

# HEINKEL He 112

in action



Don Greer



Aircraft Number 159  
squadron/signal publications

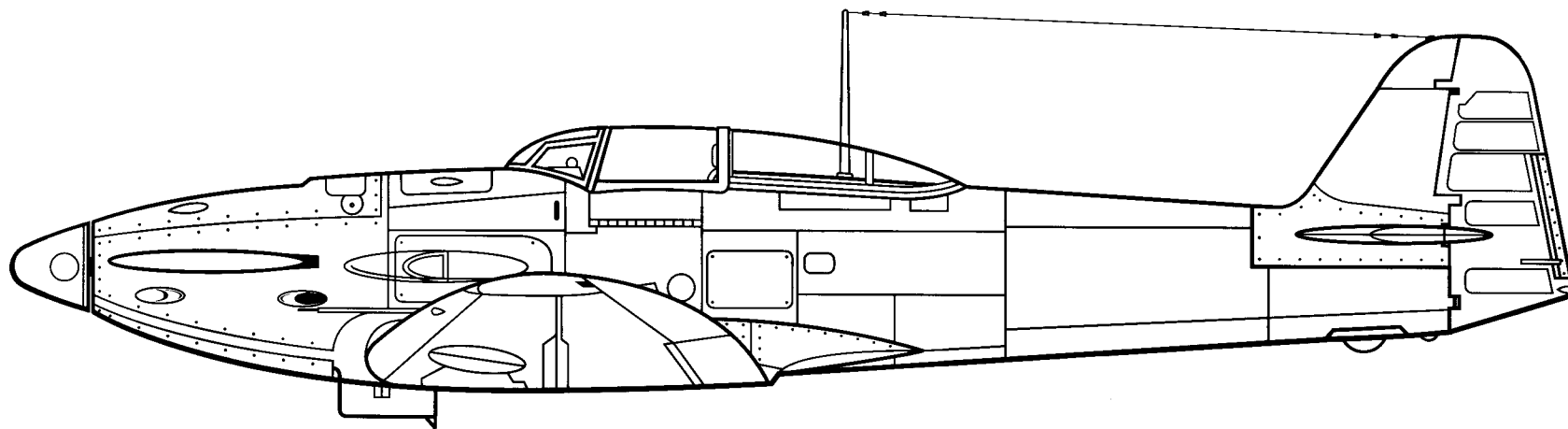
# HEINKEL He 112

By Dénes Bernád

Color by Don Greer

Illustrated by Joe Sewell & Randle Toepfer

in action



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Teniete Miguel Entrena Klett, flying He 112B-2 5-68, damaged a P-38F of the 14th Fighter Group, 12th Army Air Force, over Spanish Morocco on 3 March 1943, forcing it down on the shore of the Mulluya River.

## Acknowledgements:

I could not have fulfilled this task without the invaluable assistance of several people who spared no time and effort to contribute in compiling this, my first book written in English and who gave their whole-hearted support for my work.

My warm thanks go to Ferenc-Antal Vajda from Belgium, who helped me unravel the *He 112 puzzle* and gave moral support to my determination to follow the difficult path of rewriting a page of aeronautical history. My good friend and mentor, György Punka from Budapest, guided me in my first steps into the study of aviation. His encouragement and friendship means a lot to me. From Rumania, Valeriu Avram, Ion Tăralungă and Vasile Tudor offered invaluable information, particularly on the aviation history of Rumania, the country of my birth. Through the years, Dan Antoniu kept me supplied with photos and advice essential for my work. Ricardo García de Celis Borrell did a spectacular job writing the Spanish chapter, that he dedicates to his wife, Irma. Peter Petrick from Germany fascinated me with his seemingly endless collection of photos, which he so generously loaned me for this book. Similarly, Manfred Griehl performed flawlessly with his prints. Hans-Peter Dabrowski contributed in the 11th hour, with valuable new data and photographs. In Finland, Matti Salonen struggles with his never-ending listings of Luftwaffe aircraft accidents and losses. Through him I obtained a precious list compiled by Gerhard Stemmer of Hamburg, which strengthened the opinion that my ideas were correct. Mikio Aida was the sole contributor from Japan who responded to my repeated appeals. Chuck Davis from Westminster, Colorado helped to put my English in a literary form and according to U.S. standards.

Finally, I would like to hug my parents and my brother, Csaba, for their continuous support in my three decades of life. However, they are back home in Transylvania, *Erdély* for me, far away from here.

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To all of them, I address in my mother tongue, the Hungarian: *köszönöm*, thank you.

**Sleek, elegant and pleasant to fly, the fate of the He 112 was decided, not by its qualities, but rather by the *Führerprinzip*. The aircraft had fallen into disfavor and ended bypassed and left in a forgotten corner of aviation history. (Smithsonian Institute)**



# Introduction

## The He 112 Puzzle

Writing the story of the Heinkel 112 was both fun and, at the same time, a challenge. In the beginning, what looked to be a customary compilation of well-known data, previously published by the respected *Gurus* of Luftwaffe history, mixed with a few exotic facts and photographs from lesser known countries, evolved into an arduous job, with originality, surprises and revelations. It provoked sleepless nights and embarrassing moments, especially when I had to decide to follow the well trodden path or accept the risks of rewriting the story to maintain historical accuracy. I decided to accept the challenge. I am fully aware that this could bring on criticism from many of my colleagues and fans of German aviation. I am also aware that my name, full of accent marks, is not familiar to most readers (except those who have read "Horrido"), and will raise a few eyebrows. Yet, this story needed to be told. I owe this much to those who created and flew the Heinkel fighter, to the reader, and I owe it to myself.

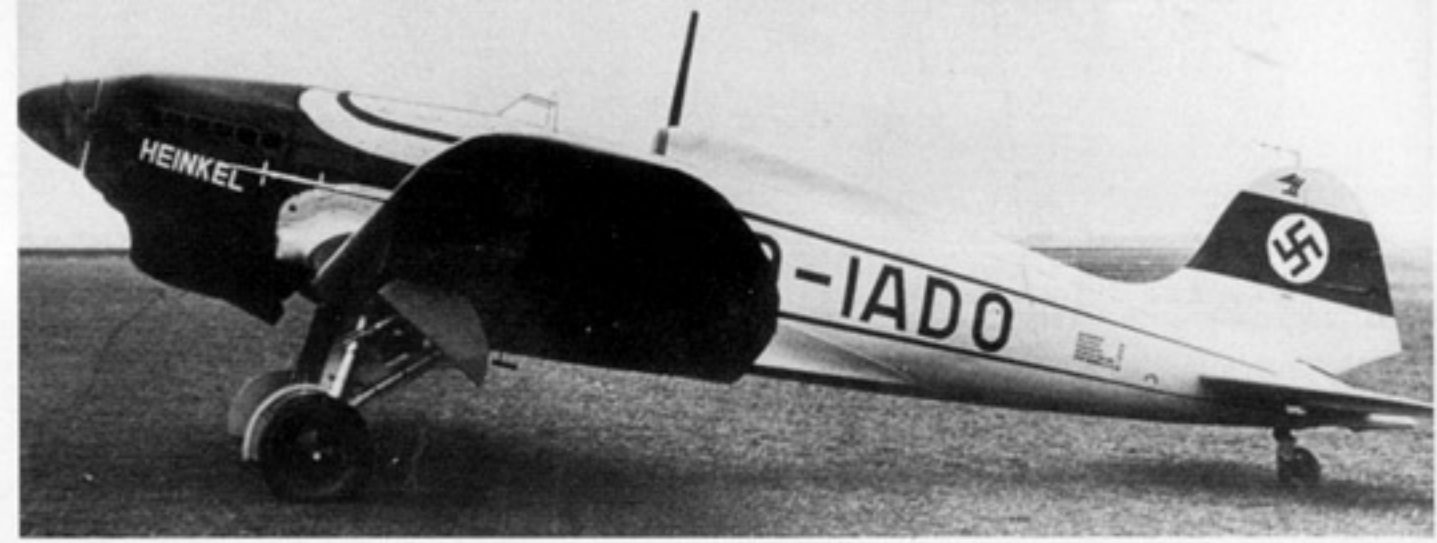
The He 112 fascinated me from the very beginning. It possesses something that makes an aircraft pleasant to view, even if one never flew it. It is simply beautiful. My affection peaked when I spoke with the pilots who flew it during war and peace. These people actually made history. Even though, at times, their memories faded when recalling events and details that happened some 50 years ago, one thing stood out loud and clear: they loved to fly the He 112! It was then that I decided to write the story for posterity.

Now, when my research came to a (temporary) end, a final conclusion can be ascertained: the Heinkel 112 is probably the least known German series-production fighter. There has been so much incorrect information published about it, so many myths and legends persist, that I believed a book entirely dedicated to the He 112, that traces the real career of this fine aircraft based upon available documents and eyewitness testimony, was justified. Today, the last words have finally been written, the file closed. All I can say is that it has been a demanding job, but one well worth the effort and tribulations.

Ernst Heinkel was one of the remarkable German aircraft designers whose influence was a determining factor during the rise of the fledgling Luftwaffe. He began his exceptional aviation career during 1911, well before the First World War, at the age of twenty-four. Heinkel worked at several of the preeminent aircraft manufacturers during these early years of aviation. On 1 December 1922, he founded his own company, the Ernst Heinkel *Flugzeugwerke G.m.b.H.*, at Warnemünde. Initially involved in design work and small run license production, by the early 1930s Heinkel began receiving foreign orders for the design and construction of floatplanes.

By the time the clandestine Luftwaffe emerged from its veil of secrecy, the Heinkel company was, by far, the most experienced German aircraft manufacturer. The first orders of the *Reichswehrministerium* were received, obviously, by the *Heinkel Werke*, for what was to evolve into a family of single-engine, two-seat utility aircraft, the He 45, He 46 and He 50. This ensured that Heinkel was firmly involved with the new Luftwaffe's expansion programs.

Ernst Heinkel's interest in fighter aircraft was first manifested during the late 1920s, when he received an order for a single-seat fighter from the Soviet Union. Designated the HD 37c (*Heinkel Doppeldecker*, Heinkel Biplane), the little fighter was manufactured under license in the USSR as the I-7 (I = *Istrebitel* or Fighter). The HD 37c was the first in a line of fighter



The He 112 V1 (D-IADO), with its large semi-elliptical wings, was an aerodynamically clean design. After the flight trials were commenced, it was repeatedly redesigned, eventually giving birth to the excellent He 112 V9, which bore little resemblance with the V1. But, it was already too late. (Griehl)

biplanes that culminated in the He 51.

The He 51 was the first fighter to display the dominant influence of the Günter twins, Walter and Siegfried, who were later largely responsible for the new line of Heinkel monoplanes, including the Heinkel He 112 fighter.

The aircraft that had a major impact on the design of the He 112, was not one of Heinkel's fighters but, uniquely, an aircraft conceived initially as a passenger aircraft! The He 70 *Blitz* (Lightning), with its elegant, flowing curves, oval-section duralumin monocoque fuselage, graceful elliptical wings and retractable undercarriage, established new standards in aircraft design elegance. Its lines can be found in several of Heinkel's later designs, including the aircraft that so nearly became the backbone of the Luftwaffe's *Tagjagdflotte* (day fighter force). It was a complexity of unfortunate political and economic events, all emerging in the same period, that prevents us today from familiarly speaking not about the "112", but about the "109".

## The Contest

In a personal letter, dated 20 October 1933, the recently appointed *Reichsluftfahrtminister* (Reich's Minister for Aviation) Hermann Göring confidentially indicated the need for a single-seat *Blitzschnelles Kurierflugzeug*. Even though he could not openly disclose his thoughts, it was clear that the "lightning-fast courier aircraft" was, in fact, a fighter.

In May of 1934, the *C-Amt* (Technical Office) of the *Reichsluftfahrtministerium* (RLM) headed by *General der Infanterie* Göring, issued a specification for a *Verfolgungs-jagdeinsitzer* (Single-seat Interceptor Fighter) to replace the outdated He 51 and Ar 68 biplanes. The relatively modest requirements called for a single-seat, single-engine all metalmonoplane, with a maximum speed of 248 mph (400 km/h) at 19,685 feet (4,000 m). This specification was issued to selected aircraft manufacturers, including *Ernst Heinkel Flugzeugwerke*, *Focke-Wulf Flugzeugbau* and *Arado Flugzeugwerke* [ironically, the appeal initially was not remitted to Dr.-Ing. Willy Messerschmitt's tiny *Bayerische Flugzeugwerke* (BFW), who joined later in the contest to finally emerge as victor], all with *Projektbüros* already experienced in designing fighters. Each of these firms were duly awarded a contract for three prototypes (V1, V2 and V3).

All three companies had completed their design work in less than a year and, by the end of 1934, the metal was being cut for the first prototypes. During the following Spring the work at Arado and Focke-Wulf was equally completed, and their V1s stood ready for their maiden



**The Messerschmitt Bf 109B-1 was structurally very similar to the early prototypes. Its clean lines and compact design made it fast and highly maneuverable. (Author)**

flights. The entirely new Messerschmitt and Heinkel designs proceeded at a slower pace and these prototypes were not rolled-out until May and September of 1935, respectively.

The Arado Ar 80 was a cantilever, low-wing construction with inverted gull-wings, fixed undercarriage and open cockpit. To compensate the drag caused by the mainwheel housings, a streamlined silhouette and low structural weight were anticipated. Miscalculations, however, resulted in a substantially higher weight than appreciated and, combined with the resultant higher wing loading, handling characteristics suffered greatly. The V1 crashed during early trials and was written off. Two additional prototypes were completed, but by this time the Ar 80 was excluded from the contest.

Focke-Wulf's entry, the Fw 159, was largely based on its successful predecessor, the Fw 56 *Stösser* fighter. The Fw 159's parasol monoplane layout was uniquely combined with a retractable undercarriage. It was this retractable undercarriage that proved to be the aircraft's Achilles heel. Extremely complex and not thoroughly tested, the landing gear was subject to failure. During its very first landing attempt, the V1 (w. Nr. 932) was damaged beyond repair. The V2 (W. Nr. 933) suffered from similar shortcomings, and by the time the third prototype (W. Nr. 1246) was completed, the Fw 159 was no longer given really serious consideration as a contestant.

Considered an outsider and late comer, the Messerschmitt Bf 109 was designed in record time to meet the time restrictions of the competition. The resulting aircraft was a cantilever, low-wing monoplane built of light metal. With its oval section monocoque fuselage, enclosed cockpit and retractable landing gear, the Bf 109 was the epitome of modern fighter aircraft technology. The single-spar, low-set wing was fitted with automatic Handley-Page type leading edge slats, an unusual feature for a fighter. The undercarriage was manually retracted outboard into the wing. Although it was designed to use the Jumo 210A, due to a shortage of engines, the V1 was powered, like its main rival, the He 112 V1, by an imported Rolls-Royce Kestrel, 12-cylinder engine. The first test flight proved that a real fighter with excellent handling qualities was born.

The Heinkel He 112 was inspired by its forerunner He 70 *Blitz*, and retained the semi-elliptical, low-wing and oval-section, monocoque fuselage conception. The wing was slightly gulled, and both the wing and fuselage were built of light metal alloys, patented as Dural and Electron. The stressed skin was flush-riveted. The deep section fuselage sported an open cockpit that afforded the pilot good visibility. In contrast to the Messerschmitt fighter, the He 112's wide-track, retractable undercarriage provided safe takeoff and landing characteristics. All these structural advantages, combined with adequate flying performances, placed the He 112 V1 as equal competitor to the Bf 109 prototype.

The four contenders competed in trials commenced in October of 1935 at *Erprobungsstelle* (E-Stelle, Test Centre) Rechlin and, later, at Travemünde. It was quickly evident that the



**The Ar 80 V2 (D-ILOH) was of mixed wood and metal construction, with a fixed undercarriage. Equipped with a Rolls-Royce Kestrel V engine, it was considered an outsider from the very beginning. (Petrick)**

Heinkel and BFW designs were far superior to the other entries. In fact, the Bf 109 V's top speed was 17 m.p.h. (27 km/h) faster than the slightly heavier He 112 V, but the latter presented an appreciably lower wing loading, by 3.529 lb/sq.ft. (17.23 kg/m<sup>2</sup>) less than the Bf 109V. In this way, the He 112's wing load was under the prescribed limit of 20.485 lb/sq.ft. (100 kg/m<sup>2</sup>), specification, well exceeded by the Bf 109. In other areas (flight stability and climb rate) the two prototypes were evenly matched.

Opinions were deeply divided among members of the Flight Acceptance Commission, who sponsored the contest. As an interim measure, development contracts were awarded in late October for fifteen zero-series aircraft of both designs. Notwithstanding, the He 112 with its excellent handling qualities remained favored to be the first monoplane to see service with the *Jagdfliegern*.

Further test flights were conducted at Travemünde until August of 1936 by Luftwaffe and RLM test pilots. Gradually, the pilot's opinions slowly toppled the scale toward the Bf 109. Being consummate pilots, they stressed the Bf 109's superior aerobatic qualities, over such items as ground stability, view from the cockpit while taxiing, structural robustness, ease of maintenance, etc.

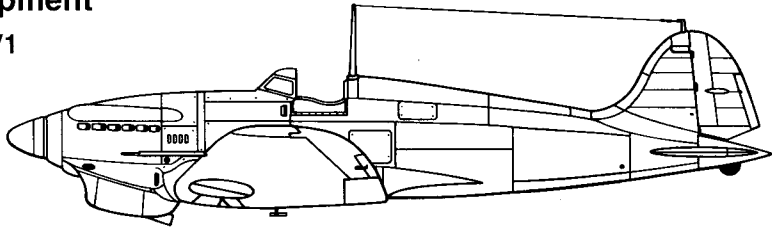
After a half century, we can speculate what would the outcome have been if the vastly improved He 112 V9, pattern aircraft for the B-0 series, that bore little if any resemblance to the V1, would have been compared to its counterpart, the Bf 109 V4 or the similar Bf 109B-01. The final decision, however, was made in mid-1936, not at the RLM but within the inner circles of Hitler's National Socialist Party, pressed by time to achieve their political goals. The resolution was in favor of the Messerschmitt design, easier to manufacture, with a considerable number planned to be ready in a record period, crucial to quickly re-equip the *Jagdgeschwadern*. In September of 1936, the RLM ordered seventy-six Bf 109s for the Luftwaffe. The Heinkel 112's fate had been sealed.

**The Fw 159 V2 (D-INGA) had exceptionally clean lines. Its parasol monoplane configuration was, however, passé by 1935 and its complex landing gear often failed. (Petrick)**

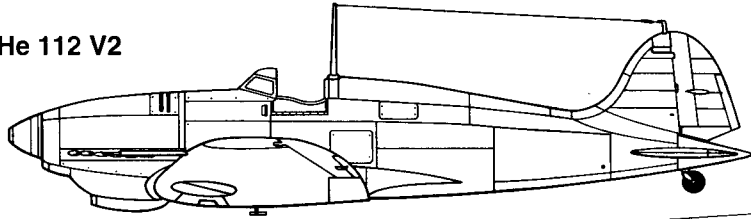


# Development

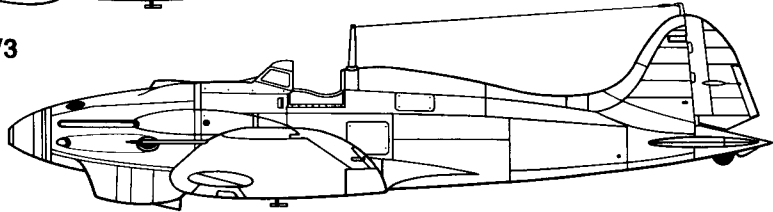
He 112 V1



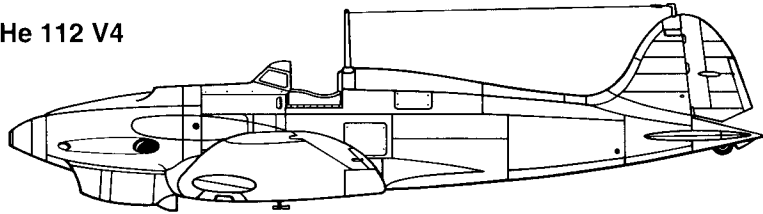
He 112 V2



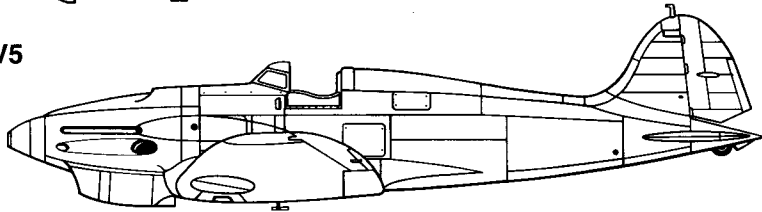
He 112 V3



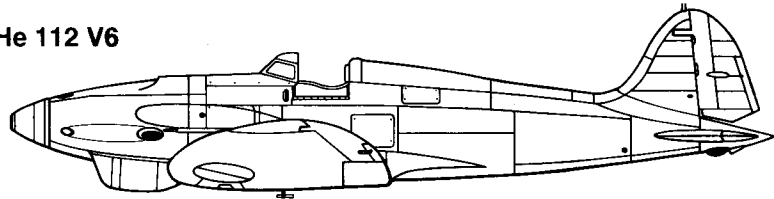
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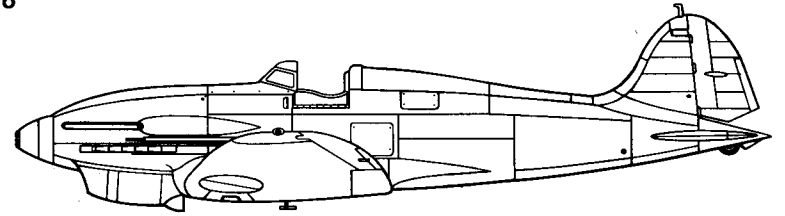
He 112 V5



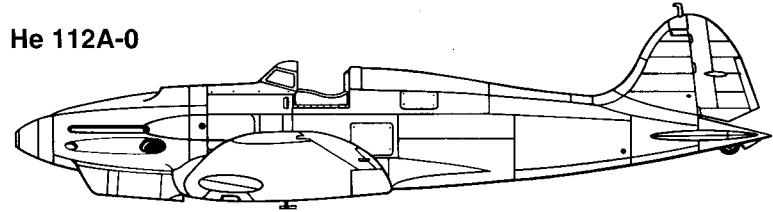
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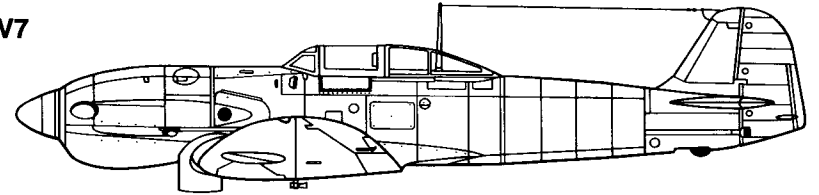
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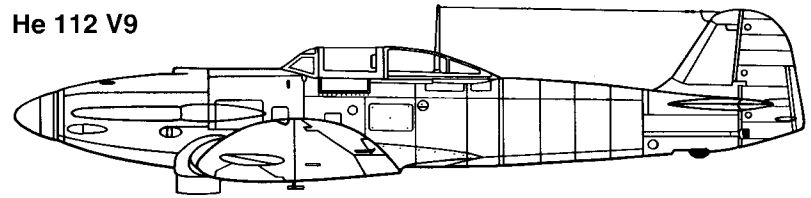
He 112A-0



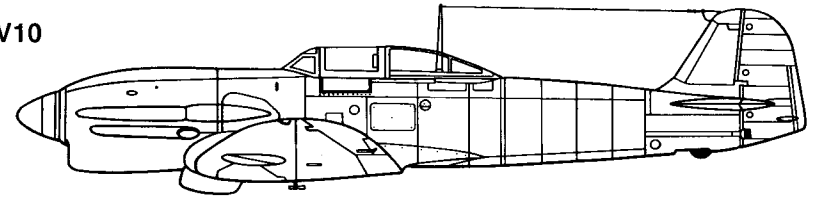
He 112 V7



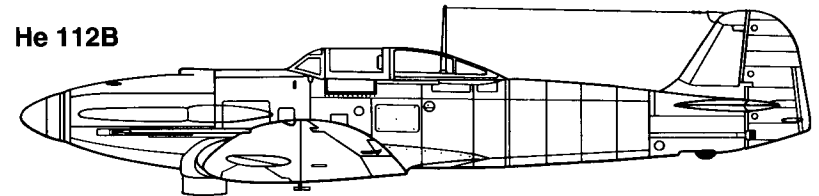
He 112 V9



He 112 V10



He 112B



# Prototypes and Development

In response to a contract submitted by the RLM to all aircraft manufacturers participating in the fighter contest, the *Ernst Heinkel Flugzeugwerke* built three prototypes of its competing model, the He 112.

The first prototype, He 112 V1 (*Werknummer*, or Construction Number 1290), was fitted with a British 695 hp Rolls-Royce Kestrel Mk. II.S, 12-cylinder, upright Vee, liquid-cooled engine. The aircraft had been finished on 1 September 1935, less than eighteen months after the contract was issued. *Flugkapitän* Gerhard Nitschke, Heinkel's chief test pilot performed the initial evaluation flights at the company's Marienehe test centre. Nitschke was generally satisfied with the prototype's handling characteristics, but it was soon ascertained that overall airframe drag was considerably higher than calculated. The inverted gull wing configuration and excessively large wingspan presented certain disadvantages as well. Nevertheless, the prototype's overall performance still met and even exceeded the RLM requirements, therefore it received the low-key approval of the test pilots who flew it.

In December of 1935, the He 112 V1, registered as D-IADO, arrived at the *Erprobungsstelle* of Travemünde, where further in-depth tests were conducted. Never before had a German airplane been subjected to such intensive testing. Meanwhile, the second prototype, He 112 V2 (W.Nr. 1291, D-IHGE) had been completed. It was test flown on 16 November 1935 by Kurt Heinrich, one of Heinkel's chief test pilots. This aircraft was fitted with the now available 640 hp Junkers Jumo 210C inverted-Vee, liquid-cooled engine. Slightly smaller and less powerful than the Rolls-Royce Kestrel, the Jumo 210C offered a more favorable aerodynamic shape than its chunky predecessor. Except for the German powerplant, a revised cowling and a three-blade propeller, the early V2 was identical with the first prototype.

After pouring over the results of the V1's initial test flights, the Günter brothers surmised that the oversized wing and thick, high-lift airfoil section presented a serious degradation of performance. They estimated that a reduced wing span and thinner profile will reduce detrimental aerodynamic drag and would increase speed by 15-18 mph (24-29 km/h), enough to catch up with their main rival, the Bf 109 V1's speed advantage. Therefore, prior submitting the V2 for official testing, the wing was redesigned. The tips were clipped and the wing root fillet was straightened. These modifications reduced the overall span by 3 feet 7.307 inches (1.10 meters) and wing area by 17.222 sq.ft. (1.60 m<sup>2</sup>). This was, however, a reduction of only 7-8%. The wing loading increased over the 20.485 lb./sq.ft. (100 kg/m<sup>2</sup>) limit set by the earlier RLM specification, from the original 20.475 lb./sq.ft. (99.95 kg/m<sup>2</sup>) to 20.997 lb./sq.ft.

The He 112 V2 was fitted with redesigned shortened wings. The colorful paint scheme was applied only on the first two He 112 prototypes. The Heinkel *Flugzeugwerke's* logo was carried on the tip of the fin. The aircraft was tested at Marienehe during late November of 1935. (Petrick)



The first variant of the V3 prototype had clipped wing tips and an enlarged, curved tail surface. This was the first He 112 prototype to be fitted with armament. In March of 1937 it was assigned to rocket propulsion tests and was destroyed in late March when the rocket motor exploded. (Griehl)

(102.5 kg/m<sup>2</sup>). This minor discrepancy was over-looked for the sake of maneuverability, which had a higher priority than wing loading.

In early 1936, soon after Heinkel's improved second prototype had arrived at *E-Stelle* Travemünde, comparison tests were carried out between the two main contenders, the He 112 V2 and Bf 109 V2, the latter being still considered an outsider. The test flights were conducted by highly respected fighter pilots as *Major* Robert Ritter von Greim, the future *General der Jagdflieger*, Dipl.-Ing. Karl Francke, head of the Fighter Acceptance Commission set up for this contest and the irrepressible *Oberst* Ernst Udet. Udet was to become the Luftwaffe's Inspector of fighters and dive bombers in February of 1936. Four months later, he was appointed as Director of the RLM's *Technisches Amt* (Technical Office). In February both prototypes were transferred to Rechlin centre, where testing continued. The following month, on 2 March, dive and spin tests were carried out. The Bf 109 V2 performed well, but the He 112 V2 flown by *Flugkapitän* Nitschke was seriously damaged in a crash. It was shipped back to Heinkel's Rostock facility on 15 March for repairs. These were completed in record time, and the V2 soon resumed test flights. Finally, it was destroyed the following month.

The V2's accident was a serious blow to the Heinkel team's sustained effort. Nevertheless, it did not adversely affect the program. The third prototype, He 112 V3 (W.Nr. 1292, D-IDMO), was ready in January for its part in the competition. This aircraft incorporated the latest modifications made on the V2 and, additionally, the radiator bath was redesigned and the  
The He 112 V-2 was lost in an accident during April of 1936. The pilot, G. Nitschke was able to bail out and survived. (Dabrowski)

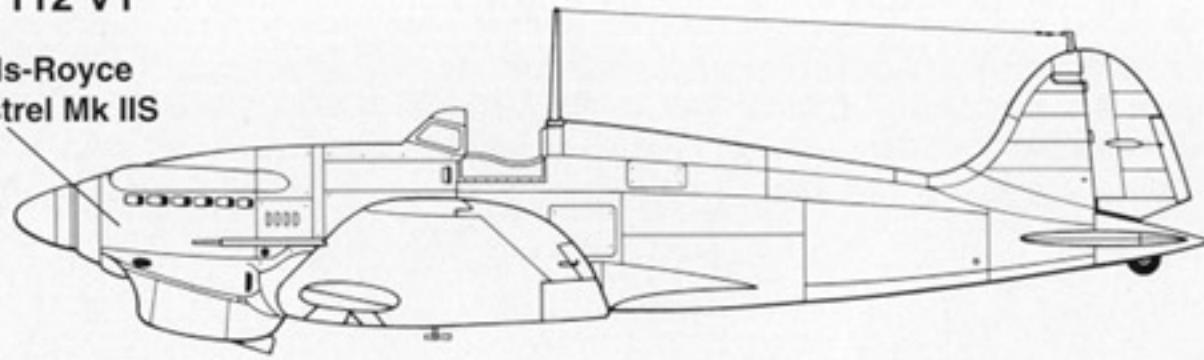




## Prototype Development

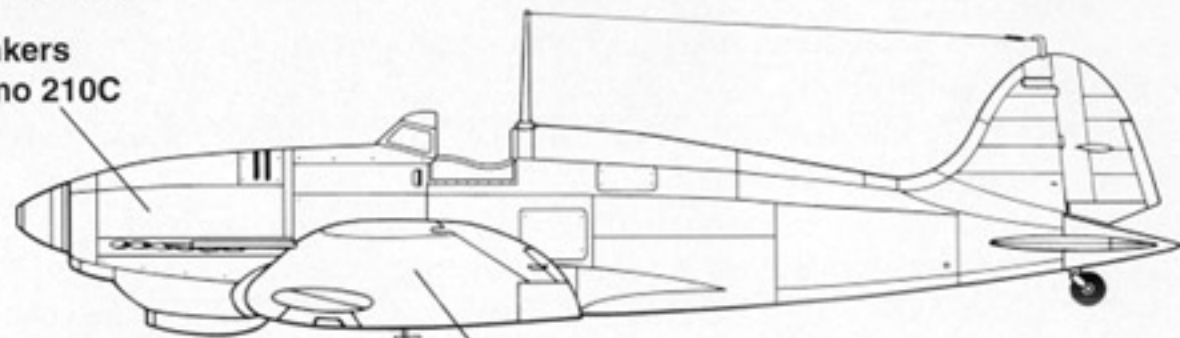
He 112 V1

Rolls-Royce  
Kestrel Mk IIS



He 112 V2

Junkers  
Jumo 210C



Shorter Wing

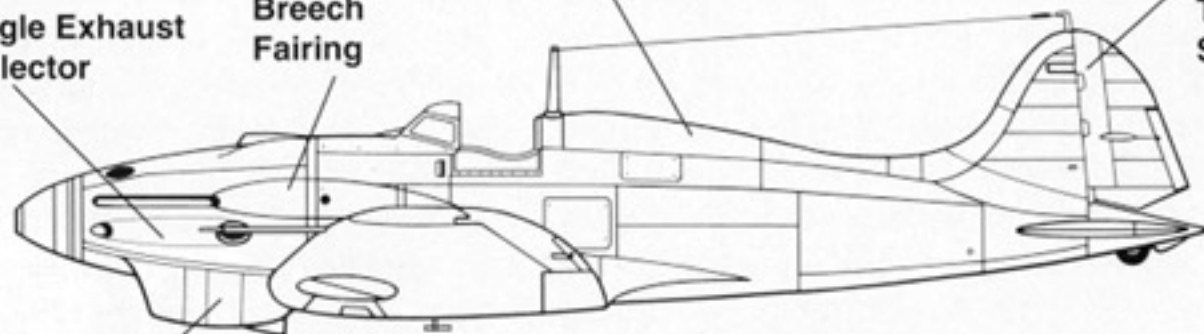
He 112 V3

Single Exhaust  
Collector

Gun  
Breech  
Fairing

Enlarged Spine

Enlarged  
Tail  
Surfaces

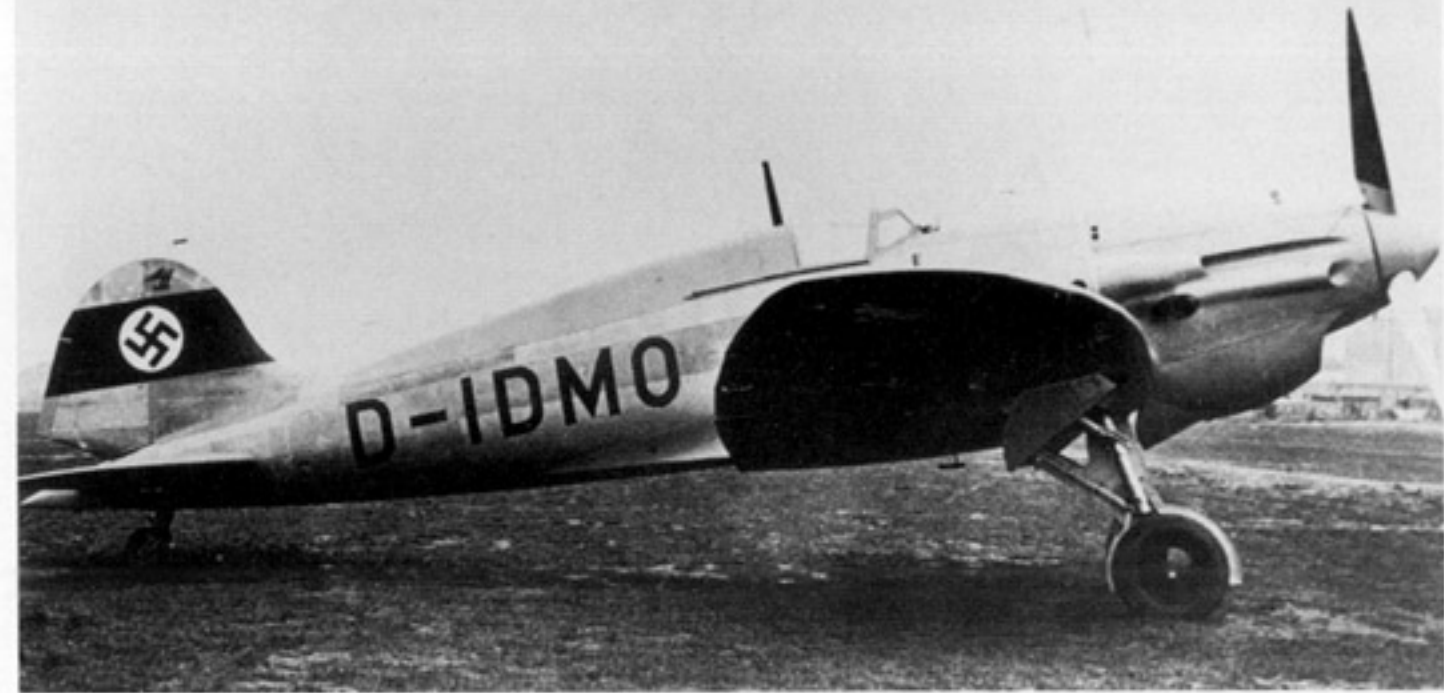
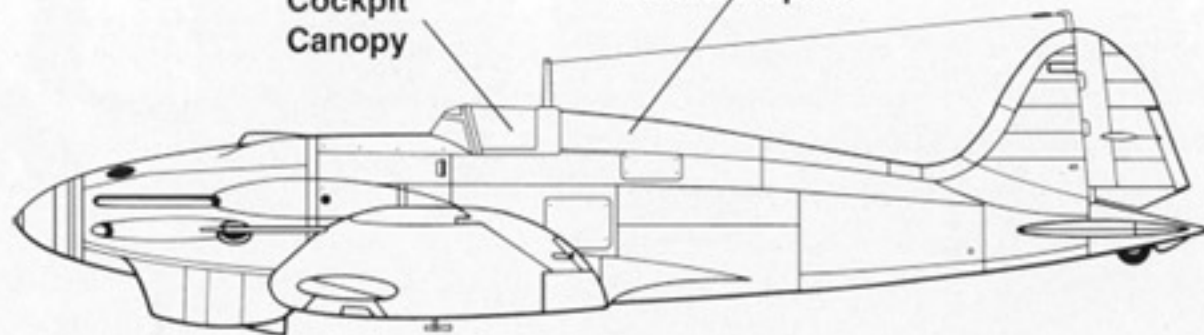


Redesigned  
Radiator

He 112 V3 Mod

Cockpit  
Canopy

Modified Spine



Only the D-IDMO register reveals that this is, in fact, the He 112 V3. The rebuilt prototype received new wings and tail. The upper section of the fuselage was rounded and an enclosed cockpit with a rear-sliding canopy is fitted. There was a gun sight mounted in front of the windscreen. (Smithsonian Institute)

tail surface was enlarged. Breech fairings for the intended armament, comprising three fuselage-mounted 7.9MM MG 17 machine guns, appeared on the engine cowling and a single exhaust collector tube replaced the earlier individual stubs.

In early 1937 the V3 was assigned by Ernst Heinkel to rocket motor experiments. During one of these tests the experimental device exploded, partially destroying the aircraft. A new airframe with rounded fuselage section and enlarged tail surface was built. The wings were redesigned and an enclosed cockpit was fitted. The aircraft, registered once more D-IDMO, resumed flights, being assigned to various test programs.

## A-Series

The repeated design changes and persistent problems with the Heinkel prototypes had had a negative influence on Commission members. They had already started to consider the Bf 109 as an equal partner, if not the favorite. Indeed, a document entitled "Bf 109 Priority Procurement", which assesses the decisions made at the RLM meeting held on 12 March 1936, can serve as evidence for the Commission's change of opinion. This document was forwarded to higher political circles where the ultimate decision would rest. Those influential leaders were already warned in June by the *Abwehr* (German Intelligence) that the British Government had placed a production contract with Supermarine for substantial numbers of Spitfires. This rather alarming fact combined with the suggestions summarized in the forwarded document eventually settled the outcome of the fighter contest.

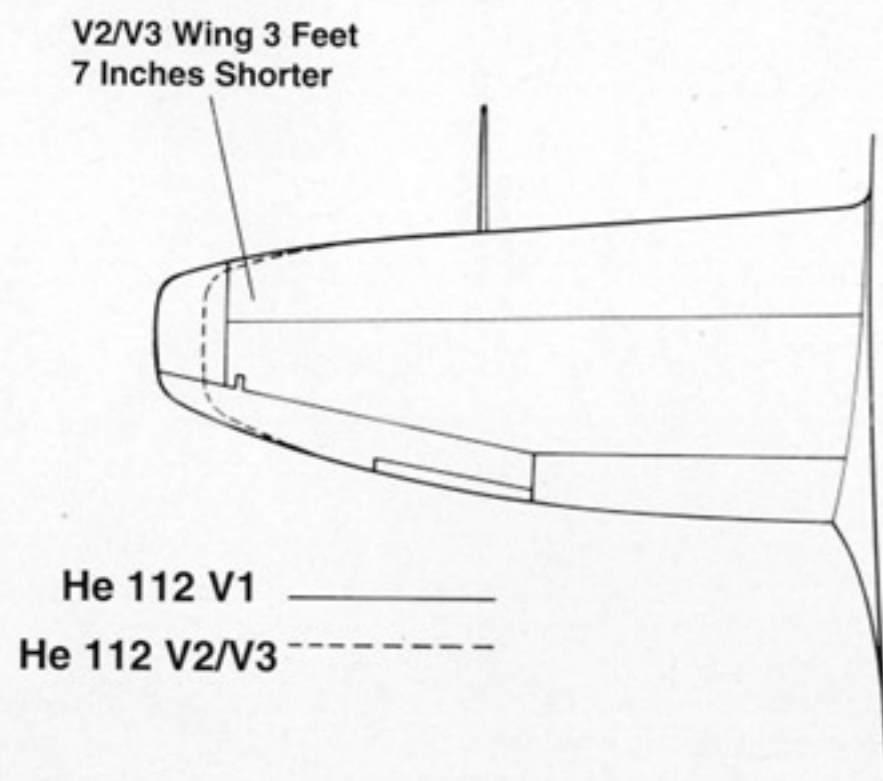
Nevertheless, the comparison flights at *E-Stelle* Rechlin continued, mainly due to certain influential members of the Acceptance Commission, supporters of the Heinkel design. Their persistence resulted in a production contract being given to BFW and Heinkel for fifteen zero-series aircraft each. According to the *Lieferplan* (delivery schedule) Nr. 4/ 1.11. 1936, the *Heinkel Werke* was to begin delivering two aircraft a month starting in October of 1936 (for

unknown reasons the schedule omitted February 1937). The last three airframes were to be delivered in May. To this specific order the Heinkel bureau allocated the *Werknummern* 1955-1960, 1969, 1974, 2001-2005, 2253-2254 and the designation He 112A-0 denoting, at that time, all airplanes planned to be powered by a Jumo 210C engine.

The first aircraft included in this contract was the He 112 V4 (W.Nr. 1974, D-IDMY), ordered on 23 April 1936 (384,000 RM) and completed in mid-June of 1936. This machine was equipped with a more powerful Jumo 210Da engine fitted with a two-speed supercharger and offering 690 hp at 2,700 rpm for five minutes at take off, and 630 hp at 2,600 rpm for thirty minutes. Except for the open cockpit, the V4 was almost identical to the latest version of the V3, with the new, shortened wings and elliptical wing tips. The tail surface had been reduced to further improve the He 112's already outstanding handling qualities. The fourth prototype was subsequently tested at Marienehe by Gerhard Nitschke and Kurt Heinrich.

Heinkel had, in fact, laid down additional airframes prior to starting the zero-series aircraft. In July of 1936, the He 112 V5 (W.Nr. 1951, D-IIZO) and V6 (W.Nr. 1952, D-IQZE) were completed, both being built according to A-0 standards. The fifth prototype, like its stablemate the V4, was powered by the more advanced Jumo 210Da engine and had two fuselage-mounted 7.9MM MG 17 machine guns. In the late Spring of 1937, the He 112 V5 was presented to an Imperial Japanese Navy delegation, who eventually bought the aircraft. The V6, built as a replacement aircraft for the crashed V2, was the pattern aircraft for the planned zero-

### Wing Modification

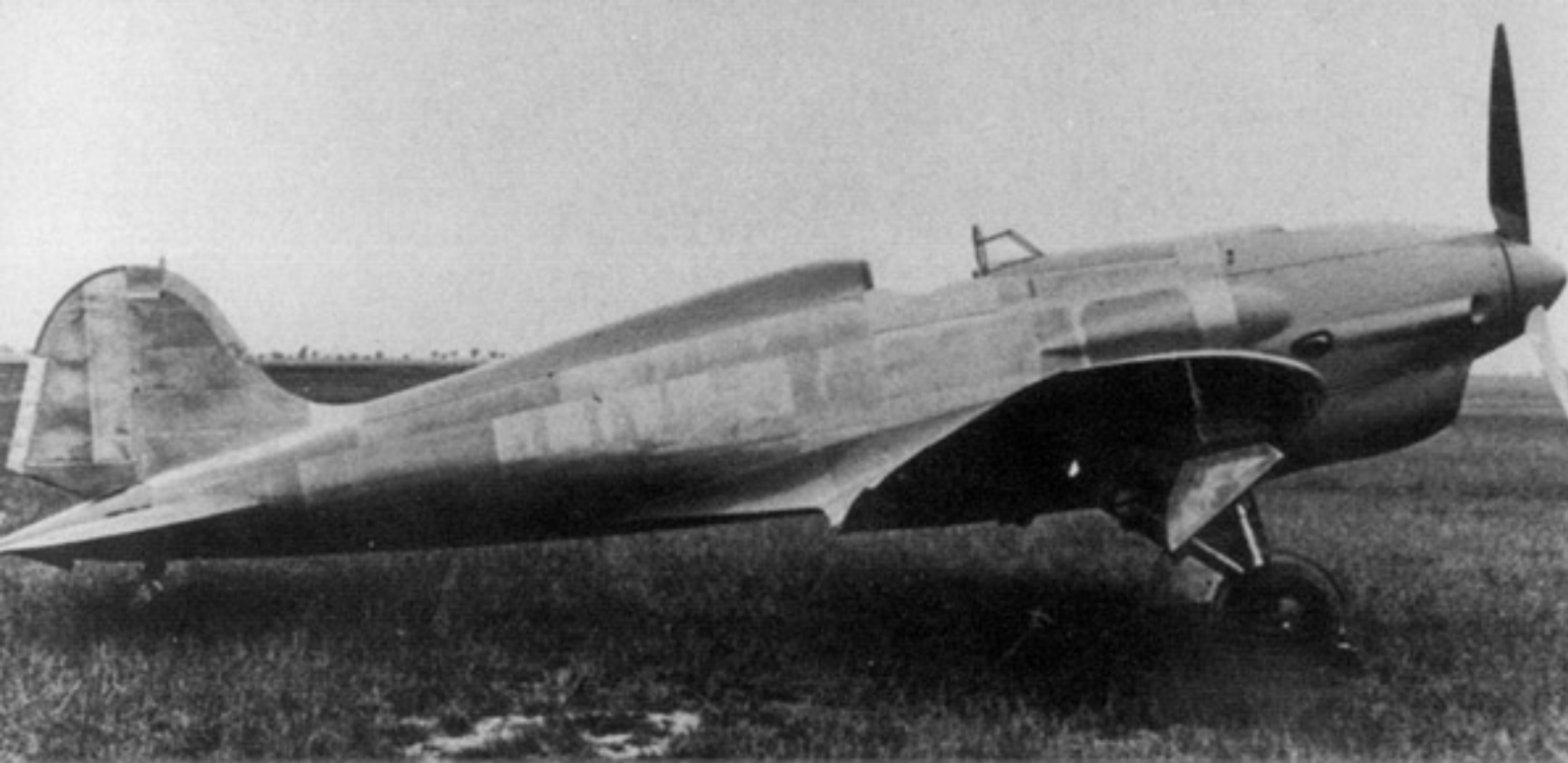


The He 112 V5 (D-IIZO) prototype was eventually sold to Japan during 1938. (Petrick)

series and was equipped with the Jumo 210C engine. This powerplant was to become standard engine for the future He 112A-0s and B-0s. It was rolled out in July of 1936 and from October participated in the final test flights at *E-Stelle* Travemünde.

In order to call attention on his fighter program, Ernst Heinkel offered to the RLM its V6 as a flying test bed for the development of a new concept in aircraft armament: the cannon armed fighter plane, precursor of the *Zerstörer* (Destroyer, or Heavy Fighter), concept represented in the early period of war by the Messerschmitt Bf 110. The offer was finally accepted and the He 112 V6 was modified according to the *Technisches Amt's* request to take an engine-mounted 20MM Rheinmetall-Borsig MG C/30L type cannon. Anxious to evaluate the *Motorkanone's* operational feasibility, the RLM approved the V6's deployment to Spain, where the civil war had just commenced. It arrived in Spain during early December of 1936, (contrary to sources which state the V5's deployed to Spain. The fifth prototype was still present at Rostock in March of 1937 and was eventually sold and shipped to Japan.) along with three Bf 109 prototypes. The He 112 V6 finally met its fate in Spain where it was destroyed in a force landing on 19 July 1937.

The last A-0 prototype, the He 112 V8 (W.Nr. 1954, D-IRXO), was completed for various test purposes. It was equipped with an improved version of the Daimler-Benz DB 600Aa engine, driving a three-bladed, adjustable-pitch, all metal propeller. This power plant offered 910 hp for take-off and 850 hp for cruise. This engine had a reduced power-to-weight ratio of 5.51 lb/hp (2.50 kg/h.p.) compared with 7.32 lb/hp (3.32 kg/h.p.) of the Rolls-Royce Kestrel installed in the V1. Completed in early October of 1936, the V8 initially served to test the DB 600 engine's cooling system. In March of 1937, the prototype was redesignated as He 112 V8/U and assigned by Heinkel to the rocket-propulsion development program conducted by Dr. Wernher von Braun at Peenemünde test site. After completing the rocket test flights in the late Summer of 1937, the V8 was returned to Marienehe for conversion back to V8 standards. By the end of 1937, it had been sent to Spain, where it was seriously damaged in an accident on 18 July 1938. After repairs, it was flown again four months later. The V8's final fate



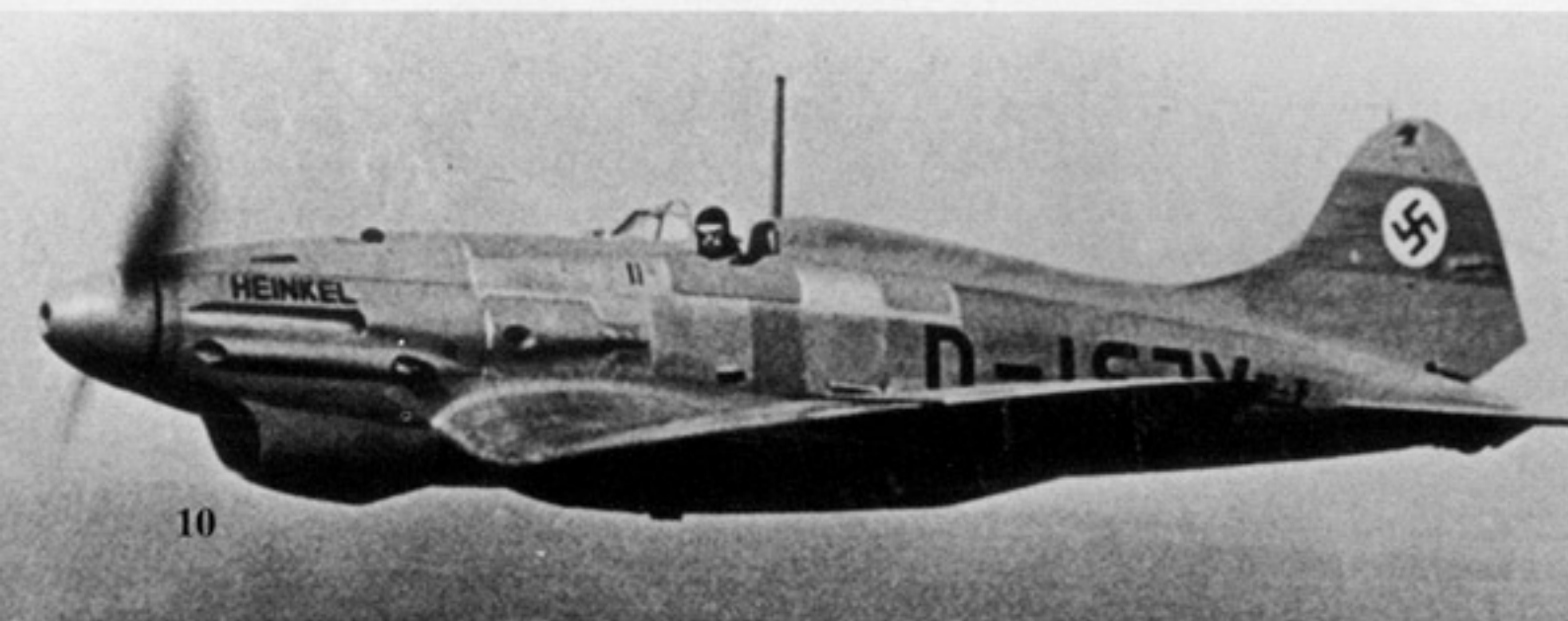
An early He 112 prototype from the A series, possibly the V6, parked on the grass at the Heinkel facility just after it left the production line. (Griehl)

remains uncertain.

In accordance to the *Lieferplan*, deliveries of zero-series continued. In October of 1936, the He 112A-01 (W.Nr. 1955, D-ISJY) was rolled out, followed the next month by the A-02 (W.Nr. 1956, D-IXHU). The A-03 (W.Nr. 1957, D-IZMY) and A-04 (W.Nr. 1958, D-IXEU) were both flown in December. . The last two A-0s completed before production shifted to the more advanced B-0 series, were the A-05 (W.Nr. 1959) and A-06 (W.Nr. 1960). These aircraft had not been registered in Germany as they were intended for export to Japan as the vanguard of the thirty He 112s ordered in late 1936.

The employment of these A-0 series aircraft were varied. The first aircraft in this production block, the A-01, was the prototype for the He 112C-0 *Trägerflugzeug* (carrier aircraft), envisioned to serve with the *Kriegsmarine's* carrier fleet, which eventually never became a reality, came to a quick and spectacular end when it exploded during ground tests with a rocket motor. The A-02 was sent to *E-Stelle* Rechlin in late June to take part in the continuing series of evaluation flights. The A-03 was the show aircraft, being exhibited at the July *Flugschau* (air display) at Zürich-Dübendorf (Switzerland) and at the Mailand (Milan) *Ausstellung* (exhibition), Italy, in October. Later, it was assigned to rocket experiments. The A-04 was retained by Heinkel for further development evaluations.

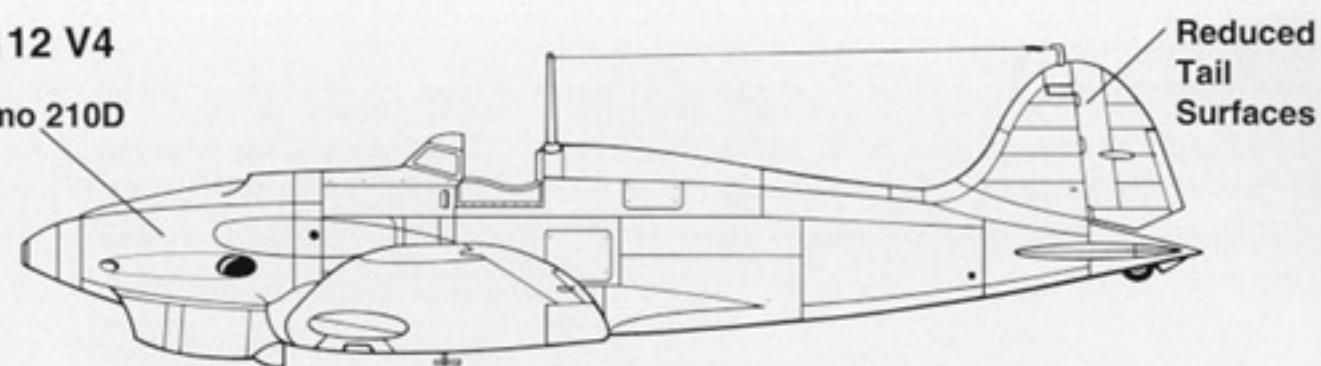
The He 112A-01 (D-ISJY) in flight during late 1936. This aircraft was the prototype for the He 112C-0 *Trägerflugzeug* (carrier aircraft), envisioned to serve with the *Kriegsmarine's* carrier fleet. (Petrick)



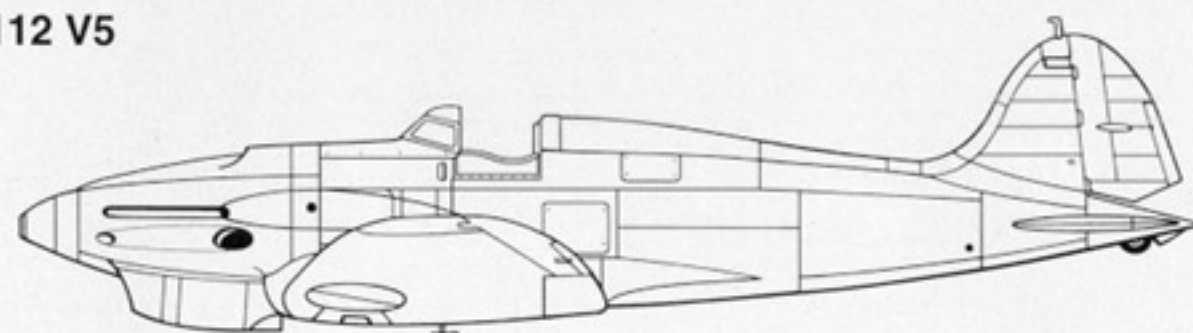
## A Series Development

He 112 V4

Jumo 210D



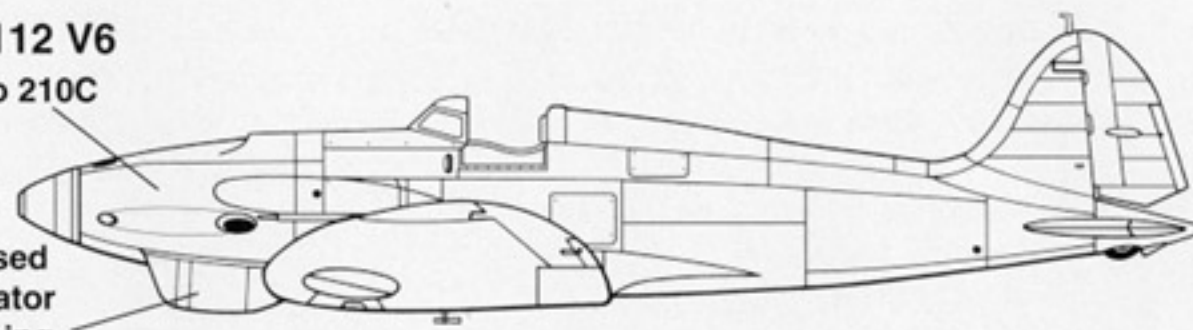
He 112 V5



He 112 V6

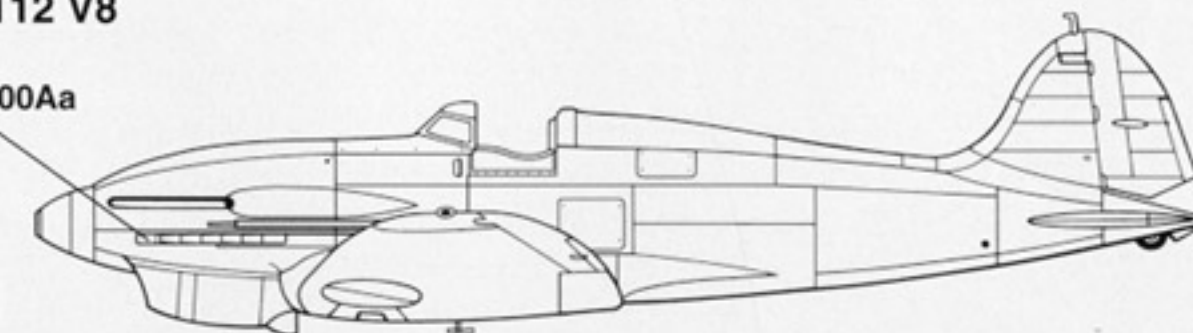
Jumo 210C

Revised Radiator Housing



He 112 V8

DB 600Aa



He 112 A-0

Jumo 210C

7.9MM Machine Gun  
Breech Fairing



# Rocket Propulsion Experiments

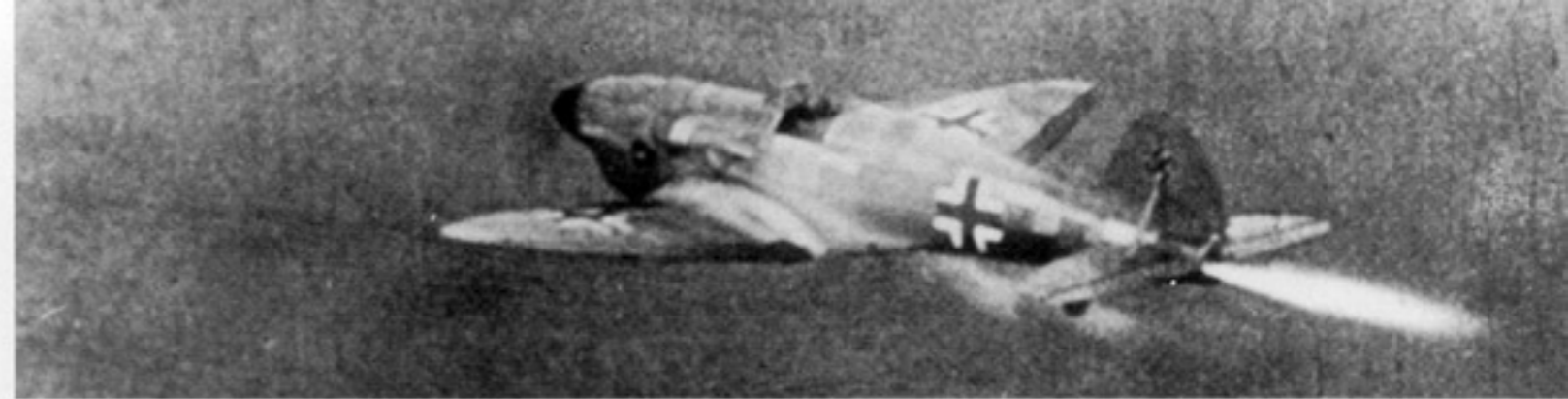
In the late 1920s and early 1930s, various experiments with rockets were carried out throughout Germany. Much of this activity was aimed at the use of rockets as a substitute for long-range heavy artillery, prohibited by the Versailles Treaty. The most intensive and serious of the experiments were conducted at the *Reichswehr's* (Home Defence Army) Kummersdorf-West test site, South of Berlin. It was there that the pioneering work began, that led to the infamous V1 (Fieseler Fi 103) and V2 (*Aggregat 4* or A4) surface-to-surface missiles. The possible use of rockets as a prime mover for aircraft was also conducted here.

As the research work progressed and expanded, the tests site was relocated to a remote peninsula on the Baltic island of Peenemünde in April of 1936. There, Dr. Wernher von Braun first conducted his experiments with liquid-fueled rocket motors. In mid-1936, when work had reached the point where a carrier aircraft was needed, von Braun turned to Heinkel for assistance. Prof. Ernst Heinkel was a firm supporter of new ideas that promised advances in technology. He first donated a He 72 *Kadett*, later a He 56 *Stösser* training aircraft as flying test beds. During 1937, trials were conducted at Neuhardenberg with a Walter rocket motor mounted in the aircraft's middle section fuselage.

Eventually, as the experiments progressed, the need for a more advanced, high-speed aircraft emerged. Again, Heinkel came through and one of the available pre-series He 112s, the A-01, was quickly placed at von Braun's disposal. The liquid oxygen container was installed forward of the cockpit and the methyl-alcohol tank aft of the pilot's seat. The rocket motor itself was mounted at the extreme end of the redesigned aft fuselage.

During an early test, the rocket was started by remote control, and promptly exploded, completely destroying the aircraft. Another Heinkel 112, this time the V3, was made available for testing. This aircraft had the tail enlarged and the fin and stabilizer were reinforced with two bracing struts. The rear fuselage was modified to accommodate the rocket device and the tail-wheel was moved forward some 3 feet 3.37 inches (1 m). After a series of successful ground tests, in early March of 1937 the rocket motor driven He 112 was prepared for its first flight. *Flugkapitän* Erich Warsitz, former test pilot at *E-Stelle* Rechlin, was assigned to this danger-

**The He 112 V3 (D-IDMO) being readied for a ground test with a rocket motor at Peenemünde during 1937. The aircraft had a modified rear fuselage with a reinforced tail that housed the rocket motor. (PRO via Koos)**



**A He 112A-0 in flight with the both the piston and rocket motors running during a test conducted in 1939, as indicated by the aircraft's markings. (Author)**

ous task. The aircraft was transported to a remote airstrip at Neuhardenberg, North-East of Berlin. As a safety measure, the aircraft's Jumo engine was started first. When it was running warm, the rocket motor was ignited. Instantly, the standing aircraft blew up. The heavy Jumo engine flung high into the air, airframe parts were widely scattered by the huge explosion. Miraculously, Warsitz was thrown clear of the blast and escaped unhurt, except for a few contusions. This latest failure did not deter von Braun from his rocket experiments. He applied for another test aircraft from the somehow reluctant Heinkel. Von Braun's request resulted in the transfer of the V8, the last A-0 series prototype, powered by the Daimler-Benz DB 600Aa engine.

The disastrous tests of the A-01 and V3 resulted in more cautious experiments with the V8. The next series of tests with a new rocket motor were carried out with only partially filled fuel tanks. In April of 1937, Warsitz took off with the now redesignated He 112 V8/U on the power of the Daimler-Benz engine alone. He climbed to a "safe" altitude of about 2,600 feet (800 meters) and shut down the DB 600. He ignited the rocket motor, probably not without some anxiety. But, this time, the device worked properly and within seconds the He 112 had accelerated to more than 248.5 mph (400 km/h). At the end of thirty seconds burning time, provided by the propellant fuel, the rocket cut out at 286 mph (460 km/h)!

Warsitz, dressed in his white flying overall, climbed out from the cockpit smiling. The test flight was a success. For the first time in history, an aircraft had been propelled through the air solely on the power of a liquid-fueled rocket motor. Another successful flight was then conducted with partially filled tanks at Peenemünde facility. Von Braun and his team now considered that enough had already been learned to justify a full fuel load flight. The flight took place smoothly, but on the landing approach the cockpit suddenly filled with smoke. Warsitz immediately jettisoned the canopy and prepared to bail out. Learning, however, that he was too low for a safe exit, he decided to ride it out. As soon as the He 112 touched down, wheels up, Warsitz realized that there really was no major problem with the aircraft, the only damage was caused by the belly landing itself. An investigation revealed the facts: after the rocket motor had been switched off, the device continued to burn a few seconds and the smoke had been drawn into the cockpit, through the fuselage, by the slipstream. The damaged He 112 V8/U was sent back to Marienehe for repairs and was replaced with another modified prototype, the He 112 V7/U. During the following months, Warsitz succeeded in making take offs with both the piston and rocket engines operating simultaneously.

On 27 August 1937, the experimental He 112 prototype took off and flew around the field on the power of the rocket motor alone. This was the first rocket-propelled aircraft to perform a controlled flight. At the end of 1937 another aircraft, the A-03, was donated by Ernst Heinkel for testing.

These experiments eventually led to the design of a high-performance aircraft, the He 176 *Raketenflugzeug*, which made its first flight in the Summer of 1938, with the same Erich Warsitz at the controls.

# The B-Series

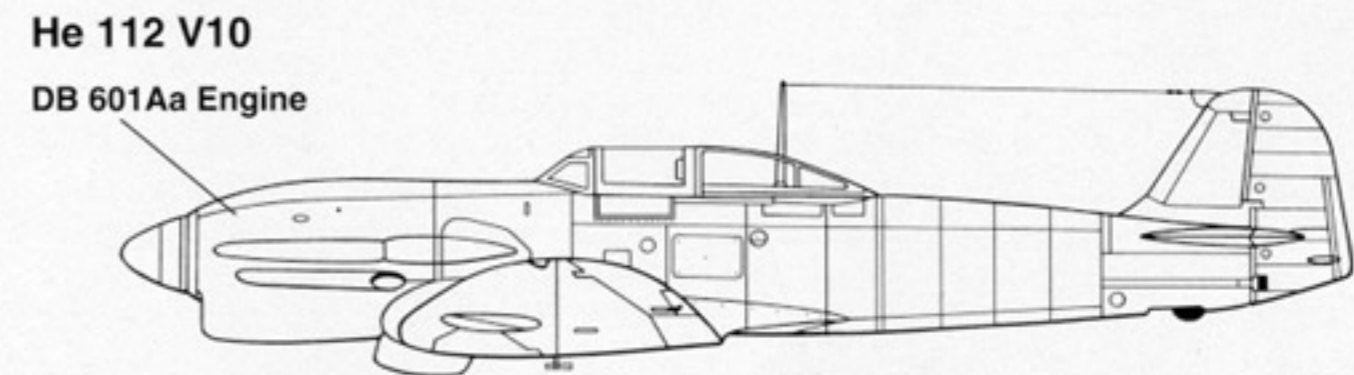
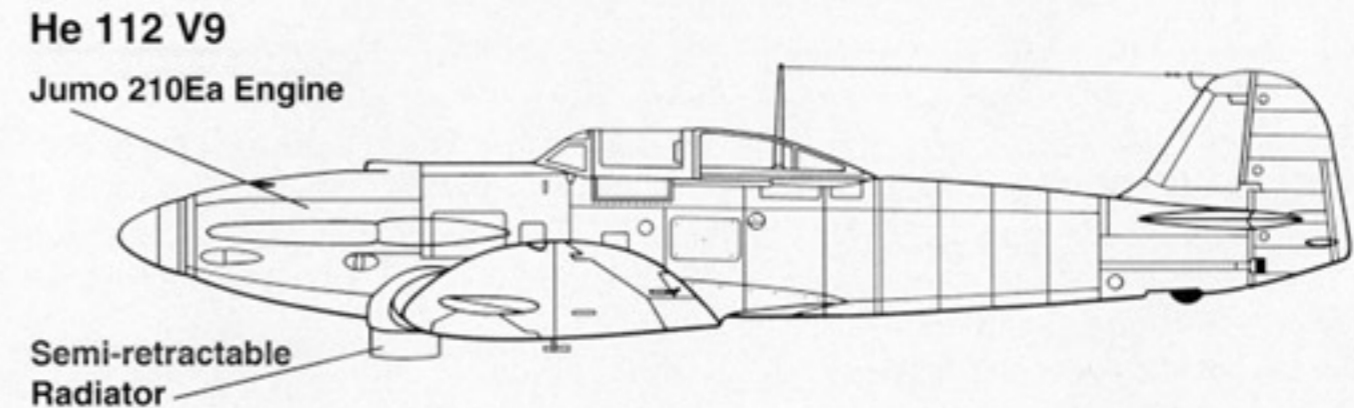
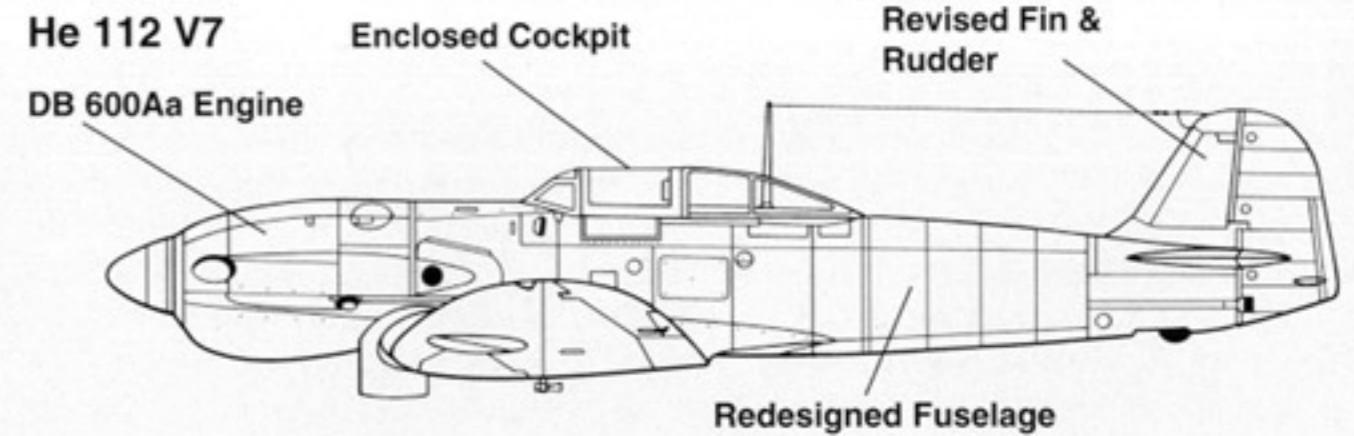
Rumors that the fighter commission's preference had shifted towards Willy Messerschmitt's design reached Ernst Heinkel early in April of 1936. He remained, however, determined to continue his He 112 development program, in the hope that the final decision could still be influenced. At the same time, he realized that substantial changes were needed to improve his own project.

Regardless of the Heinkel *Projektbüro's* advance on the new construction, in October 1936 the RLM changed its order for the He 112. They instructed the Heinkel plant to finish the A-0 airframes already under construction (W.Nr. 1955-1960), then switch to a more advanced version. Thus, the remaining eight pre-production aircraft (W.Nr. 1969, 2001-2005, 2253-2254) were redesignated as He 112B-0s. The new type had very little in common with the old A-series. In fact, the sheer number of design improvements should deserve a new name, but Prof. Heinkel insisted on the new series of aircraft being called the B-series.

The first airframe of the B-series was the He 112 V7 (W.Nr. 1953, D-IKIK), which featured a completely redesigned fuselage and tail, modified engine cowling, air intakes and a new enclosed, high-visibility cockpit. Initially, the old style long wing of 38 feet 4.63 inches (11.7 meters) span was retained, but this was later changed to a considerably smaller wing of only 29 feet 9.87 inches (9.09 meters), which became the standard for the B series. The powerful Daimler-Benz DB 600Aa was retained, but a single piece exhaust collector tube was mounted instead of individual exhaust stacks. The V7's undercarriage was similar to the A-0 series and a three-blade variable pitch propeller was fitted. The V7 was rolled out in October of 1936 and test flights continued until April of 1937. It was then handed over to von Braun's team as flying test bed in rocket-motor experiments. Upon completion of this task, in the summer of 1937 the D-IKIK was seen at *E-Stelle* Rechlin. *F1StI* Heinrich Beauvais had flown with it again at Eigenschaftan on 26 June, a day after he evaluated the He 112A-02. The last record on the V7 is dated 12 November 1937, when Kurt Heinrich performed a short test. The first prototype of the B-0 series was the He 112 V7. It was also the first prototype to be fitted with a Daimler-Benz DB 600 series engine rather than a Junkers Jumo 210. (Griehl)



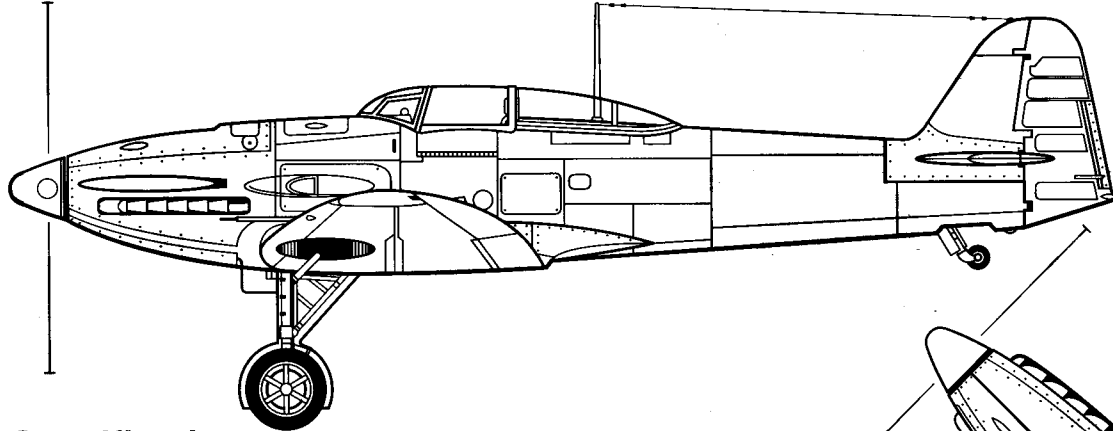
## B Series Development



Summer of 1937 the D-IKIK was seen at *E-Stelle* Rechlin. *F1StI* Heinrich Beauvais had flown with it again at Eigenschaftan on 26 June, a day after he evaluated the He 112A-02. The last record on the V7 is dated 12 November 1937, when Kurt Heinrich performed a short test.

The only A-0 prototype which was re-engined with the powerful Daimler-Benz DB 600Aa engine was the V8. During 1938, it was sent to Spain to be evaluated under combat conditions. (Griehl)





## Specification Heinkel He 112B-2

Wingspan.....29 feet 9.873 inches (9.09m)  
 Length.....30 feet 2.991 inches (9.22m)  
 Height.....12 feet 6.393 inches (3.82 m)  
 Empty Weight.....3,565 pounds (1,617 kg)  
 Maximum Weight.....4,957 pounds (2,248 kg)

Powerplant.....One 700 hp Fuel Injected Junkers Jumo  
 210Ga liquid-cooled engine

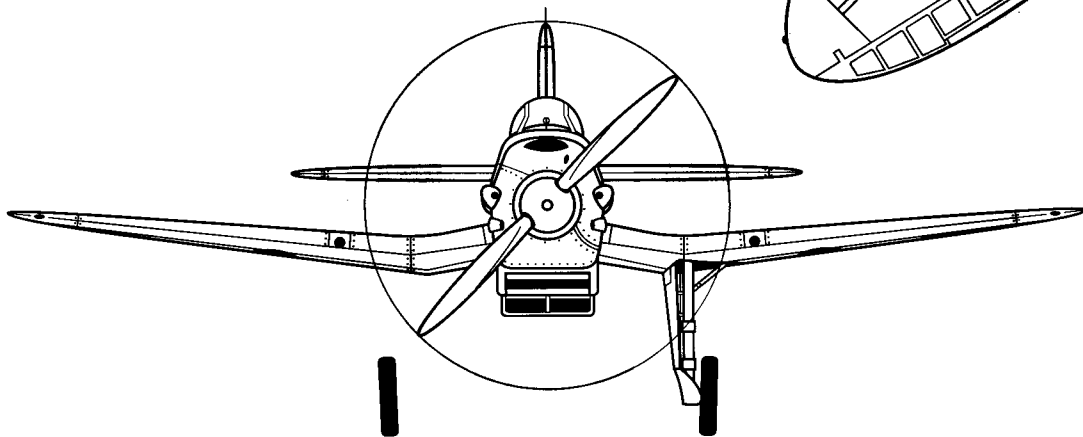
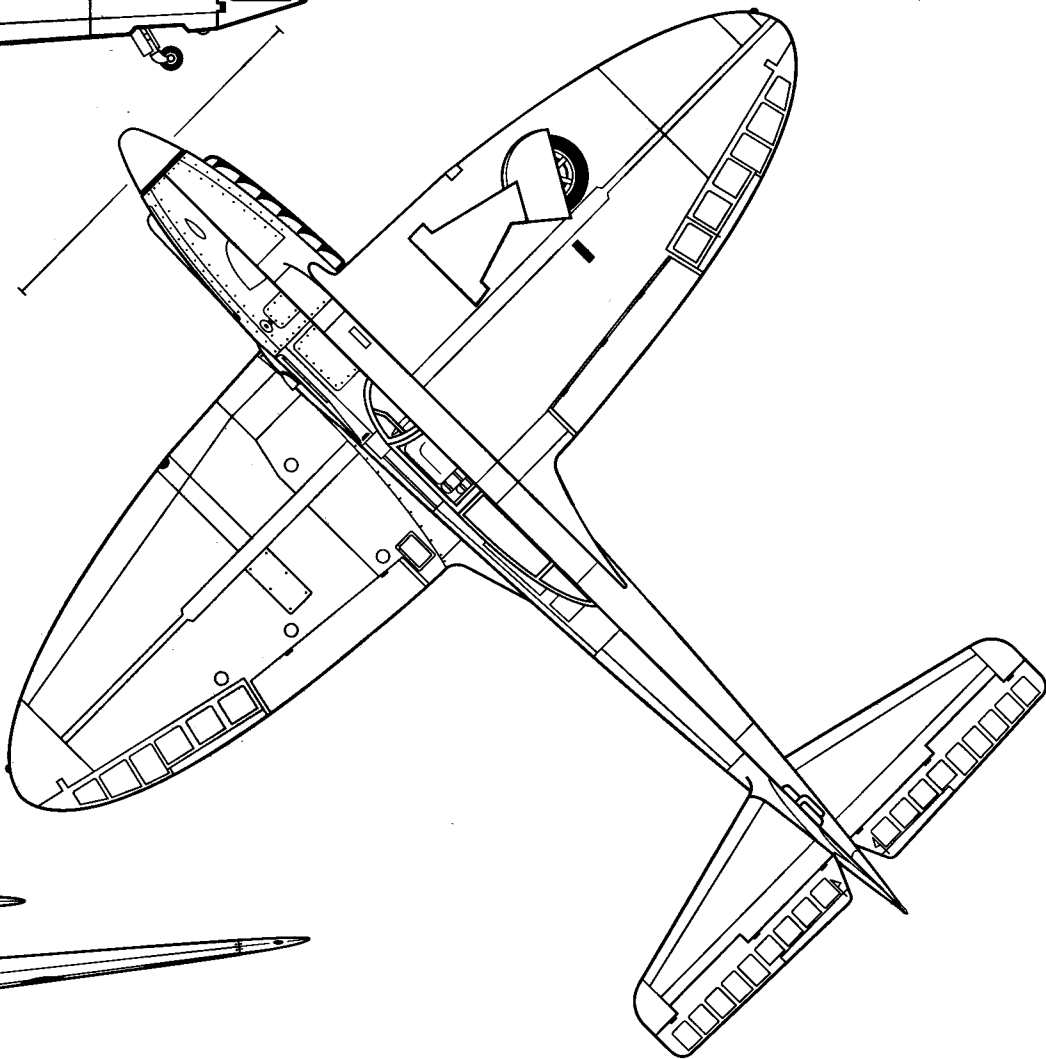
Armament.....Two 7.9mm MG 17 machine guns  
 and two 20mm MG FF cannons

Speed.....317 mph (510 km/h)

Service Ceiling.....31,168 feet (9,500 m)

Range.....714.6 miles (1,150 km)

Crew.....One





Except for their name, nothing else was common between the He 112 V9 and the He 112 V1 prototypes. The V9 was the first true B-series aircraft and some considered it to be superior to the rival Bf 109B. However, by the time it was rolled out, it was too late. (Author)

The He 112 V9 had exceptionally clean lines. The aircraft was used as a demonstrator all over Europe in the hopes of generating large scale sales to foreign buyers. (Petrick)



The wing of the He 112 V9 was an inverted gull, elliptical shape giving the aircraft good maneuverability. The wings each housed a single 20MM cannon and 60 rounds of ammunition. (Petrick)

flight at Heinkel's Marienehe center.

Although the V7 could be considered the first of the B-series, the first true representative of the future He 112B fighter to actually see action was the He 112 V9 (W.Nr. 1944, D-IGSI). It was the most publicized Heinkel fighter prototype and was used extensively for Heinkel's sales pitch. Photographed from every angle possible, on the ground or in air, the V9 was Heinkel's demonstrator model. Besides Germans, it was flown by Japanese, Austrian, Spanish, Hungarian, Yugoslavian and Rumanian pilots, all expressing their satisfaction and pleasure with its handling. It made a tour of Europe, from Spain to Rumania, then to Hungary, where it came to an inglorious end.

It represented the idea of a real fighter, sleek, agile, and adequately armed. In spite of its underpowered engine, the He 112 V9, *chef-d'œuvre* of German aeronautical technology, was the state of the art in the late 1930s. It can be, and actually was, considered superior to the contemporary Messerschmitt Bf 109B.

It was a completely new aircraft. New wing, new fuselage and new tail. There was hardly anything left of the old He 112A. As stated earlier, if at this point a fair competition would have been held between the new He 112 V9 and the similarly powered Bf 109B, which was comparable to the Bf 109 V1, the outcome could very easily have been quite different from the history we know. But, in the Summer of 1937, when the V9 was finally rolled out, the die had been cast. Series production of the Messerschmitt 109 was well under way.

The He 112 V9's fuselage was an oval-section, monocoque structure, built up with Z-section frames. Both the fuselage and wing were covered with stressed Dural skin and flush-riveted. During the design work, close attention was paid to aerodynamic efficiency. The previous model's fixed radiator bath was replaced by a semi-retractable unit, mounted under the fuselage, at the wing leading edge. Empty weight was considerably reduced to 3,565 pounds (1,617 kg); airframe 1,693 pounds (768 kg), engine 1,786 pounds (810 kg) and permanent equipment 46 pounds (21 kg). The aircraft's gross weight was 4,957 pounds (2,248 kg). A smaller, high efficient elliptical wing with a single main spar, seconded by two auxiliary



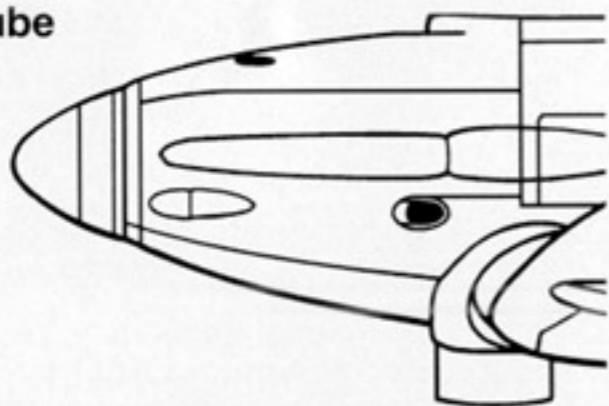
Included in a large park of German aircraft, the He 112A-03 was sent, along with the V-7, to the International Aviation Meet held at Zürich-Dübendorf airfield in July of 1937. The German warplanes outclassed all other contenders, creating a great impression. D-IZMY's loading instruction (applied on the port side of the aft fuselage) stated that the last *Nachprüfung* (inspection) was carried out on 10 July 1937. (Griehl)

spars, was adopted. As a result of the reduced dimensions and weight, wing loading was 27.102 lb/sq.ft. (132.35 kg/m<sup>2</sup>) for a wing area of 182.986 sq.ft. (17.0 m<sup>2</sup>), only 73% that of the He 112 V1's and slightly less than the Bf 109B's.

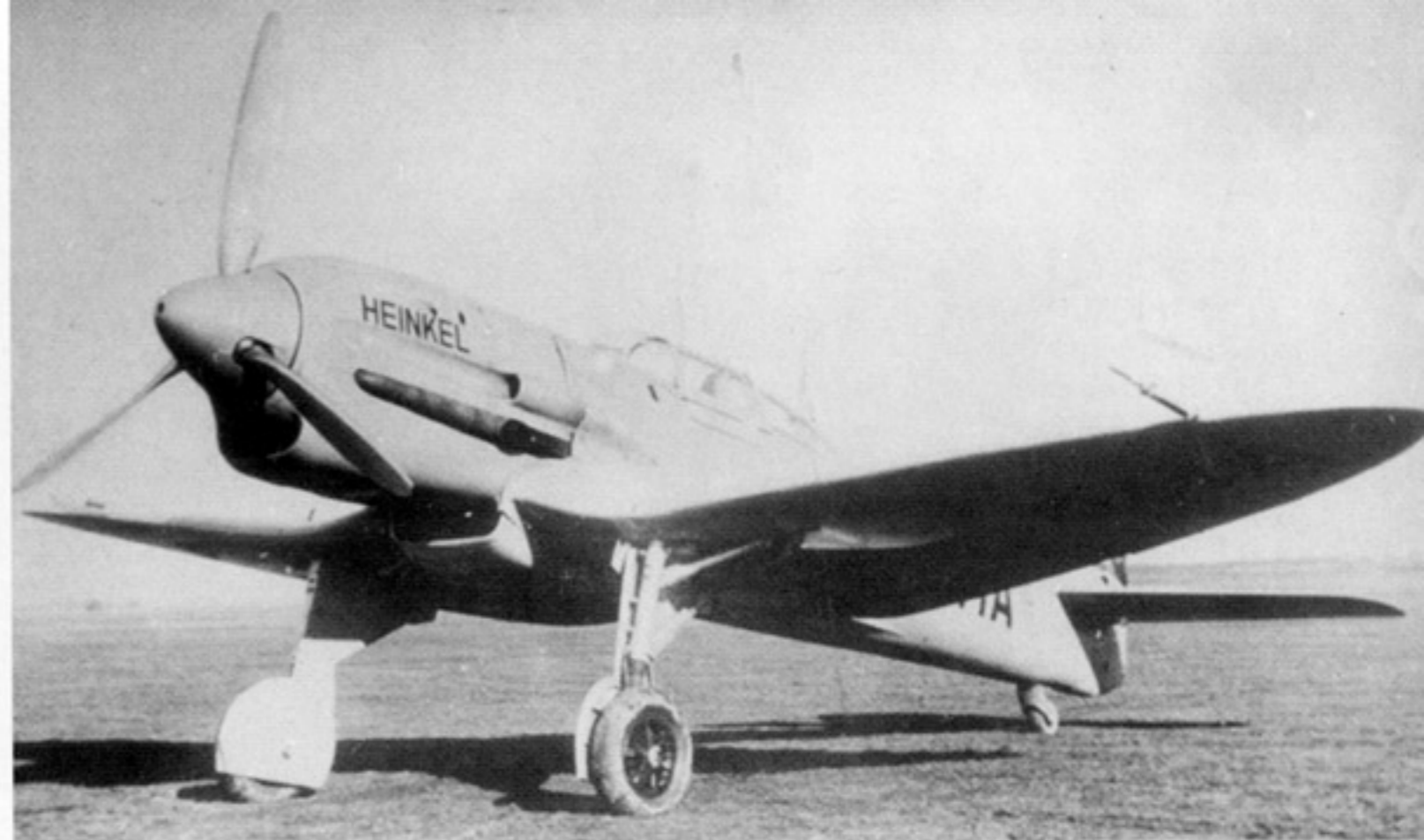
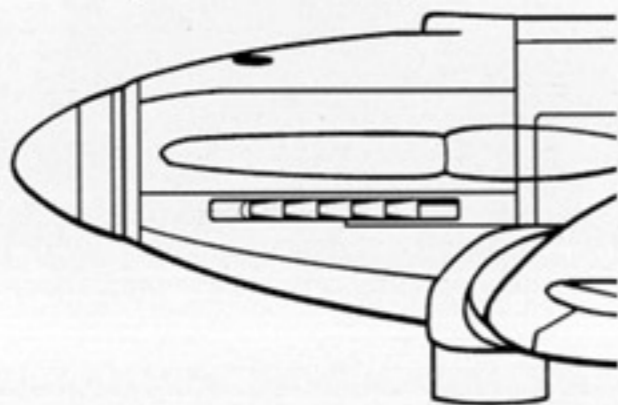
The V9 was powered by the Junkers Jumo 210Ea, a 12-cylinder, liquid-cooled, inverted-vee engine. The Junkers engine delivered 680 hp for take-off at 2,700 rpm and 650 hp at 2,600 rpm at 13,123 feet (4,000 meters). It was equipped with a two-speed blower activated at 5,577 feet (1,700 meters). A 22.232 gallon (101 liter) fuel tank was mounted in each of the

### Exhaust System

#### Single Collector Tube



#### Individual Exhaust Stubs (Umbausatz 2)



The V10 (D-IQMA) was equipped with a DB 601A engine and reached a maximum speed of 354 mph (570 km/h), being the fastest of the He 112 prototypes. It was designated *Trägerflugzeug* (carrier-based aircraft), a project which never became a reality. (Nowarra)

wing roots, supplemented by a 25.313 gallon (115 liter) tank placed under the pilot's seat. A 5.723 gallon (26 liter) oil tank was installed behind the fire wall, below the instrument panel. The engine drove a three-blade, variable pitch, all-metal VDM propeller. Maximum speed at sea level was 267.2 mph (430 km/h) and 301.3 mph (485 km/h) at 13,123 feet (4,000 meters), which was 12.4 mph (20 km/h) faster than the Bf 109B-2, which had just entered service with the Luftwaffe. Maximum diving speed was limited to 447.4 mph (720 km/h). Time to 13,123 feet (4,000 meters) was six minutes, to 19,685 feet (6,000 meters) ten minutes and the service ceiling was 27,887 feet (8,500 meters). Take-off distance was 1,082 feet (330 meters), while the landing run was 1,050 feet (320 m). Stalling speed was 77.7 mph (125 km/h).

The aircraft was armed with a pair of fuselage-mounted 7.9MM MG 17 machine guns, each with 500 rounds and two wing-mounted 20MM Oerlikon MG FF cannon, each with 60 rounds. Provisions for two *Elvemag* (*Elektrisch ausgelöstes Vertikal Magazin*) bomb racks were available under the wing roots, allowing 22 pound (10 kg) anti-personnel fragmentation bombs to be carried on each rack. A Revi 3b reflex gun-sight was provided and a Telefunken 276 dF short-wave radio transmitter was installed under the pilot's seat.

All of Heinkel's sustained efforts with the He 112 proved futile, the RLM had no interest in acquiring the He 112 any more. With the hopes of indigenous orders for the He 112 dashed, Heinkel concentrated on the export potential for his aircraft. He was convinced that there was a ready market for a fighter of such performances and envisioned excellent sales. The He 112 V9, pattern aircraft for future series production, was sent on a European sales tour. During this sale promotion the V9, practically identical with the He 112B-1 offered for sale, was demonstrated to the military officials of Japan, Austria, Spain, Hungary, Yugoslavia, Rumania and others. Although none of these efforts produced the breakthrough success Heinkel was hoping for, i.e. large-scale production orders or a license purchase, a limited quantity of the B-series, renamed the He 112E (E for Export), was sold abroad.



Regardless of the RLM's decision in favor of the Bf 109, Heinkel continued development of the He 112. Further prototypes were manufactured at the *Heinkel Werke* in accordance to the original RLM contract. These aircraft were built to the new B-series standards and were intended as test subjects for planned series production sub-variants. The He 112 V10 (W.Nr. 2253, D-IQMA), was completed in late 1937. Although it was planned to equip the V10 with a less expensive 960 hp Jumo 211A, due to the lack of availability, it was fitted with a 1,175 hp DB 601Aa engine. This more powerful engine gave the He 112 V10 a maximum speed of 354 mph (570 km/h). The He 112 V11 (W.Nr. 2254, D-IRXS) was fitted with the DB 600Aa engine instead of the planned Jumo 211A. Both aircraft were retained at the Heinkel Plant's Marienehe center for further evaluations and testing. On 1 September 1938, the V10 was sent to *E-Stelle* Rechlin, returning to Rostock on 20 October. By the end of the year, D-IQMA eventually crashed and was written off. The V11's career, however, was decidedly different. After it was flown several times at Marienehe, the D-IRXS apparently was shipped to Japan in May of 1938.

The last prototype was an aircraft taken off the production line. Designated He 112 V12 (D-IYWE), it had its original Jumo 210Ea engine replaced with a fuel-injection Jumo 210Ga. This new engine could produce 700 hp at 2,750 rpm for take-off and 675 hp normal output at 2,700 rpm at 15,420 feet (4,700 meters). Series production aircraft equipped with the Jumo *Einspritztriebwerk*, which had a considerably better fuel consumption than the Jumo 210Ea [7.595 oz (217 g)/h.p. in one hour], were designated He 112B-2 and intended also to export. The He 112B's airframe was designed so that either the Jumo 210Ea or Ga could be fitted to a series production aircraft without any modification (due to a lack of documents regarding the He 112, we can take excerpts from a paper, entitled "*Bf 109 Priority Procurement*", dated 12 March 1936, mentioned earlier. The document states: "**4. The Bf 109 series is to be built only with the Jumo 210 [Da or Ea] and two-blade propeller. Should the Jumo 210 Einspritz [Ga] version become available later, no modification [underlines mine, D.B.] will be required to any assemblies.**"). Also, either a single exhaust collector tube or individual exhaust stubs could be used, regardless of the Jumo 210 engine sub-type. The single-tube exhaust system was fitted to the early He 112Bs, but, beginning in the late 1938, individual exhaust stacks were adopted. Those aircraft fitted with this *Umbausatz* (modification kit) were designated He 112B-1/U2 (Jumo 210Ea engine, delivered to Rumania and Hungary) and He 112B-2/U2 (Jumo 210Ga engine, delivered to Rumania). [By considering only the exhaust system, one cannot identify the difference between the sub-variants of the He 112B series! Regardless of the number of exhaust stacks, the engine cowling could house either the Jumo 210C (B-0), Ea (B-1) or Ga (B-2) engine types.]

The He 112B-3 version, planned to be equipped with the Daimler-Benz DB 601A engine, did not go past the drawing board.

According to the orders received from foreign governments, the *Heinkel Flugzeugwerke* manufactured a limited series of He 112Bs between April of 1938 and January of 1939 (see production chart). When the last He 112B-2 (W.Nr. 2080) was test flown by Kurt Heinrich at Marienehe on 18 January 1939, the career of this fine aircraft on German soil came to an end. Originally intended to be the Luftwaffe's first line fighter, the Heinkel 112 finally saw action and fired its guns in anger far away from Germany, but still defending the Third Reich's strategic interests.

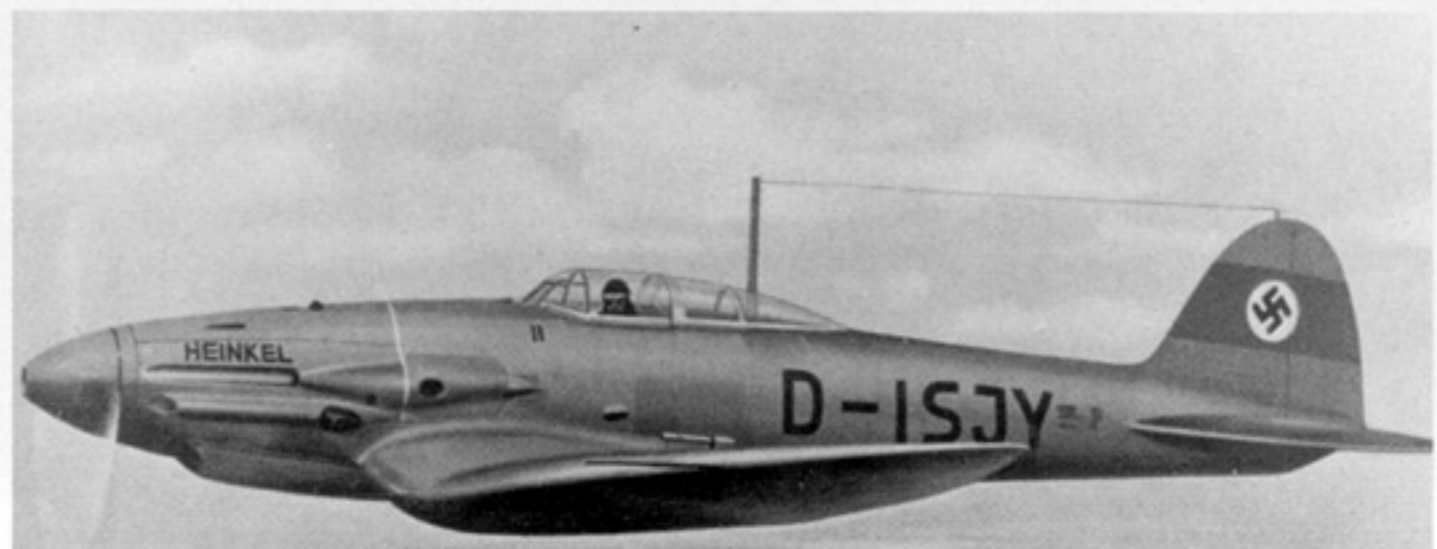


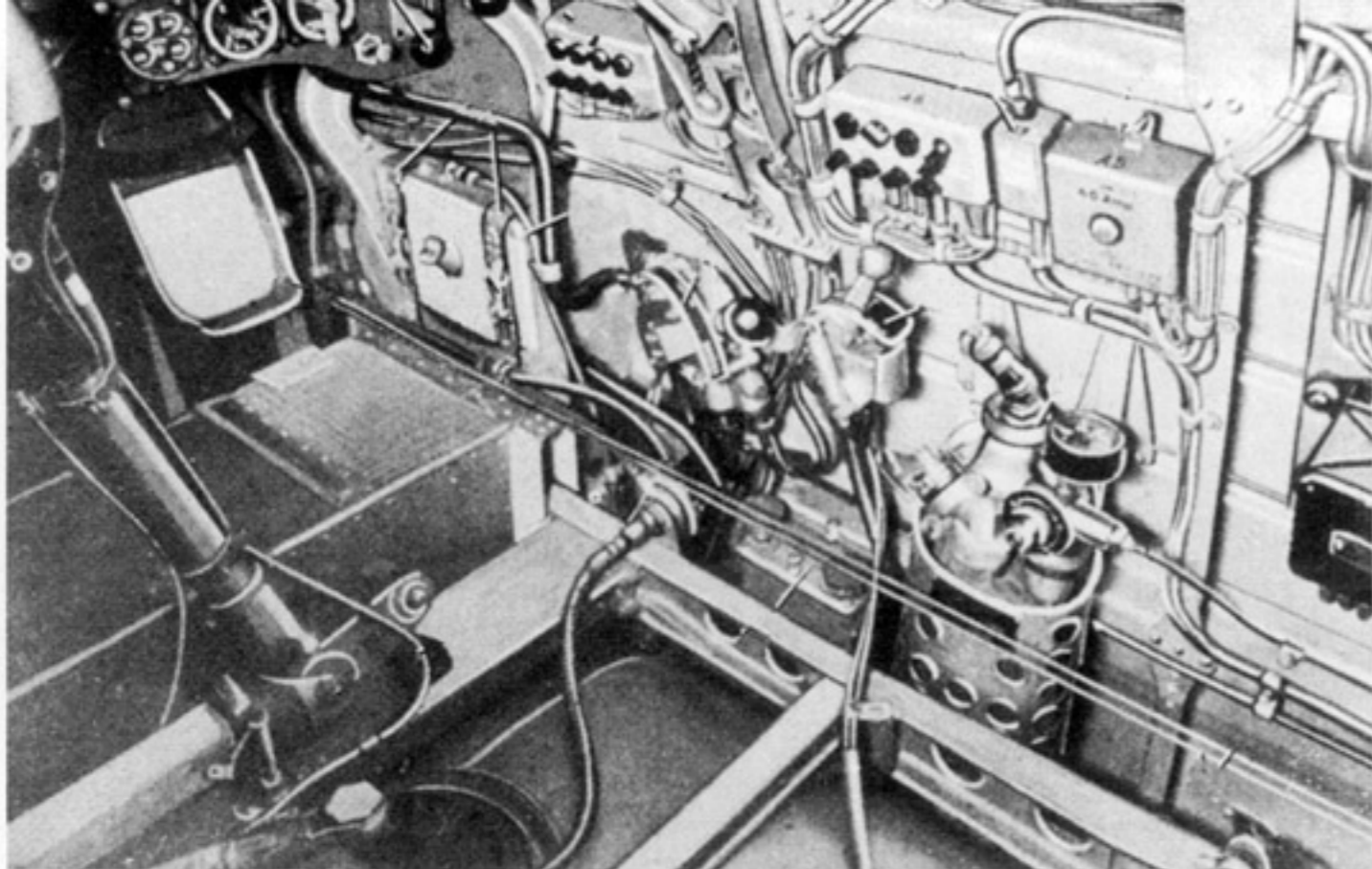
After being tested at Marienehe, the He 112 V 11 (D-IRXS) prototype was sold to Japan during May of 1938, where it ended its career as a test aircraft. (Griehl)

The last He 112 prototype (D-IYWE) was in fact a series production He 112B-1/U2 which was fitted with a 700 hp Jumo 210Ga fuel-injection engine. Originally, the He 112A-01 (Wk. Nr. 1955) was intended to be the He 112 V-12. The unconventional (and possibly retouched) tail markings consisted of a White outlined *Hakenkreuz* (swastika) applied over a roughly painted Red stripe, a combination never used on German aircraft. (Petrick)



A subtle maneuver of the German propaganda machine. A picture of the original He 112A-01, D-ISJY was heavily retouched to represent a completely different aircraft with a "new" fuselage, tail and fitted with an enclosed cockpit. Additionally, the radiator bath and engine cowling were also redrawn. The pictures were largely publicized during the war in various aeronautical revues. (de Celis Borrell)

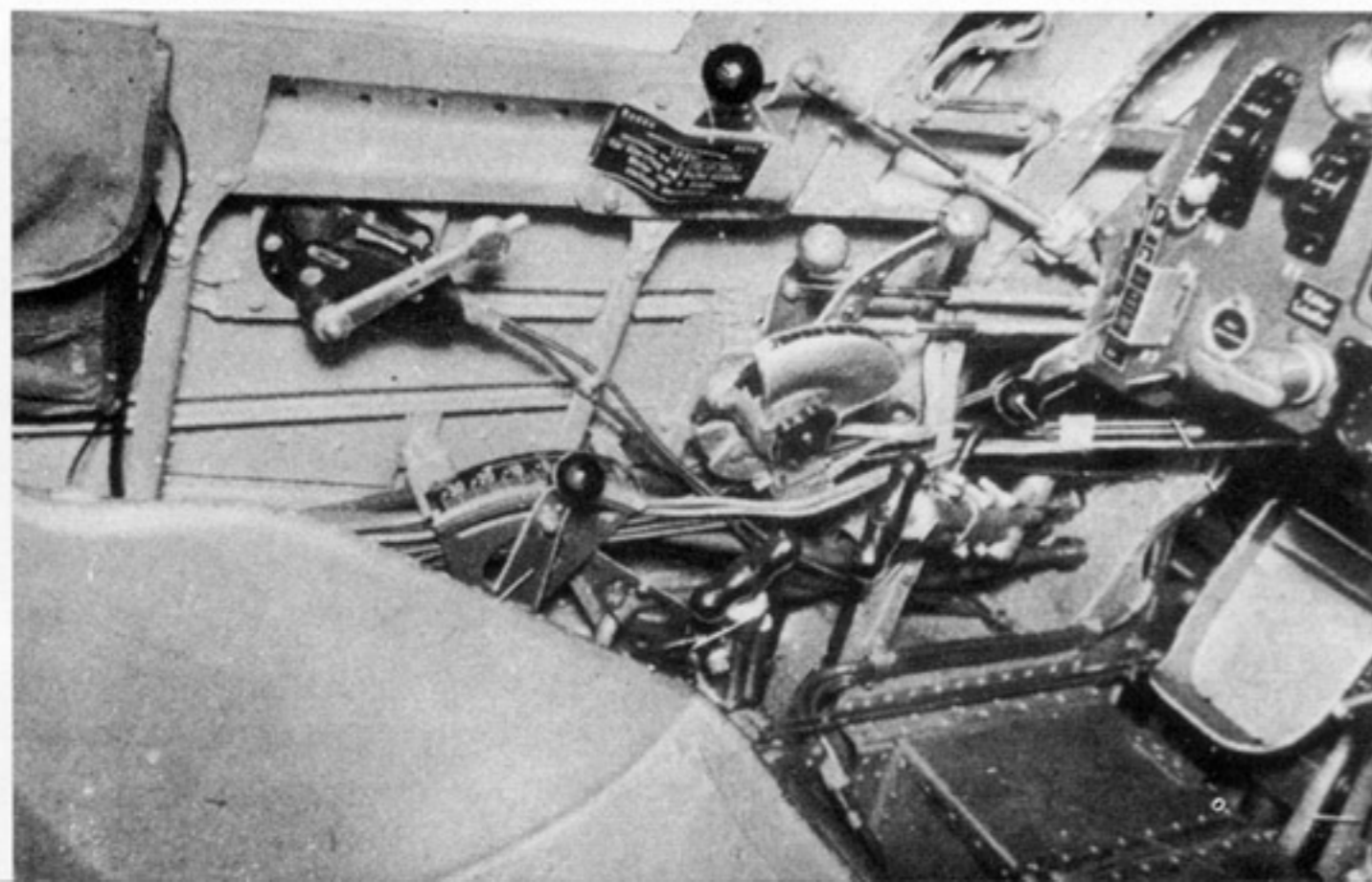




The right side of the He 112B cockpit. One of the rudder peddals is visible at left. On the cockpit sidewall are mounted various electrical boxes and switch panels. (Valtonen)

(Right) The control stick used a circular grip, similar to that used in the British Spitfire. The button at the top of the grip was the gun trigger. The compass is visible just above the stick. The small group of four instruments to the right of the stick are (clockwise) Propeller Pitch Gauge, Coolant Temperature Gauge, Oil Pressure Gauge and Oil Temperature Gauge. (Valtonen)

The left side of the He 112B cockpit contained the throttle, mixture and propeller controls. The flap lever is located just in front of the seat at the lower left. (Valtonen)



# Sales Attempts

One chilly early morning in late 1937, the He 112 V9 took off from the Heinkel's Marienehe site for another demonstration flight. This time the spectator was *Generalmajor* Ernst Udet, director of the RLM's *Technisches Amt*, an influential man in German aviation circles and a long time friend and supporter of Prof. Heinkel.

In spite of the prototype's perfect performance, that left the distinguished onlooker impressed, he already knew the bad news he had to tell his friend, the fate of the He 112 had been decided, the RLM already ordered a batch of seventy-six Bf 109B *Jäger* from the *Bayerische Flugzeugwerke* (BFW).

Heinkel was disappointed. He was convinced that this order belonged to him and, in compliance, a series production line had already been projected. Even the *Werknummern* were already reserved for this batch (W.Nr. 2001-2080). Nevertheless, to compensate the bad news, Udet brought good news, too. He informed Heinkel that exports of his fighter were welcomed and permission would be granted for export licenses. Ernst Heinkel immediately initiated an intensive sales campaign throughout Europe and even farther, in the Far East.

The first customers were not long in coming. In January of 1938 the *Heinkel Flugzeugwerke* officially asked permission from the RLM to export the He 112Bs to two "friendly" countries: Austria and Japan. Udet kept his word and the necessary papers arrived at Rostock at the end of January. By the time the paper work had arrived, steps for a limited scale production run at the Marienehe assembly line had already been set in motion.

The first customers were the Japanese. They sought a fast interceptor capable of combating the new Soviet aircraft encountered over China. Impressed by the qualities of the He 112 V9 demonstrated to them, the Japanese delegation promptly placed an order for thirty similar He 112Bs, with an option for 100 more. The first four He 112s left Germany in December of 1937, and during the next year all thirty aircraft reached Japan.

The Japanese were followed in November of 1937 by an Austrian military delegation, led by *Generaloberst* Alexander Löhr, Commander-in-Chief of the *Luftstreitkräfte* (Austrian Air

**A line-up of fifteen He 112B-1s on the Heinkel field, probably intended for Spain. The aircraft in the foreground (D-IRNH, W.Nr. 2049) was test flown on 2 September 1938 by Kurt Heinrich. (Petrick)**



**One of the first series-production He 112Bs, which was exported to Japan, on the grass at the Heinkel Flugzeugwerke's Marienehe site, moments after it had been flight tested. Since this aircraft was sent to Japan by ship, it did not receive German markings. (Nowarra)**

Force). They placed an even larger order for a total of forty-two He 112Bs [according to an Austrian document entitled *Sondergeräte-Ausrüstung He 112* (Special Equipment for the He 112), dated 20 November 1937, the Heinkel fighter would be armed with two Rheinmetall MG 17 (T6-200) machine guns and six THM 10/I bomb shackles since the 20MM Oerlikon cannons were pending on license purchase from the manufacturer.] These Heinkel fighters received Austrian air force markings (1001-1042) before their delivery. During early 1938, the Austrians reduced the order to thirty-six aircraft due to lack of funds (the price for one He 112B was 163,278 *Reichsmarks*, while for a spare Jumo 210 engine 31,533 RM). In the event, these Heinkels never reached Austria, since the country was incorporated into the Third Reich following the March 1938 *Anschluss*.

Now Heinkel found himself in trouble since the Austrian order was suddenly uncovered by funding. Luckily, another customer showed up, Spain. Impressed by the excellent results demonstrated by the three Heinkel prototypes sent for combat evaluation in Spain, the *Aviación Nacional* (Spanish Air Force) decided to purchase this fighter. Accordingly, during early 1938, they placed an order for twelve Heinkel 112s, the total number later increasing to eighteen. Unexpectedly, in the Spring of 1938, the Luftwaffe took over a batch of He 112Bs, which were returned to Heinkel in November. Two of these were immediately shipped to Spain, followed in January by another six and the remaining aircraft during April of 1939.

Meanwhile, Heinkel sent the He 112 V9 and two other He 112Bs on a European sales tour. One of the first countries visited was Finland. The *Suomen Ilmavoimat* (Finnish Air Force) was looking for a standard fighter. During the Spring of 1938, a Finnish flying officer, Captain Eka Magnusson was sent to Germany to gain experience. For a short period he was assigned to the *Richthofen Geschwader* where he flew the He 112. In mid-May of 1938, Heinkel sent the first series-production He 112B-1 (D-IEFC, W.Nr. 2006) to a Finnish aviation exhibition. Between 23-28 May it was flown at Malmi airport, and later at Utti air base. There it was tested by several Finnish pilots, including Magnusson. Heinkel's proposal, however, was rejected by the Commander of the *Suomen Ilmavoimat*, General Major Lundqvist, because the Fokker D.XXI fighter had already been purchased, and no additional funds were available for the He 112.

Another country targeted by Heinkel was the Netherlands. The *Luchtvaartafdeling* (Dutch Air Force) wanted to purchase thirty-six interceptor fighters to equip two of its squadrons. The He 112B-1, D-IORC (W.Nr. 2029), had arrived at Soesterberg base on 12 July 1938, piloted by Kurt Heinrich. Next day, gunnery trials were held at the range situated on the Vlieland island. Two Dutch pilots, 1st Lieutenant G.W. de Zwaan and Sergeant Major D.H. Lambermont, were allowed to fly the fighter. Although both of them reported favorably about the He 112, which exceeded the *Luchtvaartafdeling's* specification, the Dutch Minister of Defense, van Dijk, decided on the Koolhoven FK-58. Additionally, the Hawker Hurricane had also been ordered, mainly due to its availability for immediate shipment (the He 112s were promised for late 1939, in two versions, equipped with either the Jumo 210 Ea or DB 601Aa engine). Similarly, Switzerland rejected the purchase the He 112, instead of selecting the Bf 109. Belgium and Turkey opted for the Hawker Hurricane. In April of 1937, Yugoslavia opted for thirty He 112s, but later cancelled it and instead purchased a license to produce the other two fighter types.

Surrounded by hostile countries, each claiming, more or less founded, a piece of her territory, Rumania was the country most desperate to procure military equipment. The *Aeronautica Regală Română* (Rumanian Air Force) wanted virtually everything that flew. In April of 1939, an order was submitted for twenty-four He 112s, this soon being raised to thirty aircraft. In addition, they succeeded in obtaining a number of Hawker Hurricanes and Bf 109Es as well. The first Heinkels reached Rumania in June of 1939, with the last one arriving in October.

The last country to receive the He 112 was Hungary. In June of 1938, three Hungarian pilots were sent to Heinkel to study the He 112 V9. On 7 September 1938, the *Magyar Királyi Honvéd Légierő* (Hungarian Air Force) placed an order for thirty-six He 112Bs, and expressed the willingness to purchase a license for indigenous production of the He 112. The order was delayed several times and, ultimately, only three He 112B-1/U2s reached Hungary. The license agreement was also refused by the RLM. As a consequence, Hungary turned to Italy and chose the Fiat CR-42 and Reggiane Re-2000 as its standard fighters.

The DB 600A-equipped prototype, the V11, intended to be pattern aircraft for the planned He 112C-0 carrier aircraft series, was finally sent to Japan instead of Hungary.

The first series-production He 112B-1 (D-IEFC, W.Nr. 2006), took part in a Finnish aviation exhibition in May of 1938. The Heinkel Werke's pilot, Schütze-Blank, runs the engine prior to take off on a demonstration flight from Malmi airport on 23 May 1938. The *Suomen Ilmavoimat* (Finnish Air Force) aircraft in the background carries the *Hakaristi*, a Light Blue Swastika on its wing. This marking had nothing in common with the German Nazi party, since it symbolizes a Finnish epic poem, the *Kalevala*. (Salonen)



This brand new He 112B (D-IEFC) was exhibited at the aviation show held in Finland between 14-22 May 1938. For this occasion a hangar was built specially for the German aviation industry's exhibitions. Besides the He 112B-1, an Arado Ar 95 was also exhibited here. (Salonen)

A demonstration aircraft (He 112B-1, D-IORC, W.Nr. 2029) on the ramp at Soesterberg airfield in the Netherlands on 12 July 1938, is viewed by a group of German civilians and Dutch military personnel. (Griehl)



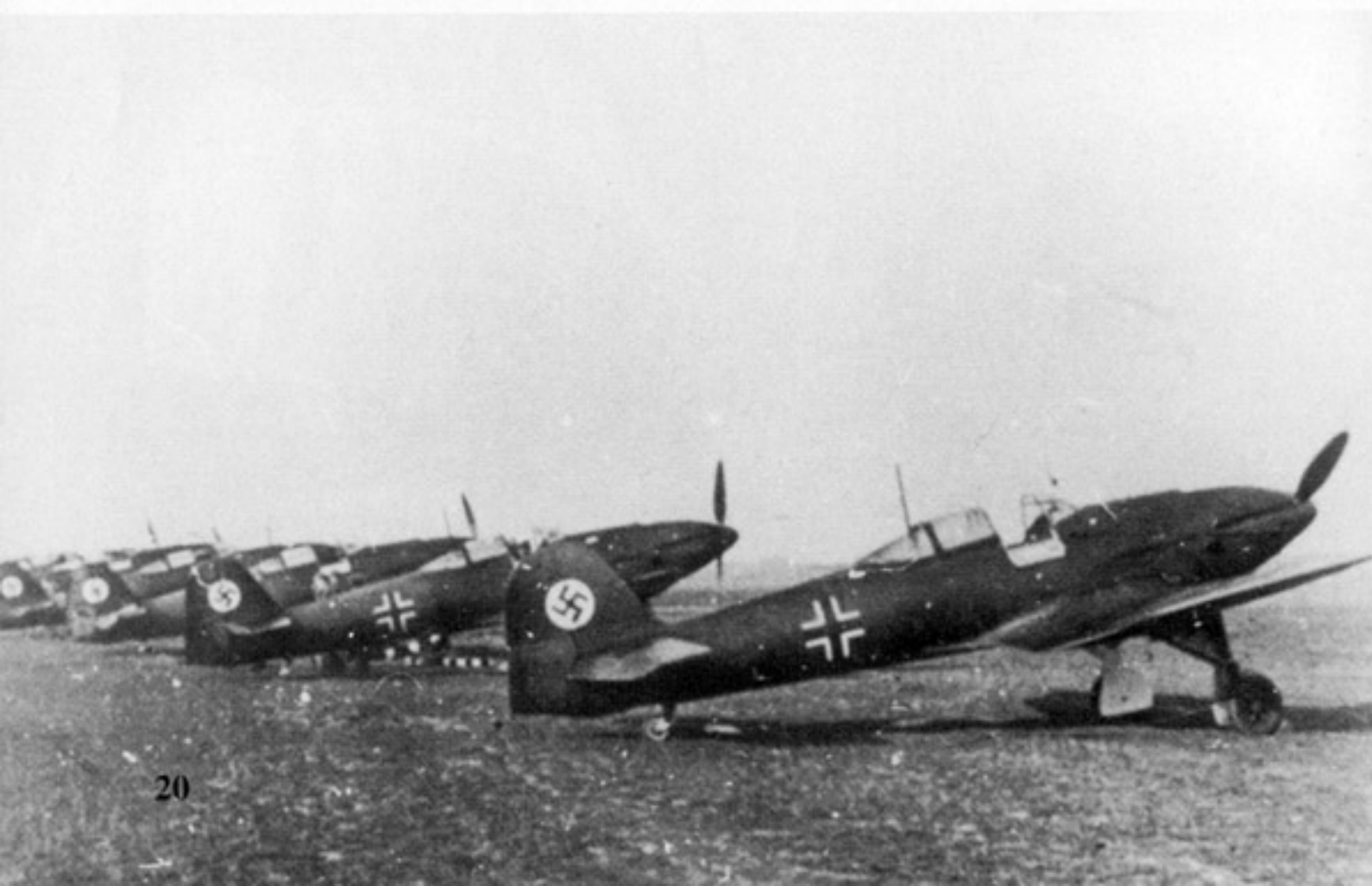
# Into the Luftwaffe

Following the *Anschluss* of March 1938, when Austria was incorporated into the Third Reich, German expansion next targeted the Western part of Czechoslovakia. This region, known as the *Sudetenland*, was inhabited by a majority of ethnic Germans, who demanded reunification with Germany. This time, however, the take over did not look to be as easy as the previous annexations. Both France and Great Britain had expressed their concerns and the Soviet Union threatened armed interference.

Fearing a confrontation, the RLM ordered the impressment of all serviceable military aircraft as a show strength and to reinforce the Luftwaffe in case of need (as of 1 August 1938, of the 2,928 German military aircraft only 643 were fighters [22%]). Among the mobilized warplanes were a limited number (different sources give the total number usually as twelve, sometimes ten, or even eighteen) of Heinkel 112Bs from the batch completed for Japan. These fighters were assigned in July of 1938 to the recently formed IV./JG 132. The Heinkels formed this fourth *Gruppe* (group), with a strength equal to only a *Staffel* (squadron). These He 112s received two different camouflage schemes: at least six of them were painted in Olive and Black Green over Light Blue, while others retained their overall Light Gray factory finish. Individual markings were single-digit numbers, beginning with 1, these being painted either in Yellow (on Green), or in Black (on Gray). No group or squadron emblems were used.

IV./JG 132 was established within *Luftkreis II* at Werneuchen on 1 July 1938. Initially, its base was at Oschatz, moving to Karlsbad on 6 October. From there to Mährisch-Trübau on 13 November, where it was redesignated I./JG 331. A short time later, the He 112s were returned to Heinkel, being replaced by Bf 109Cs. Once released, these He 112B-1s were shipped to

**A line-up of six He 112Bs assigned in July of 1938 to IV./JG 132 based at Oschatz. Individual marking (aircraft numbers) have not been applied. While the first five aircraft have the *Hakenkreuz* (swastika) on the rudder hinge line, the last Heinkel has the swastika on the rudder itself. (Griehl)**



**Yellow 4 (factory code HE+JA) flies formation with another aircraft of IV./JG 132. The *Balkenkreuz* on the aircraft in the foreground was made up of four White rectangles against the camouflage color, while those on the Yellow 4 are narrower and have the usual Black cross. A Black swastika in the middle of a White circle, applied over a Red stripe, were the usual markings used on Luftwaffe aircraft until 1 January 1939. Just under the *Hakenkreuz* (swastika) is the aircraft's construction number (*Werknummer*) in White. (Griehl)**

Japan, completing the contract.

While in the Luftwaffe, those pilots who had the chance to fly the Heinkel fighter were impressed by its handling qualities, considering it in many aspects superior to the contemporary Messerschmitt 109.

Nevertheless, the He 112s left, while the Bf 109s remained.

**The underwing *Balkenkreuz* on the He 112B was carried far out on the wing tip. This aircraft is camouflaged in Olive Green/Black Green upper surfaces over Light Blue under-surfaces. (Griehl)**





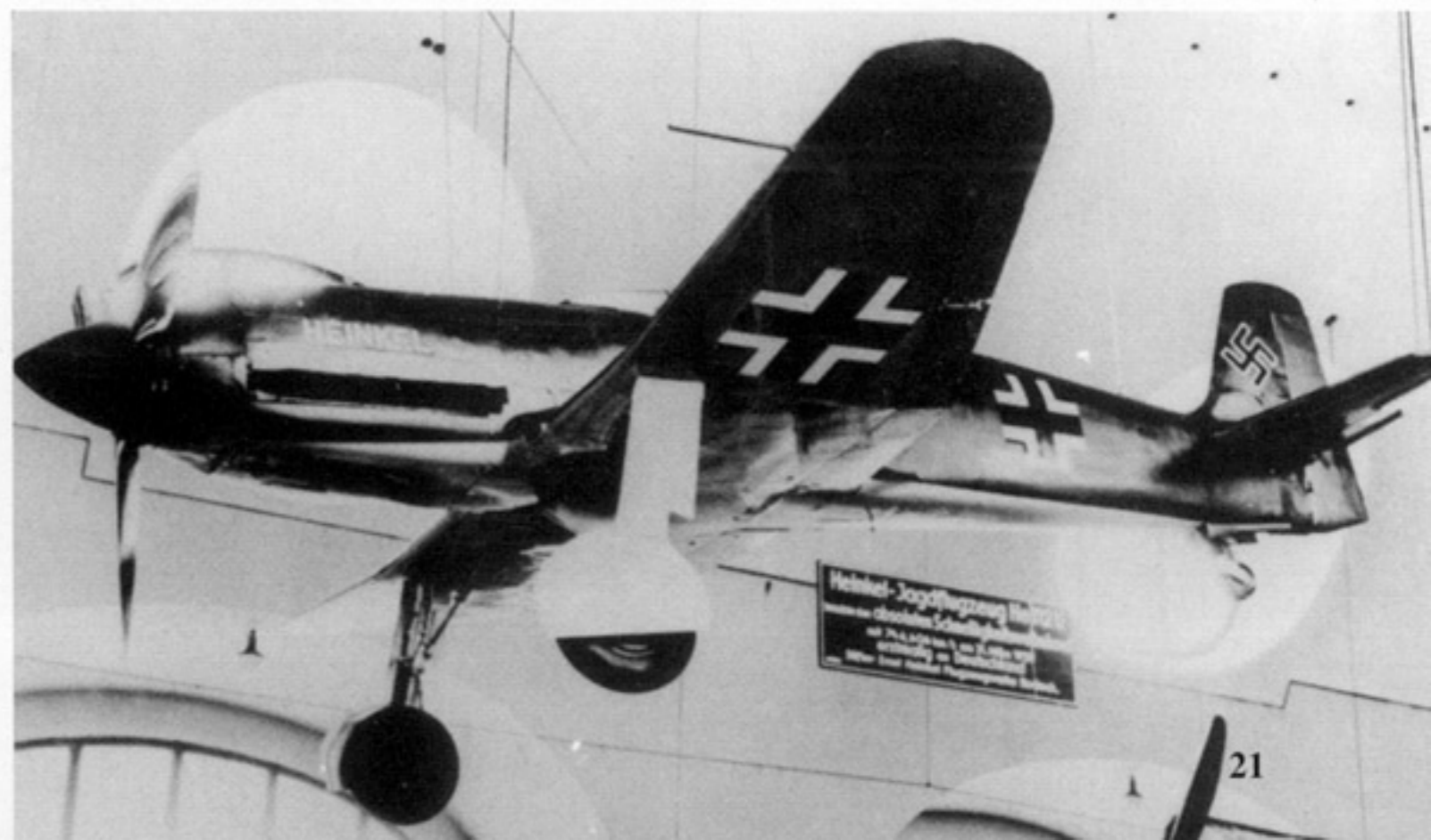
A He 112B-1, Yellow 5, at Karlsbad during October of 1938. The aircraft in the background is an Arado Ar 68E-1, White 8, of III./JG 132. The Yellow triangle beneath the cockpit indicates the location of the fuel filler cap and the fuel octane number. (Matthiesen)

The German propaganda at work. In spite of the under wing *Balkenkreuz*, this He 112B was not in Luftwaffe service. A detailed examination reveals that the shiny aircraft is, in fact, the much publicized He 112 V9 (D-IGSI) prototype/demonstration aircraft, and the cross was painted on the official factory print to suggest that in 1937 the He 112 was already impressed into the Luftwaffe. (Petrick)



A batch of He 112Bs enroute to Rumania during a refuelling stop at an airport near Belgrade (Yugoslavia). These aircraft previously wore Luftwaffe markings, as indicated by the Dark Gray circles applied on the wings to cover the original *Balkenkreuz*. German civilian markings were painted over these painted out Luftwaffe markings. (Micevski)

Another hoax of the German propaganda machine. Regardless of the inscription on the wall, this fighter was not an He 112U, which, in fact, never existed. The aircraft is actually a mixture of the He 100 V8 and V10, exhibited in the *Deutsches Museum* at Munich to represent the holder of the absolute speed record of 463.941 mph (746.606 km/h), established by the He 100 V8/R *Rekordflugzeug* (W.Nr. 1905) on 30 March 1939! Twenty-seven days later, this world record was beaten by the Messerschmitt Me 209 V1, which attained a speed of 482.485 mph (776.449 km/h). These exhibits were destroyed by an Allied bomber attack. (Petrick)



# Foreign Service

## Japan

When the second Sino-Japanese War erupted in July of 1937, combat aviation became an important strategic and tactical weapon, employed on an unprecedented scale. Both sides used aircraft en-masse and many new types made their debut in the skies over China. To counteract the higher performance of the new Soviet fighters that Japanese aircrews were encountering, the *Teikoku Nihon Kaigun* (Imperial Japanese Navy, IJN) began looking for an interceptor capable of effectively countering the new Soviet machines. As the Mitsubishi A5M was only available in limited numbers and the A6M Zero, was still under development, a fast fighter became a pressing need. To overcome this, Japan turned to its major ally, the Third Reich.

In the Autumn of 1937, a Japanese military delegation visited the *Heinkel Flugzeugwerke's* Marienehe plant. Impressed by the high performances and clean lines of the He 112 V9, an order for thirty similar He 112B-0s was placed, with options for a further 100 aircraft. The delegation returned to Japan, not only with the signed contract documents but with a demonstration aircraft, presumably the He 112 V5 (D-IIZO).

The Heinkel 112 fighter entered in the inventory of the IJN as the A7He1Heinkel Navy Type He Interceptor Fighter [the IJN designation gives the following information: A at that time indicated fighter, 7 indicated that (in 1938) the aircraft was intended as replacement for the type 6, i.e. the A6M Zero [the A7M *Reppu*, Allied code Sam, became the plane-of-choice to replace the Zero]; He is the designation for the manufacturer and 1 indicated the first sub-variant of this type] and was assigned to the IJN's Air Arsenal for evaluation [contrary to some sources, there is no official record indicating that He 112's saw operational use in China for field evaluation.] These tests included comparison flights with all similar aircraft types available. Compared with the Mitsubishi A5M2, the current Japanese Navy front-line fighter, the He 112 proved to be 40 mph (65 km/h) faster. Climb rate was almost identical but the maneu-

**This pre-series He 112A-0, presumably the He 112 V5, on the ramp at the IJN's Air Arsenal during 1938. On the original print, the Red Japanese roundels can be clearly discerned. The aircraft's Red tail carries the test unit's JAH-1 code (J is the *Katakana* character "Ko"). (Okajima via Izawa/Aida)**



**This heavily retouched print, dated 1937, appears to be the only existing photograph depicting a He 112B sporting the Hinomaru (Japanese roundel). This particular print was found in a photo album confiscated from a Japanese Air Attaché and it was obviously treated as official, judging from the degree of detail found in that album. A close examination of the original reveals it to be a retouched copy of an official Heinkel factory picture of the He 112 V9 (as on page 14, bottom). (Mikesh)**

verability of the Heinkel fighter was found to be inferior to the Japanese fighter. This was a decisive factor in view of the contemporary Japanese doctrine, that stressed maneuverability above all else for a fighter. The liquid-cooled, 12-cylinder, in-line engine was considered inferior and complicated compared to air-cooled radials, and was deemed too complex and inconvenient. As a result of these tests the *Kaigun Koku Gijyutsusho's* (Testing Unit) issued a final report which concluded that the A7He1 was not the right choice as the main IJN fighter type and cancellation of the options on additional aircraft was recommended.

All thirty He 112s [two were He 112A-0s (Jumo 210C), six were He 112B-0s (Jumo 210C), twenty-one were He 112B-1s (Jumo 210Ea) and the He 112 V11 (DB 600A) ordered arrived in Japan: four at the end of 1937, with the last of the remaining twenty-six arriving at the end of 1938 (W.Nr. 2028, was handed over by Heinkel to an unnamed customer, possibly Japan, on 4 July 1938). Some were assigned to various research institutes as demonstration aircraft representing the latest German aircraft technology. The remaining aircraft were assigned to the military for use as trainers and teaching aids [allied military intelligence was aware of the He 112s servicing with the IJN, and expected to meet this type in combat and it was assigned a code name, Jerry. Obviously, none were ever encountered by Allied pilots during the Pacific War.] After the Japanese surrender, at least one Heinkel fighter was found by U.S. troops. This particular aircraft was discovered on 5 October 1945 by J. Earl Capron of Vermont in the woods behind Atsugi airfield in Honshu area. The overall Gray fuselage was stripped of its engine, tail and instruments. The wings, appraised by Capron as *very graceful and surprisingly light in weight*, were dumped several feet away (the factory plate, removed by Capron from the front wing spar, had the following inscriptions: "*Ernst Heinkel Flugzeugwerke G.m.b.H., Rostock. Typ (type): He 112, Fabr.Nr. (Manufacturing No.): FL.EX.2; Baujahr (Manufacturing year): KM.2.38 (February 1938) H26.*")

The He 112 V11 with its powerful 1,000 hp Daimler-Benz DB 600Aa engine, was used for various research projects.

# Spain

After it had become clear that Heinkel's He 112 had lost any chance of being chosen for Luftwaffe service to Willy Messerschmitt's Bf 109, Ernst Heinkel successfully petitioned the *Reichsluftfahrtministerium* (RLM) to permit one of his He 112 V prototypes to be sent for operational evaluation in Spain.

Together with three Bf 109 prototypes (V3, V4 and V5), the He 112 V6 (contrary to sources which state the V5 deployed to Spain) was unloaded at Cádiz harbor in early December, of 1936. The fighter was subsequently shipped to Tablada (Sevilla) where it was assembled and tested by German technicians. Still wearing German civilian codes, the Heinkel 112 was assigned to *Versuchsjagdgruppe* 88, an experimental fighter unit of the *Legión Cóndor* (Condor Legion), sent by the *Führer* to assist General Franco's Nationalist Army.

Once assembled and test flown, the He 112 prototype was assigned the Spanish code 5•1 and received the markings of the *Aviación Nacional* (Spanish Nationalist Aviation), consisting of Black discs on the fuselage sides, Black *Cruz de San Andrés* (St. Andrew Cross) on the White rudder and White *San Andrés* crosses on the Black wing discs, the latter being applied to both wing surfaces. These wing markings were supplemented with two Black stripes appearing only on the inner wing panels and with White wing tips. All markings were applied directly over the aircraft's original Natural Metal factory finish.

Before leaving for Spain, a 20MM Rheinmetall-Borsig MG C/30L type *Motorkanone* (engine-mounted cannon) was installed in the longitudinal axle of the engine, firing through the propeller shaft. This modification was made according to the requirements of the RLM's *Technisches Amt* (Technical Office), which was anxious to prove the effectiveness of the aircraft and cannon combination, nick-named the *Kanonenvogel* (cannon-bird).

The Heinkel *Kanonenvogel* was assigned to *Oberleutnant* Günther "Fips" Radusch, an experienced Luftwaffe flying officer. Radusch volunteered for duty in Spain and arrived in the country in September of 1936, disguised as a civilian. His first flight in the He 112 V6 took place on 9 December 1936, from Tablada airfield and field trials commenced immediately. The He 112 V6, together with the newly arrived Junkers Ju 87A Stukas and Henschel Hs 123 *Angelitos*, undertook ground attack missions against various Republican targets, such as armored vehicles, lightly fortified positions and artillery emplacements. Many pilots volunteered. The He 112 V6 was assigned to the Condor Legion based at the airfield of Tablada (Sevilla) in late December of 1936. The opening in the spinner is for the muzzle of the 20MM experimental cannon, the only armament fitted to this Heinkel prototype. The Spanish Nationalist wing markings as well as the White identification color on wing tips had not been applied. The Jumo 210Da engine drove a three blade propeller. (EA-IHCA via Ricardo García de Celis Borrell)



The *Kanonenvogel* lies in a field with its back broken. The He 112 V6 met its fate following a crash landing at *Escalona del Prado* (Toledo) on 19 July 1937. Before landing the engine was shut down and only one of the two propeller blades was bent. The aircraft carries unusually large Nationalist markings applied on the wing upper surfaces. (EA-IHCA, via Borrell)

teered to fly the *Kanonenvogel*, but only a few were approved to do so. Those who were fortunate enough to be qualified, unanimously praised the aircraft's performance and handling.

Soon after the Battle of Jarama had begun on 6 February, *Oberleutnant* Radusch and his He 112 V6 were deployed to Villa de Prado, a small airfield near Madrid, where a He 51 fighter squadron of the Condor Legion was based. There Radusch joined another famous German pilot, *Oberleutnant* Hannes Trautloft. Trautloft was in charge of testing the Messerschmitt Bf 109 V3 (6•1), the Heinkel 112's closest competitor. Both prototypes carried out several combat sorties, with no significant results. The final goal, however, was achieved. Both fighter prototypes were thoroughly tested in the field and their performances recorded. During these test flights, the Bf 109 flew fighter missions side by side with the ageing, cracking Heinkel He 51s, while the He 112 *Kanonenvogel*, loaded with armor-piercing explosive ammunition, was used in a ground attack role.

The He 112 V9, 8•2 (ex-D-IGSI) was camouflaged in overall Medium Grey (RLM 02) during April of 1938. The area around the exhaust tube was painted in Black. The *Hakenkreuz* (swastika) painted on the usually plain Black fuselage circle is a personal emblem of *Hauptmann* Harro Harder, the pilot assigned to fly the Heinkel fighter prototype. The aircraft also lacks a radio antenna mast. (Dressel)







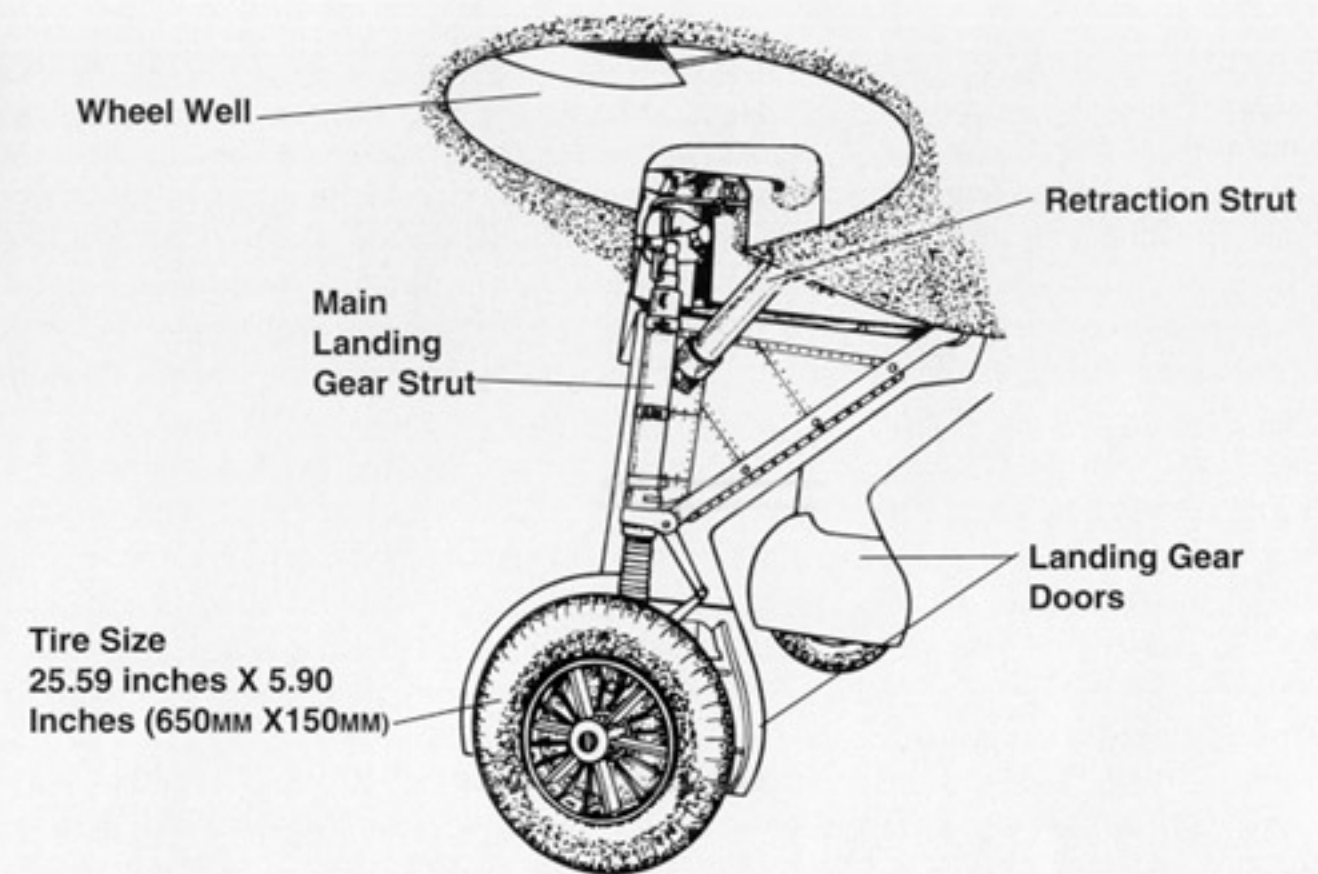
The He 112 V9 on the edge of a front-line airfield during the Summer of 1938. By this time the *Hakenkreuz* in the fuselage roundel had been deleted. The small wheel well doors were removed during field service. A Messerschmitt Bf 109 *Bipalas* is visible in the background hidden under the trees. (Petrick)

In early March 1937, the He 112 V6 was transferred to the second *Staffel* (squadron) of the *Jagdgruppe 88* (88th Fighter Group) lead by *Oberleutnant* Günther Lützow. The unit operated out of Almorox airfield (Toledo region). On 16 March, *Oberleutnant* Wilhelm Balthasar, an observer officer flying in He 45C biplanes, happened to be at Almorox due to an earlier emergency landing. While he was sitting in the C/O's office a report came in about an approaching Republican armored train. Fighters were immediately alerted and took off seconds later to attack the enemy target. *Oberleutnant* Balthasar spotted the Heinkel prototype on the airfield boundary and succeeded in convincing the airfield's commandant that he was an experienced Heinkel pilot and asked for permission to fly the aircraft on the strike. Permission was granted and following a brief cockpit check-out the newly fledged pilot headed towards Aranjuez region where the armored train operated. Quickly he caught up with the slower fighters and attacked the train halted in Seseña railway station. On his third pass, he scored a direct hit with his 20MM cannon on the ammunition car, which instantly exploded, setting off secondary explosions that destroyed the target. Elated with his success, Balthasar attacked a Republican tank on his return flight, setting it on fire. Quite an achievement for an inexperienced pilot!

*Oberleutnant* Balthasar was given a warm welcome on his return by his fellow airmen. He was subsequently assigned as C/O of an experimental combat unit made up of three He 45Cs and the sole He 112 V6. The newly formed *Rotte* was assigned to tactical reconnaissance missions, artillery spotting and ground attacks. Balthasar and his small unit were sent to Bilbao to support a Nationalist offensive in the North, where they operated until mid-June of 1937. On 6 July 1937, the battle of Brunete commenced, and the He 112 prototype took part in the combat. Piloted this time by *Unteroffizier* (NCO) Max Schulze, the He 112 V6 was flown to Escalona (Toledo region). During his ground attack missions, Schulze succeeded to knocking out three Republican armored vehicles.

Time, however, was limited for the *Kanonenvogel*. The end came on 19 July 1937, when, during a landing approach into Escalona airfield, the Jumo 210C engine suddenly seized, forcing Schulze to mush the aircraft into the ground at near stalling speed. The pilot was not

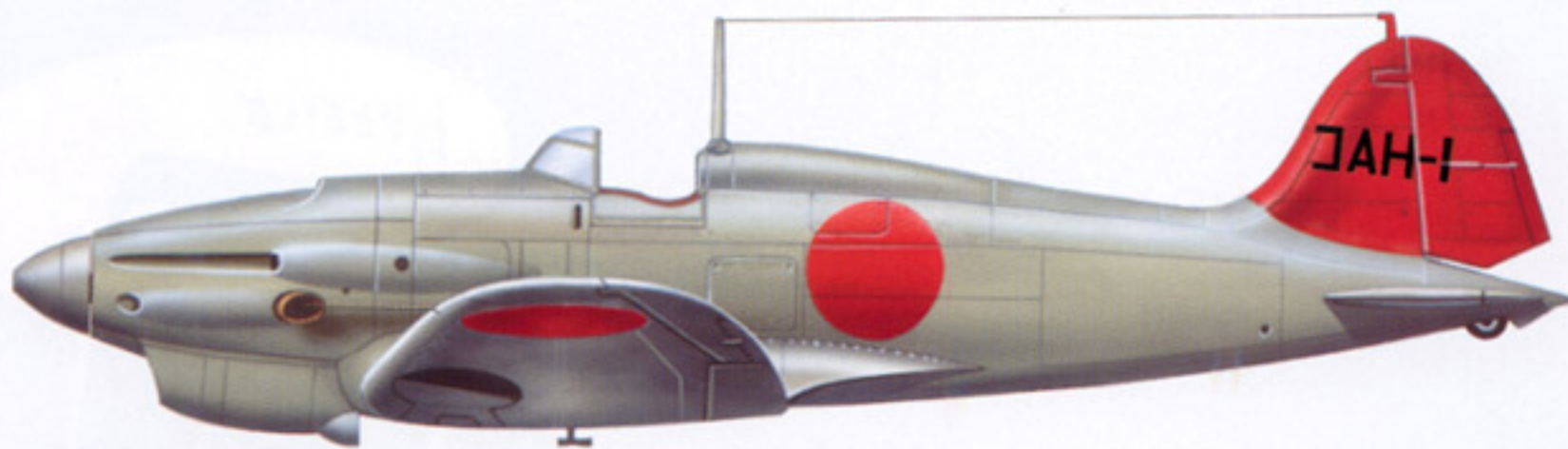
## Main Landing Gear Details



injured but the Heinkel was a write-off. The fuselage had almost broken in two and the wing leading edges were severely deformed during impact. The wreck was immediately shipped off to Germany in order to investigate the cause of the accident and evaluate the damage. The operational life of the He 112 V6 was over.

In the Spring of 1938, two other He 112 prototypes were sent to Spain for field trials. The first of the eleven series production He 112B-1s delivered to Spain. 5•51 was parked on the grass of Barajas airfield on the morning of 7 May 1939, on the occasion of the *Aviación Nacional's* victory parade. The front half of the spinner and the top of the fin were painted in Red, the identification color for the 1<sup>a</sup> *Escuadrilla* of Grupo 5-G-5. The He 112 is flanked by two Bf 109s (6•47 and 6•56). (Cerdá)



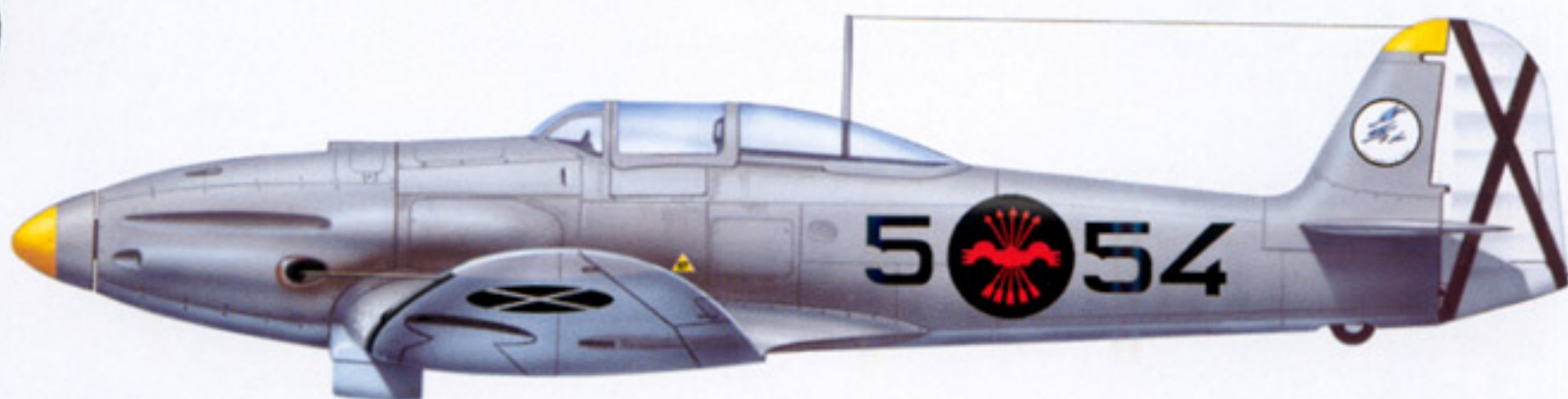
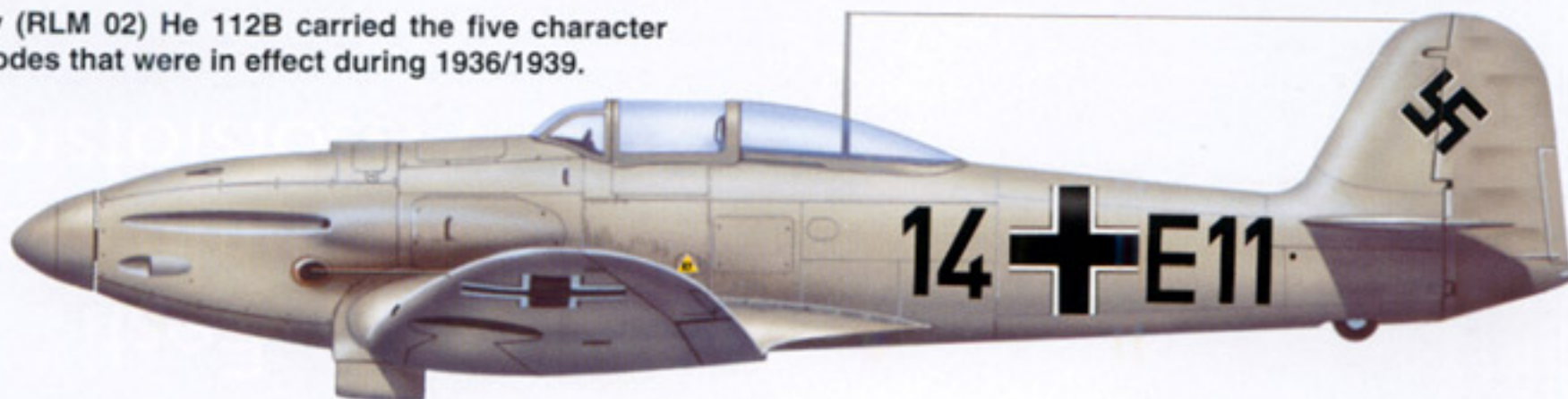


The He 112 V5 was used by the Testing Unit of the Imperial Japanese Navy for comparison flights against other fighter types. The prototype retained its original Gray (RLM 02) delivery scheme, the tail was Red, and the tail code was in Black.

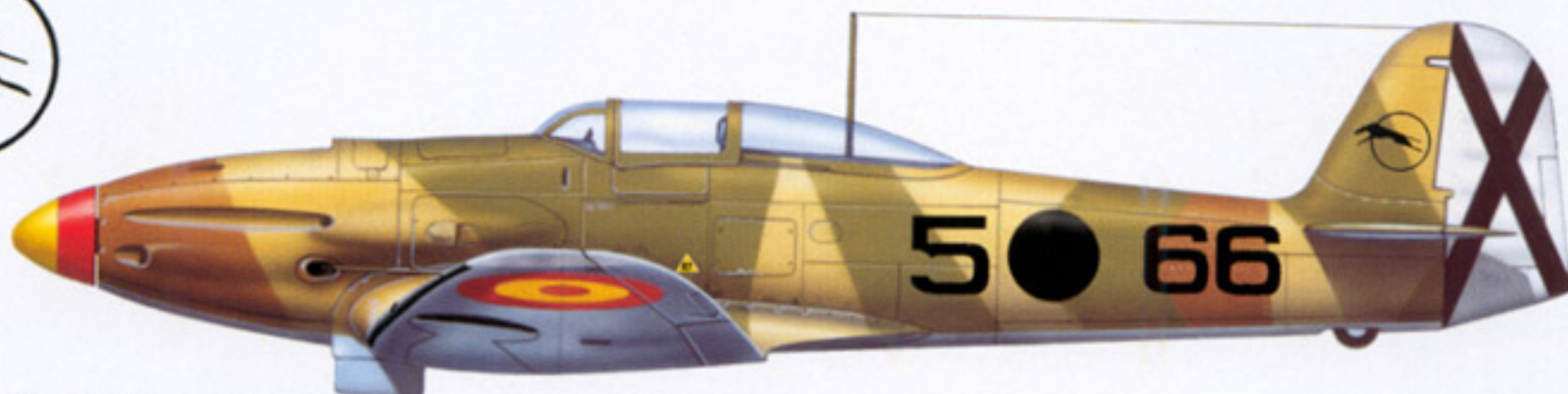


Yellow 2 was an early production He 112B in service with IV./JG 132 during the Summer of 1938. The aircraft carried the standard Luftwaffe splinter camouflage used in the late 1930s of Black Green (RLM 70) and Dark Green (RLM 71) over Light Blue (RLM 65) and the older-style tail markings. Later (from 1939) the Red stripe and White circle were deleted while the swastika was retained.

This overall Gray (RLM 02) He 112B carried the five character Luftwaffe radio codes that were in effect during 1936/1939.

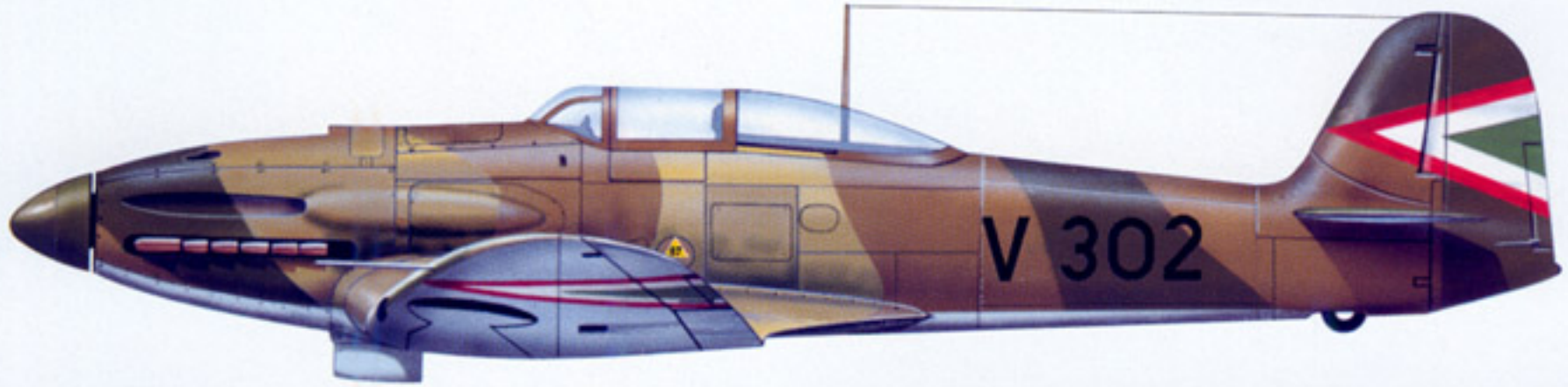


This He 112B-1, 5•54, was flown by *Capitán* Miguel García Pardo, commander of 2ª *Escuadrilla*, *Grupo* 5-G-5, based at Balaguer in early 1939. He scored the only He 112 victory during the Civil War, shooting down a Republican I-16 Rata on 19 January 1939. The aircraft was Light Gray (RLM 63) over Light Blue (RLM 65) with the Yellow markings of the 2nd Squadron on the forward half of the spinner and fin tip. All fighters of *Grupo* 5-G-5 carried the emblem of *Escuadra Morato* on the fin.

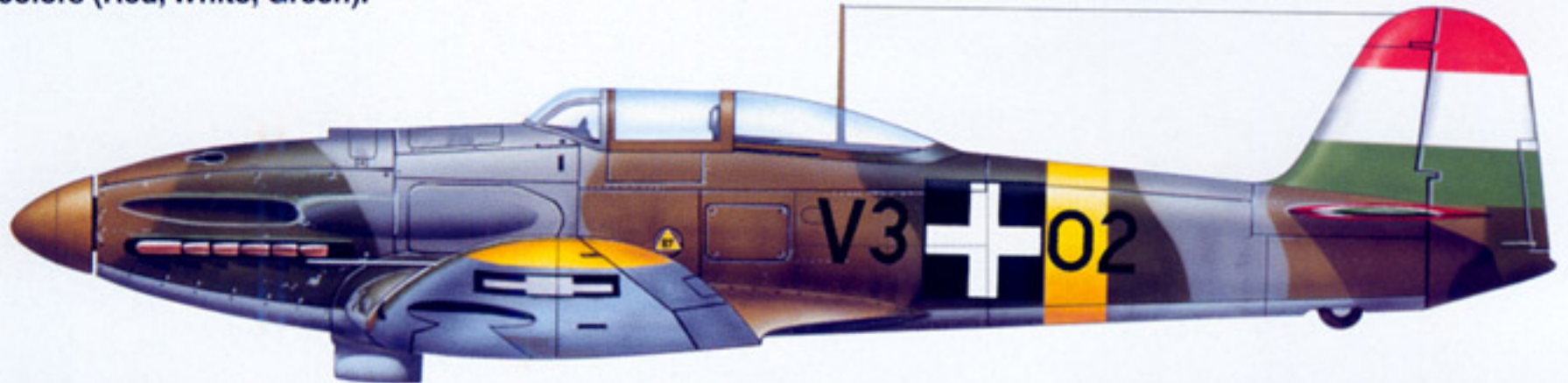


5•66, an He 112B-2 of 1ª *Escuadrilla*, *Grupo* 27 at Tauima/Nador airfield in Spanish Morocco. The three-tone splinter camouflage of Dark Green, Earth Brown and Sand Yellow, over Light Blue was typical for the Spanish Heinkel 112s deployed to Africa. The 27th Group's insignia, a Greyhound jumping through a circle, was carried on the fin.

This was the second He 112B-1/U2 received by the *Magyar Királyi Honvéd Légierő* in early 1940. V 302 was painted in typical Hungarian camouflage of Dark Green, Dark Brown and Terra Cotta over Light Gray undersurfaces, with the chevron type national insignia in effect between 1 September 1938 and 1 March 1942.



From June of 1941, Hungarian He 112Bs carried a Yellow band around the fuselage with Yellow wing tips (only on the undersurfaces). This aircraft carried the later national insignia adopted on 1 March 1942. The vertical tail surfaces and horizontal stabilizers carried the Hungarian national colors (Red, White, Green).



A He 112B-1 of *Grupul 5 vânătoare*, at Pipera-Bucharest prior to June 1941. Rumanian Heinkel 112s had two distinct paint schemes. Half of them retained the original overall Light Gray (RLM 63, Rumanian Ikarol 133 RLM Gray), while the other half were camouflaged with a wavy two-tone Green (RLM 70/71) upper surfaces and Light Blue (RLM 65) under surfaces. The spinner was 3/4 Yellow and 1/4 Black.

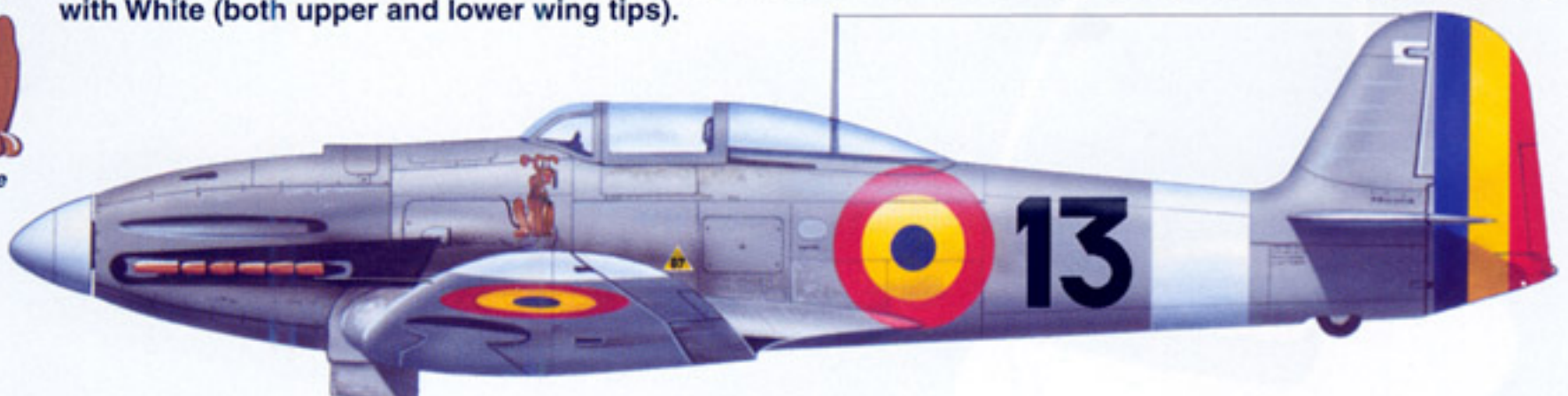


This He 112E, Black 18, of *Escadrila 52 vânătoare* belly landed behind enemy lines on 2 July 1941. *Adjutant stagiar aviator de rezerva* (Staff Sergeant) Aldea Cerchez was captured, and his aircraft was later flown by the VVS (Soviet air force). The squadron emblem, a Rumanian flag painted on a White roundel outlined in Blue was on the fin.



*Grupul 5 vânătoare*

Black 13 survived the war, being last flown by *Sublocotenent aviator* Partenie Popescu on 18 June 1946. Soon after the *coup d'état* of 23 August 1944, when Rumania sided with the Allies, the cross-type markings were replaced with the old-style Red-Yellow-Blue roundels and the Yellow Axis recognition markings were overpainted with White (both upper and lower wing tips).





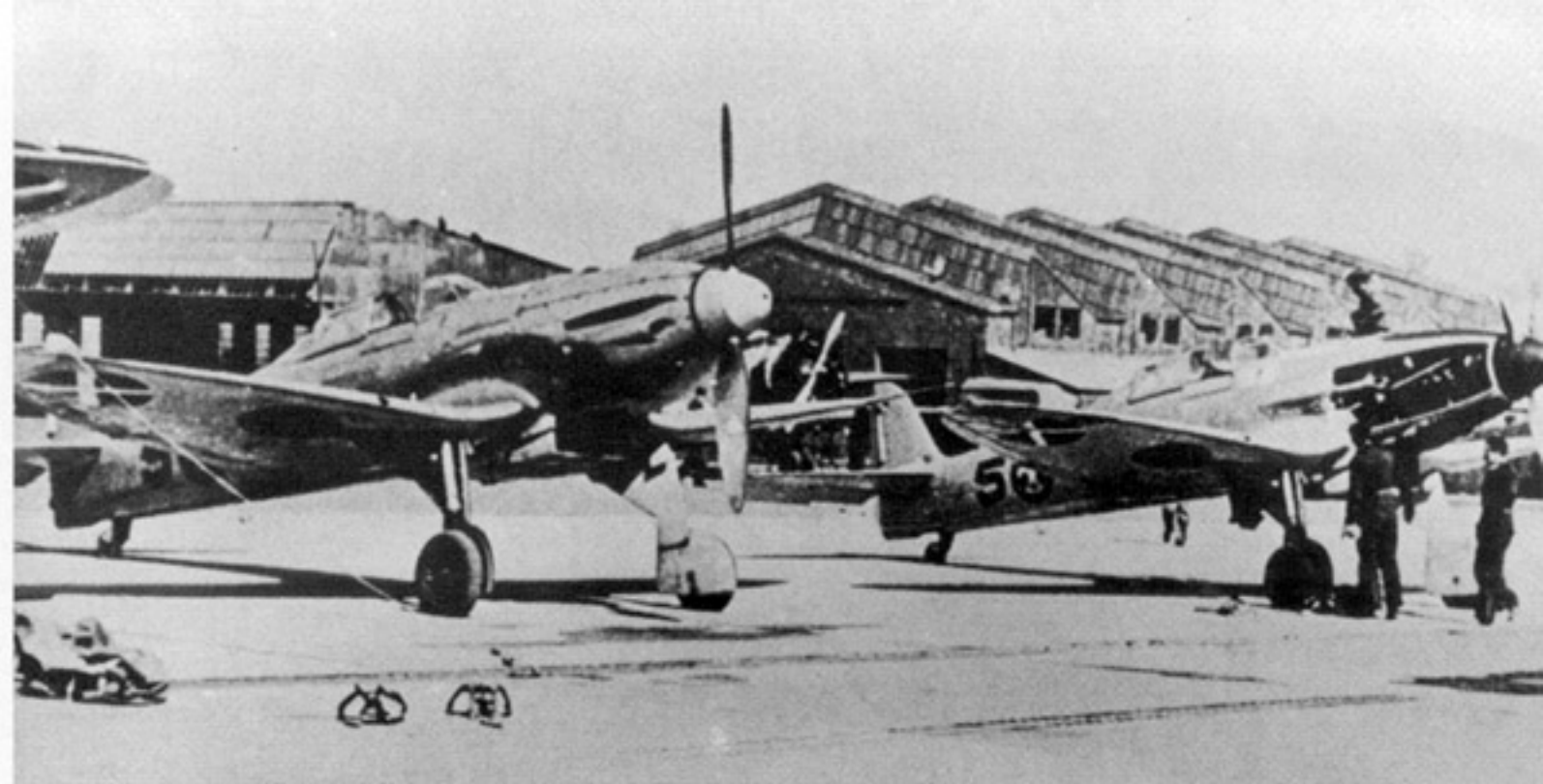
A pristine He 112B-1 soon after being assembled at León in December of 1938. The German pilot wears a Tyrolean hat, similar to those presented by the *Heinkel Flugzeugwerke* as a gift to the Spaniards. No squadron insignia or squadron identification colors have been applied at this time. (Cerdá)

eighth and ninth prototypes were intended as pattern aircraft for future series production aircraft: the He 112 V9 (D-IGSI) equipped with a Jumo 210C engine for the He 112B-0 series, while the He 112 V8 (D-IRXO) driven by a more powerful DB 600Aa engine for the He 112C-0s.

The V8's operational career turned out to be very brief. After receiving Nationalist markings and the 8•1 tactical number, a couple of experimental flights were conducted over the Spanish battle theater. On 18 July 1937, during one of these flights, the He 112 V8 was severely damaged. Repairs lasted for a period of four months and on 22 November, a Spanish pilot flew 8•1. At year's end the prototype was eventually returned to Germany.

The V9, however, performed well in Iberian skies. Designed with a radically new airframe and enclosed cockpit, this prototype was fitted with a more powerful armament as well, which comprised two wing-mounted 20MM MG FF cannons and a pair of fuselage-mounted 7.9MM MG 17 machine guns.

5•52 on the ramp of León airfield shortly after returning from its first flight in Spanish skies in mid-December of 1938. The test pilot still wears his Tyrolean hat. (Matthiesen)



The newcomers parked on the ramp at León at in late 1938. The Heinkel at left has the front half of its spinner painted in Yellow. The Yoke and Arrows *Falangist* emblem has not been added to the Black fuselage circle at this time while the other Heinkel has the insignia. It has the fin top unpainted and the spinner is entirely in Red. The antenna mast on this particular aircraft was not installed. (EA-IHCA, via Borrell)

Soon after receiving *Aviación Nacional* markings and the 8•2 code, the Light Gray painted aircraft was assigned to *Hauptmann* Harro Harder, an experienced Luftwaffe pilot. Similar to its predecessors, this aircraft was destined for ground attack role. Between April and June 1937, *Hauptmann* Harder conducted several successful strafing missions against various Republican targets. The V9 transferred to La Cenia (Zaragoza) airfield, was flown by two veteran Spanish pilots, *Comandante* Joaquín García-Morato, the highest scoring Nationalist ace and *Capitán* Miguel García-Pardo, commander of a Spanish fighter unit. They were specially selected by Spanish authorities to test the Heinkel 112 with the possibility of ordering a batch of these modern fighters for the *Aviación Nacional*.

Despite of the poor impression given by the underpowered Jumo 210Ea engine, both pilots were fairly satisfied with the aircraft's flying characteristics. After concluding the test flights, Captain García-Pardo quoted the fighter as "a Rolls-Royce with a *Topolino* [*Topolino* (Little Mouse) refers to the Fiat *Topolino*, a small, notorious passenger car that can best be compared to the Ford Pinto of the 1980s] engine." Quite an illustrative remark for the Heinkel 112!

Once its task was accomplished, the He 112 V9 was sent back to Germany. Subsequently it was demonstrated to several European countries, in the hope of obtaining new orders. In February of 1939, the aircraft met its destiny in Hungary, where it was destroyed during the very first demonstration flight.

Following the positive report made by the two pilots, the Spanish Nationalist government decided to purchase a number of He 112B series production aircraft. These aircraft would be used to form a new fighter group under the command of *Comandante* José Muñoz Jiménez "El Corto" (The Short Man). He sent his deputy, *Teniente* José María Llobet "El Turuta" (The Little Bugle) to supervise the arrival and assembly of the first Heinkels. These aircraft were sent to Spain by ship, each of them packed in two containers, one for the fuselage and another one for the wings. After their arrival in Vigo harbor in late November of 1938, the first He 112s were transported to León where they were assembled by German technicians. In the middle of December the first two Heinkels were ready to take off. They were followed

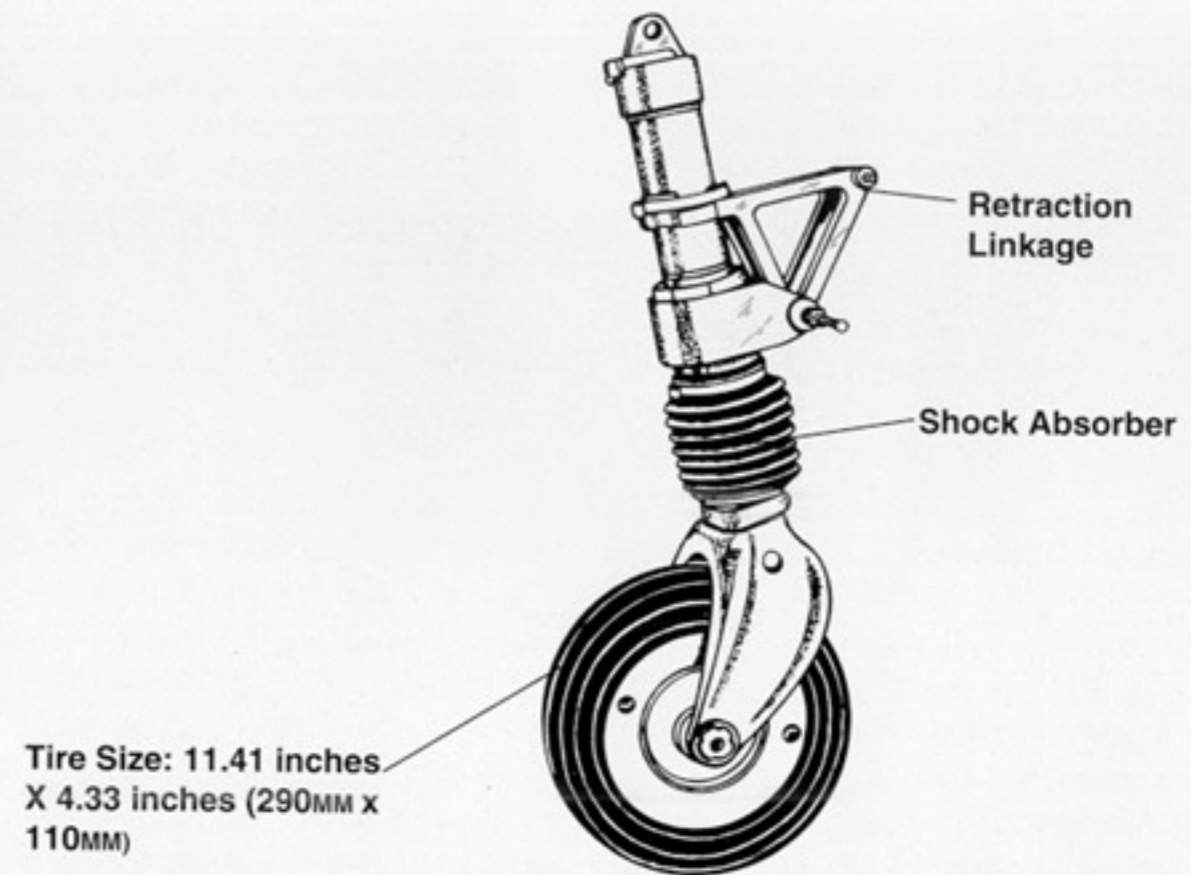


A He 112B of the 2<sup>a</sup> *Escuadrilla* (front half of the propeller spinner and the top of the fin is Yellow) is prepared for a sortie. In the background, at left, are a pair of Fiat CR-32s and behind the Heinkel is a Messerschmitt Bf 109. (EA-IHCA, via Borrell)

The Commander of the 1<sup>a</sup> *Escuadrilla*, *Capitán* Javier Murcia (back to the camera) gives a *Suelta* (cockpit check-out) to *Teniente* Luis Medrano at Balaguer airfield. There is a factory identification plate beneath the bottom right corner of the radio access panel. All identification and warning inscriptions are in German. The meaning of the numbers (0, 10, 30, 50 and 70) painted on the port wing, in front of the flap leading edge, was for wing loading. The starting crank is already in position and the mechanic standing on wing, is waiting the C/O's signal to start the engine. (Desrousseaux)



## Tail Wheel Detail

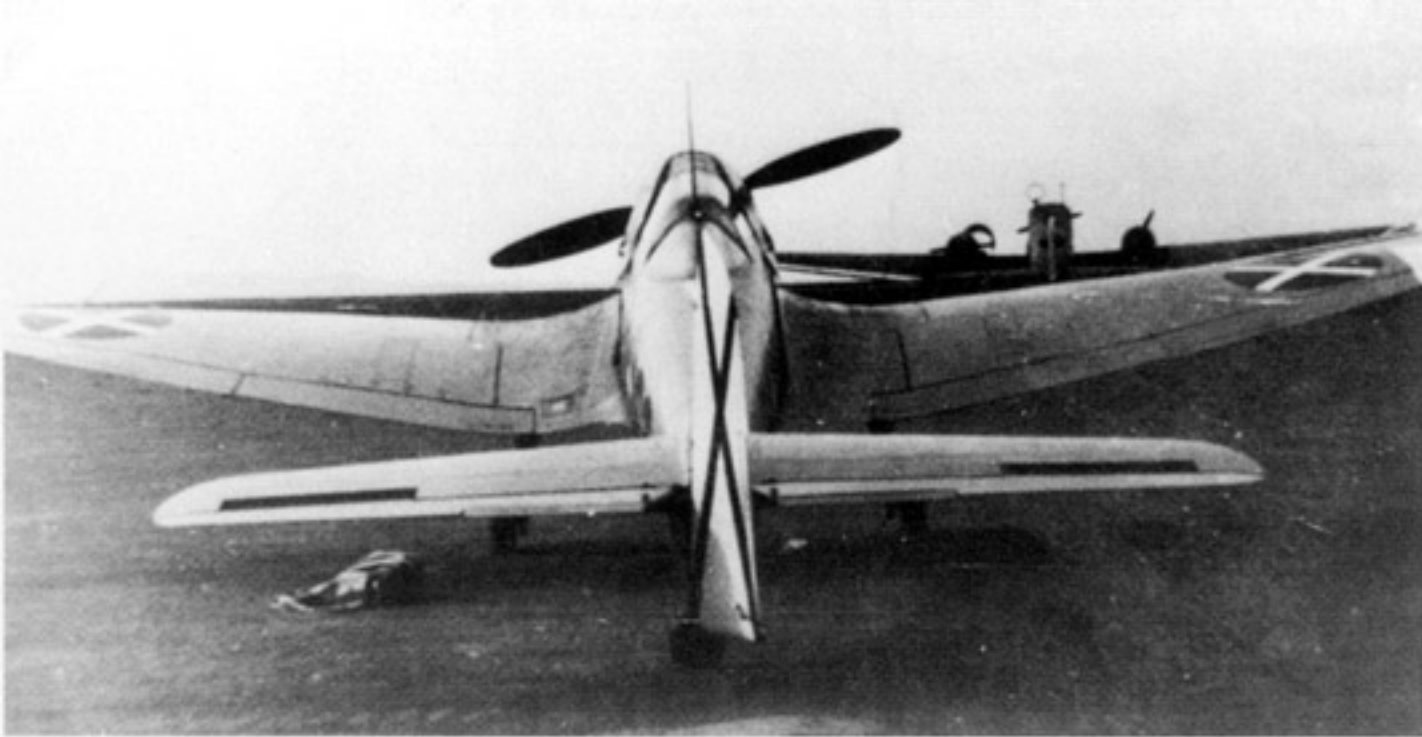


during early 1939 by another seven B-1s and ten B-2s (this latter sub-variant was powered by the fuel-injection Jumo 210Ga engine). This brought the total number of Heinkel He 112Bs in Spanish service to nineteen (contrary to published data of seventeen He 112B-0s). All of these retained their original German Light Gray/Sky Blue (RLM 63/65) color scheme and were coded 5•51 to 5•69, inclusive.

In order to differentiate the aircraft of the group's two squadrons, the forward half of the spinner and the top of the fin of seven He 112Bs (5•52 to 5•58) were painted Yellow, while for the remaining Heinkels (5•51 and 5•59 to 5•69) were painted Red. Complementing these distinctive markings, the emblem of *Escuadra Morato* was painted on the fin of all Spanish He 112s. This insignia consisted of the Blue silhouettes of three birds painted on a White circle surrounded by the motto *Vista, Suerte y al Toro* (a legend that is extremely difficult to translate. It could be approximated with Sight, Luck and Valor) in Black. Apart from their special markings, the Heinkel's received the standard Spanish Nationalist emblems: Black circles with White St. Andrew crosses on both wing surfaces, while Black St. Andrew crosses appeared on the White rudder surfaces. Wing tips were painted White. They also received the *Yugo y las Flechas* (Yoke and the Arrows) emblem of the *Falangists* in White on the Black fuselage roundel

Once the first batch of aircraft were assembled and tested by Germans, the training of the Spaniards could begin. The training was conducted at León airfield under the tutelage of Luftwaffe personnel. The first two Spanish airmen to become fully trained on the new fighter were "*El Corto*" and "*El Turuta*", who had earlier flown the He 112 V9.

At the end of January of 1939, the first seven aircraft were airworthy (5•52 to 5•58) and the newly formed 2nd Squadron (Yellow identification color) of *Grupo de Caza 5-G-5* (5-G-5 Fighter Group) was ready for training. As more Heinkels were assembled, another squadron,



The inverted gull wing configuration and the large tailplane, typical to the Heinkel fighter is very evident from behind. The marking consist of Black circles with a White Saint Andrew's Cross. The pilot's parachute is lying on the ground. (Desrousseau)

the 1st Squadron (Red identification color), was formed under the command of *Capitán* Javier Murcia Rubio. It consisted of eight He 112Bs: 5•51, 5•59 of "*El Corto*" and six other aircraft. The remaining four Heinkels arrived in April of 1939 and were divided among the two squadrons. The careers of the Heinkels assigned to the *1ª Escuadrilla* proved to be very short, as the squadron was re-equipped with the Bf 109B and C *Bipalas* in late February of 1939. Earlier variants of the Messerschmitt fighter became increasingly available as the Condor Legion began receiving the more advanced Bf 109E *Emils*. *Grupo 5-G-5* was incorporated into the *7ª Escuadra de Caza* (7th Fighter Regiment) alongside *Grupo 2-G-2* and *Grupo 3-G-3*, both of which were equipped with the obsolete Fiat CR-32 *Chirris*.

Placed under the command of *Capitán* Miguel García Pardo, the personnel of *2ª Escuadrilla*, all veterans of the civil war, began their training on the new Heinkels. Although all had many flight hours in their log-books, not all of them were fighter pilots. Those who had flown the slower, but more nimble Fiat fighter biplanes were rather skeptical of the new machine. On the other hand, the men from *Las Cadenas* (The Chain, ground attack) units, used to fly their slow and clumsy Heinkel He 51s and Romeo Ro-37s, were unanimously enthusiastic about the modern fighter plane.

Line-up of five of *2ª Escuadrilla's* He 112Bs at Balaguer airfield in January of 1939. At this time the *Vista, Suerte y al Toro* unit insignia had not been applied to the aircraft's fin. (Desrousseau)



5•63 of *1ª Escuadrilla* was probably an He 112B-2 with the fuel-injected Jumo 210Ga engine. The aircraft carries the insignia of *7ª Escuadra de Caza* (7th Fighter Regiment) on the fin. The insignia consisted of three Blue aggressive birds on a White circle. (Desrousseau)

Training was rather sketchy and given in rough manner, as all these trainees were already experienced pilots. A good example of this perfunctory training is given in the memoirs of *Teniente* J. L. Jiménez-Arenas "*Bobito*", a former He 112 pilot:

*"Sitting in the cockpit, the Comandante explains to me the complexity of this aircraft [He 112]. Once in the air, I have to keep in mind three words: gear, gauge, flaps. In other words, retract the main landing gear, hit with my finger the knob of the variable propeller pitch adjusting gauge and then retract the flaps. If I climb over 8,200 feet (2,500 meters), I have to put the compressor on, which must be turned off if I descend below that height. When I approach for landing, I have to remember once again the three words: gear, gauge, flaps. Once the instructor told me all these steps, he concluded the training with this words: "That's it. Now you can take off."*

Those former Spanish pilots who remember flying the Heinkel fighter, like R. Escudé or J.M. Llobet, recall that a fourth word had to be added to keep themselves alive: "Rudder". This was essential at landing, as once the rudder was operated properly it helped the aircraft to remain afloat a little longer before touching the ground. Some inexperienced pilots, who were not aware of this "trick", crashed during high-speed landing approach.

After the first He 112s were declared operational in mid-January, they were deployed to Balaguer (Lerida) to support the *Ejército Nacional* (National Army) offensive in Catalonia. On 17 January, *2ª Escuadrilla* headed for Logroño, but bad weather forced them to return to their base at León. The weather improved the next day, and the Heinkels could reach they destination, Balaguer, without any incident. There, the squadron was joined by new pilots (Luis Medrano de Predo, Jorge Muntadas Claramunt, Salvador Serra Alorda, Santiago González Guzmán and Julián Alonso Callejo). The He 112s mission was to provide air cover for the Fiat CR-32s, whose operational ceiling was much lower.

Two days later, after a patrol mission over Cervera, the He 112s returned to base, performing aerobatics over the field, announcing those on the ground an air victory. Over the Igualada region, the Heinkel 112s had engaged several Republican Polikarpov I-16 *Rata* (Rat).



Heinkel 112s (5•64, 5•61) of the 1ª Escuadrilla (Red identification color) of Grupo 5-G-5 prepare to leave Balaguer airfield for an escort mission. (EA-IHGA, via Borrell)

In the ensuing mêlée, the squadron's C/O, *Capitán* García Pardo, downed one of the stubby Republican fighters, obtaining the first, and only, aerial victory by a Spanish He 112 in the civil war. García Pardo's "kill" was also his last one, bringing his final tally to twelve. That evening, just before nightfall, the Heinkels took off for a strafing mission against the railway station at Manresa. Their 20MM cannons again proved devastating, destroying the target in a matter of minutes.

The commanding officer of the Republican fighter arm, *Comandante* Andrés García Lacalle, recalls that on 21 January 1939, a He 112B was shot down by *Teniente* Luciano Taberero Herrero, pilot in the 4ª Escuadrilla de Super-Moscas (the *Super-Mosca* was a later

A Spanish Heinkel 112 in its post-civil war deployment theater, North-West Africa. 5•59 was parked on a hardstand at Tauima/Nador airfield, close to Melilla, in February of 1940. The aircraft still preserves its Light Gray/Light Blue camouflage scheme worn in Spain. The only change was the Grupo 27 emblem on the fin (a stylized Greyhound jumping through a circle). This He 112 has no antenna mast. Grupo 27 of Regimiento Mixto No. 2, was part of the new *Ejército del Aire* (Air Army). The unit was formed in Spanish Morocco and it consisted of two fighter squadrons: 1ª Escuadrilla equipped with He 112Bs and 2ª Escuadrilla with Fiat G.50s. (EA-IHGA, via Borrell)



version of the Soviet Polikarpov I-16 series 10, substantially modified in Spain. It was fitted with a more powerful engine suitable for higher altitudes, heavier armament, oxygen supply, radio equipment, etc. It was called by the Republicans *Nariz fría* [Cold Nose], but there is no incontrovertible evidence of this incident. In the following days, the main role of the He 112s was tactical reconnaissance, in addition to low level attacks against the retreating enemy forces. During this final period of the civil war, the Republican fighters were rarely seen, allowing the Nationalist aircraft to complete their missions undisturbed. 23 January saw the Heinkels working in pairs to provide air cover for the *Flota Nacional* (National Navy), forty miles off-shore. Flying over Barcelona, they spotted several Republican fighters, but, following strict orders, the He 112s avoided contact with the enemy planes. Three days later, the advance-guard of *Ejército Nacional* entered the outskirts of Barcelona. This event was witnessed by the Heinkel pilots who provided air support to the troops.

On the first day of February, the He 112s were ordered back to Balaguer from Zaragoza, where they had been operating since 27 January. At Balaguer they joined 1ª Escuadrilla, still operating He 112Bs. Despite the fact that the fighting on the Catalonian front had ceased on 6 February, both squadrons still flew air support missions over the battle zone. The Heinkel's main task remained reconnaissance and air cover missions, which ruled out any air-to-air incidents. Except for some sporadic AA fire encountered in the vicinity of Olot (Gerona region) on 4 February, opposition from Republican forces remained as non-existent. Two days later the occupation of Catalonia was complete and fighting in that region ceased.

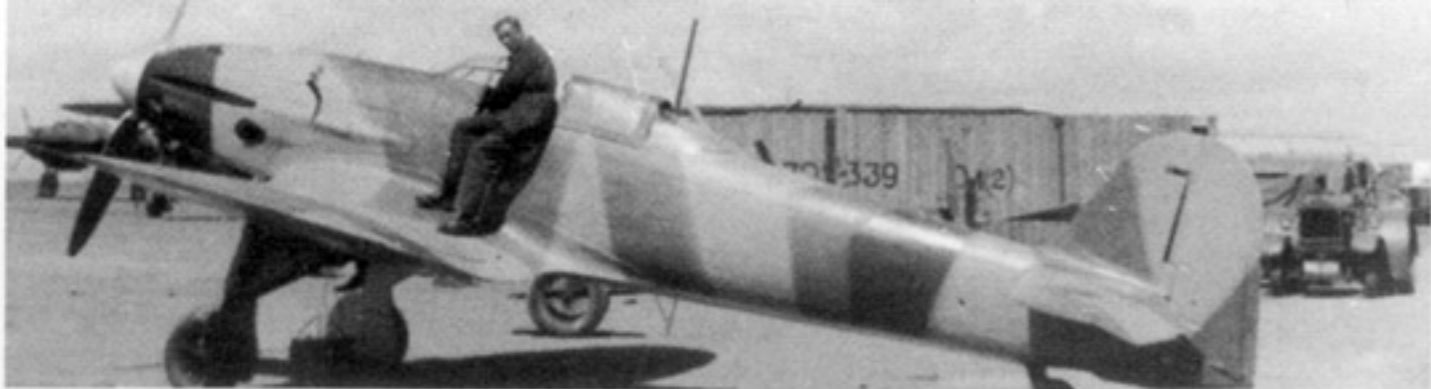
Two weeks after their victory, on 21 February 1939, Nationalist troops organized a spectacular victory parade in Barcelona. The Heinkels took part in the air display, flying in the shape of a "T" together with other fighters spelling out the initials F E T, for *Falange Española Tradicionalista* (Traditional Spanish Falangs, the official right-wing party of Franco's Spanish State.)

On the last day of February, the He 112s were deployed to Matacán airfield (Salamanca region), where they joined the Messerschmitts of 1ª Escuadrilla. The 5-G-5 Fighter Group was once again complete. During the next period, the group's pilots flew both fighter types without any specific distinction. These alternate flights allowed the pilots to experience the Bf 109's more favorable engine power/airframe ratio. The Heinkel pilots, used to their heavier aircraft, were pleased with the better maneuverability of the Bf 109, but still considered the Heinkel to be more adequately armed and safer during takeoffs and landings.

On 8 March 1939, 5-G-5 Group was ordered to Griñón, near Madrid, via Recajo (Logroño), to participate in one of the last operations of the Spanish Civil War, the battle for Madrid. Immediately after arriving at their new base, the Heinkels were put on alert, even though the possibility of Republican's presence in the air was negligible. During the following days, the He 112s carried out their typical missions, tactical reconnaissance, combined with low level attacks against Republican positions.

Later, *Grupo 5-G-5* was disbanded and the Heinkels were flown to Almaluez airfield (Soria region). Operating from their new base, the He 112s over-flew the last piece of land around Madrid still held by forces loyal to *República Española*. The period spent at Almaluez was characterized by very few missions and the stand-down permitted long overdue maintenance of the warplanes. However, still being in a combat zone, albeit a quiet one, a pair of He 112 were kept permanently on alert, ready to intercept any overflying enemy airplane. While on alert, the fully-equipped pilot sat in the cockpit, the engine was running warm, so the fighter was ready to take off within seconds.

In the morning of March 28, a patrol made up by three Heinkels of 2ª Escuadrilla, lead by



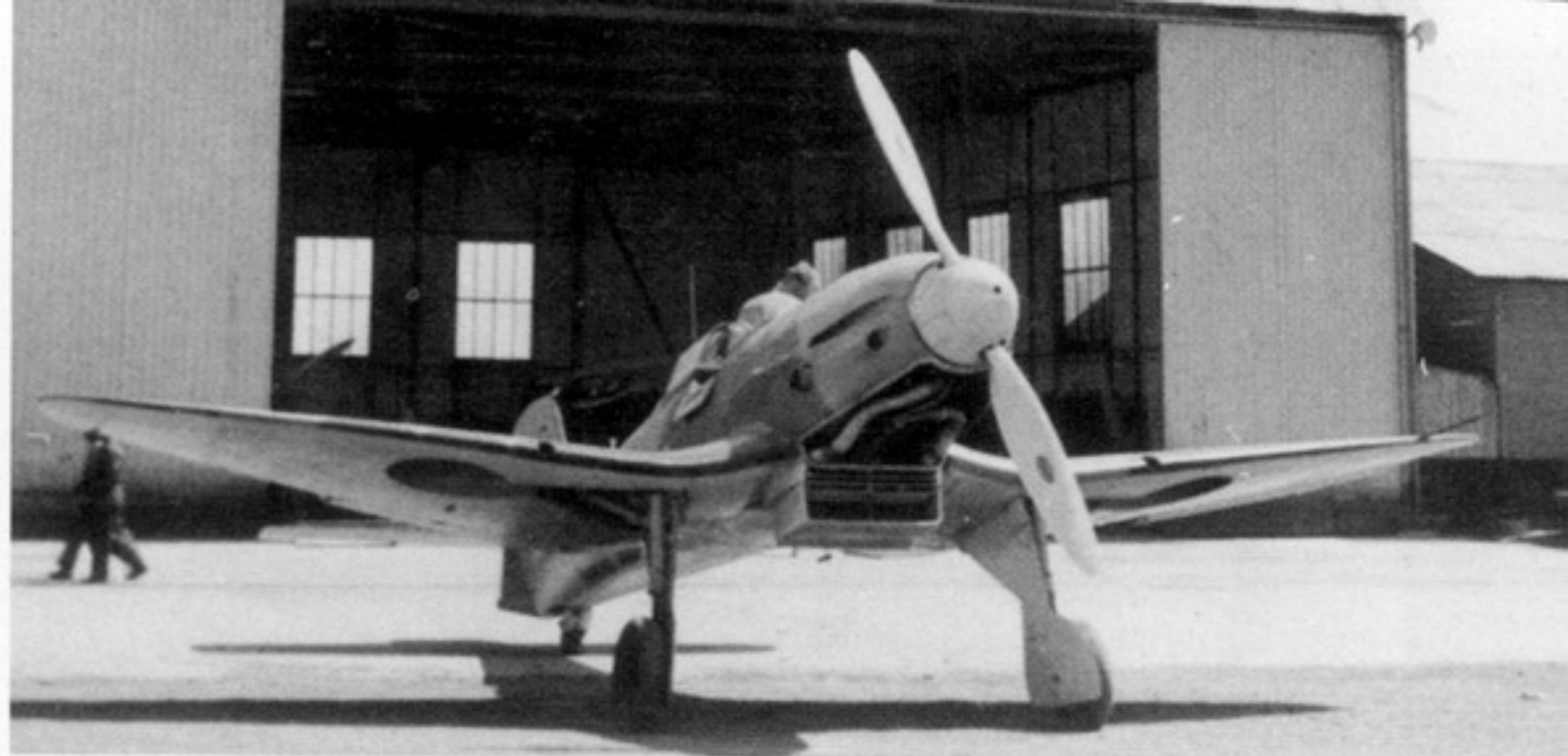
This He 112B was recently painted with the new three-tone splinter camouflage scheme (Dark Brown, Olive Green and Sand Yellow uppersurfaces over Light Blue undersurfaces), used for operations in Africa. The Spanish markings and group emblem have not been painted on the aircraft at this time. (Schnittke)

the commander, was sent over Madrid under strict orders to hold fire. They witnessed the movements of the first Nationalist troops entering the Spanish Capital. Unfortunately, this mission ended in tragedy. As the flight approached the base, *Teniente* Rogelio García de Juan, exuberant over the imminent end to the war, indulged himself in low level aerobatics. While performing a roll, a wing hit the ground, cartwheeling the Heinkel, instantly killing the careless pilot. The leader of the 2nd Squadron, *Capitán* García Pardo, was engaged in a mock dogfight with the third aircraft of this ill-fated flight, piloted by *Teniente* Jorge Muntadas "*Muntaditas*". During the simulated combat, García Pardo's aircraft fell off into a deadly spin and crashed, killing the captain.

The last Republican troops surrendered at Alicante on the first day of April. This event marked the end of the terrible Spanish civil war, in which hundreds of thousands had perished. It was on this day, that the surviving He 112s were transferred to a new base, Griñón.

On 7 May 1939, a military parade was held in Barajas, near Madrid, attended by *Generalísimo* Franco (it is interesting to note that only two other contemporary European heads of state were "awarded" with the suprême and rather eccentric rank of *Generalissimo*: Mussolini and Stalin). For that special occasion, the *Aviación Nacional* mobilized more than 500 aircraft of all types, including the venerable Heinkel He 112. Twelve days later, another pompous parade, "The Great Victory Procession" was held, this time in the capital, Madrid. On this occasion the Heinkels flew in formation, in the shape of an "O", in the name F R A N C O. This flight was not without any risks, as the Heinkels had to fly wing-to-wing not only with each other, but with the much slower and less stable Fiat CR-32s. The Heinkel pilots could only do this performance at very low engine rpm and with extreme flight discipline.

5•58 of 1ª *Escuadrilla* (*Grupo 27*) belly landed after its engine shut down near Tauima/Nador on 17 May 1940. During such forced landings, only minor damage was sustained and after quick repairs the aircraft could become airworthy again. This Heinkel still carries its former Yellow identification colors of 2ª *Escuadrilla* (*Grupo 5-G-5*). The exhaust stub's surrounding area was painted in Black. (Cerdá)



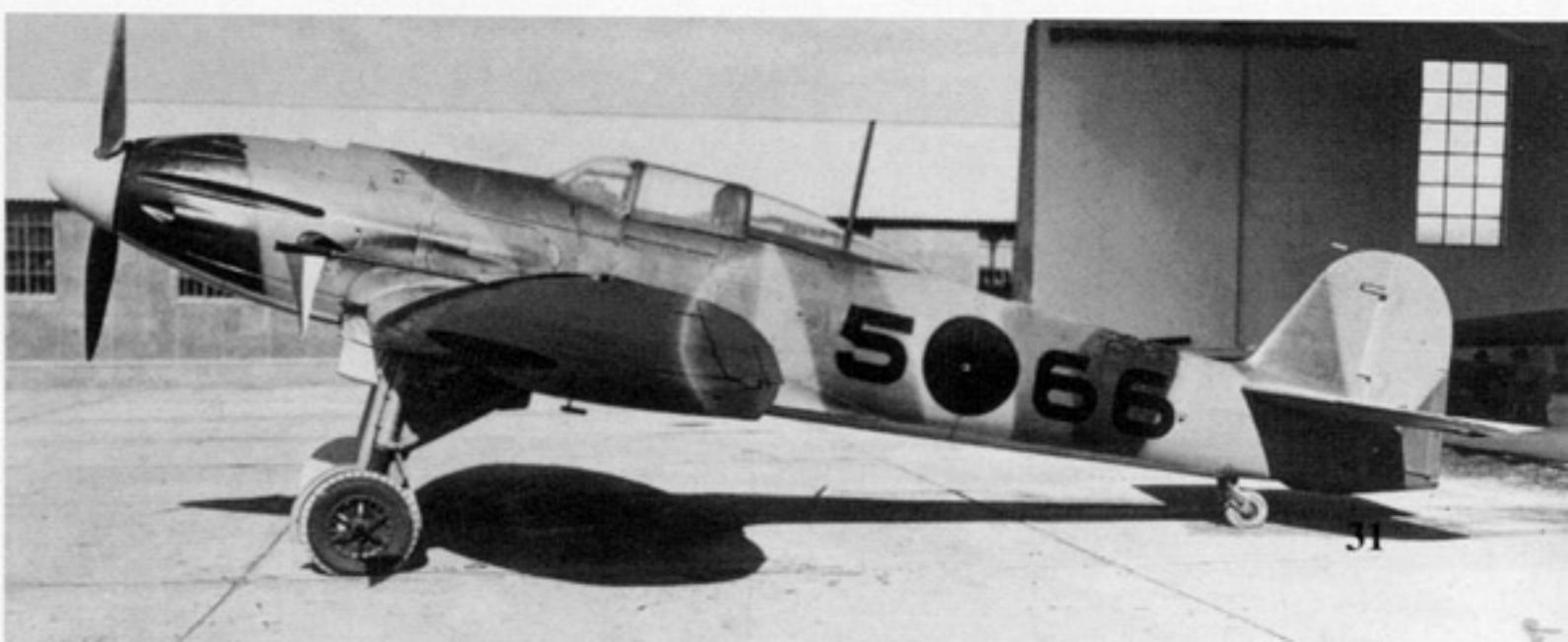
A Spanish He 112 in front of a hangar at Tauima/ Nador airfield. The cooling system's cover plate was removed for servicing. There is a small pitot tube visible just beneath the fully extended radiator. (Dölling)

With the end of the civil war, Spain found herself in possession of the one of the most potent air forces in Europe, with a large aircraft inventory and a cadre of experienced, battle hardened aircrews.

Shortly after the cessation of hostilities, the *Aviación Nacional* underwent a thorough reorganization, in accordance with its new peacetime mission. Accordingly, 1ª *Escuadrilla* was returned to León, where the Heinkel's career had started half year ago. On the eve of the second world conflagration, the *Aviación Nacional* assumed a new task, the defense of Spain's neutrality. On 13 July 1939, the He 112s embarked for a new destination, North Africa. Their next theater of operation was Spanish Morocco, a Spanish possession in the North-Western corner of North Africa. The Heinkel's new air base was the small airfield of Sania Ramel, located near Tetuán. *Comandante* José Muñoz Jiménez assumed command of the squadron. As some of the veteran Heinkel pilots requested alternative postings, inexperienced junior pilots were recruited for African duty.

Transfer of the He 112s from Spain to Morocco was not without difficulty. A former commander of the Heinkel unit, Jiménez-Arenas, recalls the extreme temperatures that developed

A Spanish Heinkel 112 on the ramp at Tauima/Nador air base. The identification code 5•66 has been applied, but full Spanish markings, consisting of the *Cruz de San Andrés* on the rudder, Red-Yellow-Red roundels on both wing surfaces and the *Grupo 27* unit insignia, have not been added at this time. (EA-IHGA, via Borrell)



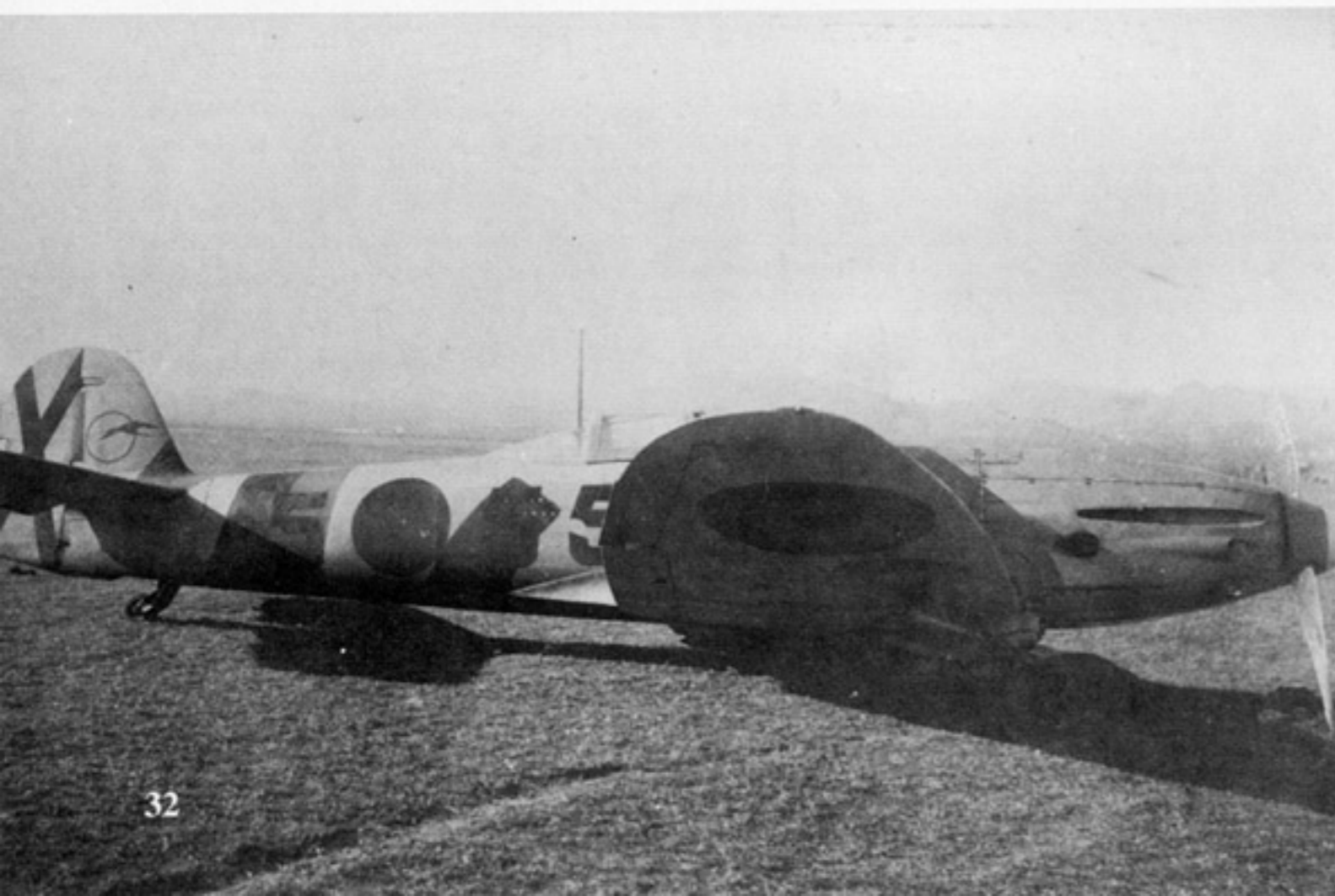




This Heinkel He 112, 5•65, was flown by *Teniente* Miguel Entrena Klett who shot down a U.S. Army Air Force Lockheed P-38 that intruded into Spanish Moroccan airspace on 3 March 1943. This aircraft has a gap between the spinner backplate and the engine cowling. (Entrena Klett)

in the cockpit during these flights. *The heat sometimes climbed to 140° F (60° C), forcing the pilots to fly only in their shorts, but with gloves to avoid burning themselves on the broiling control column!* The period the unit was based at Sania Ramel was dedicated to

5•55 couldn't avoid the Heinkel 112's common misfortune. This time, however, the pilot unsuccessfully tried to land its troubled fighter with the undercarriage lowered. On touch-down, the starboard mainwheel broke off causing considerable damage, more than in an "usual" belly landing. Before coming to a full stop, the Heinkel turned ninety degrees from the initial landing direction. (EA-IHGA, via Borrell)



training and familiarization flights over the African terrain. Soon after their arrival, the He 112 unit was combined with Fiat G-50 *Pasarians*. Later, the new unit was reorganized as the 27th Group of the 2nd Mixed Regiment, composed of the *1ª Escuadrilla* (He 112Bs) and the *2ª Escuadrilla* (Fiat G-50s). *Grupo 27* was stationed at Tauima/Nador (Melilla). The command of the 1st squadron was taken over by *Capitán* Miguel Guerrero García, a civil war ace with thirteen kills.

During this period, the Heinkel 112s retained their civil war paint scheme, but the Light Gray/Light Blue coloring proved to be inadequate in the new theater. A pattern of Chocolate Brown, Olive Green and Sand Yellow uppersurfaces with the original Light Blue undersurfaces was adopted, this color combination being considered much more appropriate to the African terrain. In the Summer of 1939, the Spanish national markings were also changed, the White St. Andrew cross painted on a Black disc was replaced with large Red-Yellow-Red roundels.

*Grupo 27's* first fatality occurred on 18 July 1939. Soon after taking off for Málaga airfield, the engine of the He 112 piloted by *Teniente* Jorge Muntadas "*Muntaditas*" suddenly stalled. Now flying a very heavy glider, *Teniente* Muntadas was compelled to land on the beach at Estepona, near Málaga. The pilot lowered the landing gear and made his approach. Upon touch down, one of the main wheels stuck in the soft sand, flipping the aircraft onto its back. The cockpit was submerged in shallow water and Muntadas became trapped. He was unable to escape and drowned in only few inches of water. This was the first of the many emergency situations and accidents that were to plague the He 112s African career.

Flying Heinkels and Fiats were not the only duties that fell to the pilots of the *Grupo 27*. During the first weeks spent on Sania Ramel, pilots of the *1ª Escuadrilla* were assigned to transport sixty-six ex-Republican aircraft of various types, gathered together at the end of the civil war on the airfield of Orán/La Senia (French Algeria) back to the Spanish mainland. The attrition rate of pilots in this operation was high. Acts of sabotage, the poor condition of the aircraft and the fact that the aircrews were inexperienced in flying unfamiliar aircraft types, the majority of Soviet origin (many pilots only saw these machines through their gun sights!), all meant deadly risks for the pilots of the 1st Squadron. One incident occurred on 29 June, when Salvador Serra was flying a Grumman GE-23 *Delfín* (Dolphin). The Grumman's engine suddenly quit and Serra had no choice but to ditch in the sea. He survived the crash, and after four hours of swimming was rescued by Moors (North-African Arabs.)

On 14 June 1940, Spanish troops occupied the International Zone of Tánger (Tangiers). A pair of He 112Bs were immediately deployed on the city's airfield to provide air protection to the newly acquired territory. Despite of this action, undoubtedly encouraged by the victorious German campaign in Europe, the 1940-1942 African theater remained quiet. This lull, coupled with a severe lack of fuel, drastically restricted activities.

Allied forces landed in North Africa on 8 November 1942, as part of Operation TORCH. With the landings, a tense period between the neutral Spain and the Allies began. From the very first days Allied aircraft frequently violated Spanish African airspace. One of the most serious incidents occurred on the day of landings, 8 November, when Spanish fighters intercepted a formation of USAAF C-47 Skytrains as they were dropping paratroopers on Moroccan territory, over the plains of Estutel, near Melilla. No shots were fired as the Spanish pilots were instructed to avoid combat. This type of incident became common in the following months, but there were no major incidents. Many times, Spanish He 112s encountered RAF Spitfire Mk. Vs stationed in Gibraltar, but again no combats occurred. Skirmishes became regular in the region of Orán, French Algeria. Dewoitine D.520 fighters of the pro-

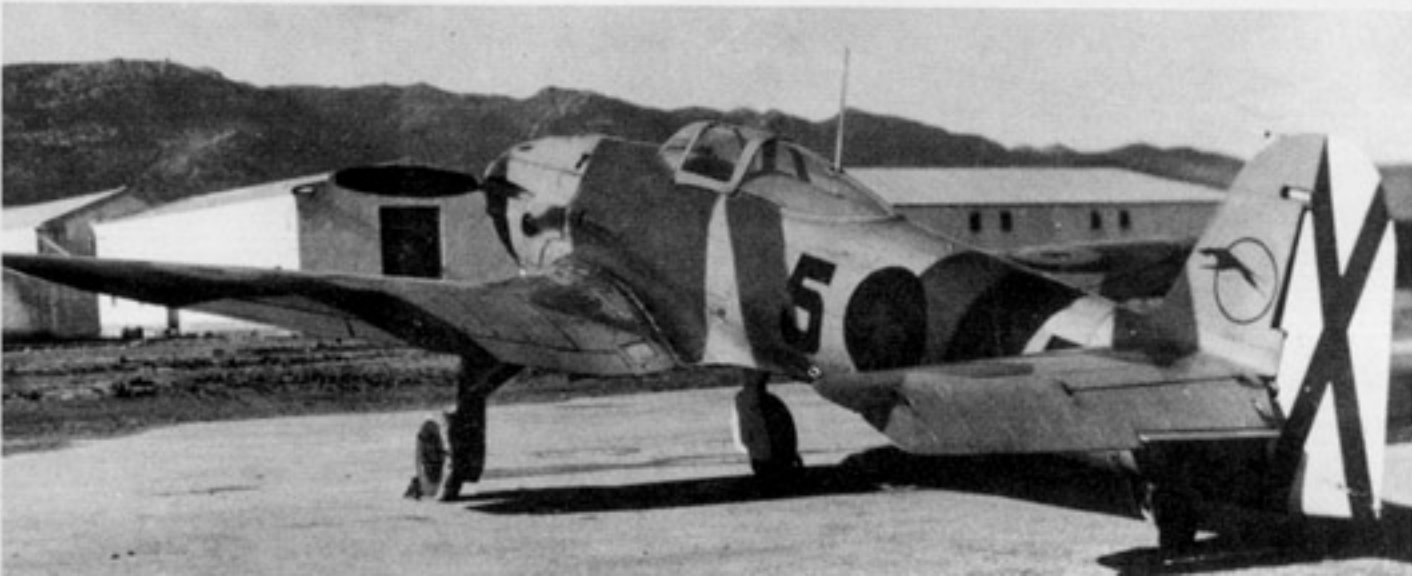
German Vichy French Naval Air Forces taking off from Port Liautey clashed with intruding Spanish warplanes, including He 112Bs, with no losses to either side.

This series of rather uneventful encounters ended on 3 March 1943, when the most serious incident involving Spanish and U.S. aircraft took place. On that morning, infantry observation posts along the Moroccan-Algerian frontier reported a large formation of aircraft flying into Spanish airspace from the East. The commander of the 27th Group immediately ordered the alert fighter to scramble and intercept the enemy formation.

Trying to avoid getting stuck in the mud, *Teniente* Miguel Entrena Klett shoved the throttle of his He 112B-2, coded 5•68, forward to full power with the main wheels' brakes on, forcing the aircraft's tail up. When he released the brakes, the Heinkel shot forward like a bullet, seemingly without regard the sea of mud covering the small concrete runway.

Entrena soon found himself airborne and immediately began climbing to 11,500 feet (3,500 meters). Upon reaching that altitude, he spotted a formation of eleven twin-boomed aircraft, divided in two smaller groups of six and five planes, respectively. Climbing another 1,600 feet (500 m), Entrena positioned himself for an attack from out the sun. He carefully approached the enemy formation and commenced his attack in a shallow dive. He lined his sights up on the last aircraft in the higher formation. Closing to firing distance, Entrena pushed the firing button. The 20MM MG FF cannons fired a long burst, but the machine guns remained silent. Only after returning to base did he learn that the armorer forgot to load the machine guns! The U.S. warplane [according to available data, the aircraft was a P-38F-1Lo Lightning of the 12th AAF, 14th Fighter Group, based at Youk-les-Bains (French-Algeria), a unit integrated into the N.W.A.F.A.A.F. (North West African Allied Air Force), a mixed Anglo-American unit) with one of his engines trailing thick, black smoke, jettisoned his underwing fuel tanks and left the formation, heading East. The pilot's only hope rested in reaching French-Algerian territory. *Teniente* Entrena formed up on the burning Lightning and with hand signals urged the pilot to bail out. The American, however, ignored Entrena's repeated signals and flew on, looking for a place to crash land. Finally, he settled on a strip of land on the Algerian shore of the Mulluya river, which formed the natural border between Spanish-Morocco and French-Algeria. The Lightning, with only one main gear down, touched down on the sandy shore. The landing gear collapsed immediately upon contact. Next day, the wreck was recovered by U.S. troops. All the Spaniards could retrieve were the Lightning's drop-tanks, found near Segangan, which were taken to Nador airfield. A close examination revealed that several 20MM shells had hit the tanks.

This incident could have resulted in serious consequences, since the next day a large formation of twenty-one P-38s, flying in seven "Vees" of three aircraft each, overflew Nador airfield, a clearly provocative move. Following the previous day's events, the Spanish pilots had **The Fallangist insignia was painted in Red over the Black fuselage circle on 5•55, which later made a forced landing in Africa. The Spanish camouflage style is visible. (EA-IHGA, via Borrell)**



**Forced landings due to engine failure were common during the Heinkel 112's operational career in Africa. 5•66 was put down on the grassy landing strip with its landing gear up and locked on 25 August 1942. In the background are the hangars of Tauima/Nador airfield (Cerdá)**

received strict orders from Madrid not to intercept or fire upon any intruding aircraft, except when attacked. Diplomacy quickly covered up the incident and tension between the Allies and Spain in North Africa eased. Soon after this episode, a P-38 landed at Melilla, when the American pilot lost its way. This particular Lightning was flown to Nador by *Capitán* Miguel Guerrero García, commander of *Grupo 27* (during those years, several other aircraft landed in Spanish-Morocco, due mainly to combat damage, fuel shortage or lost. Among these were three Spitfires, one Fairey Swordfish, one B-24, one B-25 [this being impressed into Spanish service], one Ju 88 and one He 111).

In the last years of the Second World War, the Heinkel He 112s (from 1945 onwards, the He 112s were designated C.3s, in accordance with the new code system adopted by the *Ejército del Aire*) hardly took to the air at all, due to a lack of fuel, airframe fatigue and excessively overworked and worn out Jumo 210 engines. The state of the engines resulted in many dead-stick landings since the tired engines would often suddenly quit in mid-air. The nine aircraft still surviving in 1945 were sent in relays to the Spanish mainland, to be assigned to the *Maestranza* (repair unit) in Recajo (Logroño) for overhaul. Even this route could not be completed by some of the worn-out Heinkels and many were compelled to make the last part of their journey by truck. On 8 September 1946, the ageing He 112s took another victim. *Teniente* José Luis Alvarez was killed in a landing accident at Restinga airfield.

By the end of 1947, there were no Heinkel 112s remained airworthy with *Grupo 27*. They were replaced in August of 1948 with "new" Hispano HS-132Ls (license-built Fiat CR-32 biplanes, manufactured by Hispano Aviación).

Very little information exists about the He 112Bs last years in Spanish service. Some of the survivors went to the *Escuela de Caza* (Fighter School) of Morón (Sevilla region), but they were seldom flown. A few Heinkels were cannibalized to keep the others airborne. One of the last incidents we know of is a report of an accident which took the life of *Capitán* Vinicio Gutierrez Gil. On 15 July 1952, as he was taking probably the last airworthy He 112 to the Logroño repair facility, he crashed enroute and was killed.

The *Ejército del Aire's* inventory list for 1952 mentions two He 112Bs, one still in flying condition and the other one grounded due to technical problems. The 1953 inventory fails to list any Heinkel 112s. They definitively disappeared from the records, bringing to an end the not-so-brilliant fourteen year Spanish career of this elegant fighter aircraft.

*(This section was written by Ricardo García de Celis Borrell, being translated, completed and annotated by the author, Dénes Bernád)*

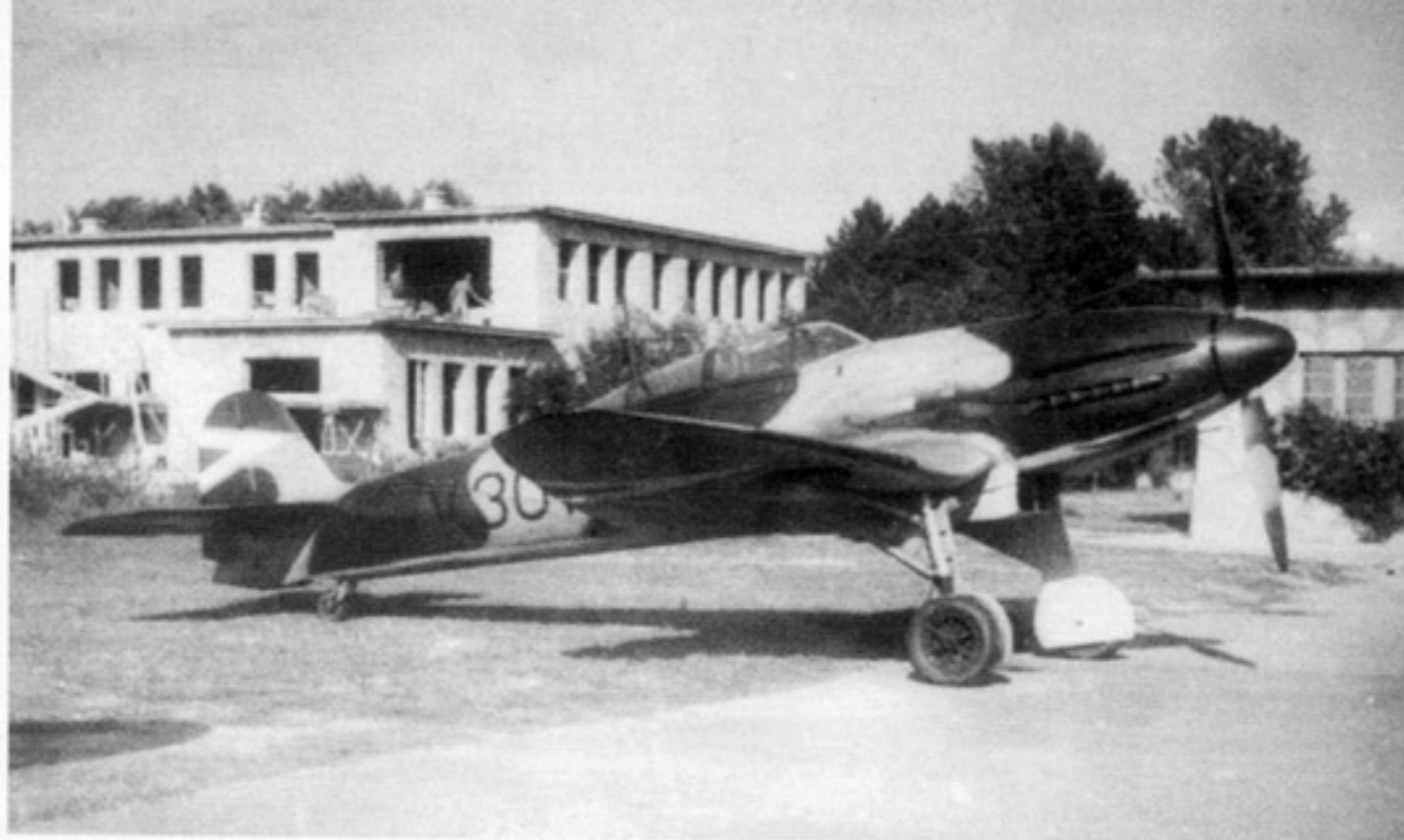
# Hungary

In August of 1938, the *Magyar Királyi Honvéd Légierő* (MKHL, Royal Hungarian Home Defense Air Force) emerged from secrecy imposed upon it by the Versailles Treaty, signed at the conclusion of the First World War. Anxious to recover its territories lost after the Great War, Hungary began the construction and expansion of a strong Army and Air Force. The primary concern of the MKHL was the acquisition of modern fighter aircraft. The Austrian Anschluss of March 1938, had brought the Kingdom of Hungary once again within the German sphere of influence, thus its main source of modern weapons from became, obviously, the Third Reich.

Hungarian aeronautics experts had kept an eye on the *Heinkel Flugzeugwerke's* fighter development program since the beginning. A Hungarian military delegation had toured the battlefields of the Spanish Civil War and returned with a very favorable impression on the new German military techniques being tested there. Among the aircraft types considered worthy of further investigation was the Heinkel He 112, which was given a high priority.

In June of 1938, a Hungarian "civilian" delegation visited the Heinkel works. On this occasion, *Örnagy* (Major) Barkász and two other pilots were allowed to fly the He 112 V9. The delegation formed a highly favorable impression of the new fighter and their reports prompted the Hungarian *Hadügyminisztérium* (Ministry of War Affairs) to place an order for thirty-six He 112Bs in late September of 1938. At that time, however, there were no aircraft ready for delivery. Japan and Spain were on the waiting list, and all aircraft were on back order. All

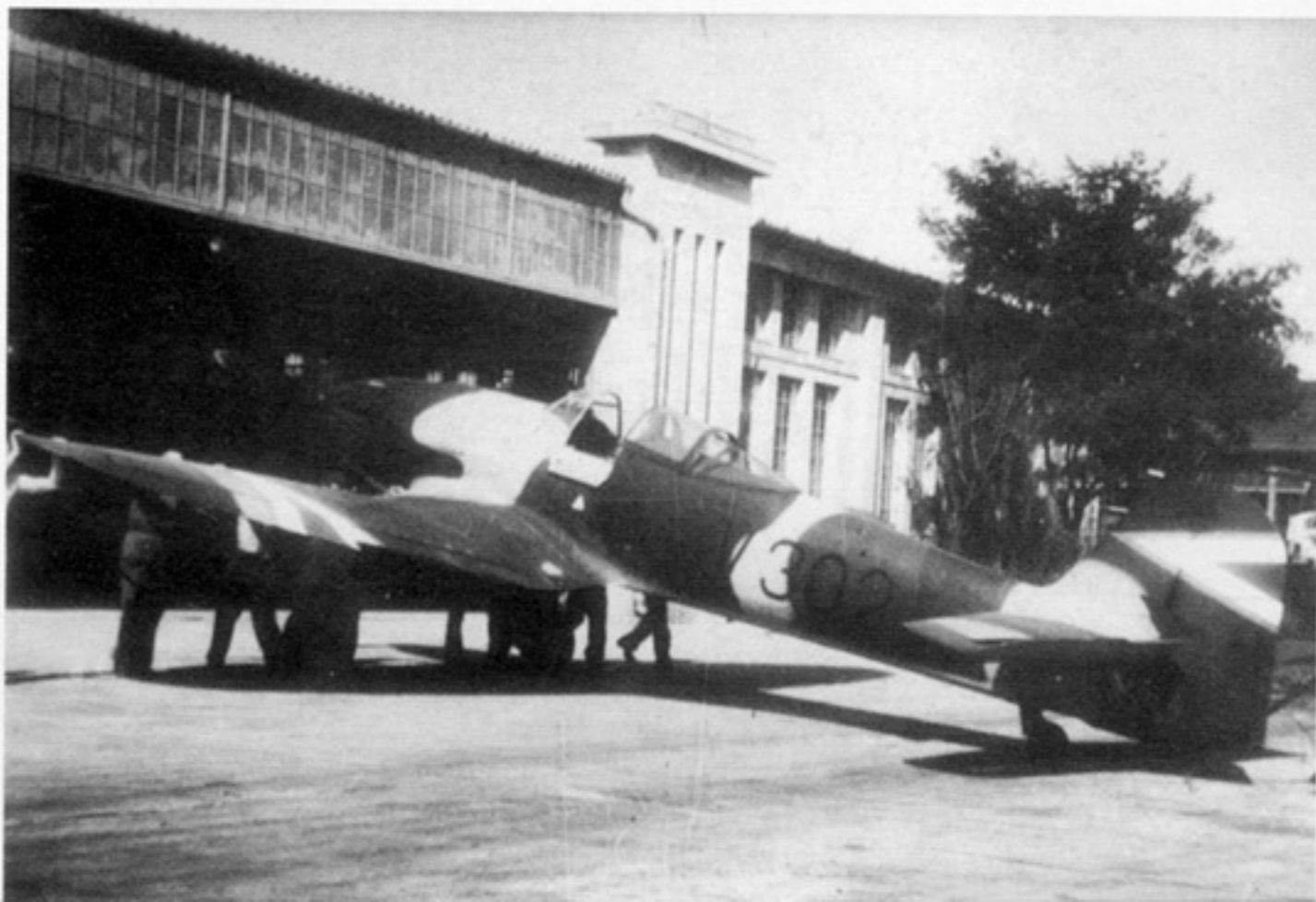
**Technicians from the *Heinkel Flugzeugwerke* and Hungarian flight officers pose with the first of the He 112B-1/U2 trio to see Hungarian service at Budapest-Csepel airfield, shortly after its delivery flight (code D-I??R) in March of 1939. The aircraft has a gun sight mounted in the cockpit and lacks an antenna mast. (Punka)**



**Freshly painted in its Hungarian three-tone camouflage scheme and full national markings, V.301 is parked on the edge of the ramp at a Hungarian airfield during the Summer of 1940. (Punka)**

pleas for priority consideration by the Hungarians proved futile, the RLM would not approve the He 112s for quick delivery. The Germans deliberately delayed the fulfillment of the order, using it as political extortion against the *Magyars* and their rivals, the Rumanians. First, the RLM refused the export license for the 20MM Oerlikon cannon (the Hungarian *Haditechnikai Intézet* [Institute for Military Technology] did not recommend the Oerlikon cannon for use, since they considered it an unsafe and underdeveloped weapon) then, after the Hungarians

**The second He 112B, V.302, is pulled out from a hangar by its ground crew using a tail wheel tow bar. There is a Yellow triangle below the cockpit, which is a servicing marking, indicating the use of 87 octane fuel. (Punka)**





The second He 112B-1/U2, V.302 parked on the grass at a Hungarian airfield during the early Spring of 1940. (Punka)

decided to replace it with the indigenous 20MM Danuvia cannon, the Germans refused to hand over the license for both the Jumo 211 and DB 601 engines!

Meanwhile, on 14 January 1939, Major Barkász pressed once more for the delivery of the thirty-six He 112s on order, but again his efforts proved futile. The only development in this sordid affair was the arrival of the He 112 V9 demonstrator in Hungary for its demonstration flights. The prototype landed at an airfield near Budapest on 5 February, after completing a similar demonstration tour in the neighboring Rumania.

The first flight of the V9 (D-IGSI), equipped with a three-bladed Junkers-Hamilton propeller, was scheduled for 14 February. The flight was to take place at the airfield of the *Repülő Kísérleti Intézet* (Institute for Aeronautical Research), situated on Csepel island, South of Budapest. On that day, shortly after 1100 am, the prototype crashed while performing comparison flights with a Hungarian Fiat CR-32 biplane fighter. On 10 March, another Heinkel demonstrator, this time a new He 112B-1/U2, was successfully demonstrated in front of Hungarian authorities. After its demonstration flights, the aircraft remained in Hungary and, from 27 March, was extensively tested by various institutes and fighter units. The impression formed among Hungarian pilots was generally favorable, but the low top speed, clocked by Hungarians at only 267 mph (430 km/h), attainable with the Jumo 210 Ea engine, was considered as the type's weakest feature.

Soon after the Japanese and Spanish orders were filled, the Rumanians came forward with an order for twenty-four He 112Bs in April of 1939. As this country was ranked by the German leadership higher than Hungary, due to its oil and grain resources, the Rumanian order received priority. The *Hadügyminisztérium* soon realized that the order for the He 112's delivery could be delayed indefinitely, so decided to inquire about license production of the Heinkel fighter. In May of 1939, the license documents were handed over to the Hungarians. An order for a first batch of twelve He 112B-2s was placed to the *Weiss Manfréd Repülőgép és Motorgyár* (Manfréd Weiss Aircraft and Engine Factory) of Budapest-Csepel. A sample aircraft powered by a Jumo 210Ga was promised by the Heinkel Werke, but never arrived. Instead, two additional He 112B-1/U2s, with the earlier Jumo 210Ea engine, arrived in Hungary in the Summer of 1939, at a cost of 163,000 *Reichsmarks* each. These were re-equipped at the WM plant in August with Hungarian-made 8MM 39.M



The propeller blades of this Hungarian He 112B were camouflaged. The aircraft in the background is a Bücker Bü 131 *Jungmann* trainer. (Jávor via Mujzer)

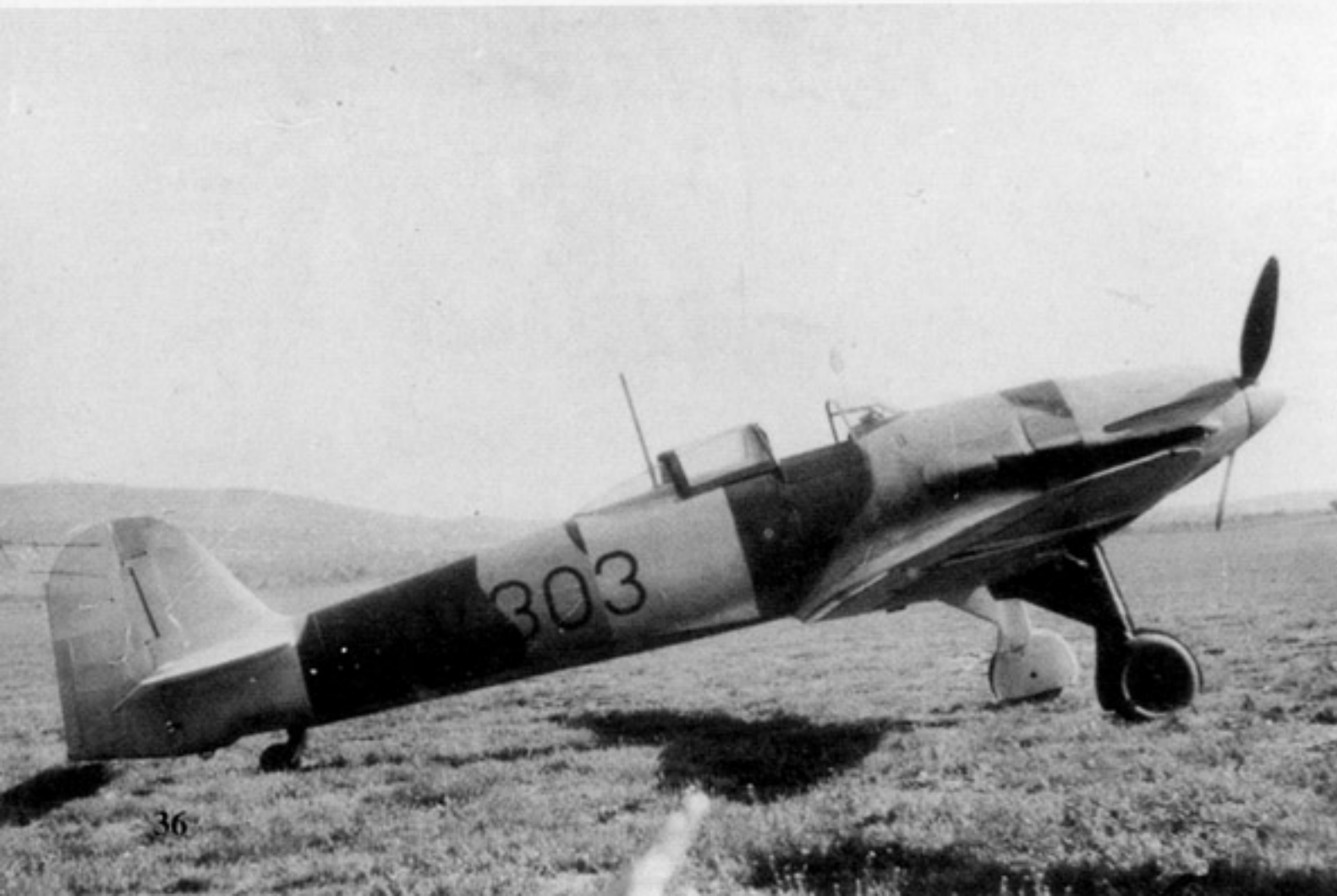
A Hungarian Heinkel He 112B-1/U2 parked on the ramp awaiting its pilot. The radiator bath is fully retracted, the flaps are fully extended and the cockpit entry door is lowered. (Punka)





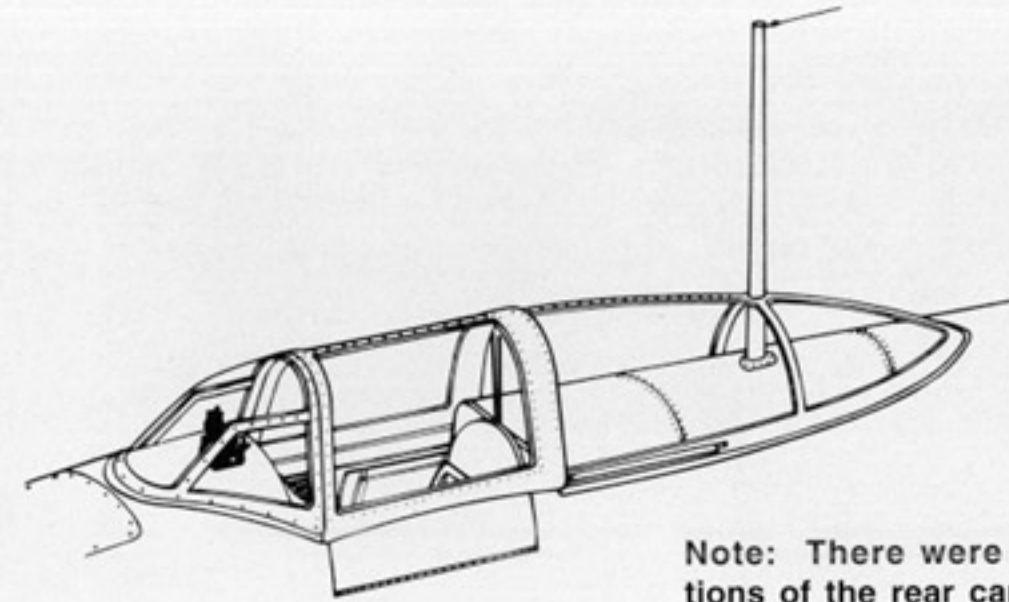
The last Hungarian He 112B-1/U2 received was coded, V.303. It was based at Börgönd airfield in June of 1940, while being tested by 2/4. *Vadászszázad* (2/4. Fighter Squadron). (Winkler)

During the Yugoslavian campaign of April 1941, all Axis combat aircraft were painted with Yellow recognition markings on the spinner and engine cowling, fuselage center section and tail. This He 112B-1, V.303, carried full identification markings even though it saw only limited use. (Petrick)



## Cockpit Canopy

### He-112B



Note: There were many variations of the rear canopy bracing on the He 112. Some aircraft had no braces, others had bracing in different locations.

machine guns and bomb racks. These fighters received the typical Hungarian camouflage scheme of Dark Green, Dark Brown, Terra Cotta uppersurfaces and over German Light Gray undersurfaces. They were coded V.302 and V.303 (V for *vadász*, or fighter [the V.301 tactical code was allocated to the He 112B-1 which had arrived earlier in March]) and the forward pointed triangular chevron national marking was applied to the wings and tail.

All three Heinkels were assigned to the *Repülő Kísérleti Intézet*, where in the following year they participated in comparison tests against various aircraft in MKHL service. In May of 1940, the Heinkels were evaluated against the new Reggiane Re-2000 *Héja I*, which was to become the standard fighter of the Hungarian air force during the early stages of the war.

On 30 March 1939, a new speed record was set by the He 100 V8, dubbed for propaganda reasons "He 112U" to gain prestige for the He 112 intended to be exported. Upon learning of this superior fighter, the Hungarians decided to manufacture the new He 112U in place of the planned He 112E. The "U" model was intended to be powered either with the Jumo 211A or DB 601A engine. Again, a sample aircraft was promised by the Heinkel plant but never delivered to Hungary.

In August 1939, the Commander-in-Chief of the MKHL, **Ezredes** (Colonel) László Hány, a veteran pilot of the First World War, recommended the Heinkel 112 as the standard Hungarian fighter. Nevertheless, negotiations with the RLM had reached a dead end by the end of September 1939, and with the war already under way, the RLM forbade the export of any sample aircraft. Simultaneously, the shipment of the promised Jumo 211A and DB 601A engines, sorely needed for the Luftwaffe, were also prohibited. Faced with this situation, on 11 October, the *Hadügyminisztérium* ordered a halt to the tooling up for He 112 series-production at the Weiss Manfréd plant. Instead, an indigenous fighter project, based largely on the He 112, was initiated. This project evolved into the W.M.-23 *Ezüst Nyíl* (Silver Arrow). The license agreement between the Heinkel Werke and Weiss Manfréd Rt. was canceled by the Hungarians in December of 1939.

After the completion of their testing period at the RKI, the three Hungarian He 112B-1s were assigned to different fighter units. On 1 June 1940, they were transferred to the 2.

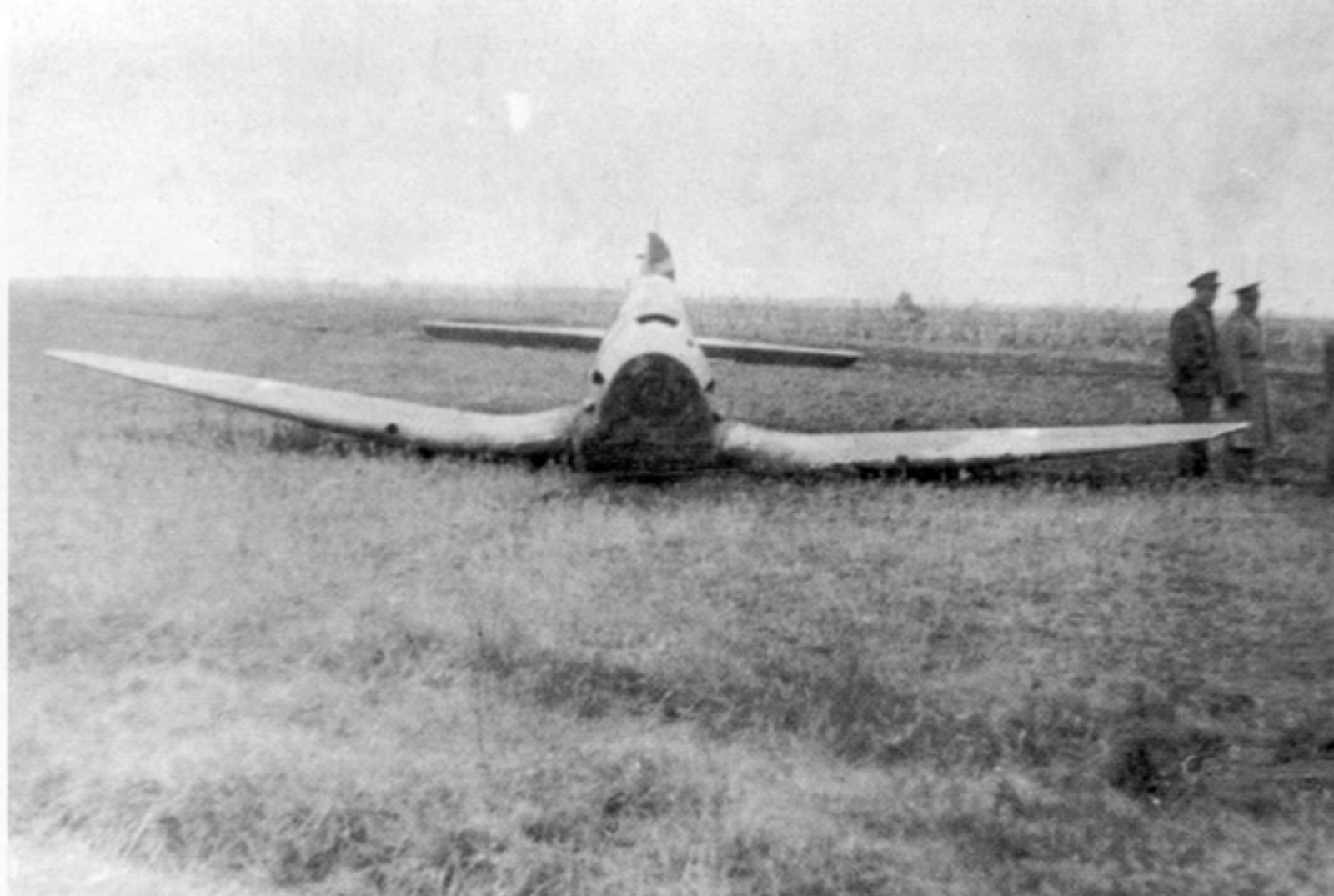
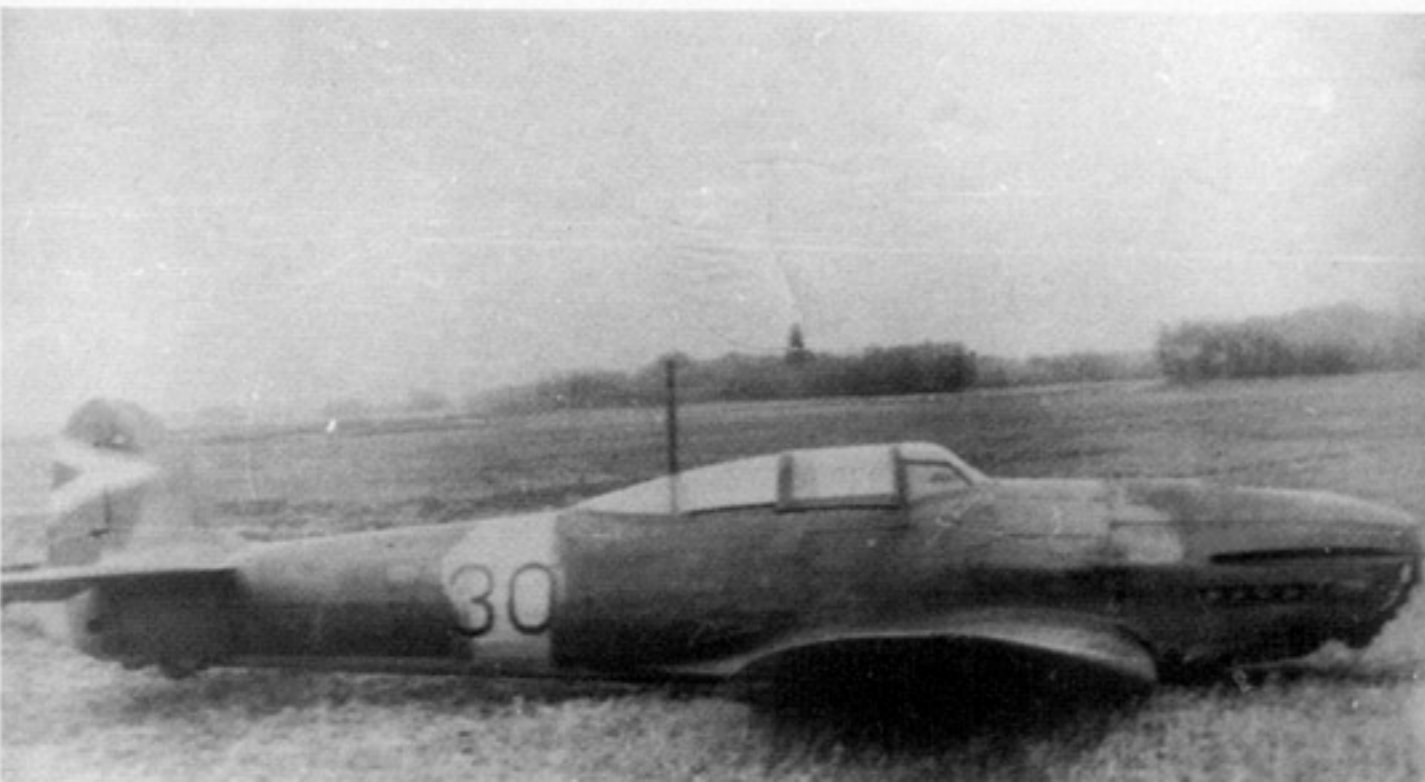


This Hungarian He 112B-1, V.303, had the port landing gear fail on landing during the late Summer of 1941. The two-blade all metal propeller on this He 112 was left unpainted. (Kovács)

*Vadászrepülő-ezred* (2nd Fighter Regiment). On 5 and 6 June, V.303 was seen at the *2/4. Vadászszázad* (2/4. Fighter Squadron), based at Börgönd airfield and equipped with Fiat CR-32 biplanes.

During the Summer of 1940, tension between Rumania and Hungary over Transylvania increased to a boiling point. The possibility of armed conflict became real and both countries mobilized their armies and air forces. On 27 June 1940, the MKHL was put on alert. A week later Hungarian fighters were deployed near the Eastern border, among them were the Heinkel 112s. On 21 August, all three He 112Bs were sent to Debrecen base to defend the railroad between Békéscsaba-Debrecen-Beregszász (today Beregovo, the Ukraine). A similarly equipped Rumanian He 112 squadron was sent to Western Transylvania, near the Hungarian border, to patrol the frontier. Although Rumanian Heinkels intruded at least once into

Another accident occurred in late 1941, when *Százados* (Captain) Zoltán Zákány forgot to lower the landing gear and landed wheels up. His aircraft, V.301, suffered only minor damage, with the exception of the propeller and spinner which were ripped off the aircraft. (Punka)

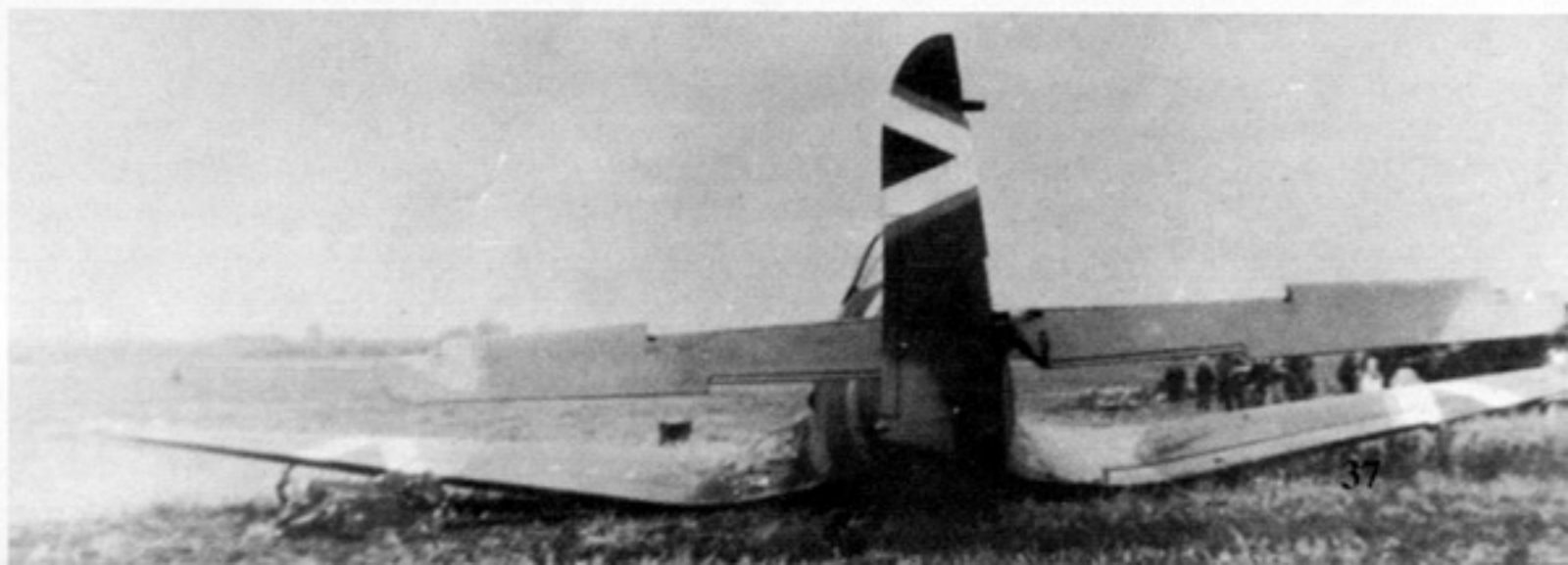


*Százados* (Captain) Zoltán Zákány crashed landed V.301 when he forgot to lower the landing gear and made an unintentional wheels up landing. The engine was still running and when the propeller contacted the ground it was ripped from the aircraft. The large openings in the wing leading edges are the cannon ports for the two 20MM cannon. (Punka)

Hungarian airspace over Debrecen, there were no recorded encounters between the He 112s of the two nations. The Transylvanian problem was peacefully settled by a political agreement reached at Vienna on 30 August 1940. In early September both Hungarian and Rumanian Heinkels were recalled to their home bases.

The next action of the Hungarian He 112s took place during the German invasion of Yugoslavia, in April of 1941. The Heinkels were deployed to a Southern base near the Yugoslavian frontier. This time, in compliance with German regulations, the engine cowling, fuselage center section and tails was painted Chrome Yellow, identifying them to the Luftwaffe as a friendly aircraft. In spite of all these preparations, the Hungarian He 112s did not take active part in fights.

At the time *Százados* (Captain) Zoltán Zákány crashed landed V.301, he had the rudder hard over and the trim tab set. (Punka)





Mechanics of the *Repülő Kísérleti Intézet* examine the port landing gear of He 112B-1/U2, V.3+02, at Budapest airfield. Although of poor quality, this is the only known illustration of a Hungarian He 112B-1/U2 with the "White cross in a Black square" style national markings introduced on 1 March 1942. (Kovács)

When the war against the Soviet Union began, the He 112s had been assigned to the training role, nevertheless they were officially assigned the air defense of the Weiss Manfréd plant.

By the Spring of 1944, when the first Allied daylight raids on Budapest occurred, the He 112s were no longer airworthy. Grounded by a lack of spare parts, the surviving Heinkels were probably destroyed during the massive U.S. air raids in the Summer of 1944 (possibly on 9 August, when approximately 180 B-24s of the 15th AAF's 47th and 55th Bomber Wings attacked Budapest-Ferihegy airport, destroying the majority of the RKI's fleet).

## W.M. 23 *Ezüst Nyíl*

In October of 1939, it had become clear that the Germans would not hand over to the Hungarians the license rights for the He 112, as had been earlier promised. As a result, the *Hadügyminisztérium* (Ministry of War Affairs) decided to develop its own fighter type. The task was assigned to the major Hungarian aircraft and engine manufacturer, the *Weiss Manfréd Repülőgép-és Motorgyár* (WM, Manfréd Weiss Aircraft and Engine Plant), of Csepel island, Budapest.

Dipl.-eng. Béla Samu, Chief Designer of the WM plants, initiated work on the project in early 1939. Undoubtedly inspired by the He 112 already in service with the *Magyar Királyi Honvéd Légierő* (Royal Hungarian Home Defense Air Force), the new design adopted the Heinkel fighter's wings, virtually unchanged, except for one feature. The new wing was made of wood instead of metal, because, at that time, the Hungarians possessed little experience

with advanced all metal structural methods. The oval section fuselage was of welded steel tube with plywood skinning, since there was no time to develop a more sophisticated mono-coque one. All control surfaces had steel tube frames covered with plywood. The outward-retracting landing gear too was similar to the Heinkel design. An enclosed cockpit with aft-sliding canopy was fitted to the fuselage. The prototype was powered by the indigenous 1,030 hp W.M. K-14B fourteen-cylinder, air-cooled radial engine (development of the license produced French Gnome & Rhône 14Kfrs Mistral-Major). Overall dimensions included a wing span of 31 feet 5.952 inches (9.6 meters), a length of 29 feet 10.267 inches (9.1 meters) and a height of 10 feet 9.921 inches (3.3 meters). Wing surface was 199.132 sq.ft. (18.5 m<sup>2</sup>), empty weight 4,851 pounds (2,200 kg) and the maximum take off weight was 5,733 pounds (2,600 kg). Its armament was planned to consist of two wing-mounted 8MM machine guns, completed by a pair of .5 inch (.50 caliber or 12.7MM) Gebauer heavy machine guns of Hungarian design, installed in the fuselage over the engine. 44.1 pound (20 kg) fragmentation bombs could be carried as well. The prototype, however, apparently was never fitted with armament.

Once the design project was finished in late 1939, the prototype was completed in record time. The shiny, overall Gray aircraft was quickly nick-named by WM employees *Ezüst Nyíl* (Silver Arrow). Soon after delivery, it was painted in the typical three-tone Hungarian camouflage scheme and received the tactical code V.501 (V for *Vadász*, fighter). The first flight took place at the airfield of the *Repülő Kísérleti Intézet* (Institute for Aeronautical Research), at Csepel-Budapest, on 23 February 1940. The prototype's maiden flight revealed pleasant flying characteristics and it attained the expected 329.3 mph (530 km/h) top speed at 16,400 feet (5,000 m). During further trials some aileron flutter was experienced and considerable airframe vibrations were generated by the exhaust system. These problems were partly eliminated by structural modifications.

Just before the order for series production was given by the *Hadügyminisztérium*, on 21 February 1942, the prototype was lost. During a high-speed test flight the prototype's starboard aileron suddenly broke away at 9,842 feet (3,000 meters), causing severe vibration. The test pilot, Sándor Boskovits, lost control of the aircraft and was forced to bail out. The aircraft crashed and thus the short life of this advanced design with a promising future came to an abrupt end.

This is the only known illustration of the W.M. 23 *Ezüst Nyíl* to survive the war. The aircraft was painted in standard Hungarian markings for its tests at Budapest-Csepel airfield during April 1941, with the engine cowl, middle fuselage section and tail in Crome Yellow, to conform to standard Axis aircraft identification regulations. (Winkler)



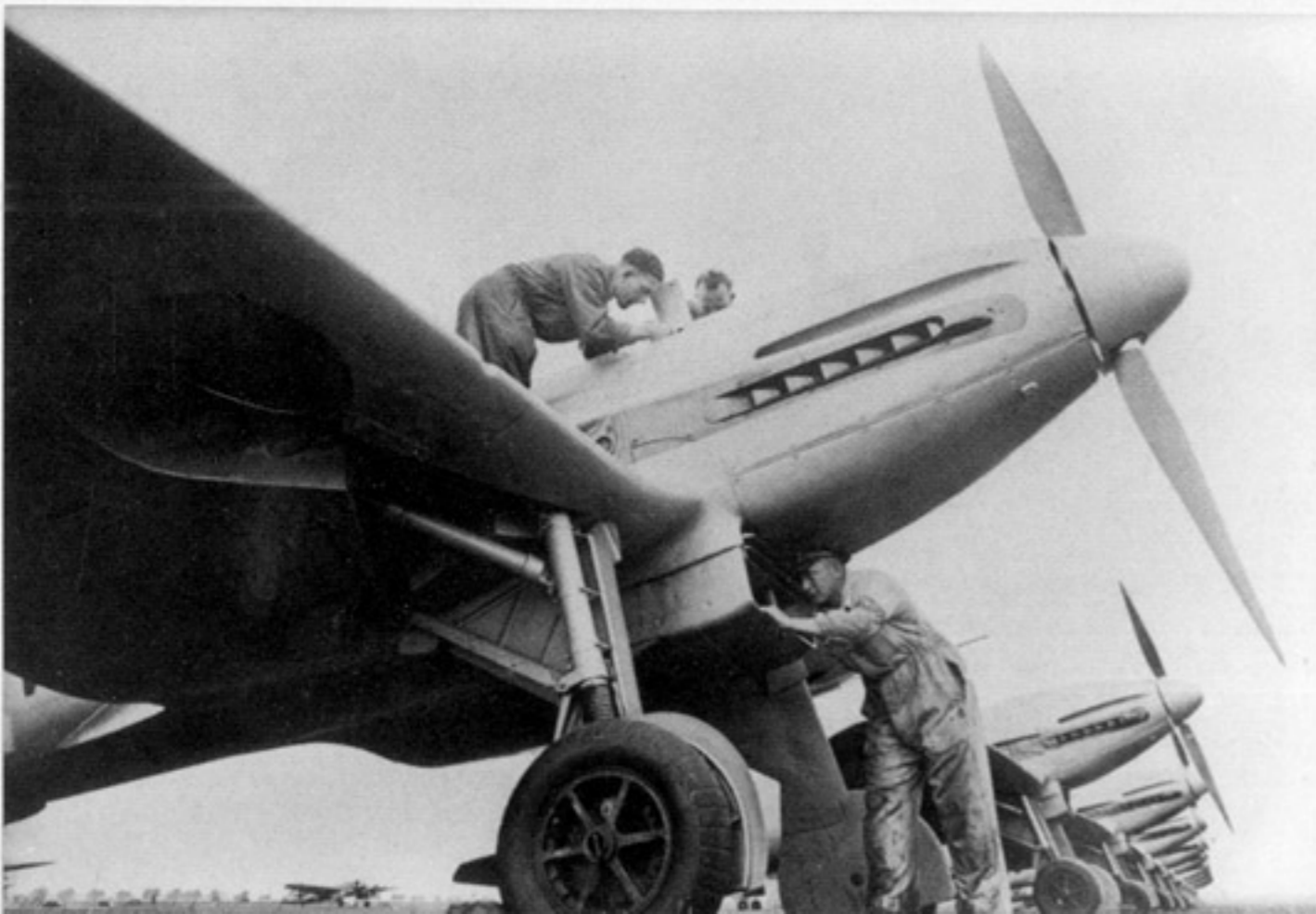
# Rumania

During the late 1930s, increasing political tensions in Europe necessitated the modernization of the *Aeronautica Regală Română* (ARR, Royal Rumanian Aeronautics). The most urgent requirement was for the upgrading of the fighter fleet (as of April 1939, fighter aircraft made up only 36.5% of the ARR's total front-line combat aircraft strength, which strategically and geopolitically was considered totally inadequate for Rumania). At this time the fighter strength consisted entirely of obsolete gull-winged P.Z.L. monoplanes of Polish origin (P.Z.L. P.11b, f and P.24Es).

In April of 1939, as a result of a European tour by Charles II, King of Rumania, a wide range of modern military equipment, including aircraft, was acquired from France, the United Kingdom and, above all, Germany.

The Third Reich made every substantial effort to attract Rumania, a country rich in oil and wheat, to its side by promising the preferred Messerschmitt Bf 109s for future delivery, and by offering the immediate shipment of twenty-four already available *Heinkel He 112Ea* (sic) fighters. The well-shaped Heinkel fighter was no mystery to the Rumanians, since a prototype had been extensively tested during late 1938 by pilots of the ARR's *Escadrila de experiente* (Experimental Squadron) based at Pipera-Bucharest airfield. Although the trials, conducted by dipl.-eng. Nicolae Caranfil and *Căpitan aviator* (Captain aviator) Dumitru "Pufi" Popescu from the I.A.R. factory, revealed some deficiencies, such as inadequate rudder response and unsatisfactory handling during aerobatics, the German offer was gladly accepted. According to a request made by the Rumanians, this order was later extended to thirty aircraft, equipped partly with Jumo 210Ea (He 112B-1) or Jumo 210Ga (He 112B-2) engine (contrary to the published data of 13 He 112B-0s and 11 He 112B-1s). All of them, designated by Heinkel as He 112E (E for Export), were painted with German civilian markings in preparation for their

German technicians prepare an overall Gray He 112E for delivery to Rumania. The aircraft on the Rumanian contract were delivered in two batches during 1939. (Dabrowski)



The first batch of Rumanian He 112Es lined up on the *Heinkel Flugzeugwerke's* airstrip in preparation for the ferry flight to Rumania in late May 1939. Prof. Ernst Heinkel (the short man with eye glasses) is in the middle of the group of German and Rumanian airmen and technicians. (Antoniou)

ferry flights.

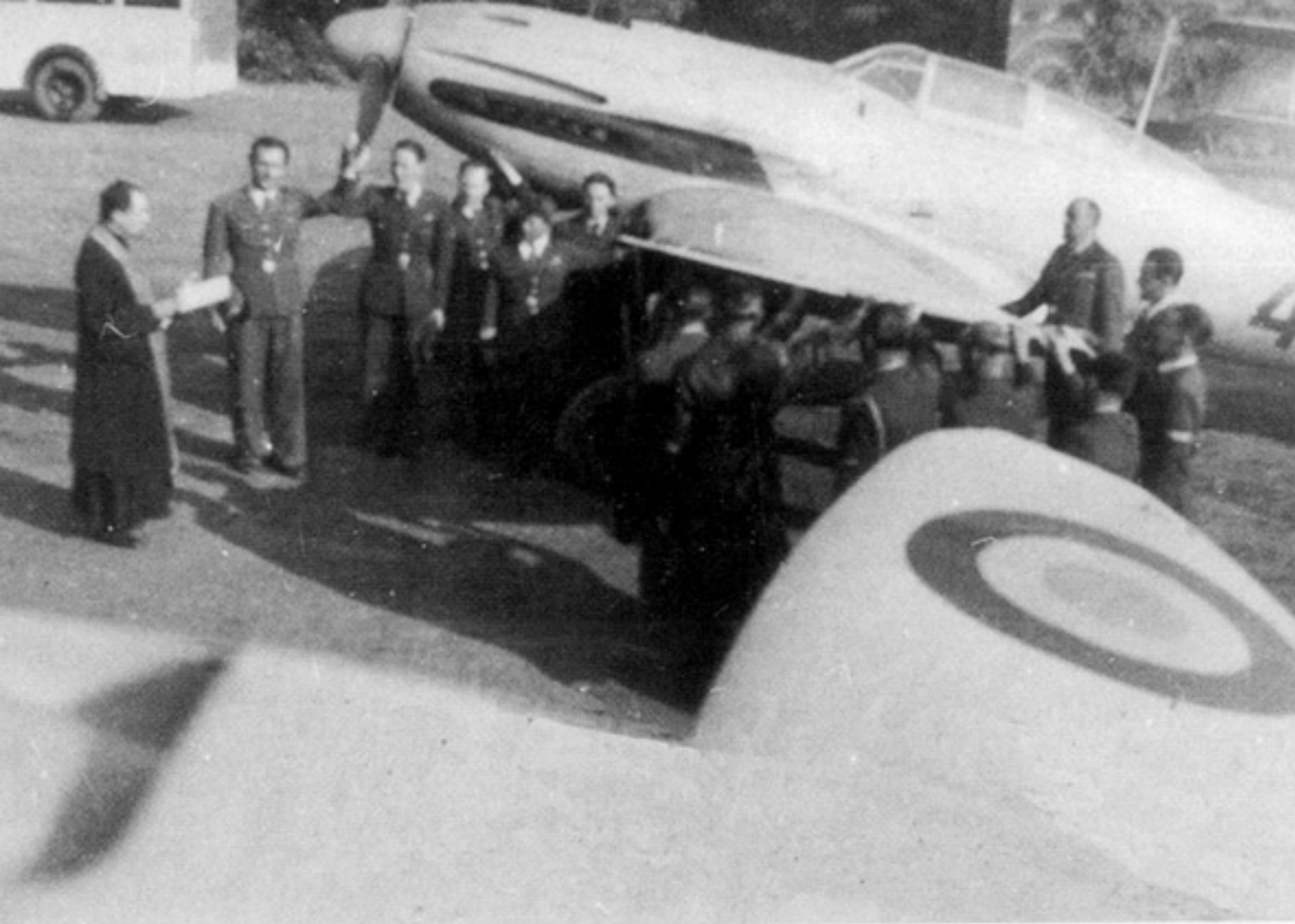
A group of Rumanian pilots arrived in Germany at the end of April to begin their transition training on the new machine. The Heinkel fighter represented a completely new aircraft type with unique handling techniques. They were unprepared for flight in a high-speed, all-metal monoplane, with retractable undercarriage and enclosed cockpit.

Upon completion of the training program at the *Heinkel Flugzeugwerke*, the first batch of

During the ferry flight to Rumania, the Heinkels made a refuelling stop at Zemun Airfield near Belgrad, Yugoslavia. The aircraft in the foreground is a He 112E, D-IXWA. The Heinkels exported to Rumania all received temporary German civilian registrations and markings for the ferry flights. (Micevski)







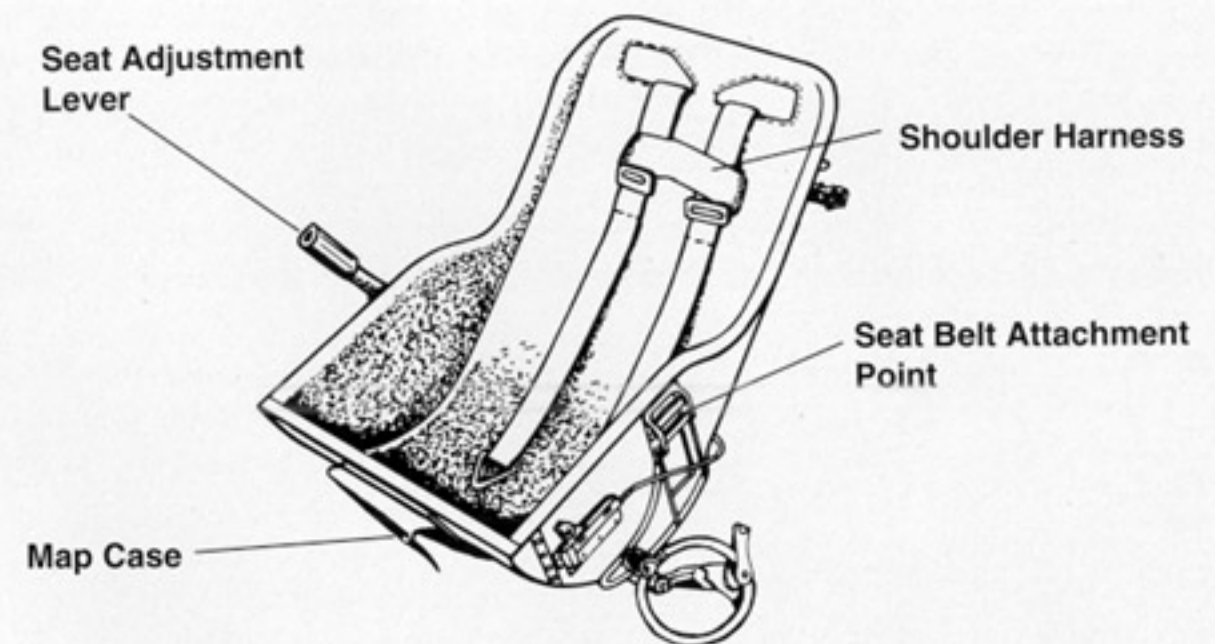
**Pilots of *Grupul 5 vânătoare* take their oath of allegiance in the presence of a *popa* (Orthodox priest) at Câmpia Turzii airfield in May 1940. The airmen swear on their aircraft rather than the national flag, as was usual in the army. (Iolu via Taralungă)**

Rumanian pilots proudly boarded their new fighters and returned home, with a refuelling stop at Belgrade. On 21 August, an *Überflug* (ferry flight) is noted in the logbook of Lieutenant Hans von Hahn, when he delivered a He 112E from Marienehe to Klausenburg (Cluj, Kolozsvár), capital city of Transylvania. The second batch of ten pilots from *Flotila 1 vânătoare* (1st Fighter Fleet) departed by train for Germany on 28 August 1939, where they took delivery of the last ten He 112Bs from the original order (among these were, probably, W.Nrs. 2029, 2033, 2036, 2040, 2051, 2052 and 2056, D-IXWN, D-IYWI, D-IZWT). On 7 September, the first fatal accident occurred when *Locotenent aviator* (First Lieutenant Aviator) Ioan Tomulescu crashed at Regensburg (Germany). Seven of his colleagues, however, arrived safely at Pipera-Bucharest airfield two days later, followed on 5 October by the last two pilots and aircraft. Another Heinkel fighter was damaged enroute in an accident, being subsequently sent to I.A.R.-Brasov and later to S.E.T.-Bucharest plants for repair.

Immediately after their arrival, the overall Gray Heinkels were promptly painted with Rumanian Red-Yellow-Blue roundels and hastily impressed into service. The very first He 112E, Black 1, was declared fit for operational service on 14 July 1939. In this way, the air force high command attempted to upgrade the quality of Rumania's fighter force, which left much to be desired. A report titled "Operative capacity of aviation", dated 12 August 1939, carried the Heinkel 112s for the very first time as part of the ARR's inventory of 121 first-line fighters, ready for take off.

Shortly after the first Heinkels arrived to Rumania, comparison flights were conducted at Pipera base against the recently completed I.A.R. 80 fighter prototype. The results of these test flights revealed the superiority of the Rumanian aircraft and besides revealing the I.A.R.

## He 112 Pilots Seat



80s qualities, it emphasized the Heinkel 112's disadvantages: underpowered and subject to extreme loading forces resulting in certain handling deficiencies during high-speed aerobatics. Nevertheless, these deficiencies were partly compensated by good handling characteristics during straight and level flight, the ease with which it could be flown by an average pilot, and safe take off and landing properties. Its armament of two cannons and two machine guns was considered adequate at the time.

Meantime, on 15 September 1939, a new fighter group was formed within the 1st Fighter Fleet, the front-line Rumanian fighter force. *Grupul 5 vânătoare* (5th Fighter Group), made up of *Escadrila 10* and *Escadrila 11* (10th and 11th Squadrons), was re-equipped with the newly arrived Heinkel He 112Bs. The 5th Fighter Group's responsibility was the defense of the capital. Using Nardi F.N.-305 monoplane trainers, the handful of assigned pilots began their transition from the old Polish-made P.Z.L. fighters to the new German aircraft.

In early October, the Rumanian air force's combat units were reorganized. As a result of these measures the two squadrons forming the *Grupul 5 vânătoare* were renumbered as the *51st* and *52nd Escadrila* (squadron).

Training flights lasted until the Spring of 1940. During this period, Germany delivered the last He 112B-2, as a replacement for the aircraft lost the previous Autumn at Regensburg. This particular aircraft, prior to being sent to Rumania, apparently served with the Spanish nationalist air force and as a result of an accident was sent to Germany for overhaul. It was then diverted to Rumania. On the occasion of the military parade held on 10 May, the Rumanian Kingdom's national day, the two *Heinkel Escadrile* were shown for the first time to the attending dignitaries and the curious crowd.

The existing tension between Rumania and its western neighbor, Hungary, over Transylvania, a province incorporated by Rumania after the First World War, increased dramatically in the Summer of 1940. Hungary was determined to regain its lost territories and prepared for war. Junkers Ju 86Ks and Heinkel He 70Ks of the Royal Hungarian Air Force



A Rumanian *Locotenent aviator* (1st Lieutenant) holding his camera, possibly a Voightlander, poses beside his pristine, shiny overall Gray He 112. All inscriptions on the aircraft were in Rumanian. On the fuselage, to the left of the Red Cross symbol was *Racord oxigen* (oxygen coupling), while at right is visible the instruction *Nu călca aici* (don't step here) on the flap. (Antoniou)



He 112B-1/U2 (He 112E), Black 1 of *Escadrila 51 vânătoare*, taxis on the grassy landing strip of Pipera air base during 1940. This particular aircraft was shot down on 12 July 1941 by Soviet antiaircraft fire. Until that fatal day, the aircraft had flown some 112.52 hours. The fuselage band was Yellow, identifying the aircraft's *Escadrila*. This band was also carried on both wing surfaces. (Matthiesen)

intensified their reconnaissance flights over the disputed territory. Due to these violations of Rumanian air space, on 11 June the *Escadrila 51 vânătoare* was transferred to Târgsor, then, on 21 August to Someșeni-Cluj, in the hart of Transylvania. From this base six He 112s were immediately deployed to Nusfalău, an emergency airfield close to the Rumanian-Hungarian border. The other six Heinkels remained at Someșeni. The several attempts to intercept the Hungarian reconnaissance planes ended in failure, owing mainly to the Heinkel's inferior speed. This was only the first fiasco in He 112's operational career with the ARR.

In an effort to atone for those failures, on 27 August 1940, *Locotenent aviator de rezervă* Nicolae Polizu intruded into Hungarian air space and attacked a MKHL Caproni Ca-135bis of the *3/III. Bombázóosztály* (3./III Bomber Group) engaged in a training flight at 9,800 feet (3,000 meters). Polizu hit the Hungarian bomber several times with 20MM cannon fire, wounding seriously the radio operator/gunner in the back, and forcing the damaged bomber to land at Debrecen airfield. The Rumanian fighter returned safely to Someșeni air base. Nicolae Polizu thus became the first Rumanian pilot to score an aerial victory and was duly decorated for his action. Later, during the war against the Soviet Union, Lieutenant Polizu, while flying a Messerschmitt Bf 109E, added to his score, achieving more than ten air victories. He eventually became one of the leading Rumanian aces, decorated with the highest Rumanian award the *Mihai Viteazul Cross*. He was killed in action on 5 May 1943, near Stalingrad. The Transylvanian problem was solved on 30 August 1940 by the Vienna Resolution. Accordingly, the Northern part of Transylvania was returned to Hungary, while Southern-Transylvania, with its ethnic Rumanian majority remained within Rumanian borders. Once the tension defused, the 51st Fighter Squadron was ordered to withdraw to Câmpia Turzii emergency airfield on 1 September, then back to Târgsor. On 19 September, the 51st F.S. was joined by the 52nd F.S. at Mizil air base, 30 km East of Ploiesti. Finally, on 31 October both squadrons and the 5th F.G.'s staff returned to their home base of Pipera, marking the end of operational missions.

While still at Câmpia Turzii, on 12 September 1940, He 112B No. 25 caught fire and



A line-up of He 112Bs of *Grupul 5 vânătoare*. The Gray Heinkels belonged to *Escadrila 51*, while those of *Escadrila 52* were painted in a two tone Green camouflage (similar to German RLM 70/71). Following the German attack on Yugoslavia in April of 1941, the cowling of all fighters was painted with Chrome Yellow, the identification color assigned to Axis aircraft. (Turcas)

*Locotenent aviator* Teodor Moscu (left) stands beside an He 112B prior the war against the Soviet Union. The Heinkel's Jumo 210 engine is being overhauled for the upcoming operations at Focsani-North airfield during mid-June of 1941. The Black stripe painted on the wing root was unusually wide. (Moscu)

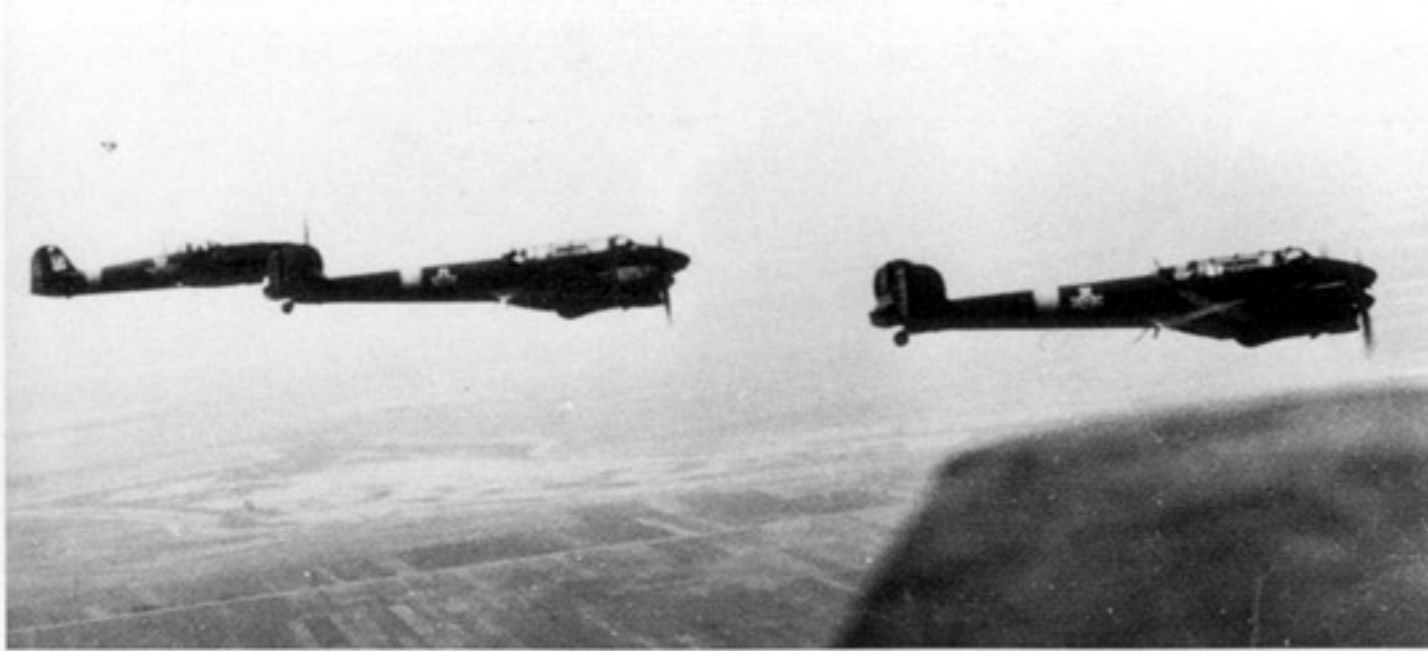


*Adjutant aviator* (First Sergeant) Gheorghe Dinu leans against his He 112B, No. 11 during the early Spring of 1941. A few months later, on 9 July, he was seriously wounded in air-to-air combat. Regardless the engine or other equipment, all exported Heinkel fighters were designated He 112E (E for export) as identified on the original factory inscription beneath the horizontal stabilizer. The other data refer to the aircraft's weights. The aircraft's *Werknummer* (construction number) W.Nr. 2042 is visible on the fin. (Author)

crashed during a training flight, killing *Adjutant stagiar aviator* (Staff Sergeant) Andrei Mitache. He became the first Heinkel 112 pilot killed on Rumanian soil. *Adjutant stagiar aviator* Octavian Loga became the second, on 19 March 1941, when he failed to recover from a spine during an air combat exercise.

By the early Summer of 1941, Rumania, who a year ago allied herself with Hitler's Germany, was preparing for war with the Soviet Union, in order to recover Bessarabia (Eastern Moldavia) and Northern Bukovina, territories lost the previous year. The ARR, incorporated into *Luftflotte 4*, repositioned it's units to Moldavia, close to the Soviet frontier. Among the forward units was *Grupul 5 vânătoare* with its Heinkel 112s (for a brief period *Escadrila 53 vânătoare*, equipped with Hawker Hurricane Mk.IIs was included in the 5th F.G., but later it operated independently). On 15 June 1941, a week prior to *Unternehmen Barbarossa*, all twenty-four serviceable He 112Bs of both squadrons were ordered to move to Focsani-North airfield in Southern Moldavia. Three Heinkels undergoing repairs were to remain at Pipera base.

On Sunday, 22 June 1941, at dawn, the Rumanian Heinkels took off on their first combat missions of the Second World War. The primary task assigned was to attack Soviet airfields, fortified positions, military columns, artillery placements. The Heinkels role as fighter was severely restricted in favor of the new I.A.R. 80s, the ageing P.Z.L.s and the handful of Hawker Hurricanes (similarly to the He 112Bs, the Bf 109Es of *Grupul 7 vânătoare* were



Heinkels of *Escadrila 52 vânătoare* escort a pair of Potez 633 B2s of *Grupul 2 bombardament, Escadrila 75 bombardament* on their way to attack Soviet airfields at Bolgrad and Bulgarica in Southern Bessarabia at 1100 on Sunday, 22 June 1941. During this first mission of the war, three out of the thirteen bombers dispatched were lost. (Antoni)

deployed as ground attack aircraft). Although the He 112's powerful armament of two cannons and two machine guns combined with six small-caliber bombs was effective against ground targets, it was not wholly suited to the ground attack role. The lack of proper armor around the engine, cockpit and fuel tanks, combined with insufficient low level attack training for the pilots resulted in high losses. This unsuitable tactical deployment and the average three combat missions per day quickly decimated the two *Heinkel Escadrile*.

Their very first war mission was to provide air cover for Potez 63 light bombers of *Grupul 2 bombardament* attacking the Soviet airfields of Bolgrad and Bulgărica. Twelve He 112s took off from Focsani at 1050, in gloomy weather and rendezvoused with the bombers over the air- This Green camouflaged He 112B of *Escadrila 52 vânătoare* on Komrat airfield (Bessarabia), during late July 1941, carries the inscription "Bill" in White on the cowling near the crank shaft. The small White vertical rod visible to the left of the wing cannon port, indicates to the pilot that the landing gear was in the lowered position. (Author)



1st Lieutenant Moscu studies the damage to his fighter after his return to Bărlad airfield on 22 June 1941 after escorting bombers on the first mission of the war. During this sortie he shot down two Russian I-16s with another credited as probable. The hole in front of the numeral 3 was caused by enemy fire and there is oil all over the fuselage and wing root. The Pluto cartoon dog beneath the cockpit was the squadron emblem of *Grupul 5 vânătoare*. (Moscu)

field. Light anti-aircraft fire was encountered enroute, but this increased considerably over the first target, Bolgrad airfield. Despite the heavy *Flak* (*Flugzeugabwehrkanone*, well-known German acronym for anti-aircraft guns), the Soviet planes lined up on the runway were successfully hit by bombs and gunfire. The warning, however, was immediately sent out to other units. When the Rumanian formation reached the second target, Bulgărica airfield, it was greeted by numerous Soviet fighters, already alerted to the impending raid. A bitter combat ensued between the dozen He 112s and some thirty I-16 Ratas. In the event, he first air battle between the Russians and the Rumanians was a victory for the latter. At 1205, *Sublocotenent aviator* Teodor Moscu dove on the last pair of I-16s as they took off. He fired a burst into one of them, sending it crashing in flames. Pulling out of his dive, Moscu suddenly found himself face to face with the another Rata. He squeezed off a burst hitting the Russian fighter in its radial engine. This proved to be fatal for the Rata. The wrecks of the aircraft went down in the Danube and quickly sank. Now Moscu had his hands full! Several I-16s bounced the Heinkel, one firing from Moscu's right front quarter. He was hit in the starboard wing, his fuel tanks punctured and was losing fuel rapidly. The rear fuselage received hits as well. 2nd Lieutenant Moscu in a final effort fired a long burst at the attacking fighter, which abruptly dove and disappeared from sight. *Adjutant stagiar aviator* Pavel Barbu, Moscu's wingman, joined up with him, escorting the damaged Heinkel home following the Danube River back to base. The fuel warning light came on and, taking stock of his fuel crisis and structural damage, Moscu decided to put his machine down at the first available airfield.



An He 112 *celulă* (pair) of *Escadrila 52 vânătoare* (Nos. 20 and 21) flying over Bessarabian during July of 1941. Both aircraft have the semi-retractable radiator fully extended. (Antoniu)

This was Bârlad airfield, where the bullet-riddled fighter made a successful wheel-up landing. 2nd Lt. Teodor Moscu, was officially credited with two confirmed victories and became the first hero of the Rumanian air force, in a war which had just started and was to prove a long and exhausting one. Later, in an air battle over Cazaclia, Moscu added two more kills to his score. His He 112B, No. 13, was reparable and rejoined *Escadrila 51 vânătoare*.

On 23 June 1941, another air battle took place over Southern Bessarabia, when four He 112Bs and ten to twelve Soviet fighters clashed, this time without no losses to either side.

Regardless of the heavy toll their unit suffered in combat, the majority of Heinkel pilots maintained their morale throughout the war. This aircraft was unusual in that it had a different canopy framing consisting of two braces behind the antenna mast. (Author)



*Locotenent aviator de rezervă inginer* (1st Lieutenant aviator in reserve, dipl.-eng.) Ioan Lascu of *Escadrila 51 vânătoare* had suffered head wounds in an air battle with Soviet fighters early in the war. Later on, on 12 July 1941, he lost his life when ground fire scored a direct hit on his aircraft, He 112B-1/U2, Black 1. (Antoniu)

The missions followed one after the other, the Heinkels successfully attacking front-line airfields, which were usually the first targets of the day, being strafed just before dawn. Later in the day, forward enemy positions, military columns, AFV concentrations, trains and artillery placements were regularly hit with cannon fire and small-caliber bombs. Rarely were the Heinkels used in air cover sorties.

These successes, however, claimed a heavy toll. On the second day of fighting, while attacking Bolgrad airfield, aircraft No. 12 was fatally hit by Soviet fighters, forcing its pilot *Adjutant aviator* Anghel Codrut to bail out over enemy territory. He was never heard from again. The next day, two Heinkels were involved in accidents and were rendered unserviceable. One of these was piloted by *Locotenent comandor aviator* (Major) Gheorghe Miculescu, commander of the 5th Fighter Group.



Mechanics load 26.5 pound (12 kg) Rumanian-made bombs on the wing-root bomb shackles of a He 112. The unpainted, metal colored cone is the bomb's fuse which was armed just before takeoff. The usual load for a Heinkel 112 fighter-bomber was three 22 pound bombs (10 kg) or two 26.5 pound (12 kg) on each rack. (Avram)

Two more Heinkels were lost on 28 June 1941. No. 8 of the 51st Squadron was hit by AA fire while providing long-range fighter escort to bombers attacking Kiliya and Ismail harbors, located on the left bank of Danube. On its way back the He 112 ran out of fuel and was forced to land near Râmnicul Sărat, Moldavia. During the rough wheels-up landing the central fuel tank exploded and 2nd Lieutenant Constantin Smeu was killed in the fireball. The other Heinkel, No. 6, crashed and caught fire on Rumanian territory following a dogfight with Soviet fighters. The pilot, *Sublocotenent aviator* Constantin Stancu was wounded.

Black 18, flown by *Adjutant stagiar aviator de rezervă* Aldea Cerchez of the 52nd Fighter Squadron was shot down behind enemy lines on 2 July 1941. The pilot was captured and the aircraft was recovered by the Soviets for evaluation. The Pluto emblem normally carried below the cockpit was overpainted on this aircraft. (Author)



Black 29 was one of the lucky few to survive the war. The emblem of *Escadrila 52 vânătoare* was carried on the fin and consisted of the Rumanian tricolor in a White circle. (Antoni)

*Adjutant aviator* Alexandru Aliman (left), a future Stuka pilot and *Adjutant aviator* Aurel Brânduse from *Grupul de postă aeriană* (a group charged with postal transport for the Trans-Dnestra Government, which ruled the Ukrainian territory between Dnestr and Bug rivers, which was occupied and incorporated into Rumania during 1942) visit their colleagues from *Grupul 5 vânătoare* at Odessa, on 25 May 1942. (Author)





A ground crewman refuels a Rumanian He 112E of *Escadrila 52 vânătoare* with 87 octane fuel. The Walt Disney Pluto character was used by the 5th Fighter Group as a unit insignia. Other Disney characters were also used by Rumanian units. *Grupul 7 vânătoare* used Donald Duck and later Mickey Mouse. (Antoniou)

On 2 July 1941, two additional He 112s were lost. *Adjutant stagiari aviator de rezervă* (Staff Sergeant Res.) Aldea Cerchez belly landed behind enemy lines near the village of Vulcănești after he ran out of fuel due to damage from ground fire. After making a successful crash landing, the Rumanian pilot quickly evacuated the downed machine. Conscious of his fate, he waved to his circling wingman, Staff Sergeant Alexandru Savu, and ran into the nearby forest. He couldn't avoid capture and subsequently disappeared in one of the deadliest prisoner camps set up by Soviets in Siberia. His aircraft, No. 18, was quickly recovered from site and tested by experts of the *Voyenno-Vozdushniye Sily* (Soviet Air Force). That same day, aircraft No. 5, piloted by *Adjutant aviator* Ion Igescu, was set on flames by incendiary fire from the heavy machine guns defending Bulgărica airfield. Technical Sergeant Igescu was killed instantly.

On July 5, before dawn, a formation of He 112s of *Escadrila 52 vânătoare* again attacked Bulgărica airfield. After releasing their bomb load and ignoring the decoys lined up on the western side of the airfield, the Heinkels made two strafing runs on the edges of the nearby forest, where the Soviets hid their real matériel. Several Russian fighters tried in vain to take off to combat the attackers. One climbing Z.K.B. was shot down in flames by *Adjutant aviator* Anghel Niculescu (Z.K.B. was a code name commonly used by the Axis in early war period, wrongly applied to various Soviet warplanes [e.g. Z.K.B.-3 to I-15bis or I-153, Z.K.B.-12 to I-16, Z.K.B.-19 or 30 to DB-3, Z.K.B.-57 to Il-2, etc.]). In this case it can be presumed that the destroyed aircraft was an I-15bis or I-153 biplane). Other Soviet aircraft were destroyed



*Adjutant aviator* Gheorghe Dinu, wounded in an air battle on 9 July, is removed from his aircraft. The damaged fighter, No. 19, was barely able to return to a friendly airfield. He was rushed to a hospital in Bucharest and survived. There are unreleased bombs under the wing. (Antoniou)

on ground or in air. *Adjutant aviator* Niculescu's aircraft, He 112B No. 24, was damaged as well, the port wing's fuel tank being hit by three bullets.

During this time, *Sublocotenent aviator* Constantin Runceanu was killed in a dogfight. 2nd Lieutenant Runceanu was part of a *patrulă* (a four plane patrol) of *Escadrila 52 vânătoare*

*Comandor aviator* (Lieutenant Colonel) Mihail Romanescu *Leul* (Lion) was the commander in Chief of *Flotila 1 vânătoare* is seated in the cockpit of his He 112B with the access door folded down. (Antoniou)





**Soviet Heinkel He112s?** These fighters were not in service with the VVS (Soviet Air Force) but rather with *Escadrila 51 vânătoare*, recently returned from the front in September of 1942. The Heinkels were painted in Soviet markings to portray "Soviet MiG-3s" in a war movie called "The White Squadron". The aircraft in the background are an I.A.R. 38 army co-operation and light-bomber aircraft (No.2) and behind it is a Bf 109E-7, No.58, of *Grupul 7 vânătoare*. (Tulea)

providing top cover for a formation of bombers. Over the Dalnik-Mayaki-Freudenthal area they were bounced by twelve Soviet fighters. During the engagement four Russian aircraft were promptly shot down. Runceanu lost contact with his patrol during the heat of battle and was surrounded by six enemy fighters. He didn't have the slightest chance and was shot down in flames within a few seconds. Runceanu had arrived at the front only a couple of days **The commander of the 51st Fighter Squadron, Captain Virgil Tandafirescu, shares the cockpit of his He 112 with his pet rooster.** (Author)



**This well-worn He 112B-2/U2, No. 30, was used as conversion trainer for pilots transitioning into the Bf 109 at Focsani airfield, during late 1942. The fuselage was decorated with a White Edelweiss and the aircraft's type was carried on the fin in White.** (Axente)

before and had only five combat missions in his log book.

On 9 and 10 July, *Escadrila 52 vânătoare* had to ground two He 112s, Nos. 19 and 28, due to battle damage from enemy fighters. And the losses continued.

12 July 1941, marked an important success for the ARR. On this day, two Soviet attempts to annihilate the Rumanian bridgehead formed in Tiganca-Porumbiste area were repelled by the co-ordinated action of Rumanian ground and air forces. Around 150 bombers and fighters provided vital air support, allowing the Rumanian ground forces to reinforce and solidify their positions on left bank of the Tigheci river.

The 5th F.G. was present in these embittered fights. The Heinkel 112s bombed and strafed enemy artillery positions and infantry repeatedly, neutralizing every Soviet attempt to wipe out the Rumanian positions. For it's actions, the 1st Fighter Fleet was cited by the 4th Rumanian Army's Order of the Day, dated 12 July 1941.

In this massive air battle, with both sides engaging dozens of aircraft, both victories and losses occurred. 2nd Lieutenant Ion Zaharia from the 52nd F.S. shot down a Soviet aircraft west of the village of Tătărăseni, while Heinkel He 112, No. 1, flown by *Locotenent aviator de rezervă* Ion Lascu took a direct hit from anti-aircraft fire and exploded. Lieutenant Lascu, a former engineer from the I.A.R. factory who had volunteered for front-line service, was killed instantly. One of the He 112s, No. 10, was damaged during a low level attack on enemy Flak positions in Lărguta Valley. Two bullets hit the cockpit wounding the pilot in the legs. He was able, however, to successfully return to base.

After a lull of two days, on 14 July, *Escadrila 52 vânătoare* regrouped to Bârlad-West airfield, North-East of Focsani. Three days later, a pair of Heinkels took off for a train hunting mission. During this sortie, He 112 No. 10 knocked out a locomotive near New Paris station, Bessarabia. On 18 July, this aircraft was belly landed on Bârlad airfield after an early morning weather reconnaissance mission. The damaged fighter was sent back behind the front lines for repairs and returned to service only two months later.

On 24 July 1941, *Escadrila 52 vânătoare* moved to Komrat-South airfield in liberated Bessarabia, followed the second day by the sister squadron, *Escadrila 51 vânătoare*. A report dated 29 July 1941, summing up the status of the *Gruparea Aeriană de Lupta* (Aerial Combat Group), which included all Rumanian air units fighting on the Eastern front, lists a total of





**Sublocotenent aviator Titus Axente in the cockpit of a war weary He 112B-2 (He 112E) number 30, assigned to the training role during late 1942. The aircraft carried a White Edelweiss on the nose, forward of the cockpit. (Axente)**

fourteen combat ready He 112Es and another eight as temporarily unserviceable. It can be assumed that after five weeks of intense fighting, more than forty percent of all Rumanian Heinkels were lost or damaged!

The decimated *Grupul 5 vânătoare* was reorganized on 13 August 1941. Accordingly, *Escadrila 52* was disbanded and the majority of its remaining material transferred to *Escadrila 51*. In compliance with the Transfer Order No. 6, dated 13 August 1941, the personnel of the 51st F.S. merged with the 42nd F.S. flying I.A.R. 80s. The new mixed unit was redesignated *Escadrila 42/52 vânătoare* and was soon transferred from Komrat back to Sturzeni air base, in the homeland, to re-equip entirely with I.A.R. 80 fighters, which were becoming increasingly available. The remaining part of the group was withdrawn as well and sent to Mizil for rest and recovery.

As Luftwaffe fighter units left Rumania to move closer to the front, advancing deeper into Ukraine, *Escadrila 51 vânătoare* was assigned the task of *Apărarea teritoriului* (Home defense). He 112s made several interceptions of Soviet bombers attacking Ploiesti oil refineries and other Rumanian strategic targets. On 16 August 1941 Captain Marin Ghica, commander of *Escadrila 42/52 vânătoare* shot down a Soviet fighter in Usotova zone.

The commanding officers of both the 5th Fighter Group, *Locotenent comandor aviator* (Major) Gheorghe Miculescu and the 1st Fighter Fleet, *Comandor aviator* (Colonel) Mihail Romanescu *Leul* (The Lion), regularly flew combat missions alongside their men. This *esprit de corps* was a brave way to set an example to their subordinates.

By the end of August 1941, German-Rumanian ground forces were advancing deep into enemy territory. *Escadrila 51 vânătoare*, temporarily under Luftwaffe command, was

deployed to Râmnicul Sărat airfield. By early October, the unit crossed the Dneestr river, the natural border between the self-styled "Greater-Rumania" and the Ukraine, moving to Razelmnaya. It was from this air base that the Rumanian He 112Bs took part in the offensive to capture Odessa, an important communications hub and strategic port on the Northern coast of the Black Sea. On 16 October 1941, after two months of bitter and bloody fighting, Odessa fell and troops of 4th Rumanian Army occupied the city and harbor. *Escadrila 51 vânătoare* moved with its selected twelve (a Rumanian fighter squadron was made up, theoretically, by twelve serviceable and three reserve aircraft) Heinkel 112s forward to the Odessa airfield, the other surviving Heinkels being transferred back in Rumania, to Focsani and assigned the fighter trainer role.

With the last Soviet troops retreating to the eastern bank of Dneestr river and Odessa in Rumanian hands, their main objective was achieved: Bessarabia was re-annexed to Rumania. The first campaign of Rumanian Army and Air Force was over.

After the fighting came to a temporary end, the conclusions were summarized. The results of investigations into the combat activity of the Heinkel fighters were far from encouraging. In order to form a broad picture of the He 112, it is necessary to quote from the official report, compiled in August of 1941:

*The clumsy He 112E, powered by a Jumo 210E [engine], proved to be unsuitable for aerial battles due to its low horizontal speed, insufficient climbing capacity and lack of maneuverability compared to the modern aircraft encountered. Its diving speed, which could be reached very quickly was, however, adequate. The possibility to carry six 12 kg (sic!) bombs was useful as well, being successfully employed in low level attacks. If the fuel tanks and pilot's seat would have been protected by armor [plates] the heavy human losses endured in such kind of missions could have been avoided.*

*The armament fitted, consisting of a practical combination of cannons and heavy machine guns was also sufficient numerically and concerning firepower. The ammunition used, however, proved to be totally inadequate, as the armor [protecting] enemy aircraft wasn't penetrated by the [Heinkel 112's] existing armament. There occurred several occasions when tracer bullets fired by their own cannons and guns indicated to the pilot that the whole load had hit the target without causing [its] destruction.*

On 1 November 1941, the sole *He 112 Escadrila* moved to Tatarka airfield (approx. 100 km southwest of Odessa), moving back to Odessa on 25 November. During its eight months tour of duty at Odessa, the squadron was assigned to coastal defense, air cover for the harbor and tactical reconnaissance missions over the Black Sea. As the front shifted to the Crimean peninsula, enemy aircraft were rarely encountered during these missions.

On 14 January, *Escadrila 51 vânătoare* was transferred, together with the *Escadrila 22 observatie* (22nd Short-range Reconnaissance Squadron), under command of *Grupul 3 vânătoare*. The group's task was maritime surveillance and coastal defense of the Black Sea's Northern and Eastern shores, covering the area between Mangalia, the Southeast Rumanian harbor and Ocheakov, approximately 80 km northeast of Odessa, a 685 km long and 129 km wide territory. In this period the Heinkels provided air cover for naval convoys as well.

The Spring of 1942 saw one of the very few kills claimed by the squadron during this period. *Sublocotenent aviator de rezervă* Ion Istrăteanu, flying his He 112B (probably No. 20), shot down a Polikarpov I-153. This was to be the last aircraft destroyed by a Rumanian Heinkel 112. Istrăteanu, a former judge who gave up his office to volunteer for front-line service, was killed in action at the end of November, near Stalingrad, in his Messerschmitt Bf 109E as part of *Grupul 7 vânătoare*.

During these kinds of missions the real danger, however was represented by the endless expanse of the Black Sea itself, where even the smallest engine malfunction could mean the end for any single-engined aircraft. It was under these circumstances that *Adjutant stagiar aviator* (Staff Sergeant) Constantinescu, a young and inexperienced pilot, was lost in 1942 (this loss had to occur between 16 January and 30 June, as a report on the ARR's fighter strength, dated 15 January 1942, lists twenty-two He 112Bs [fifteen in flying condition and seven under repair], while on 1 July, when the 51st F.S. was withdrawn to Rumania, it consisted of only twenty-one aircraft [thirteen serviceable and eight in repair centers] during a maritime reconnaissance sortie in the Sevastopol area.

On 1 of July 1942, the Staff of *Grupul 5 vânătoare*, together with *Escadrila 51*, was withdrawn to Pipera air base, their task being taken over by I.A.R. 80s.

After a year of continuous front service, nine He 112Bs of *Grupul 5 vânătoare* had been lost in combat. Of the nineteen theoretically surviving He 112B-1/U2s and B-2/U2s, fourteen were assigned to *Escadrila 51 vânătoare*, and the remaining five joined three Hurricane Mk.IIs to form a coastal defense squadron based at Mamaia, on the Rumanian Black Sea coast. Technically, however, only a few of the Heinkels were airworthy, as a report dated 1 July 1942, revealed the presence of eight He 112Bs from the 1st Fighter Fleet at the I.A.R.-Pipera repair depot.

On the night of 19 July 1942, a historic flight took place that represented a pioneer event for the Rumanian Air Force. A He 112 of *Escadrila 51 vânătoare* took off from Pipera on the very first night interception mission performed by a Rumanian fighter. As Soviet bombers began attacking Bucharest at night, the air force recognized the need for a night fighter force. By early 1943, the 51st F.S. was re-equipped with Messerschmitt Bf 110s supplied by the Germans in limited quantities and intended for night fighting role. *Escadrila 51* became the only Rumanian unit specializing in night intercepting missions (renamed *Escadrila 51 vânătoare de noapte* (51st Night Fighter Squadron), the Rumanian unit came under Luftwaffe control, being commanded by *IV./NJG 6*).

In 1943, the He 112s were handed over to *Corpul 3 aerian* (3rd Air Corps), being assigned to training units at Focsani, Zilistea, Mamaia, Mizil and Tiraspol [this base was located in Trans-Dniestra (in Rumanian Transnistria), occupied and annexed by Rumania]. The new role for the Heinkels was as a conversion trainer for I.A.R. 80 fighter pilots transitioning to the new Messerschmitt Bf 109G. As an example, beginning with August of 1944, the entire *Grupul 6 vânătoare*, then mounted on I.A.R. 80/81s, used the remaining He 112s as trainers in converting to Bf 109Gs. During training flights several Heinkels were written off in accidents.

On 23 August 1944, a *coûp d'état* overthrew the Axis aligned Rumanian government lead by Marshall Ion Antonescu. The new military leadership pledged allegiance to the Allies, and joined battle against their former allies, Germany and Hungary. This new situation created an urgent need for more fighter pilots. With the I.A.R. plants beginning to manufacture the Messerschmitt Bf 109Ga-6, the lack of a suitable conversion trainer was painfully evident. As a result, the remaining serviceable Heinkel He 112Bs were pressed into service once more (as on 15 November 1944, a total of nineteen He 112B were in the ARR's inventory. Nine were still airworthy [Nos. 2, 3, 11, 14, 16, 19, 26, 27 and 30], while the remaining aircraft were under repair [Nos. 4, 7, 9, 13, 15, 20, 21, 22, 28 and 29]).

Few of the Heinkels survived the war. Those were put into storage in a deserted corner of Giulesti-Bucharest airfield, among other written-off aircraft of the 1st Fighter Fleet.

Mission Order No. 30, dated 15 April 1946 and signed by Colonel Gheorghe Miculescu,

Commander-in-Chief of the 1st Fighter Fleet and former commander of *Grupul 5 vânătoare*, had arrive at Popesti-Leordeni airfield, then base for *Escadrila 8 vânătoare*. The order instructed the squadron's commander to send a pilot to Giulesti to transfer the last three Bf 109Es and two He 112Bs to the scrap yard near Popesti-Leordeni.

Since none of the pilots volunteered to take this hazardous mission, a young 2nd Lieutenant stepped forward. *Sublocotenent aviator* Partenie Popescu had graduated flight school the previous month and had never flown a real fighter, only trainers. The first transfer flight, involving He 112B, No. 14, was accomplished on 18 June 1946, at 0900 without any difficulties. Once over Popesti-Leordeni, 2nd Lt. Popescu performed a series of aerobatics over the airfield at the sight of his stupefied squadron mates.

An hour later, the last surviving He 112 took off for its final journey. By chance, it was No. 13, the aircraft Lieutenant Teodor Moscu had flown on the first day of the war, credited with two I-16 Ratas and another one probable. The Heinkel was barely airworthy, not surprising in light of its war service. Popescu being superstitious, like all fliers around the world, left the undercarriage lowered and kept the engine set for cruising flight. Flying at 3,300 feet (1,000 meters) over the capital, above Calea Victoriei, near the Main Telephone Center, the engine suddenly begun to misfire. After a desperate diving, flustered maneuvers and a prayer, the miracle happened, the engine roared back to life. He was able to land the war-worn machine on the airfield and breathed a sigh of relief as the engine shuddered to a stop. The last flight of a Heinkel 112 wearing Red-Yellow-Blue roundels came to a fortunate end. After seven years of intensive service, No. 13 could now take a well-earned long rest on a deserted edge of a minor airfield.

Fifty years later, Mr. Popescu, today a retired engineer living in Bucharest, was asked his opinion about the He 112. He promptly replied: "*The Heinkel fighter? What a beautiful and pleasant aircraft! A real limousine! It was the most beloved plane of my whole career as a pilot.*"

**These two He 112s were used as fighter trainers by the 3rd Air Corp's fighter school during 1943. The aircraft in the foreground carries a chalk drawing of a duck on the fuselage, and the name Bill (behind the head of the man at right) in White. These aircraft were used as conversion trainers for pilots who had previously not flown German fighters. (Antoni)**

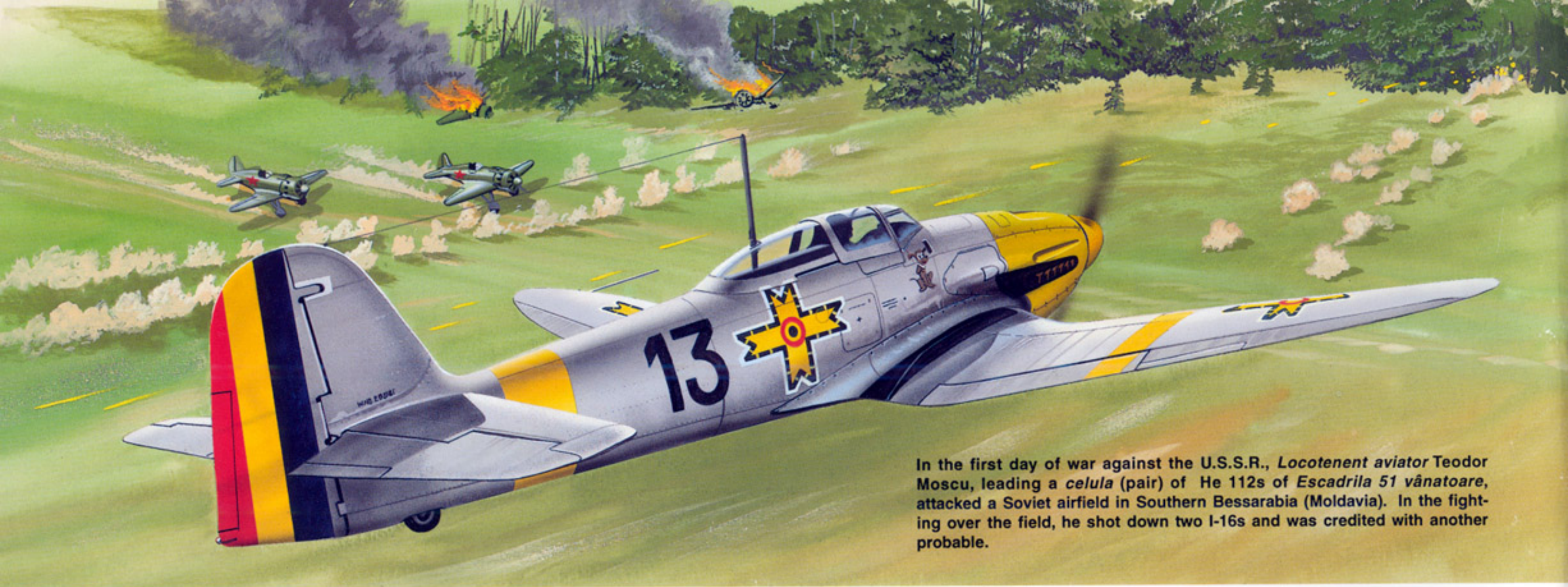


## Heinkel He 112 Production Chart

DESIGN TYPE	W.NR.	REGISTRATION	ENGINE	COMMENTS
Projekt P 1015			BMW XV	October 1933, secret project for a <i>Verfolgungsjäger</i> , issued 2 May 1934 for a single seat "sports" aircraft. On 5 May designation changed to He 112.
He 112 V1	1290	D-IADO	Rolls-Royce Kestrel Mk. IIS	First flown on 1 September 1935. Tested by <i>E-Stelle Travemünde</i> from 27 February 1936. New smaller wings attached on 17 April 1936. In May coded as TH+HW. Still under test at Travemünde in September of 1940
He 112 V2	1291	D-IHGE	Jumo 210C	First flown on 16 November 1935 with V-1 wings. Fitted with MG C/30L machine gun. Damaged at E-Stelle during test flights on 2 March 1936. Back at Rostock on 15 March 1936. Crashed by G. Nitschke on 15 April 1936
He 112 V3	1292	D-IDMO	Jumo 210C	Flown in January 1936. Fitted with three MG 17 guns. Exploded during rocket motor tests. Rebuilt with modified fuse lage, tail and wings.
He 112 V4 A-0	1974	D-IDMY	Jumo 210Da	First flight on 23 June 1936 by K. Heinrich, no armament. Assigned to rocket test program ( <i>Sonderraum Kuünze</i> )
He 112 V5 A-0	1951	D-IIZO	Jumo 210Da	First flight on 9 July 1936. Fitted with two MG 17s. At Rostock until March 1937. Presumably sold to Japan
He 112 V6 A-0	1952	D-IQZE	Jumo 210C	First flight on 28 July 1936. Forced landed by K. Heinrich on 1 August. 20MM <i>Motorkanone</i> fitted in September 1936. Tested at <i>E-Stelle Travemünde</i> from October 1936. Evaluation in Spain as 5•1 from 9 December 1936, destroyed during landing at Escalona airfield 19 July 1937
He 112 V7 B-0	1953	D-IKIK	DB 600Aa	Completed in October 1936. Fitted with two MG FF and two MG 17 guns. Test flights at Marienehe in February 1937. Sent to IVth International Air Show, Switzerland 23 August/1 Spetember 1937. Rocket motor tests in late 1937
He 112 V8 A-0	1954	D-IRXO	DB 600Aa	Completed in October 1936. Tested by K. Heinrich at Marienehe on 6 December 1936. Rocket tests in March 1937 Evaluated in Spain as 8•1. Damaged in Spain, 18 July 1938. Flown again 20 November '38. Also noted as D-IRNO
He 112 V9 B-0	1944	D-IGSI	Jumo 210Ea	Completed and first flown in July 1937. Initial engine; Jumo 210C. Fitted with Jumo 210E in June 1937. Fitted with three MG 17s. Evaluated in Spain as 8•2. Made European sales trip. Destroyed in testing, Hungary, 14 February 1939
He 112 V10 B-0	2253	D-IQMA	DB 601Aa	Completed in late 1937. Intended to be equipped with Jumo 211A engine. Between 22 April-18 August 1938 flown at Rostock, 1 September-20 October at Rechlin. Crashed during evaluation flights in late 1938. He 112 V11 B-0
2254	D-IRXS	DB 600Aa		Intended to be equipped with Jumo 211A First flight at Marienehe on 27 April '38. Plans to re-engine with DB 600 or Jumo 211. Eventually sold to Japan
He 112 V12 B-2	20??	D-IYWE	Jumo 210Ga	Series production B-1 equipped with a Jumo 210Ga engine. Completed in mid-1937. Later on probably exported
He 112 A-01	1955	D-ISJY	Jumo 210C	First flight, 26 October 1936. Fitted with three MG 17s. Destroyed during rocket tests at Peenemünde, in late 1937. Designation He 112C-0 <i>Trägerflugzeug</i> (carrier aircraft). Originally planned as V12.
He 112 A-02	1956	D-IXHU	Jumo 210C	Completed as second C-0. First flight, on 21 November 1936. Fitted with three MG 17s. Tested at <i>E-Stelle Rechlin</i> in 1937 by Beauvais. Originally planned as V13
June				
He 112 A-03	1957	D-IZMY	Jumo 210C	First flight, 20 December 1936. Wheel up landing at Rostock, 27 January 1937. At Dübendorf air show. Rocket tests
He 112 A-04	1958	D-IXEU	Jumo 210C	First flight on 6 December 1936. Field-evaluations from March 1937. Fitted with 15MM Mauser MG 151 cannon
He 112 A-05	1959	-----	Jumo 210C	Test flights from March 1937. Exported to Japan
He 112 A-06	1960	-----	Jumo 210C	Test flights from March 1937. Exported to Japan
He 112A-0	2248-2252		Jumo 210C	Cancelled, together with He 112B-0 W.Nr. 1973 (which became the He 270 V1)
He 112E B-0	1969	-----	Jumo 210C	Test flights from March 1937. Exported to Japan
He 112E B-0	2001-2005*		Jumo 210C	Exported to Japan (5 a/c). [*completed during April-May 1937]
He 112E B-1			Jumo 210Ea	Exported to Japan (21 a/c)
He 112E B-1			Jumo 210Ea	Exported to Spain (11 a/c)
He 112E B-1/U2	2006-		Jumo 210Ea	Exported to Hungary (3 a/c.)
He 112E B-1/U2	2080**		Jumo 210Ea	Exported to Rumania (14 a/c)*** [** the last He 112B-2, W.Nr. 2080, had been first flown on 18 January 1939. One became the V12 (D-IYWE) equipped with the Jumo 210Ga engine, another one (code BO+EW, possibly W.Nr. 2037) was retained in 1940 by the <i>Heinkel Flugzeugwerke</i> for tests.] [***one of them, No.11, was W.Nr. 2042 ]
He 112E B-2			Jumo 210Ga	Exported to Spain (8 a/c)
He 112E B-2/U2			Jumo 210Ga	Exported to Rumania (16 a/c)**** [**** one had been destroyed at Regensburg, Germany, during ferry flight on 7 September 1939.

### Production (total 98 aircraft)

He 112V: 3 a/c (V1, V2 and V3), He 112A-0: 10 a/c. (V4, V5, V6, V8, A-01 to A-04 and A-05, A-06 to Japan), He 112B-0: 10 a/c (V7, V9, V10, V11 and 6 to Japan.), He 112B-1: 50 a/c. (21 to Japan, 11 to Spain, 3 to Hungary, 14 to Rumania, 1 for tests), He 112B-2: 25 a/c (V12, 8 to Spain and 16 to Rumania)



In the first day of war against the U.S.S.R., *Locotenent* aviator Teodor Moscu, leading a *celula* (pair) of He 112s of *Escadrila 51 vânătoare*, attacked a Soviet airfield in Southern Bessarabia (Moldavia). In the fighting over the field, he shot down two I-16s and was credited with another probable.



These overall Light Gray (RLM 63) He 112B/U2s were assigned to the *Industrieschutzstaffel* (Factory protection unit) set up by the *Heinkel Flugzeugwerke* to protect its plants in September of 1939. Later these fighters were exported, being replaced by a handful of Heinkel 100D-1s. The pilots and mechanics were all civilian Heinkel employees.

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