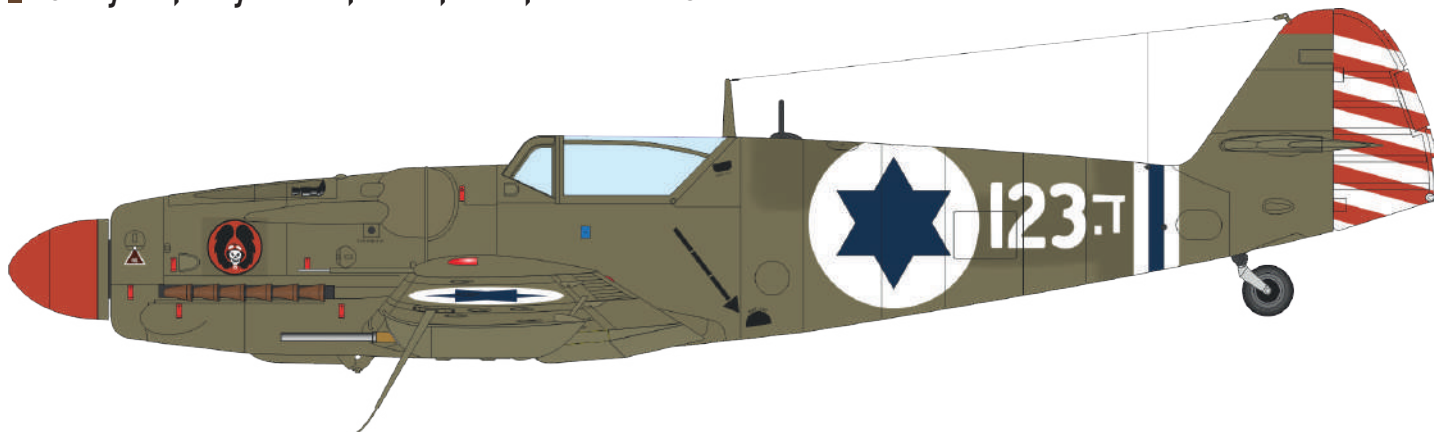
#948011

HYBRID edition kit of Czechoslovak single engine fighter Avia S-199 with ERLA canopy in 1/48 scale.

- plastic parts: Eduard
- marking options: 6
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes, TFace
- resin parts: yes, cockpit, wheel wells, exhausts, barrels, antennas, air intake

[Product page](#)


■ 101 Tayeset, Cheyl Ha'avir, Hatzor, Israel, October 1948

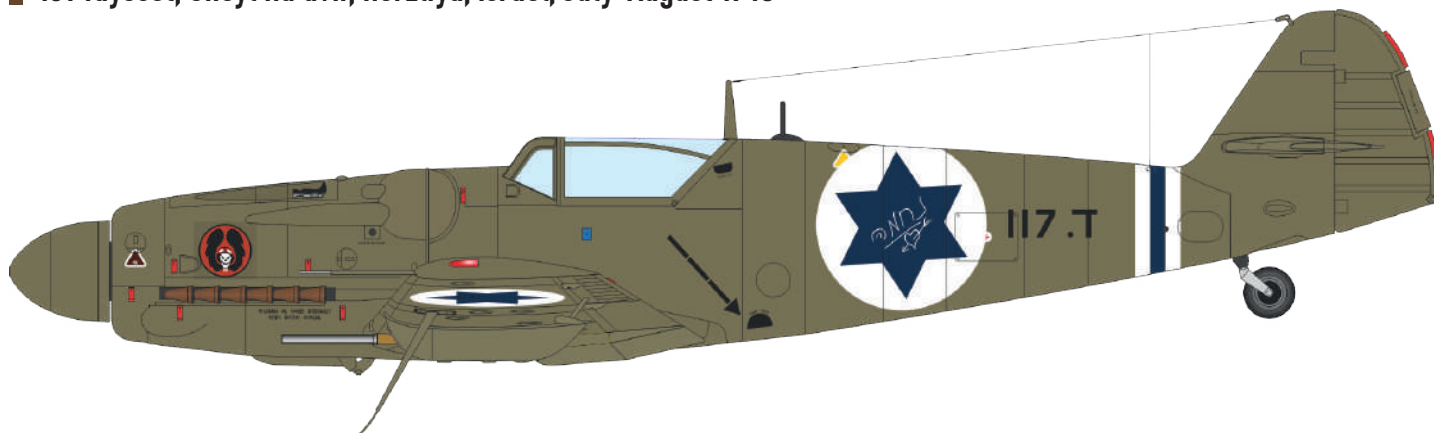


The aircraft coded D-123 was delivered to Israel on July 28 on board Balak Flight No. 79 and joined the action on August 15, 1948. A month prior to entry into service, ex-USAAF volunteer pilot Stan Andrews drew up the 101 Tayeset's (Squadron) insignia of a winged skull of death wearing a flight helmet and goggles. The skull symbolizes the Jewish faith's belief in the rising of the dead to form a large army when the messiah comes to earth. The insignia was printed on paper and applied to the left side of the nose of 101 Tayeset's

planes. In preparation for Operation Ten Plagues (October 15-22, 1948), later renamed Operation Yoav, 101 Tayeset fighters obtained high visibility markings consisting of red spinners and red and white stripes on the rudders in order to distinguish them from Egyptian aircraft. More to it, the Star of David roundels were applied atop the wings for the first time. During Operation Yoav, Rudi Augarten claimed a Royal Egyptian Air Force Spitfire Mk.IXc flying D-123 on the first day of the offensive, on October 16. The kill was

not confirmed by IAF intelligence. In November, D-123 was given the number 1905 as part of the introduction of a new military aircraft marking system. There are a few repairs to the fuselage that appear darker areas on photos of D-123. This has led some researchers to believe the aircraft received a two-tone camouflage. However, it is merely a contrast of older and newer paint of the same shade of green

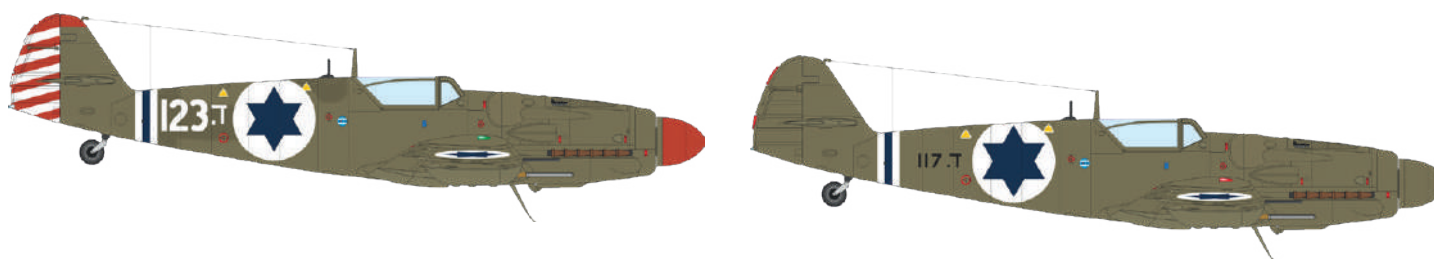
■ 101 Tayeset, Cheyl Ha'avir, Herzliya, Israel, July-August 1948



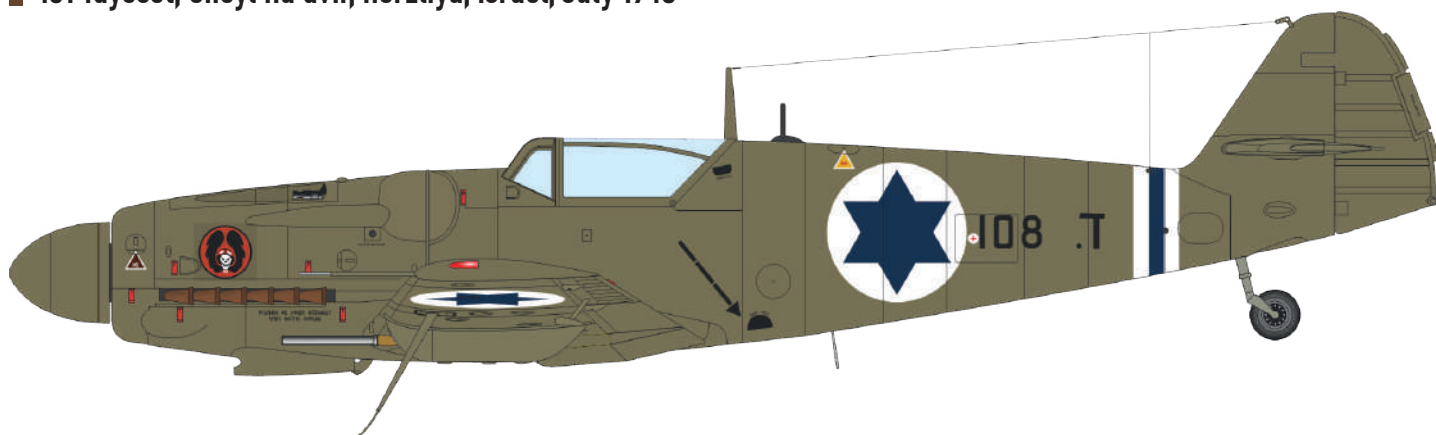
One of the "Messers", as these aircraft were dubbed in Israeli use, that survived the First Arab-Israeli War, was this aircraft coded D-117. It was delivered on July 15, 1948, aboard Balak Flight No. 63 and made its first operational sortie on July 21. In the summer of 1948, 101 Tayeset's (Squadron) lead mechanic, Eli Reuveni fell in love with his sweetheart named Nechama. He commemorated this occasion with a photograph in which he posed next to "Messer"

D-117 with Nechama's name chalked atop the airplane's Star of David; Nechama went on to become his wife. However, D-117 had a less romantic future, suffering its first accident on August 20, 1948, when Mitchell Flint flipped it over onto its back in a crash landing. Further serious fuselage damage occurred on October 17 when, after being hit by ground fire, Giddy Lichtman made a forced landing at Aqir Air Base. Along with the repairs made to the airframe,

D-117 was also fitted with a high-resolution camera to conduct photo reconnaissance missions. In November 1948, the Israeli Air Force changed its alpha numeric aircraft numbering system to a four-digit identification number, and D-117 was renumbered 1901, where 19 stood for the airplane type and 01 for the first airframe on the squadron list.



101 Tayeset, Cheyl Ha'avir, Herzliya, Israel, July 1948



D-108 was part of the first shipment of S-199s from Czechoslovakia to Israel to be deployed in combat in the Arab-Israeli War of 1948. D-108, as can be inferred from its designation, was among the last examples to arrive in the first series, and thus missed the very first missions of the Israeli S-199s. D-108 was fully assembled and ready for combat within the 101 Tayeset (Squadron) sometime in early June, along with D-107 and D-109. At the time of their assembly, the Israeli Air Force had only five operational S-199s. To avoid Egyptian air raids, the 101st

Squadron moved to an improvised dirt airstrip near the town of Herzliya. Mitchell Flint crashed D-108 on August 21 during landing, and this incident put the aircraft out of service for a significant part of the war. The accident also marked the end of Flint's service with the unit. D-108 was returned to service after extensive repairs on November 21, when the 101 Tayeset was transferred to Qastina. At that time, the numbering system in the Israeli Air Force was changed, and D-108 was given the designation 1906. With this designation, it participated

in Operation Horev at the end of December 1948. Among other things, it accompanied the Beaufighter TF Mk.X during the attack on El Arish airport on December 24, and the Spitfire D-130 during a photographic reconnaissance mission over Gaza. At the end of the war, it was one of four operational S-199s that survived the Arab-Israeli War and the only one to survive from the first series of S-199s delivered. It was finally scrapped sometime after October 15, 1950.

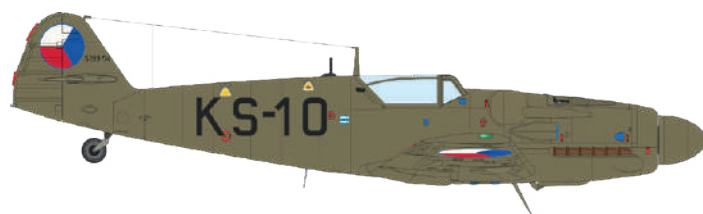
S-199.54, Sgt. František Novák, Fighter Training Center, No. 2 Squadron, Aviation Regiment 4, Planá u Českých Budějovic, Czechoslovakia, May 1948



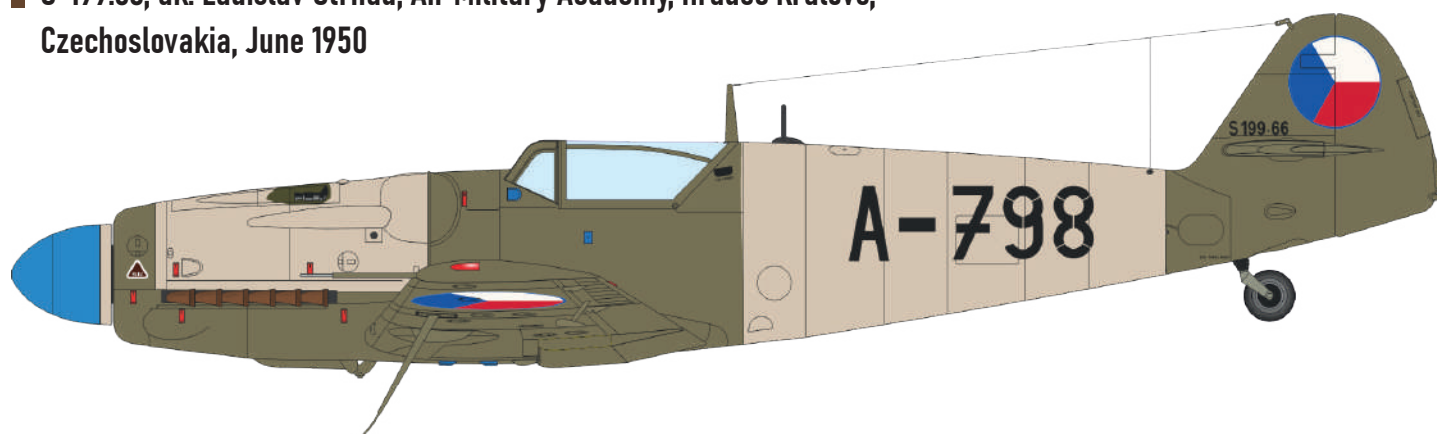
After the communist takeover of Czechoslovakia, military pilot defections to the West were nothing unusual. Former RAF members, who either suspected or even knew that they would be persecuted by the communists, crossed the border and many younger pilots also decided to leave the country. One of them was Sgt. František Novák, at that time a trainee

of the second class from the Fighter Training Centre (SVS), who fled to then West Germany on May 24, 1948. The aircraft was stored in Munich and, after various obstacles were ironed out, was transported to Czechoslovakia by land in March 1950. From March 31 until October 24, 1950, there was a general overhaul at the Avia factory. Later it served with LP 4 (Aviation

Regiment 4). The Avia produced aircraft bore the standard MNO Smalt Avion 2036.02 paint scheme on all surfaces and this aircraft was the tenth Avia factory production piece to be fitted with a heat exchanger instead of the original oil cooler. The canopy was of the older design, and the aircraft did not have machine guns in the wings, nor underwing cannons.



■ **S-199.66, ak. Ladislav Strnad, Air Military Academy, Hradec Králové,
Czechoslovakia, June 1950**

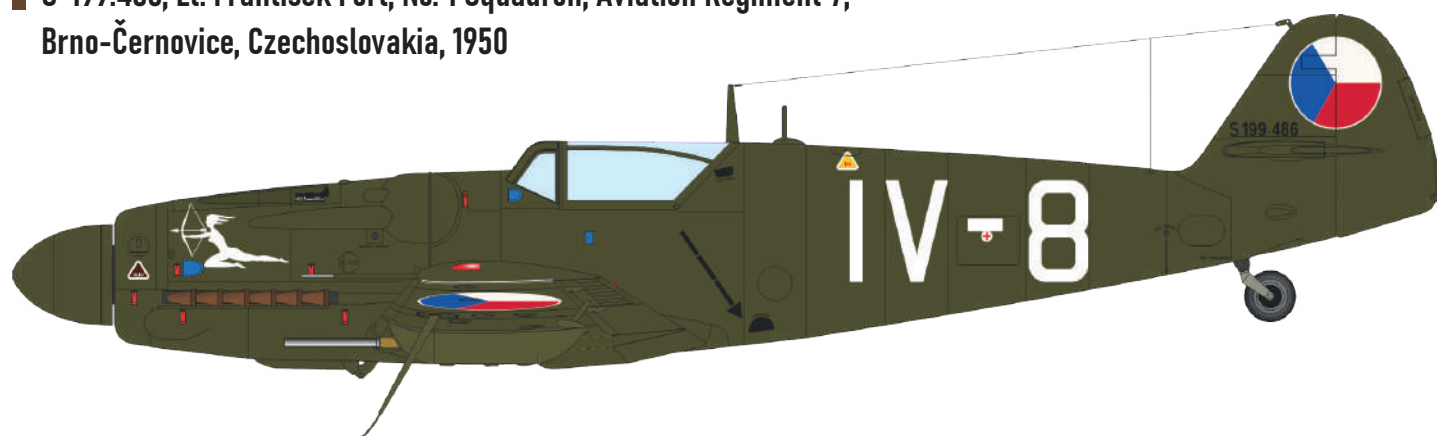


This aircraft was assigned to Air Regiment 7 on August 4, 1948. On May 10, 1950, it was sent to the LVA (Air Military Academy), where it was damaged during take-off from the Pardubice airfield. A good quality photo of this crashed aircraft exists and shows very interesting coloring, as the rear fuselage and engine cowls are clearly different shade of lighter color compared to the original green. There might be several reasons about this aircraft's colors. We believe there were probably some minor

repairs needed on the rear fuselage (or just overpainting of original user's code) and as the LVA probably did not have the standard green color the tan color intended for C-104s was used. As there was also a need to change the engine cowl at some point, the cowl from a dark green aircraft was used and overpainted in the same color as the rear fuselage to keep the aircraft in some color "order". But the new coat chipped around the machine gun barrels and the darker green surfaced there. Also, the right

slat is clearly dark green color. The question mark hangs over the national insignia on upper wing surfaces. On the photo it seems like they were not painted there, but it might well be only due to the over exposition of the surface under the direct sun. Interesting is also the obvious absence of most of the stencils. The front of the fuselage and wings were quite worn out, while both green and rear tan part of fuselage looks like new. The engine cowl sports some chipping and repairs in contrast.

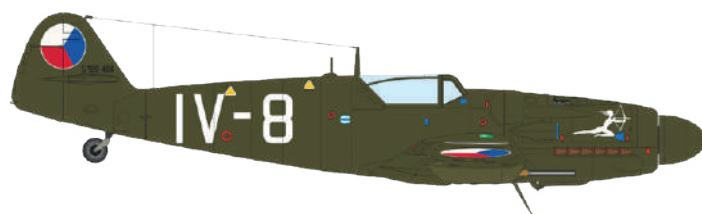
■ **S-199.486, Lt. František Fořt, No. 1 Squadron, Aviation Regiment 7,
Brno-Černovice, Czechoslovakia, 1950**



This "Mezek" was test flown by factory pilot Antonín Kraus on December 12, 1949. On January 24, 1950, the aircraft was taken over by the military administration and assigned to LP 7 (Aviation Regiment 7) stationed at Brno-Slatina airport on February 7 of the same year. It was coded IV-8 and, according to the memories of veterans and unit logs, it sported a drawing of Diana carrying her bow. The author of the drawing was the

fiancée and future wife of the deputy Squadron Commander and Flight Commander František Fořt. According to period witnesses, the same emblem also appeared on the aircraft of two other Flight Commanders, Lieutenants Jaro-mír Jech and Jiří Váňa. As is mentioned in the unit memoirs, more S-199s were equipped with various emblems, at least for a certain period of time. They are even documented in the said

memoirs, but it is not clear to which specific aircraft they refer to. The aircraft was probably painted with darker green paint on all surfaces. At that time, the white of the spinner belonged to the aircraft of Air Division, to which LP 7 and LP 8 (Aviation Regiments 7 and 8) belonged, but not all aircraft were so marked, and IV-8 was probably one of these. There is no photographic evidence, unfortunately.



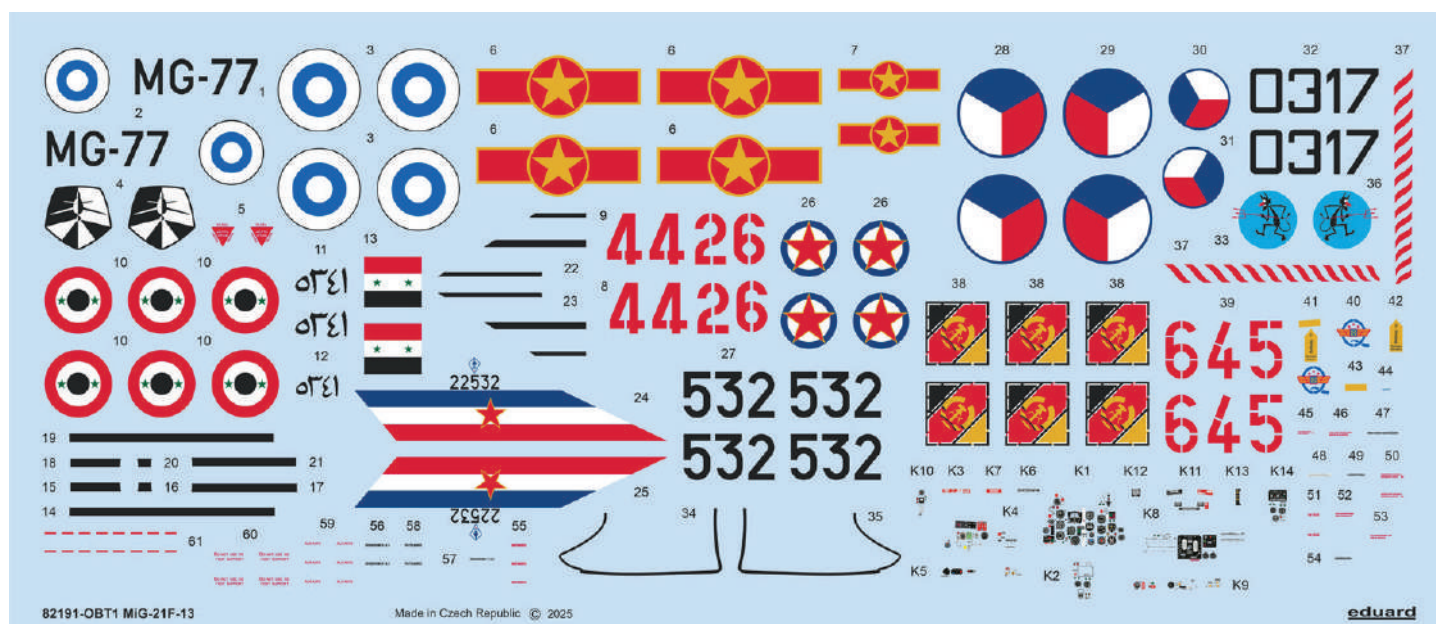
MiG-21F-13

1/48

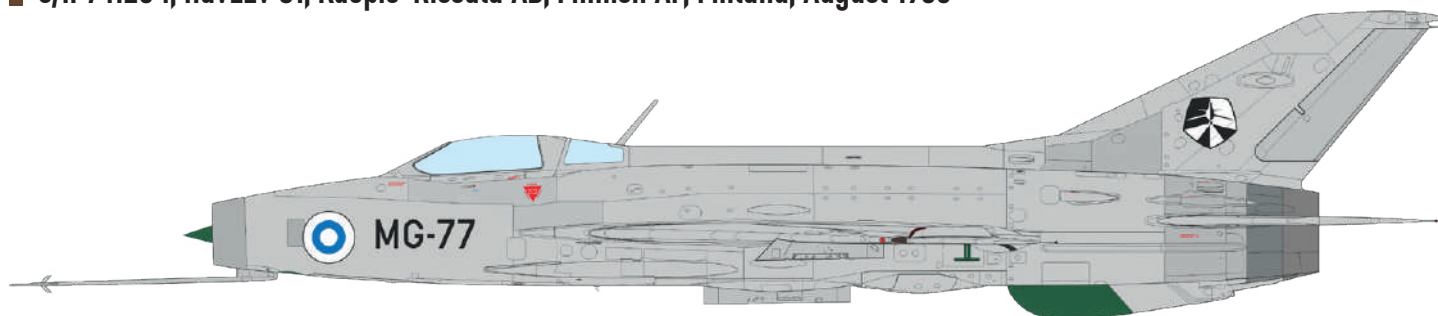
#82191

The ProfiPACK edition kit of Soviet jet plane MiG-21F-13 in 1/48 scale. The kit offers markings for 6 aircraft used in different countries around the world..

- plastic parts: Eduard
- marking options: 6
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: no

[Product page](#)


■ s/n 741204, HävLLv 31, Kuopio-Rissala AB, Finnish AF, Finland, August 1985

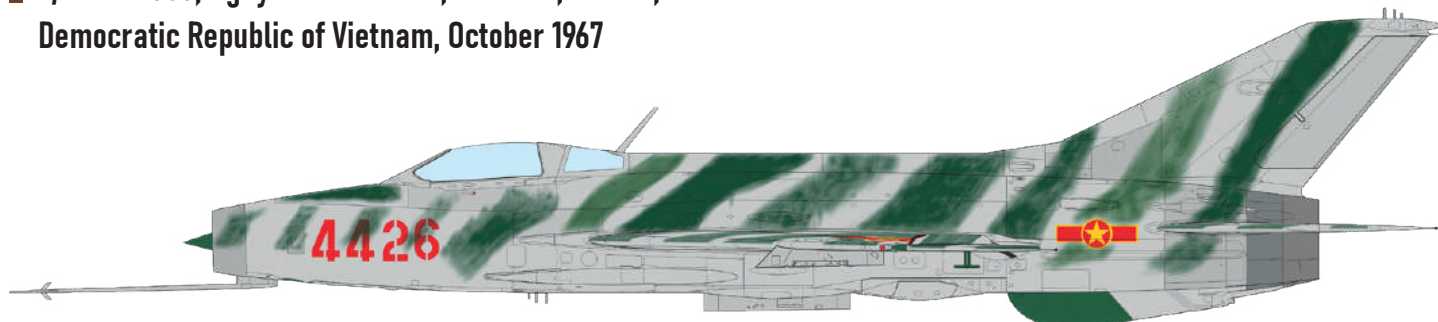


Finland replaced its de Havilland Vampire and Folland Gnat aircraft with MiG-21s in the early 1960s, becoming the first non-communist European country to use this type. The first ten MiG-21F-13s were delivered to Suomen ilmavoimat (the Finnish Air Force) in April 1963, with another 11 following in November of the same

year. Between 1971 and 1973, nine MiG-21F-13s were converted into reconnaissance versions. HävLLv 31 in Kuopio-Rissala began gradually replacing its F-13s with new MiG-21bis at the end of 1978. The last flight of the Finnish F-13 version took place in January 1986. The aircraft with the fuselage number MG-77 was delivered

in November 1963. It made its last flight on August 16, 1985. After being decommissioned, it served as a dummy with the number MG-127 in Pirkkala and was later transferred to the Aviation Museum in Vantaa.

■ s/n 74211503, Nguyen Nhat Chieu, 921st FR, Sao Do, Democratic Republic of Vietnam, October 1967

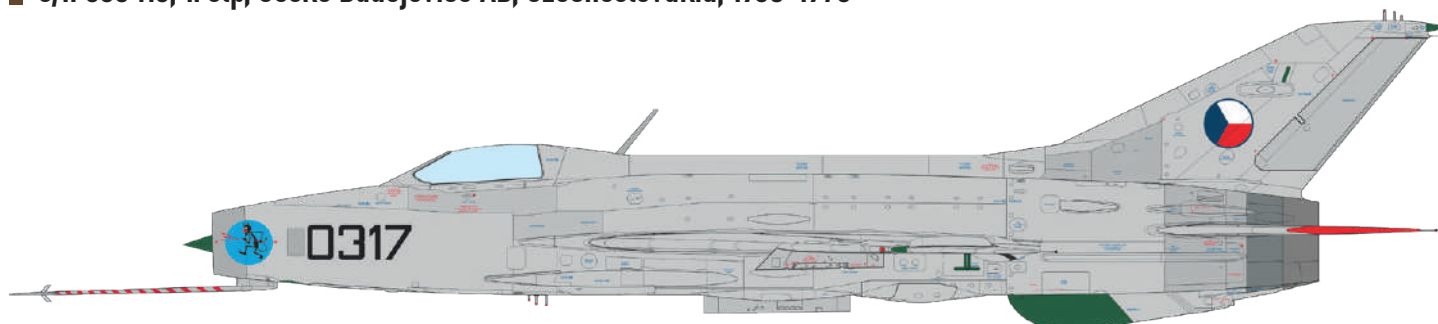


The Vietnamese People's Liberation Army Air Force acquired its first MiG-21F-13s in 1966. The first dogfight in which North Vietnamese MiG-21s clashed with American aircraft took place in February 1966. In March of the same year, two American Ryan Firebee unmanned aircraft were destroyed, but the first aerial victory for

Vietnamese pilots was not achieved until June 9, 1966, when two F-4 Phantoms II were shot down by several MiG-21s. On October 29, 1967, pilot Nguyen Nhat Chieu used a green-camouflaged MiG-21F-13 with tactical number 4426 in a dogfight in which he shot down an American F-4 Phantom II over the Nam Dinh-Ninh Binh

area. It was Chieu's sixth aerial victory, although according to USAF records, no Phantoms II were lost on that day. During the Vietnam War, 67 American fighter aircraft were shot down by MiG-21s, while the US Air Force shot down 86 MiG-21s. Thirteen MiG-21 pilots achieved fighter ace status between 1967 and 1972.

■ s/n 660416, 1. slp, České Budějovice AB, Czechoslovakia, 1968-1970

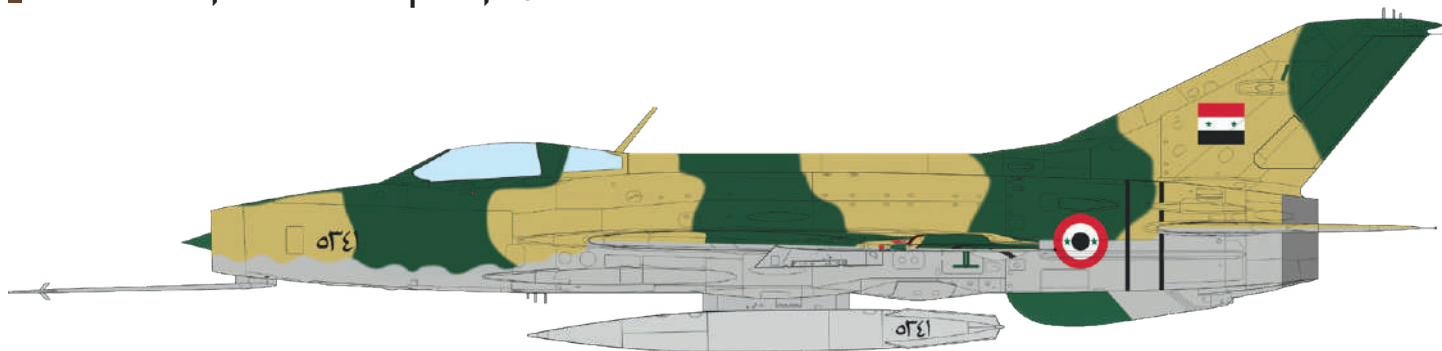


The easing of the political atmosphere in the spring of 1968 was also reflected in the coloring of some Czechoslovak MiG-21Fs. Members of the 1 Fighter Wing in České Budějovice were the first to design their own insignias. While the insignias for the MiG-21PF and PFM fighter squadrons for operations in difficult weather conditions and at night featured typical nocturnal animals like

a bat and an owl, the first training squadron chose the symbol of a devil with a pitchfork against a clear blue sky. The author of the design was Miloslav Martenek, later known for his cartoons and illustrations. The inspiration for the drawing was the strict squadron commander, Major Jan Jansa. It was said that serving under him was hell. His red nose was also an

inspiration for the devil drawing. All the designs were approved on May 17, 1968, and then spray-painted onto the aircraft. The same symbol also appeared in a smaller form as a decal on the pilots' helmets. The devil drawing was used until August 20, 1970, when an order was issued to remove all such symbols.

■ Cairo-West AB, United Arab Republic, 1967

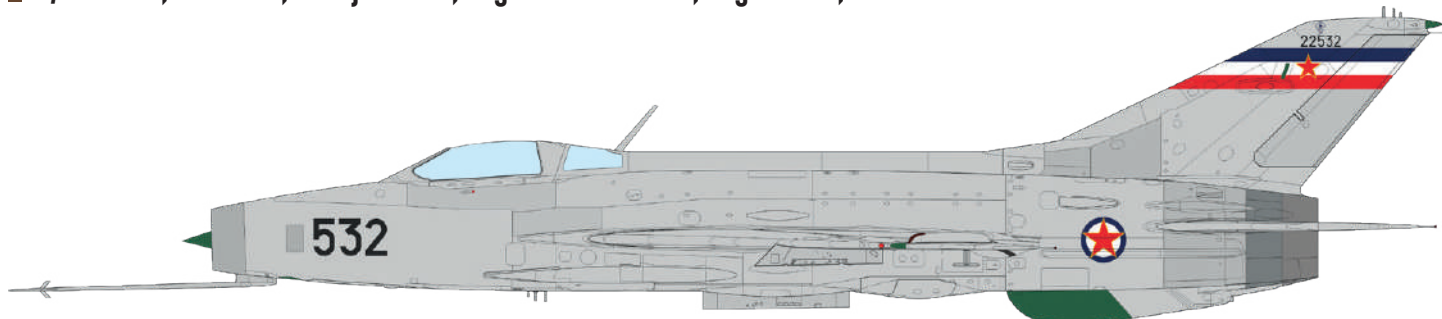


The MiG-21F-13 with fuselage number 5341 came from one of the first series of MiG-21F-13s delivered to Egypt before the Six-Day War and was one of 22 aircraft of this type that survived

the Arab-Israeli War in June 1967. After the war, it was camouflaged using automotive paint. This was applied around the black identification stripes located on the rear of the fuselage and at

the wing tips. The auxiliary fuel tank was usually left unpainted but bore the aircraft's black serial number (5341) on its side.

■ s/n 22504, 204. LAP, Batajnica AB, Yugoslav Air Force, Yugoslavia, 1962

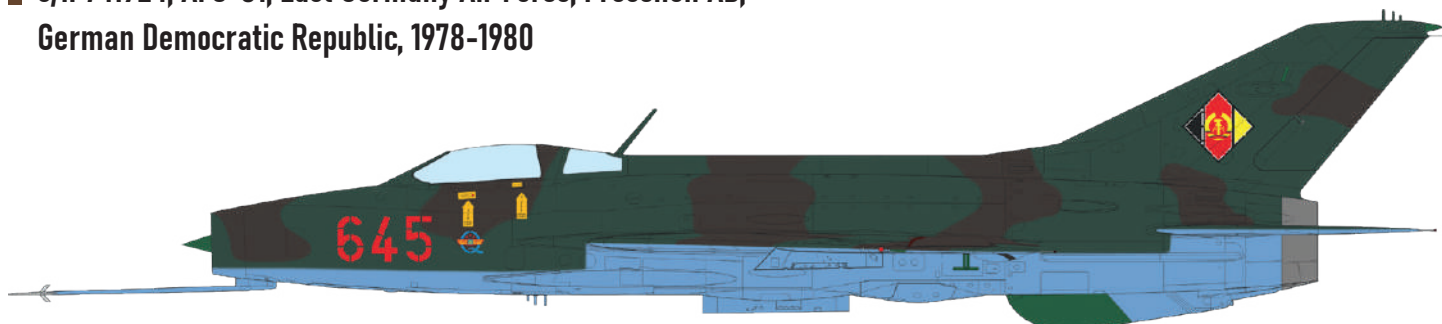


The MiG-21F-13 JRViPVO (Ratno Vazduhoplovstvo i Protivvazdušna Odbrana) aircraft bore registration numbers 22501 to 22541. The first five of them were delivered in September 1962. By the end of 1964, the rearmament of the 204 Fighter Regiment, consisting of three fighter

squadrons, each with 12 aircraft, was completed. In August 1968, the Yugoslav Air Force had 38 MiG-21F-13 aircraft at its disposal. The last flights were made in March 1980. The aircraft were subsequently maintained until May 11, 1981, when it was decided to decommission them.

During their service, the MiG-21F-13 aircraft flew 23,559 hours and 15 minutes. A total of 17 were destroyed, with 11 pilots losing their lives in various circumstances.

■ s/n 741924, AFS-31, East Germany Air Force, Preschen AB, German Democratic Republic, 1978-1980



The MiG-21F-13 entered service with the East Germany Air Force on May 4, 1962, when the first one landed at Neuhardenberg Air Base. A total of 76 aircraft of this type were delivered. The MiG-21F-13 stayed in active service with

the NVA only until 1974, when it began to be replaced by the more modern MiG-21PFM and MiG-21SPS. The aircraft with the red fuselage number 645 was part of Jagdgeschwader 3 (JG 3) and later JG 15. When it ended its service

with JG 15 in 1978, it served with AFS-31 and TAFS-47 as a tactical reconnaissance aircraft. The newly restored red 645 is currently on display at the Luftwaffenmuseum at Berlin-Gatow Airport.

For MiG-21F-13 1/48

RECOMMENDED:

481175	MiG-21F-13 upgrade set (PE-Set)
FE1556	MiG-21F-13 seatbelts STEEL (PE-Set)
644329	MiG-21F grey LööK (Brassin)
6481149	MiG-21F exhaust nozzle PRINT (Brassin)
6481151	MiG-21F wheels (Brassin)
6481154	MiG-21F PTB-490 fuel tank PRINT (Brassin)
3DL48249	MiG-21F-13 black SPACE (3D Decal Set)
3DL48250	MiG-21F-13 turquoise SPACE (3D Decal Set)
3DL48251	MiG-21F-13 seatbelts SPACE (3D Decal Set)
EX1142	MiG-21F-13 TFace (Mask)

#3DL48249



#3DL48250



#3DL48251



#644329



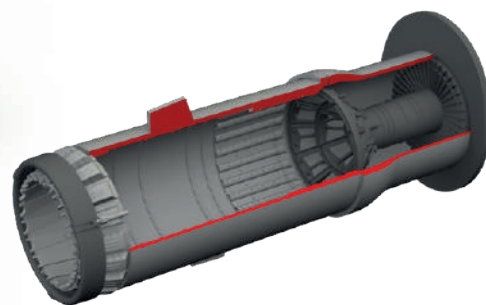
#6481154



#6481151

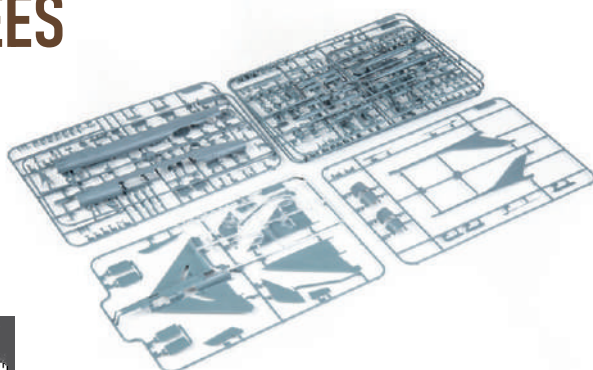


#6481149



OVERTREES

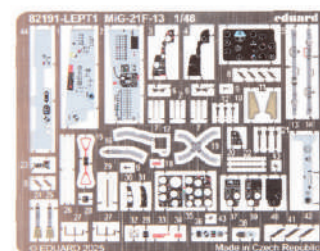
#82191X
MiG-21F-13
1/48



Product page

OVERLEPT

#82191-LEPT1
MiG-21F-13
1/48



Product page

P-40N Warhawk

1/48

#82242

The ProfiPACK edition kit of American WWII fighter aircraft P-40N Warhawk in 1/48 scale. The kit offers 6 marking options of USAAF, RAAF users.

- plastic parts: Eduard
- marking options: 6
- decals: Eduard
- PE parts: yes, pre-painted
- painting mask: yes
- resin parts: no

[Product page](#)
