

History Detail Scale Drawings Flying Colours



AirArchive No.1 WWI GERMAN

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Fokker Eindecker



With photos from the ALEX IMRIE Collection

Fokker Eindecker

Germany's first true fighter aircraft. Aviation historian Alex Imrie traces the development of this famous line of aircraft and the impact it had on WW1

uring the first months of World War One, the introduction and development of aircraft armament had high priority. At the start of hostilities, Germany did not have a suitable lightweight machine gun for use in aircraft, but modified infantry weapons were soon in use from a variety of makeshift gun mountings

It was appreciated that a machine gun firing forward in the direction of flight would be the best solution and this gave rise to the appearance of armed pusher aircraft. Another approach to the problem was the construction of twin-engined aircraft, since the observer/gunner in the nose of this type of machine did not have any airscrew avoidance problem. Various methods were tried by both sides and one of these used by the French, where a machine gun was free-fired through the area of the rotating airscrew, provided a practical, if somewhat dangerous solution.

Metal deflector wedges were bolted to the wooden airscrew in a line with the muzzle of the machine gun and this prevented damage to the blades from the few rounds that would otherwise have struck them. This device, known as the 'Saulnier Armoured Propeller' was fitted to several Morane Type L Parasols and used operationally. One of the most successful pilots to use this set-up was the famous pre-war pilot Roland Garros, who managed to shoot down a number of German aircraft in a few short weeks before he in turn was shot down behind German lines, to be captured in April 1915.

Garros managed to destroy his downed



Leutnant Diemer poses in the cockpit of his Fokker E.III 420/15. Some of the undercarriage is usefully revealed here.





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aircraft before capture, but the remains included the propeller with its armoured deflector wedges, sufficiently intact to reveal the principle of the 'System-Garros' to German technicians.

Investigations into how best to utilise this rather crude device revealed the surprise to Germany authorities, that Anthony Fokker had previously conducted experiments in this direction and that he already had a mechanical synchronised gun that worked.

Fokker was immediately asked to fit his interrupter system to an aircraft and he installed it into one of his Fokker M5K single-seat scouting aircraft that he was already supplying to the Imperial German Air Service. The new, armed single-seat Fokker M5K/MG aircraft prototype was then taken to the Front and demonstrated to selected units. Pilots with experience of rotary-engined aircraft were given the chance to fly the new machine and gave it an enthusiastic endorsement.

Redesignated E.1, the 80 hp, seven cylinder rotary powered aircraft, with wing warping for lateral control, went into production, with 15 examples operational by the end of July 1915.



Success was immediate. Initially, one example was allocated to each two-seater unit on the active parts of the battlefront and in the hands of aggressive pilots was soon shooting down the slower, less manoeuvrable Allied aircraft. The long months of the 'Fokker Scourge' had begun.

It was soon realised that a more effective means of maximising the new machine's superiority was by operating the single-seaters in groups, resulting in non-permanent formations known as Kampfeinsitzer-Kommandos, which were formed and dissolved as the tactical situation required. It was soon appreciated that fighting in single-seaters was a specialist job and while many of the early Fokkers were flown by two-seater

pilots who did this work in addition to their normal twoseater duties, the dedicated single-seater fighter pilot new emerged.

Some of these pilots began to amass considerable victory scores and their names became household words in Germany as news of their achievements and decorations became known.

Such air superiority could not be left unchallenged



Man and machine ... Unteroffizier Dietrich of Feldflieger Abteilung 24 with his personal Fokker E.I. Note the hawk (Habitch) motif on the rear fuselage side which must have been one of the earliest examples of personal identification art on a WW1 fighter aircraft.

FAR LEFT:

Although it is still in German national markings, this captured E.III is caught in the act of being tested by an Allied pilot for evaluation.

LEFT: The installation of the ninecylinder Oberursel U.1 100 hp rotary engine in a Fokker E.III.

LEFT: A brand new Fokker E.III. The undercarriage struts are also visible here, together with the V-strut anchor for rthe wing warping mechanism.

FAR LEFT: The man himself, Anthony Fokker looks well pleased with himself in front of this E.III. Machine gun is offset to starboard.

TYPE HISTORY

RIGHT: A clear view of the sparse cockpit interior of an E.III reveals the absolute minimum of instrumentation. What looks like a blank instrument panel in front of the control column is a box for empty cartridge belts. The control column surmounted by a ring and twin hand grips was typical of the type carried over to other German fighter aircraft, of which the Albtros D.I and D.II were examples.

TOP RIGHT: The fragility of WWI aircraft is well illustrated by this unhappy E.III which has nosed over. But such damage could be easily rectified by skilled riggers.

The cut-outs in the front of the engine cowl immediately identify this machine as an example of the later Fokker E.IV



and sparked the beginning of the never-ending fighter technology race that persists to this day. The Allied reply came in the form of nimble biplanes, the British Airco DH2 and the French Nieuport 11 to herald the end of the operational life of the Fokker E-type monoplanes of which there were 140 on the Western Front at the commencement of the Battle of the Somme on July 1st 1916. Outnumbered and outperformed, only a few lingered in the newly formed Jagdstaffeln which came into being in August to briefly serve alongside the new Albatros, Fokker and Halberstadt fighter biplanes.

An early attempt was made to improve the performance of the E.1 by employing the higher powered Oberursel U.1 rotary engine that offered 100 hp to produce the E.II type with shorter wing span and higher wing loading, but this was not a success. New wings of 9.52 metres span were then fitted to produce the E.III which became the most numerous version of the Fokker monoplane line, with 110 examples at the Front by the end of April 1916.

The final offspring was the E.IV, a redesign to accommodate a twingun armament installation, with



wingspan increased to 10 metres. The fuselage front end was revised, a more enclosed cockpit position added, together with 160 hp Oberursel U III 14 cylinder doublerow rotary engine.

However the greater torque and gyroscopic effect of the bigger, heavier engine actually restricted manoeuvrability and the optimum performance had been achieved with the E.III. There were also problems associated with the synchronisation of the two guns and also of three guns, installed on a few E.IVs of which only 29 are recorded as being with Front-Line formations.



Construction

Although there were differences in engine installation, cowlings and wingspan, construction remained very similar throughout the series. The fuselage was a steel tube structure, braced with wire and covered with fabric, It was rectangular in cross section from the pilot's position aft in both plan and side elevation, terminating in bearings for the tubular main spar of the elevators. The rudder was hinged vertically at this position, its bottom hinge being attached to an inverted pyramid of steel tubing that supported the tailskid.

No tailplane or fin was employed, the rudder and elevator being aerodynamically balanced.

The forward fuselage was clad in aluminium sheet and bulged fairings were fitted to the sides of the nose to fair the circular shape of the engine cowling into the fuselage. The cowling was left open at the bottom to provide entry of cooling air and to prevent accumulation of oil or petrol that might impose a fire hazard. The top decking of the fuselage varied with different models





FAR LEFT: Headon view of the prototype E.IV, werk No.298, delivered from the Fokker factory on September 27th 1915, showing the experimental three-gun armament installation. Note - no cooling frets in the cowl front at this stage.

LEFT: An E.IV in standard format pictured in early 1916.

FAR LEFT: The bare bones of the prototype E.IV, showing the installation of the 14 cylinder double-row Oberursel engine and the experimental three-gun armament installation, also seen at LEFT: viewed from the cockpit.

FAR LEFT:

Ground crew at Sivry, France in 1916 display the kind of clothing used by WWI aviators for protection against cold at altitude.

LEFT:

Oberleutnant Kurt Student with his Fokker E.IV, which features the standard twin-gun armamanet of production examples. Student became General of Paratroops during WW2.









and on the E.IV it extended aft of the cockpit to form a short 'turtledeck'.

The axles for the undercarriage wheels were pivoted at the front apex of an inverted wire-braced steel tube trestle, the compression leg working in a slot in the fuselage, being sprung inside the fuselage by means of shock cord. Undercarriage drag loads were taken by steel tubes extending from the bottom of the compression leg to the rear apex of the undercarriage trestle.

Wings were of two (wooden) spar construction with metal tube drag struts and wire bracing, of parallel chord with raked tips. Ribs and riblets were of wood. The wings were fitted to the fuselage sides almost on the thrust line, the front spars being braced with steel cables from a small steel tube pylon just ahead of the cockpit and from the axle pivot point on the undercarriage trestle.

The rear apex of the undercarriage trestle carried a rocking lever actuated from the control column, which operated the wing warping cables to points on the rear spars on the wing under-surface. Balance cables from similar points on the rear spars on the wing upper-surface ran through two pulleys attached to the wingbracing pylon.

On the E. III, the main fuel tank was cylindrical in shape and mounted aft of the pilot, extending across the fuselage, its capacity being 100 litres. This tank was pressurised by a hand pump on early models, but later a windmill-driven pump fitted to a strut on the undercarriage trestle became a standard fitting. Fuel was transferred by cock selection from the pressurised tank to the gravity tank situated in front of the ammunition box. The gravity tank held 22 litres and, in addition, had an



integral compartment for 25 litres of castor lubricating oil.

Airscrews fitted were usually of the Garuda type and were of 2.20 metres diameter on the 80 hp E. I and 2.5 metres diameter on the higher powered Fokker E. III.

Colours

Fokker 'E' monoplanes were covered in natural, unbleached linen fabric which, when clear doped, presented a beige appearance. National insignia in the form of the Iron Cross was carried above and below the wings, on the fuselage sides and on the rudder against white backgrounds.

Some early aircraft did not always have the fuselage cross and some of these machines did not have white-painted backgrounds to their national insignia. Few Fokker 'E' monoplanes carried unit markings for the simple reason that such decoration was not yet in general use. Some aircraft did begin to employ markings that signified the Arnee to which they were assigned and during the summer of 1916, there was a general increase in the use of individual markings, which were mostly confined to the wheel covers or to a simple numeral or letter marked on the fuselage.

Fokkers flying for the III Armee had their wheel covers painted half black and half white and similar machines on the strength of ArmeeAbteilung-Gaede had the rudders over-painted black. Later, these aircraft also carried various black and white fuselage bands to further indicate their assigned Armee. Wheel cover decoration was commonly used in the V Armee area on the Fokker E.IV monoplanes used by its Kampfeinsitzer-Kommandos during the summer of 1916.







pivot

1:40 Scale

The comma-shaped Rudder is the only change from the equivalent Morane. It is made up of two semicircles conjoined vertically at their diameters with the smaller of the two in front of the pivot line forming area compensation. Rudder Area is 0.7 Sq M.



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The Pfalz Monoplanes E.I - E.VI



With photos from the ALEX IMRIE Collection



The Pfalz Monoplanes E.1 - E.VI

Never the notable success of their Fokker contemporary, the Pfalz 'Eindeckers' were quite unloved by those who flew them

he Pfalz 'E' series of monoplane fighters of the First World War played a pretty undistinguished part in the early aerial struggle over the Western Front. They were inferior to their Fokker look-alikes, considered dangerous and unsuited to combat by many who flew them after a series of fatal accidents and were withdrawn from front line use in the late summer of 1916.

Manufactured by Pfalz Flugzeug-Werk G.m.b.H at Speyer am Rhein, the 9.26 (30ft 4ins) metres span Pfalz E.I was, in reality, a slightly modified French Morane-Saulnier type 'H', the product of a licence agreement reached between Pfalz and the French company in February 1914. Few details of the development of the 'E' series have survived, but what is known is that early E.1s were constructed exactly to MoraneSaulnier specifications and even the later variants were only slightly modified, largely to accept different power units.

The E.I used a seven-cylinder 80 h.p. Oberursel U.0 rotary engine and, by 1915, carried a single Spandau machine gun, firing through the propeller, courtesy of Fokker-type synchronising gear. Approximately 60 E.Is were constructed.

Next came the 10.2 metres (33.5 ft.) span E.II, virtually an E.I fitted with a larger, 100 h.p. Oberursel U.I and the same single Spandau machine gun. The E.III licencebuilt Morane-Saulnier type 'L' followed - a parasol fighter whose single wing was carried above the fuselage on struts. Few E.IIIs were built and, as of April 1916, only four of the machines were at the Front.

The 10.2 metres (33.5ft) wing span Pfalz E.IV featured a strengthened airframe and had as its power unit the more powerful

160 h.p. Oberursel U.III 14-cylinder rotary. E.IVs also enjoyed enhanced firepower in the shape of twin Spandau LMG 08 machine guns.

Penultimate 'E'-type was the E.V which used a 120 h.p. Mercedes DII in-line engine with car-type nose radiator in a virtually standard E.II airframe. This version proved to be the best of a bad lot and some 20 aircraft were ordered, but there is some doubt as to whether they were all completed before the German Chief of Field Aviation pulled the plug on the entire 'E' series in August 1916.

Last of the 'E'-types was the E.VI. another improved E.II with modified rudder shape and lengthened fuselage. Like the E.II, it was powered by a 100 h.p. Oberursel rotary. There is some speculation as to whether this version ever saw service in German markings - photos certainly exist



This very early example of the Pfalz E.1 is unarmed. Note the distinctive black airframe outlines and wing rib positions.



Pfalz E.1 seen at Vilma on the Eastern front, in what appears to be a rather wintery scene. At this stage of WW1, colour schemes were very simple. Wing warp mechanism can be seen behind undercarriage.



of a Pfalz A.10 (E.VI) in Austro-Hungarian air service employment and one reference carries a photograph of what is believed to be an E.VI decorated in German crosses and lozenge camouflage.

Despite their considerable similarity in shape and size to the Fokker monoplanes, the construction of the Pfalz machines was all-wooden, whereas the Fokkers employed a welded steel tube fuselage. The Pfalz structure comprised four spruce longerons with rectangular section braced box-girders. Sheet plywood cladding covered the forward fuselage panels back to the cockpit, while fabric covering was employed for the remainder.

Open-fronted horseshoe-style cowlings with underside cut-outs to allow for engine exhaust were featured on all but the E.V with its distinctive nose radiator for the in-line DII engine. On the E.IV, the closed-front cowling was heavily fretted with cooling vents.

The constant chord fabric-covered wing relied on warping rather than ailerons for roll control and was constructed in such a manner that the leading-edge spar was held rigid by bracing wires running from pylons above and below the fuselage. The trailing-edge spar was connected by a series of cables, cranks and pulleys to a pylon beneath the cockpit, a closed-loop arrangement via a further pulley on the top pylon being used to effect warp control.

The all-moving balanced tailplane was fabric-covered and pivoted around its tubular spar, the rudder being hinged to the fuselage sternpost and a steel tube lower pylon that also carried the ash tailskid. Both front and rear legs of the complicated-looking undercarriage were markedly raked forward, a feature that assisted groundhandling and helped counteract the sensitivity of the elevator control with its attendant risk of nose-overs.

By the time it had been decided to withdraw the 'E'types from Western Front involvement, more powerful and effective biplane fighters were in the pipeline and the days of the German monoplane fighter were numbered - but only for another 20 years!

References

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'Pfalz E.I - E.VI' by P. M. Grosz, Windsock Datafile 59. Albatros Productions Ltd. *'German Aircraft of the First World War'* by Peter Gray and Owen Thetford. Putnam and Company Ltd. ISBN 0 370 00103 6. ABOVE LEFT : This side view reveals the main undercarraige struts, tailskid and the shape of the engine cowl.

ABOVE RIGHT: This Pfalz E.II has no fabric covering applied to the wheels, but provides a good view of the main undercarriage bracing, and the wing warp post.

LEFT: The later Pfalz E.IV used the more powerful Oberursel 100 HP engine in a revised and more streamlined cowl, seen here

FAR LEFT: Pfalz Eindeckers were operated alongside Turkish forces in Palestine. This E.II was overturned at the hands of Lt.Henkel.

FAR LEFT: This head-on view of a Pfalz E.IV shows the revised engine cowl to cool the larger Oberursel rotary engine.







ABOVE: Airborne action photos of Pfalz Eindekkers are rare. This one gives a good idea of the airborne 'sit' of the aircraft.

LEFT: Lt. Czermack mounted in an unarmed Pfalz E.1. This view details the kingpost for the wire wing braces and the small windscreen.



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The charismatic Sopwith Scout (to give its correct designation) is a great scale modellers' favourite. Example depicted is the one preserved and regularly flown at the Shuttleworth Collection, Old Warden. (50 images)

S.E.5A CD91

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Bubble-canopy version of the much loved 'Jug', photographed in fine detail. (105 images)

Polikarpov Po-2 CD88

The world's most numerously produced aircraft of all time, the PO-2 was a great maid-of-all-work used by both military and civil groups in the old Soviet Union and its satellite states. Example depicted is pristine, and now in storage at Old Warden. (170 images)

Polikarpov I-15 CD87

The ultra agile Russian biplane fighter aircraft that saw widespread service prior to and in the early years of WW2 and during the Spanish civil war. Example illustrated is a superbly restored machine. (100 images)

Pitts S.1 CD86

Homebuilt example by Bob Millinchip, as seen at 2002 PFA Rally. Complete detail study. (36 images) **Piper Tomahawk CDBS Confided Detail A control of this child at initia**

Cranfield Flying School example of this civil ab-initio trainer aircraft. (54 images)

more elegant engine cowl. Two examples shown. (80 images)

Piper Super Cub CD84 The later, 'cleaned-up' version of the famous Piper J-3, with

Piper L-4 Grasshopper CD83

Military version of the famous Piper J-3 Cub used during WW2 and close reconnaissance and spotter aircraft and for many other tasks. (80 images)

Curtiss P<u>-40M</u>

Percival Provost CD82

Airworthy, preserved example of the RAF piston engined basic trainer used in the 1950s. Full detail. (30 images)

Percival Mew Gull CD81

Famous 1930s racing and record setting aircraft that will forever linked with the achievements of British aviator Alex Henshaw. (35 images)

North American T28 CD80

The advanced trainer aircraft that served in many air arms worldwide and also became a counter-insurgency ground attack aircraft. Examples illustrated are from France, where the type served for many years as the 'Fenec'. (100 plus images)

North American P51D Mustang CD79

The definitive bubble canopy Merlin Mustang. In detail, showing several restored examples. This is the Fantasy of Flight Museum's overpolished example, but the close-up detail is all there. (102 images)

North American P51B/C CD78

First of the Rolls Royce Merlin engined Mustangs, this collection depicts the Fantasy of Flight Museum's restored example, with overly polished plain metal surfaces. Much detail. (102 images) Also, 41 images of The Fighter Collection's P-51C in bare metal restoration, showing much surface and internal airframe detail. A real bumper bundle! (over 140 images)

North American B25 Mitchell CD77 Fantasy of Flight Museum's example. Photographed soon after superb restoration. Full nose to tail detail. (74 images)

North American AT6 Harvard CD76

AT-6, SNJ, Texan, Harvard – call it what you will. 55,000 were built – this example is in U.S. Army colours, with comprehensive close-up detail, nose to tail. (76 images)

North American A36 Invader CD75 The ground attack variant of the Alison engined P-51A. Photos, in detail, of the world's only airworthy example. (69 images)

Morane Saulnier MS406 CD74 French WW2 fighter that fought in the Battle of France, 1940. Swiss restored example (92 images)

Monocoupe CD108

melisa

The Monocoupes were side-by-side two-seat lightplanes of mixed wood and steel-tube basic construction with fabric covering. A braced high-wing monoplane with fixed tailskid landing gear, and the reverse curve rear fuselage lines that were to become one of the signature identifier features of the Monocoupes. 55 photos

90

Miles Magister CD73

A firm favourite with scale modellers, this extensive collection of images depicts two examples in different Royal Air Force training colour schemes. (100 images)

Messerschmitt ME109G CD72

The 'Gustav' saw Luftwaffe service from late 1942 onwards. Subject version of this collection is a tropicalised G-6. (110 images)

Messerschmitt Bf109E CD71

The 'Emil' was the version of this WW2 fighter that was the mainstay of the Luftwaffe fighter force during the Battle of Britain in 1940. (150 images)

Me 410A - 1/U2 CD107

For those who fancy a twin, but something outside the 'normal' favourites, consider the Luftwaffe's final 'destroyer' heavy fighter that packed a powerful punch 79 photos

Martin B-26 Marauder CD70

The Fantasy of Flight Museum's example, photographed pre-restoration, soon after it was flown into the Museum site, thus in original, unrestores condition. (100 images)

LVG C.VI CD69

The sole survivor of its type from the WW1 era, photographed in extensive detail. This is the machine house at and flown from the Shuttleworth Collection airfield, Old Warden and now in storage, awaiting display at the RAF Museum. (110 images)

Luton Minor CD68

Just one example of this light aircraft, to which the owner has added many mods and variations. (32 images)

Luscombe Silvaire CD67

The elegant late 1940s U.S. light aircraft. Several examples provided, with much close-up detail for modellers. (74 images)

Kawasaki Ki100 CD66

A study of the late WW2 radial engined 'emergency' development of the Japanese Ki 61 Hien (Tony) that provided an unexpectedly superior performance for the squadrons of the Imperial Japanese Air Force during the closing stages of the Pacific war. (60 images)

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Halberstadt DV



With photos from the ALEX IMRIE Collection

Halberstadt Fighters

When Allied fighter performance began to eclipse the Fokker Eindecker in early 1916, the Halberstadt was one of the machines ordered to redress the balance

he Halberstadt series of fighters (D.1 to D.V) were the result of German Imperial Air Service's loss of air superiority over the Western Front during early 1916, when more manoeuvrable Allied biplanes, like the Nieuport 11 Bebe eclipsed the Fokker monoplanes.

In comparison to the new French and British machines newly introduced on the Western Front, the German aircraft in service lacked speed, climb rate and manoeuvrability - the three key requisites that command an air battle. A fresh approach was required and was provided by an aircraft manufacturer whose previous experience was in the supply of training aircraft and in operating a flying school for military pilots.

In fact, the Halberstadt Company had British origins in the Deutsche Bristol Werke Gesellschaft mbH formed in 1912 to make aircraft of Bristol Aeroplane Co. design.

The Halberstadt 'B' series two-seat biplane trainers, offering all-round good flying characteristics and manoeuvrability, proved to be a workable starting point from which to develop Imperial Germany's first operational biplane fighter aircraft, the Halberstadt D.I. Powered by a Mercedes 100 hp motor, the prototype first flew in late 1915, quickly followed by the D.II and then D.III, which differed little.

A trickle of Halberstadt D.IIs and D.IIIs

began to flow to front-line units by mid-1916, with a build-up through that year to more than 100 machines by year-end. These aircraft soon found favour with German fighter formations, providing a better performance than the very best that could be wrung from the late Fokker Eindeckers, even with more powerful 160 hp motors.

However, as the new generation of dedicated fighter pilots honed their combat skills, they quickly focused their impressions of the qualities most desired for a fighter aircraft based on experience and the early Halberstadt D types were criticised for the manner in which the upper wing, inconveniently set at eye level, obscured vision and there was, not



Halberstadt D.V displaying Turkish insignia. This national marking was achived by the simple expedient of filling in the white areas between the arms of the crosses of the German marking to achieve a black square, outlined in white.





surprisingly, a never-ending desire for more power, which led to the development of the D.V version, with revised wing centre section, ailerons with aerodynamic balance, revised cabane strut layout and a 120 hp Argus engine.

Radios and rockets

Halberstadt fighters were used in experiments to produce a viable ground-to-air command system for the controlled interception of inbound enemy aircraft and also to give airborne fighter commanders a means (but not voice communication) of commanding the formations they led.

A radio transceiver weighing only 22 lbs (10kg.) was successfully developed for installation in formation commanders' aircraft, which gave the airborne leader the facility to contact a ground control station and to issue commands to his formation pilots whose aircraft carried radio receivers of slightly greater weight.

A further experiment involved the installation of rocket mounts on the outer interplane struts. Although live combat firings were made, the rockets proved to be as much a hazard to the launch aircraft as to the enemy and the experiments were not pursued.

Service further afield

As an ally of Germany in WWI, Turkey received military assistance in the struggle for control of the Middle East as the Allies worked to contain and overthrow the Ottoman Empire.



ABOVE LEFT: This Halberstadt D.II has a 120 hp Mercedes engine. Note the struts to the pivot point on the raked leading edge of the allmoving rudder.

ABOVE RIGHT: All natural linen finish D.II. Note the prominent stitching lines and the drooped trailing edge on lower wing.

FAR LEFT: Halberstadt D.III with uncovered wheel centres exposing the wheel spokes. Note the ammunition holder just behind the cockpit coaming.

LEFT: A Halberstadt D.V. Note the shaped sheet metal fairing over the rear part of the machine gun.



A late manufacture D.II is plain linen finish displays late aileron outline.

TYPE HISTORY



An Argus engined Halberstadt D.III. Note the exhaust stack arrangement, with stack ending above the upper wing.

Aircraft supplied included Halberstadt D.Vs which operated in the European sector of Ottoman control, in what is now Bulgaria and also further south in the desert conditions of Mesopotamia and Palestine, serving there well into 1918.

Back to school

By mid-1917, advancing development of combat aircraft of all types had produced new aircraft, that well exceeded the performance of the Halberstadt fighters, which were now relegated from the Western Front to the task of training machines, from which their origins had stemmed.

By then however the Halberstadts had done their job - and had done it well.



Halberstadt D.II (serial 818/16) in a wintry scene. Exhaust runs along the side of the fuselage, ending behind the cockpit.





ABOVE: This captured D.V displays the effects of forced landing and the attentions of trophy baggers. Flown by Unteroffizer Schneider of Jasta 30.

LEFT: Rear view of Unteroffizer Schneider's captured D.V. reveals the arrangement of the tail section.





ABOVE LEFT: A good way to burn your wing tips! Experimental rocket armament used to attack observation balloons.

ABOVE & LEFT: inflight view of Jast 5 Halberstadt D.II. Below: apres le deluge ... the same aircraft totally wrecked in February 1917.

FLYING COLOURS

Halberstadt fighters, D.II through to D.V appeared on the combat scene at a time before the Jagdstaffeln units of Imperial Germany began to apply the highly individualist colour schemes that characterised the period from 1917 onwards. Such colour schemes and stylized motifs were common among formations later using such aircraft types as the Albatros D.III and even later types like the Fokker D.VII.

Schemes shown here are about as 'individual' as it gets, where the Halberstadt fighters are concerned. This plan-view depicts the early attempt at a camouflage scheme, adopted by the Jagdstaffeln units - a mixture of red/brown and green on the upper surfaces. The pattern of the top wing upper surfaces is repeated on the upper surface of the lower wings.

Undersides were pale blue, with the national insignia applied.



Halberstadt D.





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Albatros DII



With photos from the ALEX IMRIE Collection

Albatros DII

Alex Imrie traces the development and service history of the type

espite the success of the Fokker and Pfalz rotary-engined wingwarping monoplanes during late-1915/early 1916, the Inspektion der Fliegertruppen (Idflieg) realised that a lightweight biplane fighter would have better manoeuvrability. They were also aware of the Allied trend in producing machines of this configuration, having captured the prototype DH 2 in August and had been able to examine a number of Nieuports that had fallen into their hands. This caused them to bring the matter to the attention of the German aircraft industry when they introduced the new 'D' aircraft category, which was for an armed single-seat biplane.

Although experience showed that a rotary engine seemed to be the best motor for such a machine, there was a shortage of rotary engines and the necessary castor oil for their lubrication and ldflieg specified that 'D' type aircraft could also be powered by stationary engines of between 120 and 150 hp.

It was essential to introduce biplane replacements for the monoplanes as rapidly

as possible. The latter were still being ordered in large numbers and would not reach their maximum strength at the Front until April when 230 are reported to be in use by the frontline formations. This focus caused various manufacturers to concentrate on the new requirement and a number of prototype single-seat biplanes rapidly appeared. Obviously the modification of existing types would speed production and the Halberstadt Company was the first to create such a machine by altering their basic 'B' type (unarmed) two-bay biplane two-seater, which was already at the Front in small numbers.

Halberstadt received an order for twelve single-seat aircraft in March. This was the Halberstadt D.II armed with one machine gun and powered by the 120 hp Mercedes D II six-cylinder in-line water-cooled engine and by the end of June, six were at the Front, shortly to be joined by the first Fokker D.I fighter biplanes, 80 having been ordered in May. This was also a two-bay machine armed with one machine gun and powered by the 120hp D II Mercedes. During a demonstration of new aircraft types at Adlershof in April 1916 Albatros was able to show its prototype singleseater. This was an aerodynamically clean single-bay biplane with a semi-monocoque plywood fuselage, with plywood covered fin and tailplane and used a trestle type centre-section - some of these features were either already in use or under development for a new series of Albatros two-seaters. Another important aspect was that Albatros had not limited the engine power to 120/150 hp as specified, but were using the relatively heavy two seater engine, the six-cylinder in-line water-cooled 160hp Mercedes D.III.

This was the first time such an engine was used on a 'D' category aircraft - not only did the extra power improve performance over other contenders for ldflieg contracts, but it enabled two machine-guns to be carried (the prototype was unarmed). Acceptance flying undertaken at Adlershof showed that the Albatros D.I had a speed of 170 km/hr and could climb to a height of 5,000 metres in 38/40 minutes. The safety factor was 5.5 and ldflieg placed a pre-production order for twelve prototypes in June (Serials D.380 - D.391/161). This pre-produc-



Early aircraft from the first production batch (D.504/16) shows clear-varnished fuselage. National insignia on square white backgrounds, sprayed finish, green and reddish brown. Kampfstaffel 11 in Kampfgeschwader 2, late-1916.



tion order was a typical Idflieg procedure and enabled necessary modifications to be incorporated on the production line. Even before an order for 50 Albatros D L (Serials D.421 - 470/16) was made on 11 July 1916, the seventh aircraft of the pre-production batch was modified by splaying the centre section struts thereby reducing the wing gap by 250 cm and replacing the side 'ear' type Windhoff radiators with a Teves und Braun wing radiator in the centre of the top wing. So modified the aircraft was the prototype of the Albatros D.II (Serial D.386/16) and in August 100 machines of the type were ordered (Serials D.472 -521/16; D.890 - D.939/16). This was followed by another order for 100 D.II in September (Serials D.1700 - 1799/16). Due to the urgency with which the aircraft were required, some were made by the Albatros sister company OAW (Ostdeutsche Albatros Werke) at Schneidemuhl while a batch of 75 aircraft was contracted to be licence-built by LVG (known initially as the LVG D.I, the designation Albatros D.II(LVG) was later used -Serials D.1024 - 1098/16). Also in the same initial batch of twelve pre-production aircraft, the Nieuport sesquiplane wing system was applied to D.388/16 with 'vee' interplane struts and also used the wing mounted radiator to become the prototype Albatros D.III - an aircraft that was produced in large numbers and which reigned supreme over the Western Front in the Spring of 1917. Although the prototype Albatros D.II used the wing radiator, the bulk of the production aircraft still employed the side mounted 'ear' radiators (tests showed that the Windhoff radiator was the most efficient radiator at the time) and it was not until some 30 machines had been built in the final production batch that the wing mounted Teves und Braun radiator was fitted on the production line, thus the majority of Albatros D.II used the vulnerable cooling system where the low position of the side radiators, if leaking or hit in combat, could lead to the complete loss of the cooling water and engine seizure.

First production aircraft had clear varnished fuselages, some even having natural fabric wings. However, camouflage painting was introduced during the period of production and Albatros mixed a dark reddish brown pigment with the clear varnish and showed that fuselage camouflage could be effected for only a very slight increase in weight (50 grams).

Wings and tails were sprayed in two colours on upper surfaces, reddish brown and olive green being generally used, while undersurfaces were sprayed light sky blue. (LVG licence-built aircraft used their own company's camouflage scheme whereby each wing panel sprayed in chestnut brown and dark green was additionally marked with a wide lilac stripe - when this can be seen in photographs, it identifies the manufacturer.) Struts and the metal panels around the engine were painted grev. National insignia was carried above and below the wings near the tips on the vertical tail and on either side of the rear fuselage. These displays were black iron cross type, adhering to the laid down Idflieg proportions against square white backgrounds. With the national insignia changes made late in 1916 the white backgrounds were eventually painted out leaving only a 5 cm white border around the black crosses. When these machines reached the units at the Front they were initially flown as delivered, but almost immediately, markings for individual aircraft identity became necessary and some aircraft were marked with large numerals or initial letters on the fuselage

At this time too more intricate symbols were introduced for individual identification. Because of the generally low volume of aerial activity, no markings were adopted or displayed to show unit identity. From the end of 1916, the Albatros D.III began to reach the units and gradually replaced the Albatros D.II on active parts of the Front. Those serving in less active areas and in the west home defence units continued in use into 1917 and it was at this time that markings to signify unit identity began to be used - a necessity with the increasing pace of aerial activity. Thus a few Albatros D.II were privileged to wear these until the aircraft disappeared from front line use. A number were eventually used by the Jagdstaffelschule (Fighter School) at Valenciennes and there it was usual to clearly mark all aircraft with large numerals for the easy identification of the fighter pilot



ABOVE LEFT: Close-up detail, showing side radiator - note rearview mirror. Machine flown by Leutnant Hermann in Kampfstaffel 11, late- 1916. ABOVE RIGHT:

Overhead view of an LVG-built aircraft from Jagdstaffel 16 in flight shows to advantage the oblique lilac bands used by this manufacturer when applying camouflage colours.

Flown by Leutnant Nebel in Jagdstaffel 5, March 1917, D.1178/16 has lost the white back grounds of its national insignia these beina replaced by the regulation 5 cm wide white borders. This aircraft has the wing radiator, note the natural fabric rudder with the Albatros factory logo.



In Turkish service Leutnant Meinecke's OAW-built aircraft has the wing radiator. The Turkish national insignia was achieved by simply painting black over the German iron cross, retaining a thin white border.



Few Albatros D.II survived WWI - one that did was the white painted D. 1076/16 used by the Central Acceptance Commission (ZAK). It sports the straight-sided Balkenkreuze insignia introduced in spring 1918. That even officialdom made mistakes is shown by the incorrect use of '/17' in the aircraft designation! This aircraft was destroyed in a take-off crash at Bork in Brandenburg in 1919.



Captured Albatros DII repainted with Allied insignia. Monochrome picture does not conclusively confirm either French or British roundels and fin flash, but tones tend to indicate French.

SPECIFICATIONS Wingspan: 8.5m Length: 7.4m Height: 2.64m 675ka Weight empty: Weight loaded: 898 ka Armament: Twin LMG 08115 MG with provision for 1000 rounds **Powerplant:** one 160hp Mercedes D III 6-cylinder in-line water-cooled engine Maximum speed: 165km/h Rate of climb: 1,000m in 4.84 mins

pupils. These were usually white on dark painted fuselages also being marked in

2,000m in 9.16 mins 3,000m in 12.66 mins

black on wing undersurfaces, thus a few Albatros D.II were so decorated until they finally left the scene. What the modeller has to be aware of in the choice of markings for his model, is to ensure that 'ear' or wing radiators are used as appropriate, that the aircraft serial number on the fin is applied in the Albatros-style, reflecting the correct form of national insignia (whether updated or not). Machines from the LVG licence-built batch did not show large serials on the fin; also of course since they were not Albatrosbuilt, they did not carry the well-known attractive Albatros logo on the rudder. The most common fault, even on extremely well detailed models is to show the iron cross insignia incorrectly - a construction has to be made whereby the radius of the curve of the cross arms is 1.6 times the height of the cross and the width of the cross arms at their extremities is 0.4 times the height of the cross - you would be surprised how many 'expert' artists, even in this day and age, get it wrong. Some aircraft manufacturers used their own interpretation of the official instructions, but Albatros and LVG on their D.II production got it dead right.

From the total number of Albatros D.IIs built (276), the maximum number at the Front was 214 at the end of 1916 and this number steadily reduced throughout 1917 to the advantage of the Albatros D.III and by the end of the year only six are recorded as being with the Jagdstaffeln (fighter units) compared to 423 Albatros D.III.

The Albatros D.II was basically the same aircraft as the Albatros D.I except for the reduced wing gap already mentioned. This change was made of course to improve the pilot's field of view, which is also another reason for the substitution of the bulky side radiators with the wing radiator. The dimensions and weights were the same except for the reduced height of the D.II. Performance and manoeuvrability were also closely similar, but markedly inferior to the excellent Albatros D.III.




FLYING COLOURS











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Fokker D.VII



With photos from the ALEX IMRIE Collection

'... especially all D.VIIs...'

Fokker D.VII

The only aircraft ever mentioned in an armistice treaty, the D.VII is undoubtedly Germany's most famous WW1 fighter

HEN THE FOKKER D.VII arrived on the Western Front in April 1918, it was immediately recognised as a truly outstanding fighter, but its extreme manoeuvrability, its ruggedness and rapid recovery from a dive were neither happy accident nor mark of genius. Rather, each of the D.VII's characteristics was the result of methodical trial and error with a sound basic design, a process of development which reached its peak with the installation of the most advanced engine available.

Early in 1917, Anthony Fokker and his chief designer Reinhold Platz had introduced their experimental V.4 triplane, with thick-section, cantilever wings of the type pioneered

10

by Dr Hugo Junkers, but of all-wood construction. Platz had been Fokker's chief welder and although without formal engineering training, had a talent for sound structural design and a strong preference for the simple solution to any engineering problem. Among the fighter prototypes he and Fokker developed during the second half of 1917 were the rotary-powered V.9 and the Mercedes engined V.11.

The V.9 was clearly derived from the V.4 triplane, with almost identical fuselage, engine installation, landing gear and tail surfaces. Both wings used the same thick, highly cambered aerofoil section but whereas the smaller lower wing reproduced the V.4's single compound box spar, the larger upper

wing used two orthodox box spars.

Later in 1917 a generally similar, larger machine was produced, powered by a sixcylinder 160hp Mercedes engine and designated V.11. Both its semi-cantilever wings used the same aerofoil section as the V.4 but were of conventional two-spar construction with N-type interplane struts in place of the widened V-struts of the V.9. The central cabane consisted of a tripod of streamlined steel tubes welded to engine bearer, lower longeron and upper longeron on each side and connected to the front spar, while the rear spar was attached to each lower longeron by a single removable strut that provided a degree of rigging adjustment. The upper wing was dihedralled outboard of the

Fok.D 1777

Archive Serie

cabane struts and carried partly inset ailerons with squared-off tip balances. The welded steel tube landing gear was without the triplane's aerofoil axle fairing.

Tail surfaces of V.11 were generally similar to the V.4 and V.9 and the wire-braced welded steel tube fuselage was similarly short-coupled, although its longer (and heavier) engine dictated a lengthened nose, with the upper wing mounted unusually far forward. A nose radiator similar to that of the quintuplane V.8 was fitted, removable cowling panels were of aluminium and the upper surface of the fuselage was faired by a plywood-covered turtledeck.

The first of three competitions to find one or more war-winning fighters for the hard-pressed Fliegertruppe was due to begin at Adlershof on January 21, 1918. Fokker's own account of how he personally floated the idea of this competition, then influenced various 'ace' fighter pilots to support 'his' idea, must be considered highly exaggerated, but it does seem probable that the starting date was indeed several days earlier than he would have preferred and that, in consequence, the V.11 was finished 'considerably short of what (he) had in mind'.

Nevertheless, with only some three weeks at his disposal, Fokker entered no fewer than eight aircraft in the ldflieg's fighter competition! Photographs of V.11 as delivered to Adlershof show that its upper wing had been moved aft, thus requiring a small trailing edge cut-out above the cockpit, and that its ailerons were now fully inset with their trailing edges in line with that of the wing. A small triangular fin and modified rudder also appears to have been fitted during this period.

However, Fokker was well aware that his V.11, although highly manoeuvrable, was directionally unstable, with dangerous spinning tendencies. This was confirmed when, at Fokker's request, Manfred von Richthofen flew the aircraft on January 23 1918. On the pretext of making minor repairs following a landing accident, Fokker locked himself in his hangar over the following weekend with two welders from his Schwerin

After WW1, many of the surviving Fokker D.Vlls were acquired by the U.S. Air Service as war booty. This is one example, still carrying its original German serial (7776/18).

0 18

TYPE HISTORY



factory. According to his own colourful story, they lengthened the fuselage by some 60cm, increased the vertical tail area, then recovered and repainted as necessary to hide these modifications. Photographs of V.11 in its final form show a longer rear fuselage with wider



structure bays, differently contoured longerons and a more prominent triangular fin.

Thus modified, the V.11 was easy to fly with no tendency to spin: it was agile, reasonably fast and accelerated quickly in a dive



ABOVE: All-white D.VIIF 5125/18 was the personal mount of Hermann Goring, then an Oberleutnant in command of J.G.1. BELOW: Captured D.VII acquired by the US 9th Aero Squadron, seen at Trier, France, in January 1919, with 2nd Lt. James A. Royer in the cockpit.



without loss of directional stability. It was unanimously agreed that the V.11 should be recommended for production as the standard Mercedes-engined type and eventually. Fokker's V.13 was chosen as the best all-round rotary-powered machine. Not only were 400 V.11 type fighters eventually ordered from Fokker's Schwerin factory as the Fokker D.VII, but Albatros Werke and its subsidiary OAW were to build his new fighter under licence.

A second V.11 was built. Type testing at Adlershof began on February 4, 1918 with prototype structural testing that same month and further structural tests of a 'pre-production' D.VII in March. Both aircraft exceeded the required criteria and in service the D.VII proved to be immensely strong: no D.VII structural failure in the air has ever been recorded, other than the failure of top wing ribs aft of the rear spar at the centre section, but no fatal crashes are known as a result of this short-lived defect.

At Adlershof the V.11 had been considered rather heavy, with less than outstanding climb and performance at altitude. In an effort to make good these shortcomings, Fokker built two more prototypes. One of these was the V.18, while the 'V' number of the other is not known. What is known is that all three machines (V.11, V.18 and V ?) were modified and eventually were allocated the first service serial numbers of 227/18, 228/18 and 229/18 respectively. The first production batch of Fokker D.VIIs were numbered from 230/18 upwards and comprised 295 machines.

The first D.VII from the first Schwerin factory production batch arrived at Jagdgeschwader I (Richthofen's old unit) in April 1918 and by the end of the month, 19 were reported to be at the Front. It was eventually issued to most of the front-line fighter







The D.VII of Ltn. Richard Wenzl. Although the picture is very grainy, the distinctive markings of this Jasta 6 machine are clearly demarkated. Note the stripes on the tailplane, nose and wheel.

Many WW1 German Air Service pilots held senior N.C.O. ranks. This is VzFW. Willi Gabriel of Jasta II, whose aircraft shows little embeliishment beyond a white fin/rudder and horizontal bar below the tailplane. The machine features the streaky finish (vertical on the fuselage) applied to very early D.VII examples.

units: 407 D.VII were operational in July, 828 in September and it is thought that less than 1,000 were in front- line use at the end of WW1.

The ability of the D.VII to retain control at very high angles of attack while firing into the underside of unsuspecting Allied aircraft became legendary, as did its remarkable agility at very low speed while retaining the altitude of level flight.

A 'height-compensated' BMW engine of 185hp was installed as availability allowed: machines with this engine were designated D.VIIF and enjoyed improved climb, greater control at altitude and a ceiling of 21,000ft.

In April 1918, 217 Allied aircraft were shot down: in June there were 468 such losses, for July there were 517

and in August 565. Many of these were the results of successful employment of the Fokker D.VII.

Small wonder that the Armistice agreement of November 1918 stipulated that military equipment to be handed over to the Allies must include '...especially all machines of the D.VII type.' Yet British and French designers ignored the structural and aerodynamic advantages of Fokker's thick, unbraced wing and the structural and production simplicity of his welded steel tube fuselage. But many of the surrendered machines went to America, where the value of their high-lift, cantilever wings and simple rugged structure was generally recognised: the D.VII's influence on design persisted until the advent of stressed-skin metal construction became the norm.



This fully lozenge camouflaged machine is seen at the Adlershof Test Centre





Four D.VIIs in German Imperial Air Service livery. Aircraft nearest is Ltn. Richard Kraut's machine and has his stylised initials on the fuselage side.

This captured Fokker D.VII has either British or French roundels applied over the German crosses. Lighter outer colour implies red, which would suggest French roundels, but tone values on photographs of that era can be misleading.

Fokker Warpaint

Alex Imrie explains some of the intricacies of the markings applied to Fokker D.VIIs that prowled the Western Front in 1918

NITIAL PRODUCTION from the parent factory at Schwerin took place at the same time as final batches of the Fokker Dr I triplane were going through the shops. As a result, the Fokker D.VIIs were finished in the same man-

ner, covered in plain linen fabric and had all top and side surfaces streaked with greenish/brown dope. This was applied chordwise on the wings, vertically on the fuselage sides and diagonally on the tail unit. All undersurfaces were coloured light blue.

National Insignia were applied exactly in the same manner as on the triplanes, which was an out-of-date application... in that large white backgrounds were still being used for the Iron Crosses. These were marked at the usual locations on wings, fuselage and rudder. A change to straightsided crosses (Balkenkreuz) was ordered in March 1918 and many Fokker D.VIIs had disproportioned crosses caused by modifying the Iron Crosses already applied in as simple a manner as possible to make them conform to the new instructions.

Lozenge pattern printed fabric in five colours was already in widespread use among German aircraft manufacturers, but a new four colour material appeared at this time and Fokker D.Vlls began to appear covered with this fabric. In order to expedite this fine fighter to the front-line units, the type was also in licence production by the Albatros factories as both Johannisthal production aircraft, and Ostdeutsche Albatroswerke GmbH and these factories having already been using the five/colour pattern fabric for some time on their products, also covered their Fokker D.VII machines with this material.

This was applied chordwise on the wings where it was sewn at the selvedge edges to obtain sufficient length to cover the complete wingspan, lengthwise on the fuselage, where a selvedge edge was aligned with the bottom longeron on the Johannisthal production aircraft, and aligned with the top longeron on OAW examples.

Ailerons, elevators and tailplanes were covered spanwise with the pattern along their longest lengths and rib tapes were cut from light coloured fabric, usually blue.

Cowlings, struts and wheel covers were all finished in a manner peculiar to the specific manufacturer. Johannisthal machines had these components painted grey-green, while OAW at Schneidemohl used green and mauve patches to roughly match the pattern fabric. Fokker painted these components dark olive green and cut their rib tapes from the printed pattern fabric.

Later Fokker-built aircraft were to be seen in five colour material and even some Albatros products used the four colour fabric. The factory finishes outlined here, are, of necessity, a generalisation, and in practice many variations to these schemes occurred.

Modellers should be especially careful that they use the appropriate finish and an accurate presentation can only result if a study of several photographs of the subject aircraft is made.

The Fokker D.VII arrived at the Front when unit

All photos from the Alex Imrie Collection

This D.VII is the personal mount of Ltn. Karl Thom of Jasta 21. The fabric on the fuselage shows no trace of lozenge camouflage, but the lower wing top surface certainly has this, so the upper wing top surface probably does too.





LEFT: Ltn. Ulrich Neckel of Jasta 6 with his D.VII that features narrow fuselage stripes, probably in black and white. ABOVE: This D.VII was flown by Ltns Main and Koennecke, both of Jasta 5. The fuselage stripes appear to be slightly wider than those on the Jasta 6 machine at left.

and individual markings were in widespread use, because of the necessity of identification in the large fighting formations that were then being employed. Usually, all the machines in a Jagdstaffel carried a specific marking that identified the unit, and this information was known to Flak batteries, officers of the Flugmeldeinst and others concerned with the operational control of the units.

Within each Jasta, every pilot carried his own special marking and this had to be sufficiently conspicuous to enable the formation leader to identify individual pilots. While unit markings tended to be simple and functional, the individual markings of the pilots were of every conceivable kind, birds, animals, initials, regimental crests, home town or family coat of arms etc. all being used. Some Staffelfuhrer would, however, only allow pilots to use say, different coloured tailunits for identification, it being argued that a simple distinctive marking was more practical in the heat of a dogfight. Jagdgeschwader Freiherr von Richthofen Nr. 1 comprised Jasta 4, 6,10 and 11 and these units marked their machines in a similar way to each other, carrying their marking on nose cowlings and wheel covers. Jasta 4 used black, Jasta 6 black and white stripes, Jasta 10 yellow and Jasta 11, the traditional von Richthofen red. Individual markings were carried on fuselages and tail units, and in Jasta 6 on the fuselage only, since in that unit, the tailplanes also sported the unit's black and white markings. The leader of this formation from mid-1918 was Oberleutnant Hermann Goring and, as was necessary at the time, used a colour scheme that was unmissable, in that he flew a completely white Fokker D.VIIF (5125/18).

The 'F" in the designation indicated that this machine was powered by the 185 hp BMW engine. Since all the detail stencilling can be seen on Goring's machine it does not appear to have been merely overpainted in the field, but was undoubtedly a special factory finished aircraft for Goring.

Another highly efficient fighting formation was Jagdgeschwader II comprising Jagdstaffeln 12, 13, 15 and 19 and at the time of the introduction of the Fokker D.VII was commanded by a fearless fighter, Oberleutnant Rudolf Berthold. In keeping with the need for an immediately recognisable colour scheme as Kommandeur, Berthold's machine displayed a red nose aft to a vertical line at the cockpit. Beyond that point the fuselage, tailplane and elevators were all coloured blue as were the uppersurfaces of both mainplanes. Additionally, he carried a winged sword on a white fuselage band which, at one time, was repeated on the top wing centre section.

His component units all adopted the blue rear fuselage and tail unit, so this became, in effect, a Jagdgeschwader marking. The noses in Jasta 12 were white, Jasta 15 (Berthold's old unit) used red, while Jasta 13, which had a Saxon Staffelfuhrer used green and Jasta 19 employed yellow. While the areas of nose colour varied, eventually only the metal engine cowlings showed this. Wheels and struts were also, at one time, painted in the unit colour. Pilots' individual markings were generally confined to fuselage motifs.

Jagdgeschwader III commanded by Oberleutnant Bruno Loerzer comprising Jagdstaffeln Boelcke, 26, 27 and 36, used a different system of markings. Jasta Boelcke (previously Jasta 2) used black and white, displaying this on each side of the tailplane and elevators, while the radiator shell was painted white.

Jasta 26 also used black and white (Prussian colours) and carried this in alternate bands from just behind the nose panels rearwards to, and including, the complete tail unit. Jasta 27 (Goring's previous unit) had yellow noses, struts, and tailunits, while Jasta 36 had blue noses only.

Individual pilot markings were positioned immediately aft of the cockpit on both sides of the fuselage and on the fuselage decking. There were, of course, some variations and



TOP: Two views of Ltn. von Bueren of Jasta 18 showing his personal fuselage motif. ABOVE LEFT: The stylised initials on the fuselage identify Ltn. Arthur Laumann, the Staffelfurhrer of Jasta 10, seen is his aircraft. ABOVE RIGHT: Oberleutnant Rudolf Bertold, Kommandeur of Jagdgeschwader (JG) II.

embellishments, Many aircraft in Jagdgeschwader III showed the pilots' marking on the top wing centre section.

The leader's aircraft sported the black and white bands of his personal Jasta 26 and in addition had the top surface of the top wing and the bottom surface of the lower wing striped spanwise in the same colours.

The use of all this colour is best envisaged when one considers the task of getting over fifty machines airborne and into formation in a short space of time. Individual Jagdstaffeln took off after their leader in what nowadays would be called a gaggle, the leader flew around the aerodrome well throttled back to let his men formate on him, all adopting a strict place that had been worked out beforehand.

Once the Kommandeur could see that all the component Jagdstaffeln were airborne and were forming up into some sort of discipline, he himself took off and flew, also at reduced power, towards a predetermined landmark, letting his Staffelfuhrer bring their units into their allocated place in the formation.

Machines flew stepped up so that the last aircraft occupied the highest position. Don't think that the formation was of Hollywood or Hendon Air Pageant standard, it was, of necessity, 'loose' and this gave more freedom of manoeuvre not only to individual pilots, but also to the component Jagdstaffeln.

After a fight, of course, units were all split up, but leaders orbited around predetermined landmarks in the fighting area and allowed their men to reformate and if sufficient strength was assembled and enough time remained, off they went again.

There is no doubt that the Fokker D.VII was the best fighter of WW1. When next in the RAF Museum, compare its angular aggressiveness to the wire entanglements known as the Camel and SE5a!



Ltn. Jacobs of Jasta 43 seen in his Albatros-built machine with his personal fuselage motif. Note the prominent light coloured rib tapes on the lower wing. The fuselage fabic appears plain, but the colour is unknown.

Fokker D.VII in Detail

Ron Moulton managed to snap this collection of close-up details of the RAF Museum's machine, right after completion of the restoration work some years ago



1-6: Some general views of the RAF Museum's machine which features five-colour pattern lozenge camouflage scheme. The 'axle wing' is not lozenge pattern covered.

7: Cockpit interior, front and left hand side showing control column and rudder bar.

8: Cockpit interior right hand side, showing the pilot's seat and the fuel tank pressure pump (bottom of well).







AirArchive Series

Close up









9, 10 & 11: Further views of the cockpit interior from slightly diferent angle, help to demonstrate the layout.

12: View ahead from the pilot's seat.

13, 14 & 15: Spandau machine gun installation in the forward fuselage, ahead of the cockpit.

16: View of the 'N' style wing interplane struts and the cabane strut arrangement.

18

The state of the s

17: Further view of the cabane struts. These look quite slim by the standards of the era.

18: view of the upper anchor points for the cabane struts.

19: Fuselage nose section, showing the layout of louvres and cabane struts.

20: Further view of the nose section, showing engine bay louvres and the anchor points, top and bottom, for the cabane struts.

21: Upper anchor points for the cabane struts.



















AirArchive Series











33













the lower edge of the rear fuselage side.

24: Right, lower wing tip, showing the anchor points for the 'N' style interplane strut

25: Close-up of the anchor point of one of the inter-, plane strut members.

26: Wing leading edge detail.

27: Main undercarriage, showing the front strut anchor point. Note, the 'sub-wing' axle fairing is not lozenge camouflaged.

28: Further view of the main undercarriage reveals the wire cross braces and the rear strut anchor point.

29: Not specifically identified, but from the numerals and redline marking it is similar to the Main Fuel Tank gauge as seen in the NASM D.VII at Smithsonian in Washington DC.

30: The Carl Bamberg Armee Kompass II was fit-ted low down on the starboard side of the cockpit in most Fokker D VIIs. It was free to swing in its gimbal, but of course, secured for aerobatics.

31: Front-end struttery both main undercarriage and cabane struts.

32: Propeller tip showing manufacturer's motif.

33: Mounted on a strut so that the pilot could read the dial showing airspeed, the Morell Anemometer was a standard instrument in use also on other types, and continued in service postwar.

34: Allied tail gunner's view of the Fokker D.VII! This gives a clear idea of the spanwise spread of the undercarriage legs and the cabane struts.













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Fokker E.V / D.VIII



With photos from the ALEX IMRIE Collection

Fokker E.V/D.VIII

Too little, too late? The 'Flying Razor' might well have made a difference if it had entered service earlier and in greater numbers





1: VzFlgmstr. Goerth of Marine Jagdstaffel III with Fokker E. V 144/18. Cowl and wheels are yellow, '3' annotation probably white.

2: Post-WW1 picture of D.VIII is US Air Service markings, having been taken States-side for evalualtion.

3: Off.Stv. Altemeier of Jasta 24. Altemeier had worked for Krupp and used the Krupp motif as his personal marking on fuselage side.

4: This Fokker D.VIII of Jasta 36 looks very

5: This D.VIII is one of the Jasta 6 machines, which seem to have had their fair share of photographers' attention. odern-day military combat aircraft often have a long servicelife. In some cases, 40 years or more. Examples are the Boeing B-52 and English Electric

Canberra, where individual aircraft have been older than the crews that have flown them. Back in 1914-18, the active in-service lifetime

of WW1 combat aircraft could often be measured in months only, before obsolescence set in as military hierarchy, aircraft designers and manufacturers on both sides of the conflict strove to achieve or maintain superiority of combat performance over the aircraft of the enemy. Lives depended upon it!

On the German side, the latest in a succession of competitions for the supply of fighters, in early 1918, led to the selection of the Fokker D.VII, the best of a number of machines, all of which were required to use the 160/180 hp Mercedes engine.

The D.VII went into immediate production, but the German High Command were fully aware of how quickly the performance of a new aircraft could be eclipsed and immediately decided to float a further fighter design competition, the requirements of which were circularised among the manufacturers, including Albatros, Dornier, Kondor, LVG, Pfalz, Roland, Rumpler, Seimens-Schuckert and Fokker.

At the latter company, Designer Reinhold Platz had in hand a number of experimental parasol monoplane configuration designs, V26. V27 and V28.

When this new competition was run off, it was leading pilots from the Jagdstaffeln in the war zones who did the comparative testing and who were the arbiters of which design would be selected as the follow-on fighter. Their shortlist whittled down the choice to the Dornier D1, Seimens Schuckert and Fokker V26/V28, Finally, the Fokker design was selected, receiving the official designation E,V ('E' for eindecker).

The production order required 400 machines, the first 20 being delivered in July 1918. Jagdstaffel 6 was the first unit to get their hands on the new fighter, receiving six in early August, but before the end of the month, three of their pilots had been killed due to wing failures.







Urgent official investigations blamed these failures on deformation under heavy in-flight wing loads, but further more practical examination revealed poor standard of construction, which included the use of unseasoned wood and perished glue. Immediate improvement in quality control and adherence to the designer's original construction specifications quickly cured these ills.

Re-designated Fokker D.VIII, the aircraft re-entered service. Jagdstaffel 11 were the first to re-equip, followed by Jagdstafeln 1, 6, 10, 19, 23, 36 and the Marine-Feld-Jagdstaffeln 1, 2 and 3.

However, the D.VIII saw only three weeks of combat service before the November 11th armistice, during which the aircraft proved to be an effective fighting machine. More powerful variants using the 145 hp Uberursel UR III rotary engine and 200 hp Goebel Goe Illa were planned and had these entered service, they could well have given the newly formed Royal Air Force's squadrons equipped with S.E.5as and Sopwith Snipes a hard time indeed.

As also occurred in 1945, there was a post WW1 round-up of German aircraft by the Allies, including some of the 85 examples of the Fokker D.VIII operational with German Air Service units. Some of these were shared among the Allies for evaluation including US Air Service.

But not before Anthony Fokker had spirited 20 examples away to his native Holland, from where he sold some to the Netherlands Air Service. Others were sold to Poland, to equip the 7th Aviation Squadron and used during 1919, in that country's conflict with Ukraine. In 1921 Lieutenant Leigh Wade of the US Air Service produced the following evaluation of the D.VIII afternation at McCook Field:-

'The aeroplane has a tendency to turn to the right in taxiing, takes off quickly, climbs very rapidly and is very manoeuvrable.

It is easy to fly and the controls are sensitive. It is tail heavy, but so light on the controls that it is not tiresome to fly. The visibility is good.

The machine's guns are so placed that in the event of a crash, the pilot would undoubtedly be injured by being thrown against same.

The aeroplane lands very slowly with a slight tendency to drop the right wing and to turn to the right on the ground.

The controls for the engine are very inconveniently located, in as much as the throttle for the gas is in the left side of the fuselage and the throttle for the air is on the left side of the control stick.

Such then was the Fokker D.VIII, a fighter aircraft of great promise, that just ran out of time ... rather like that other great German fighter, a generation later - the Messerschmitt Me262!



6: A line-up of D.VIIIs of Jasta 6 at Laon, France, in early August 1918, probably right after delivery.

7: This D.VIII is a war booty machine received and operated by the Belgian Air Force after WW1.

8: Fokker sold D.VIIIs to Poland after WW1. This machine was the personal mount of Lt.Stefan Stec, seen at Lwow in 1919.

9: Jasta 6 again ... this is Ltn. Wolff in his flying gear.

10: Fokker E.V no. 148.18 of Jasta 6. The interest that is being shown in the aircraft by those in the picture might suggest that it may be the first of the type to arrive at the unit.



Fokker D.VIII

A close-up study of the Fokker E.V housed at the Fantasy of Flight museum in Florida, USA.



ing leather coaming and binding.

2: Pilot's seat and safety straps.

3: Inside the cockpit looking forward toward the instrument panel.

4: The engine cowl and the access panels behind the rear cowl line.

5: Close-up of the lower cowl showing the cylinders of the rotary engine.







6 & 7: Two views showing the cockpit windscreen and the twin Spandau machine guns.

8: The rudder post, showing the rudder hinges, together with the elevator joiner and centre hinge.

9: Rudder control horn and adjustable clevis link to the control wire.























10: View of the left forward fuselage side, showing access panel, wing struts and undercarriage anchor points.

11: View of the forward fuselage looking forward toward the cowl, showing the wing struts and the fuel tank cap.

12: Detail of the foot stirrup on the left fuselage side below the cockpit.

13: Lifting handle at the bottom of the rear fuselage side.

14: View of the fuselage rear, underneath the tailplane, showing the control wire runs to the rudder and elevator control horns. Note the leather facings where the control wires exit the fuselage. The wire at the top goes through the tailplane to the top surface elevator horn.

15: The anchor points on the lower fuselage for the rear undercarriage member and a wing strut.

16: View looking forward along the fuselage, showing the general arrangement of wing struts.

17: View, right side of fuselage, just behind the engine cowl, showing wing strut, where it enters the fuselage.

18: View of the right side of the rear fuselage, showing the control cable runs.

19: Detail of the upper fuselage behind the engine cowl, showing the fuel tank cap.



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Fokker DVIII









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Dann. History of the F4F's development and operational service. Includes the XF4F-2, XF4F-3, F4F-3, XfSF-6, F4F-3A, F4F-3P, F4F-7, F4F-3S, XF4F-5, F4F-4, Xf4F-4, XF4F-8, FM-1, FM-2, G-36A, Martlet Mk I, Martlet Mk II/G-36B, Martlet Mk III, Wildcat Mk IV (F4F-4B), Wildcat Mk V, and Wildcat Mk VI variants. Also covers Wildcat exports to Finland, Belgium, and Iran. 100 photos, 10 color profiles; 50 pages.



Ilyushin IL-4 in Action (SC) Stapfer. Includes the DB-3S, DB-3B, DB-3T, DB-3TP, DB-3T (Experimental), Capsule DB-3, TsKB-30, DB-3M, TsKB-30 N-1, DB-3F, DB-3F, IL-4, IL-4TK, and IL-6 variants. Also covers the DB-3F in German and IL-4 in Finnish service, Approximately 90 photos, b/w line drawings, 10 color profiles; 50 pages. SS1192



Tupolev SB in Action (SC) Stapfer. It saw service in Spain and China and was the backbone of the Soviet bomber force when the Nazi's invaded the Soviet Union in 1941. Includes the ANT-40-1, SB-2-M-100, SB-2-M-100-A, Avia B-71, Avia B-71A, Avia B-71B, SB-2-M-100, SB-2-M-100-A (Modified), SB-2-M-103, SB-bis-3, PS-40, PS-41, PS-41 bis, SB-MMN, USB variants. Operations in Poland, Finland, Russo-German War, aircraft in foreign service. Over 100 photos, 38 line drawings, 10 color profiles; 50 pgs. **SS1194**



US Liaison Aircraft in Action (SC)

Adcock. Covers L-1 thru L-5 during WW II. Includes the Stinson L-1 (0-49) Vigilant, Taylorcraft L-2 (0-57) Grasshopper, Aeronca L-3 (0-58) Grasshopper, Piper L-4 (0-59) Grasshopper, and the Stinson L-5 (0-62) Sentinel. Over 90 b/w photos. 10 full-color profiles; 50 pages. SS1195



F-16 Falcon in Action (SC)

Drendel. Over 4000 F-16s have been produced since the mid 1970s. Includes the YF-16, F-16A/B, and F-16C/D variants. Also covers weapons, and other mission attachments, as well as experimental F-16s, and the listing of foreign operators. 100 photos, 27 line drawings, 7 color profiles; 50 pages. SS1196



Sepecat Jaguar in Action (SC) Ashley. The Sepecat Jaguar is an Anglo-French strike aircraft, having served with the British, French airforces, and several export customers. Includes Jaguar A/GR.1, trainer variants, British and French service, Naval trials, as well as service with Oman, Ecuador, India, and Nigeria. Also covers combat operations in Iraq, Senegal, Chad, South America, and the Balkans. 97 photos, 26 line drawings, 10 color profiles; 50 pages.

SS1197



F-102A Delta Dagger in Action (SC) Davis. Supersonic interceptor aircraft that entered USAF service in 1956. Includes the YF-102, F-102A, XF-92A, YF-102A, F-102A, TF-102A, F-102B, F-102C, JF-102A, QF-102A, and PQM-102A/B variants. Also includes operational and Air Guard service. 100 photos, 35 line drawings, 10 color profiles; 50 pages. SS1199

Provide the second seco

Fairey Firefly in Action (SC) Harrison. British WWII Naval Fighter that superceded the Fairey Fulmar in the Fleet Air Arm, and remained in British Service into the mid 1950s. Includes the F.1, F.1A, FR.1, NF.1, T.1, TT.1, NF.2, T.2, F.3, T.3, FR.4, TT.4, NF.4, FR.5, NF.5, AS.5, T.5, T.5, AS.6, TT.6, AS/T.7, T.7D, U.7, T.8, U.8, and U.9 variants. Also covers Firefly operations in the Pacific, Malaya, and Korea, as well as Fireflies in foreign service. 90 photos, 17 line drawings, 10 color profiles; 50 pages. SS1200



C-5 Galaxy In Action (SC)

Lippincott. This reprint includes 6 all-new pages packed with color photos and additional information about the Galaxy. Illustrated with 158 photos, 8 color profiles and b/w line drawings; 64 pages.

SS1201



Early MiG Fighters in Action (SC) Stapfer. Until the collapse of the Soviet Union in 1991, the MiG Design Bureau had a near monopoly on the supply of fighter aircraft to the Soviet Air Force and the nations within Moscow's sphere of influence. Updated with 7 pages of new material and illustrated with more than 100 photographs, plus 10 color profiles, detailed line drawings, and color covers; 56 pages.

SS1204



P-40 Warhawk in Action (SC)

Dann. British Commonwealth air forces gave the name Tomahawk to models equivalent to the P-40B/C and Kittyhawk to models equivalent to the P-40E and all later variants. The reissue features four new pages with color photographs and locations of Still Airworthy and On Display modern examples of the P-40. Illustrated with more than 100 photographs, 10 color profiles, line drawings; 64 pgs. SS1205



F-14 Tomcat in Action (SC)

Drendel. The Tomcat attained speeds greater than Mach 2 with its twin afterburning turbofan engines. The versatile aircraft performed the role of fleet air defense, fighter escort, tactical air reconnaissance and air-to-surface strike fighter. This all-color In Action book is the perfect complement to the author's other book, "Tomcat!" This reissue features four new pages with color photographs and 'On Display' locations. The book features more than 100 color photos, line drawings, color paintings and seven color profiles; 56 all-color pages. **SS1206**

P-47 Thunderbolt



P-47 Thunderbolt in Action (SC) The P-47. The P-47 was the biggest, most heavily armed, and one of the fastest single engine fighters developed during World War II. Indeed, several P-47 experimental aircraft topped 507 mph, and several pilots claim to have flown the big fighter into transonic speed ranges. More than 100 photographs, line drawings and color profiles. 60 pages. **SS1208**



P-51 Mustang in Action (SC) Davis. The P-51 Mustang was one of the most outstanding aircraft developed by the Allies during World War II. Dozens of period photographs from around the world illustrate the production, development, and evolution of the legendary Mustang. Illustrated with more than 130 photographs, plus color profiles and detailed line drawings; 64 pages. SS1211

Me 262 In Action



Messerschmitt Me 262 in Action (SC) Stapfer. The Me 262 not only enjoyed superior speed, but it also had deadly firepower: a total of (4) Mk.108 30 mm cannon were mounted in the nose of the fighter variant. Its operational service, however, was hampered by its temperamental engines and under-strength undercarriage. A total of 1,433 Me 262s were built during World War II. Covers the production and development of the Me 262 with more than 100 photographs, color profiles, and detailed line drawings; 52 pages.

SS1212



F/A-18 Hornet Color in Action (SC) Drendel. While the Super Hornet is a distant relation of the A-D Hornets, they all trace their roots to the loser of the lightweight fighter competition of the early 1970s, the Northrop YF-17. The twin-engine YF-17 had a definite advantage in this competition; on 2 May 1975, the Navy announced the MDD/Northrop design as the winner. More than 100 photographs, color profiles and detailed line drawings; 52 pages.

SS1214



C-141 Starlifter in Action (SC) Burford. The first C-141 rolled out of the Lockheed Plant in Georgia on 22 August 1963 to much fanfare. From there, in war and peace, the C-141's story has been lifted to the stars of aviation history. Illustrated with over 150 color and 8 b/w photographs, 3-view drawing, 3-scheme color camouflage art, and color profiles; 58 pages. SS1215





F6F Hellcat in Action (SC) Sullivan. The heavily-armed fighters could pack armament including six wing-mounted .50 caliber machine guns, 20mm cannons, wing-mounted rockets and a bomb rack. This book takes detailed look at F6F Hellcat with 100 photographs, color profiles, detailed line drawings; 60 pages. SS1216



US Navy UAVs in Action (SC)

Neubeck. UAV evolved extensively and saw extensive action during Operation Desert Storm - the war against Iraq in 1991. UAVs can stay aloft 2 or 3 days and ground operators can be rotated on a regular schedule; they also use less fuel thus reducing operating costs. Newer roles, such as bombing, are also being considered for UAVs, some of which will be equipped to carry a weapon pod or bomb rack. SS1217



A-10 Warthog in Action (SC) Drendel. Introduced in the mid-1970s, the Å-10 has seen service in the Gulf War of 1990-1991; in the Balkans, later in the 1990s; in Afghanistan after 2001; and in the occupation of Iraq, beginning in the spring of 2003. Illustrated with more than 106 photographs, 11 full color paintings, 43 detail drawings and 2 pages of 3-view drawings; 56 pages. **SS1218**

F4U Corsair



F4U Corsair In Action (SC)

Sullivan. The Corsair was first conceived as a high-speed. high-altitude fighter for the Navy in 1938 when Chance 'ought's design team drew up plans for a fighter with a ,800 hp engine and a huge 13-foot propeller - the F4U's famous inverted gull wing was introduced to allow prop clearance. Illustrated with 169 photographs (53 in color) plus Raptor's capabilities will face increasing demand. Illustrated color profiles and detailed line drawings: 64 pages. SS1220



B-25 Mitchell in Action (SC)

Doyle. The US supplied B-25s to the British Royal Air Force and to the Soviet Union, which flew them against the Nazis on the Eastern Front. Through period photographs and detailed information, the career of the Mitchell is covered from the experimental NA-40 prototype to the final production B-25J model. US Marine Corps PBJ versions are also chronicled. Illustrated with nearly 200 photographs, more than 80 of them rare period photos in original color, plus color profiles and detailed line drawings; 72 pages. SS1221



P-38 Lightning in Action (SC) Doyle. The Lightning saw service in Europe, and it was after flying a P-38 to assess the progress of the Normandy Invasion in 1944, US Lt. Gen. Jimmy Doolittle referred to the Lightning as "the sweetest-flying plane in the sky." Illustrated with nearly 150 period photographs, a third of them rare original color photos, plus color profiles and detailed line drawings; 72 pages. SS1222



F-22 Raptor in Action (SC)

Drendel. This volume traces the history of the Raptor and describes in detail why it is likely to be the world's best fighter for years to come. With the onset of the Obama Administration, Raptor production was capped at 187 units. As challenges to US global leadership mount, however, the with 169 photographs plus color profiles and detailed line drawings; 56 pages.

SS1223



F-84 Thunderjet In Action (SC)

Davis. Thunderjets flew 86,408 missions during the conflict and took out 60 percent of the ground targets eliminated by American forces. In addition, 8 Soviet-built MiG fighters met their end thanks to F-84 pilots. After the Korean War, the F-84 took part in the Suez Crisis and the Berlin Crisis and stood alert during the first 2 decades of the Cold War. Illustrated with 164 photographs plus color profiles and detailed line drawings; 72 pages.

SS1224



B-52G/H Stratofortress in Action (SC) Katz. This volume is packed with historical, and recent photographs of the B-52. As part of his research, the author flew on a B-52 training mission, and the flight report in this volume is the most detailed description of a B-52 mission ever published. Illustrated with color profiles, detailed line drawings and over 190 photographs: 88 pages. SS10207


B-17 Flying Fortress in Action (SC) Doyle. Delivers a visual overview of the aircraft's development and use. During the 10 years in which it was produced, a total of 12,731 of the B-17 heavy bombers rolled off the assembly lines of Boeing, Douglas Aircraft, and Lockheed's subsidiary Vega. First flown in 1935, the aircraft was repeatedly modified, upgraded, and perfected in response to combat experience. Also highlights the roles played by individual aircraft and their crews, such as the 'Memphis Belle', which completed 25 missions over enemy territory; 'Stage Door Canteen', christened by Winston Churchill's daughter; and 'All American', which demonstrated the incredible toughness of the Flying Fortress by returning safely to base despite having its tail nearly sheared off by a Messerschmitt. An unmatched, lavishly illustrated account of one of the greatest warplanes of all time, a must have! Perfect binding. Illustrated with 200 vintage photographs, plus color profiles and detailed line drawings; 80 pages. SS10219



TBF/TBM Avenger In Action (SC) Doyle. Designed by Grumman as a replacement for the Douglas TBD Devastator, Avenger production began prior to the Japanese attack on Pearl Harbor, and it remained in US Navy service until October 1954. Demand for the large torpedo bomber was so strong that General Motor's newlyformed Eastern Aircraft Division was contracted as a second source for the Avenger, ultimately accounting for more than half of the total production. In addition to its obvious use as a torpedo bomber, the Avenger also served as a horizontal bomber, dropping conventional bombs, as well as mines and notably, depth charges, while operating in an antisubmarine role. Filled with 212 vintage photos, 29 of them in color, these are augmented by five color profiles and a like number of detailed line drawinas: 80 pages. SS10225



B-29 Superfortress In Action (SC) Doyle. While most often remembered as the type of aircraft that dropped the first atomic bomb, and for its extensive use in bombing Japan during the latter stages of WWII, the B-29 also saw plenty of combat during the Korean War. Individual sections of the book explore the interior and armament of these bombers, as well as their production by Boeing, Martin, and Bell. Illustrated with 248 photographs, 90 of them in full color; 88 pages.





B-24 Liberator in Action (SC) Doyle. Lavishly illustrated with almost 250 authentic wartime photos, including over 80 in vintage color, with supplemental drawings and color profiles, this totally new edition of this classic In Action title brings to life no less than 20 variants these famed aircraft, as well as their crews. Experimental versions, classic bombers, freighters, tankers, reconnaissance birds - even the rare gunship version - are shown; 88 pages. **SS10228**



F3D Skyknight in Action (SC) Carey. This book chronicles the development and operational history of the Navy fighter from conception to duty in the Korean War, to service as a night interceptor in Vietnam. Packed with never before published color and b/w photographs covering the entire operational life. Illustrated with more than 196 photos and 10 line drawings; 80 pages. SS10229



S-3 Viking In Action (SC)

Elward. Over the years, it evolved into an outstanding surveillance and anti-surface platform, effective not only against submarines but also large and small surface ships. As its nearly 35-year career came to an end in 2009, the Viking also took on the carrier air wing organic tanking requirements, retiring with over half of its service life remaining. A total of 187 aircraft were built and served in 16 United States Navy squadrons. The Viking and its main variant, the highly-classified ES-3A Shadow electronic surveillance aircraft, played a key role in the Cold War and in the conflicts of the 1990s. The book is one of the few publications to tell the Viking story and is packed with photos and detailed line drawings, all depicting the aircraft's weapons, paint schemes, sensors and interior. It also provides an overview of some of the more significant variants that were studied, but never fully pursued, such as the Carrier On-Board Delivery (COD) and dedicated (KS) refueling variants. It also discusses the aircrafts role in Operation Desert Storm and how the lessons learned from that conflict impacted the Vikings' mission during the latter part of the 1990s and early 2000s. Illustrated with 186 photographs, line drawings, and numerous color profiles; 80 pages.

SS10230

COMING SOON



How to Build Revell's 1:32 Messerschmitt Bf109 G-6

The complete guide to building Revell's 1:32 Bf109 G-6 Messerschmitt written by Brett Green of Hyperscale and Model Military fame.

Three complete builds, Plus:

- Bf 109 G-6 Reference Gallery and colour profiles
 Step by Step Tips and techniques for building the
- ultimate 1:32 Bf 109 G-6
- Bf 109 G-14 conversion
- Super detailing the cockpit and wheel wells
- Aftermarket decal and accessory summary

TBA



F-117A Nighthawk Walk Around (SC) Goodall. Losses of aircraft to radar directed missiles and antiaircraft guns during the Vietnam War led the USAF to develop a strike aircraft less visible to radar. Also used in the Persian Gulf War and more recently in Yugoslavia. Details cockpits, engines, landing gear and weapons. 12 color profiles, 40 pages color; 80 pages.





F-15 Eagle Walk Around (SC)

Drendel. The McDonnell Douglas (now Boeing) F-15 first entered service in 1974 and became the USAF's premier fighter of the late 20th and early 21st Centuries. Inside and out coverage of all variants with emphasis on F-15C and F-15E. Cockpits, radar, weapons, landing gear/wheel wells, and engines, etc.. Illustrated with 92 b/w and 109 color photos, 14 color drawings, 9 b/w drawings; 80 pages.



squadron/signal publications AH-1 Cobra Walk Around (SC) Mutza. In this title the AH-1 is presented in meticulous detail. Includes cockpits, engines, weapons, airframe and more. Also covers US Marine Corps version. Illustrated with 112 b/w and 96 color photos, 12 color drawings, and 9 b/w drawings; 80 pages.

SS5529



Bf 109E Walk Around (SC) Stapfer. The Messerschmitt Bf 109E was the backbone of the Luftwaffes fighter force from the Invasion of Poland, the Battle for France and the Low Countries, the Battle of Britain. and the Invasion of Russia. This title gives a comprehensive inside and out coverage of the Bf 109E and includes details of engines, cockpits, landing gear, airframe and more. Illustrated with over 100 b/w and over 100 color photos. 16 color drawings, 20 b/w drawings; 80 pages. SS5534



EA-6B Prowler Walk Around (SC) Michaels. The need for Electronic Warfare aircraft developed after WWII with the rapid development and proliferation of sophisticated guided weapons. This title gives inside and out coverage of fuselage, wings, tail, cockpits, engines, landing gear, and more. Illustrated with over 83 b/w and 118 color photos, 12 color drawings, 5 b/w drawings; 80 pages. SS5535



UH-1 Huey Gunships Walk Around (SC) Mutza. Not long after the UH-1s flew their first support roles (medevac, etc.) in Vietnam in 1962, armed version began to appear. This title gives inside and out coverage of the US Army's workhorse combat helicopter during the Vietnam War. Includes the UH-1s engines, rotors, airframe, and cockpit and cabin plus a wide variety of weapons. Illustrated with over 106 b/w and 97 color photos, 14 color drawings, 7 b/w drawings; 80 pages. SS5536



MiG-21 Fishbed Walk Around Part 1 (SC) Stapfer. The MiG-21 began production in 1959 and would continue in production until 1985. Also the longest production run of any combat aircraft. This title includes inside and out coverage of the MiG-21F-13 (Fishbed C), PF (Fishbed D), PFM Fishbed F), U (Mongol A), and UM (Mongol B) variants. Illustrated with over 114 b/w and 100 color photos, 12 color drawings, 11 b/w drawings; 80 pages. SS5537



F-8 Crusader Walk Around (SC) Barthelmes. The F-8 entered service in 1957 and was to remain in US service until 1987, and in French service until 2000. In Vietnam the F-8s had the highest kill ratio of any USN aircraft, which earned it the title of "MiG Master". This title includes interior/exterior photo coverage of cockpits, engines, landing gear, airframes and weapons. Illustrated with over 137 b/w and 124 color photos, 12 color drawings, 8 b/w drawings; 80 pages. SS5538



MiG-21 Fishbed Walk Around Part 2 (SC) Stapfer. The MiG-21 began production in 1959 and would continue in production until 1985, making it not only the most produced supersonic jet aircraft ever, but also the longest production run of any combat aircraft. With details on the airframes, cockpits, landing gear, engines and weapons. Illustrated with over 123 b/w and 97 color photos, 12 color drawings, 11 b/w drawings; 80 pages. SS5539



squadron/signal publications MiG-15 Walk Around (SC) Stapfer. This title includes inside and out coverage of the MiG-15 Fagot-A, MiG-15 Fagot-A (modified), Mig-15 Fagot-B (Early), MiG-15bis and Fagot-B (late) variants: with details or

(Early), MiG-15bis and Fagot-B (late) variants: with details on the airframes, cockpits, landing gear, engines and weapons. Illustrated with over 100 b/w and 124 color photos, 12 color drawings, and 27 b/w drawings; 80 pages. SS5540



Me 262 Walk Around (SC)

Concise history of Messerschmitt's Schwalbe, the world's first operational turbojet fighter aircraft. An extensive visual description of the airframe - inside and out from every perspective; detail photos are of Me 262A-1 WNr 500071 as restored at the Deutsches Museum in Munich. Illustrated with more than 100 b/w photos, over 100 color photos, 12 full color profiles plus line drawings and scrap art; 80 pages.



MiG-17 Walk Around (SC)

The MiG-17 'Fresco' followed the MiG-15 'Fagot' into Soviet AF service and evolved into a highly maneuverable, reliable and easy-to-maintain air combat fighter. Every detail of this Cold War fighter aircraft is illustrated with over 200 color and b/w photos, line drawings and 12 color profiles; 80 pgs. SS5546



Sukhoi Su-27 Flanker Walk Around (SC) A supersonic all-weather counter-air fighter, the Su-27 is equipped with a look-down/shoot-down weapons system and beyond-visual-range air-to-air missiles. Its range, thrust-to-weight ratio and maneuverability are all significant improvements over earlier Soviet fighters; one of the world's foremost combat aircraft and a potent adversary. Over 200 color and b/w photos, line drawings and 10 color profiles; 80 pages.

SS5547



OV-1 Mohawk All Walk Around (SC) The Grumman OV-1 Mohawk was the first turboprop aircraft to enter into US Army service to fill the role of visual, photo and electronic reconnaissance. The Mohawk was retired from U.S. Army service in 1996. More than 150 photographs, line drawings, and 12 color profiles; 80 pages. SS5549



OH-58D Kiowa Warrior Walk Around (SC) Werner. The OH-58D was Bell's answer to the U.S. Army's request for a digital platform to aid new artillery. Originally unarmed as part of the Army Helicopter Improvement Program, the OH-58D was based on the OH-58C. The helicopter's success led to the decision to arm it with two hard points capable of holding either .50-caliber machine guns, seven-shot rocket pods, Air-to-Air Stingers, or Hellfire missiles. This book takes a detailed look at the Kiowa Warrior with more then 200 color photos, color profiles, and detailed line drawings; 80 pages. SS5550



Douglas A-26 Walk Around (SC) Mesko. Only American combat aircraft to see combat service in WWII, Korea and Vietnam. Pilot and bombardier/ navigator were positioned side-by-side, while a single gunner sat in the rear behind the bomb bay where he operated two remote controlled twin .50-cal machine gun turrets. Over 200 photographs, color profiles, line drawings; 80 pages. SS5551



AH-64 Apache Walk Around (SC) Bernstein. The AH-64 Apache, considered by many to be the world's premiere armed helicopter, has been in service with the US Army for more than 2 decades. Designed principally as an antitank helicopter to combat large Soviet armored formations invading Western Europe, the Apache has had a major renaissance in recent years. A detailed look illustrated with more than 200 color photographs, color profiles and detailed line drawings; 80 pages.



E-2 Hawkeye Walk Around (SC) Neubeck. The E-2 Hawkeye is the first U.S. Navy carrierbased aircraft designed specifically to fill the all-weather airborne early warning mission. In addition to war service, the versatile aircraft has been used by the US Coast Guard for patrolling the coastal areas as well as by law enforcement agencies for drug traffic interdiction. Takes a detailed look at the E-2 Hawkeye with more than 200 photographs, color profiles, and detailed line drawings; 80 pages. **SS5553**



F-111 Aardvark Walk Around (SC) Neubeck. This aircraft's original design met 2 different mission roles for the US military. It served in Vietnam, Libya, and Operation Desert Storm. Currently, the Royal Australian Air Force continues to fly the C-model plane, and the aircraft has one of the best safety records in the Air Force inventory. Features 12 color profiles, 3-view illustration, line drawings, and over 200 color and 21 b/w photos. 80 pages. SS5557



Macchi C.205 Veltro Walk Around (SC) Di Terlizzi. After the war, modified C.205s went on to serve the Royal Egyptian Air Force during its 1948 war with Israel. Close-up look at one of WWII's most aesthetically pleasing and innovative single-seat fighters! Illustrated with 225 photographs, color profiles, detailed line drawings; 80 pags. SS5558



F-84F Thunderstreak Walk Around (SC) Neubeck. The F-84F remained in service with several European air forces for decades, with Greece only retiring its last Thunderstreak in 1984. Illustrated with more than 250 photographs, color art, and profiles; 80 pages. SS5559 Consolidated PEY-5A Catalina



Consolidated PBY-5A Catalina Walk Around (SC) Doyle. The US Navy began taking deliveries of the PBY-5A in October 1941 and then placed orders for over 600 more following Pearl Harbor. During WWII, PBYs conducted anti-submarine warfare, patrol bombing, convoy escort, search-and-rescue operations, and cargo transport. Some PBY-5As went to the US Army and others to US Allies - Australia, Britain, Canada and the Free French forces. This book presents a comprehensive view of Catalina with 170 photographs, color profiles, detailed line drawings; 72 pags. SS5560



F-89 Scorpion Walk Around (SC) Savage. Equipped with advanced radar for its time, the Scorpion guarded the Cold War skies over the northern frontiers of the United States, ready to confront Soviet circumpolar nuclear bomber attack, while earning the distinction of being the 1st combat aircraft armed with nuclear air-to-air weapons (Genie rockets). Illustrated with 200 photographs, plus color profiles and detailed line drawings; 60 pages.

SS5561



Saab 35 Draken Walk Around (SC) Putnikov. Sweden's most famous fighter, hailed by some as a 'fighter pilot's dream,' was developed and built by the Saab company between 1955 and 1974. Designed with the Cold War situation in mind, the Draken was specially tailored to Sweden's particular needs. Illustrated with 260 photographs, plus color profiles and detailed line drawings; 80 pages. SS5562



Lancaster Bomber Walk Around (SC) Mackay. Known for its greenhouse cockpit, turret nose, twin tail, and 33-foot long bomb bay the Lancaster took part in Air Marshall Harris's 'Operation Gomorrah' in July 1943, in which Germany's industrial center of Hamburg was devastated by round-the-clock bombing raids. In the thick of the air war, the Lancasters also paid a high price - 3,249 were lost in action. Illustrated with 200 photographs, plus color profiles and detailed line drawings; 80 pages. SS55563



F-102A Delta Dagger Walk Around (SC) Neubeck. The Convair F-102A Delta Dagger was developed for the US Air Force as a supersonic interceptor at the onset of the Cold War. It featured a 60 degree swept delta wing to lessen drag coefficient and yield stability at very high altitudes. After retirement in the US, 152 of the planes were converted to high-speed, unmanned drones for use as test targets for newer fighters. More than 200 photographs, plus color profiles and detailed line drawings; 80 pages. SS5564



F4U Corsair Walk Around (SC) Doyle. The F4U Corsair was arguably the best piston-engine carrier-borne fighter ever produced. Designed in 1938 and first flown in 1940, the Corsair remained in production until 1953, long after many of its contemporaries had been rendered obsolete. In addition to detailed line drawings and color profile illustrations, this volume is packed with over 200 photographs, 80 pages. SS5565



B-17G Flying Fortress Walk Around (SC) Doyle. The B-17 Flying Fortress is arguably the most famous US bomber of World War II, and perhaps all time. The vast majority of these aircraft were the G-model, accounting for 8,680 of the 12,730 Flying Fortresses built. Not surprisingly, with more than eight thousand examples being produced by three manufacturers, a number of changes were introduced in the course of the production run. This new addition to Squadron's Walk Around series takes the reader over, under, and through the B-17G, illustrating the subtle - and not so subtle - changes in gun mounts, turrets, crew positions, and other details. Ten aircraft were photographed in order to create this comprehensive look at the famed Flying Fortress through more than 300 photos with detailed captions;

88 pages. **SS5567**

Squadron Signal



A-4 Skyhawk Walk Around (SC) Drendel. The carrier-capable Douglas A-4 Skyhawk is one of the most successful modern combat aircraft. During the 25 years in which the A-4 was on the production line. 2,960 Skyhawks were built. A relatively light aircraft, with a maximum takeoff weight of 24,500 pounds and with a top speed exceeding 600 mph, the Skyhawk was operated not only by the US Navy and Marines but also by the air forces of Australia, New Zealand, Israel, Malaysia, Argentina, Singapore, Brazil, Indonesia, and Kuwait. Introduced in 1956, Skyhawks played major roles in the Vietnam War, the 1973 Arab-Israeli October War, and the Falklands/ Malvinas Conflict in 1982. With a reputation for toughness and agility, Skyhawks remained a part of the American arsenal for nearly half a century - the U.S. Navy retired the A-4 as recently as 2003. Meanwhile, the battle-tested warrior continues to serve today other militaries around the world. Illustrated with 205 photographs, color profiles, and detailed line drawings; 80 pages. SS25041



B-29 Superfortress Walk Around (SC) Savage. Equipped with pressurized cabins for high-altitude effectiveness, with an electronic fire-control system, and remote-controlled machine gun turrets, the B-29 Superfortress was the most advanced aircraft of WWII. A unique look at the plane that ushered in the nuclear age. Illustrated with over 210 photographs; 80 pages. SS25054



KC-135 Stratotanker Walk Around (SC) Katz. Many air forces can conduct missions such as air superiority and ground attack, but only the US Air Force has truly global reach. This book contains the most detailed photographic documentation of the KC-135 inside and out that has ever been published, as well as color profiles of the KC-135R in the markings of every major USAF command that has operated that variant. Illustrated with 240 photographs, detailed line drawings and color profiles; 88 pages.

SS25066



F9F Cougar Walk Around (SC) Neubeck. Photographs in this volume illustrate in detail the differences between the various Cougar models, making use of over a dozen display aircraft located in museums across the United States as well as one Cougar on display in Argentina. Grounded in solid historical research, features historical images from the photo archives of both the U.S. Navy and Grumman, includes rare photos of F9F Cougar in its final days, serving as a target drone for later generations. **SS25068**



B-26 Marauder Walk Around (SC) Doyle. Exclusive photos illustrate the rarely seen inner workings and outer features of the B-26G, with additional coverage of the B-26, B-26B, and B-26C. The B-26 Marauder saw service in Europe, the Mediterranean and the Pacific, including use by the United States, the Free French, the Royal Air Force and the South African Air Force. More than 220 photographs, plus numerous detailed line drawings and color profiles.

SS25069



Heinkel He 111 Walk Around (SC) Mackay. This iconic warplane had its origins as a cutting-edge civil airliner in the mid-1930s. Although produced in large numbers and exported to many countries before and during the war, few examples survive today. This volume features detailed photographic images of the He 111P-1 restored and preserved in Norway, and the He 111H-20 on display in the RAF museum. Illustrated with 228 photos, detailed line drawings and color profiles; 88 pages.

SS25070



B-25 Mitchell Walk Around (SC) Doyle. Profusely illustrated, enhancing color photographs, taken both on the ground and in the air, four vintage blackand-white images and 14 line drawings further illustrate details, while five color renderings of aircraft and markings provide a glimpse at the nature of the crews. Illustrated with more than 200 photographs; 80 pages. SS25071



THE GATE SERIES



Douglas DC-9/MD-80 at the Gate

(SC) Peeler. The most successful of all the twin-jet transports, the DC-9 brought jet travel to the general public. The DC-9 and its descendants have transported countless people to big cities and tiny towns, serving communities that had never before known jet travel. Military versions have served in the aeromedical evacuation, logistics and VIP transport roles. Traces the development and many users of this important aircraft in 200 color and b/w photos, line drawings and color profiles; 80 pages. SS5801



Boeing 737 At The Gate (SC) Tidwell. Few commercial aircraft have enjoyed a production run that spans more than four decades and service in nearly every nation on Earth. The Boeing 737 has such a track record. Takes the reader on a journey through the continuing story of the 737 from the first aircraft to roll of the production line in the 1960s, to the very latest airframes being delivered to major airlines today. The book also offers the reader a look at some of the most interesting 737 liveries as well as parts of the aircraft that few people get to see. Also covered are business jets, cargo carriers, and military versions of the 737 that are less familiar even to the thousands of air travelers who have flown aboard this legendary Boeing liner. Illustrated with over 220 photographs; 96 pages.

SS28002

COMBAT CHRONICLES Combat Chronicles of the Black Widow (SC)

Combat Chronicles of the Black Widow

Thompson.

In this volume we hear from the crews who rode the Black Widow into battle all over the world. The outbreak of war in Europe left no room for doubt that the United States needed quickly to come up with a specialized night fighter to confront the totally new face of air combat. Illustrated

with 152 photographs; 112 pages. **SS6701**

B-29 Superfortress Combat Chronicles (SC)



Hilton. In early 1945, the 40th BG moved to newly-liberated Tinian from which they took part in the final chapter of WWII - the aerial assault on the Japanese home islands. Introduces you to

fellow veterans of the 40th who relate their no-less extraordinary experiences - ditching in the Bay of Bengal,

lost in the Siberian Taiga, downed behind enemy lines in China, taken prisoner after bailing out over Tokyo. Personal accounts from the men who served on the front lines of the air war in the Pacific, a unique primary historical source and a truly exciting read. Illustrated with over 100 photographs; 120 pages.

SS36002

Aeroscouts in Vietnam Combat Chronicles (SC)

Aeroscouts in Vietnam

Combat Chronicles

Mutza. The Army developed new tactical doctrine using helicopters - the airmobile concept - which was based largely on air cavalry units. Such units were descendants of the US Cavalry, which had operated as light, horse-mounted infantry. Packed with more than 30 action packed, often hair

raising first-hand accounts of helicopter scout combat in Vietnam, this latest addition takes you into the thick of the action. Besides being exciting reading, these personal recollections by dozens of the fighters themselves provide invaluable, primary source historical coverage of one of America's epic conflicts as experienced by frontline helicopter scouts. Illustrated with 160 photographs; 136 pgs SS36003

hine gri the Air as well own ww sa lik Sabre North I maps, SS60 Plane

AIRCRAFT SPECIALS

MiG Alley - Air to Air Combat Over Korea (SC)

Davis. A pictorial record of the American pilots and their aircraft who ran up a 10 to 1 victory ratio over the MiG-15.In all, 976 "North Korean" aircraft were shot down in the three years of the Korean War. This title gives a history of the Air War in Korea, as well as the pilots own words of what it was like to fly the F-86



Sabre (also F-82, F-51D, F9F-3, B-29, & F3D-2) against North Korean and Soviet pilots. Illustrated with 145 photos, 7 maps, 28 drawings, 40 full color drawings; 80 pgs. SS6020

Planes, Names & Dames Volume 2: Korea (SC)



Davis. The art of decorating the front section of military aircraft goes back to the First World War. It was a way of personalizing a piece of machinery that one depended on every day. The theme went from patriotism to the latest trend in music to sex (girls), and this sort

of art appeared on every type of aircraft. This title covers military aircraft nose art of the post war period including the Korean War and the late 50s. Extensively covers the wide variety of personal and mission markings carried by the F-80, F-84, F-86, B-29, F- 51s and other planes in Korea. Illustrated with 239 b/w and 47 color photos, 64 pages. SS6058

Red Ladies in Waiting (SC)

Stapfer. This title is considered by the author as a retrospective of the early 1990s, the ex-Soviet Union and Eastern Bloc. The former Soviet Union had a number of facilities to store and display aircraft, including complexes at Khodinka. Ramenskoye and Tushino. Includes coverage of facilities in



Hungary and former East Germany, as well as US aircraft that found their way into Soviet/Eastern Bloc service. Illustrated with 213 b/w and 56 color photos; 64 pages. SS6065



AIRCRAFT SPECIA

Arab Air Forces Post WWII (SC) Tullis. Traces the history of the air forces of the Arab nations through the turbulent years after WWII and their many conflicts with Israel as well as many clashes amongst themselves. Includes Algeria, Bahrain, Egypt, Iraq, Jordan, Lebanon, Libya, Mauritania, Morocco, Oman, Qatar, Saudi Arabia, Sudan, Syria,



Tunisia, United Arab Emirates, Yemen Arab Republic, and the Peoples Democratic Republic of Yemen. Illustrated with 204 b/w, 28 color photos, 12 color drawings, 2 maps; 64 pgs. SS6066

Planes, Names & Dames Volume 3 (SC)



Davis. The art of decorating the front section of military aircraft goes back to the First World War. It was a way of personalizing a piece of machinery that one depended on every day. The theme went from patriotism to the latest trend in music to sex (girls), and this sort of art appeared on

every type of aircraft. This third volume of military aircraft nose art covers the Vietnam period (1955-1975). Includes aircraft types such as F-86, F-104, A-26K, UH-1, OV-1C, A-1J Skyraider, F-4E, F-105D, F-8E, and many more. Includes some art from foreian airforces. Illustrated with 259 b/w and 91 color photos; 80 pages.

SS6068 And Kill MiGs (SC)

Drendel. Revised edition. USN, USAF, and USMC aerial combat over North Vietnam. 1981 Sixth Fleet shoot down of Libyan fighters, and Operation Desert Storm. Includes pilots' own descriptions of engagements, with lists of USAF and USN MiG killers in Vietnam, as well as section on the North Vietnamese



Enemy with listing of the MiGs' Kills. Illustrated with 168 b/w and 19 color photos, 46 color drawings, 1 map, 1 b/w drawina: 104 pages.

SS6072

Pride of Seattle (SC)

The story of the first 300 Boeing B-17Fs. A fascinating book revealing the varied fates of the machines and their crews, diverse, often tragic, sometimes inspiring but always interesting. Illustrated with 120 b/w period photos, 32 full color profiles; 64 pages. SS6074

Aces (SC)



as the "Tiaer Ace", and many more. Illustrated with 20 b/w photos, 116 color drawings, and 48 b/w drawings; 64 pages. SS6077

Aces 2 (SC)

Patton. The exploits of air aces - pilots who shot down five or more enemy aircraft - have fascinated the world since WWI. Successful aces combined the killer instinct, mastery of their aircraft and of air combat tactics, and the ability trapidly adjust to changes in their situation. Chronicles 29



aces from WWI, WWII and the '67 Arab-Israeli war. 40 b/w drawings, 30 pages color profiles, 64 pages SS6084

USN Aircraft Camouflage & Markings 1940-45 (SC)



Doll. A highly detailed and informative look at the variations of camouflage schemes and insignias used by the US Navy during WWII. Includes both carrier and land based aircraft. Illustrated with 150 b/w and 6 color photos, 40 color drawings; 64 pages. SS6087

Aces 3 (SC) Patton. This title aives

Pride of Seattle

Patton. The exploits

of the aces , their

from WWI to the

Korean Conflict.

as Manfred von

Gregory (Pappy)

Boyington, Francis S.

Gabreski, Herman Graf,

and the novel inclusion

of Michael Wittmann

aircraft and tactics.

Includes such notables

Richthofen (Red Baron).

the exploits of the aces. their aircraft and tactics, from WWI to the War in Vietnam. The stories of 59 air aces since WWI, plus one tank ace of WWII. Includes such notables as Joseph M. McConnell, Richard "Dick" Bong, Randy Cunningham, and Ernst Udet. Illustrated with 139



color drawings, and 62 b/w drawings; 64 pages. **SS6088**

Worldwide F-16 Markings (SC)



The F-16 Fighting Falcon, also known as the 'Viper', evolved from a 1972 USAF lightweight fighter prototype program to create a small, low-cost. air superiority day fighter designed for high performance and ease of maintenance and achieved combatready status in October 1980. Since then, 21

foreign nations including Belgium, Denmark, Turkey, Egypt and Israel have the F-16, making it the most popular fighter in the world. The varied national insignia, squadron markings and camouflage of these international F-16s are depicted in full color. Over 200 color photos: 64 pags. SS6091

Tomcat! (SC)

The F-14 Tomcat is a supersonic, twinengine, variable sweep wing, two-place fighter designed to attack and destroy enemy aircraft at night and in all weather conditions. The F-14 can track up to 24 targets simultaneously with its advanced weapons control system and attack six with Phoenix



AIM-54A missiles while continuing to scan the airspace. Armament also includes a mix of other air intercept missiles, rockets, and bombs. The Grumman F-14 Tomcat has retired after over 30 years of service. It was the final member of a family of Grumman cats which began almost seventy years ago. This book presents a personal narrative of the testing and operational use of the Tomcat. More than 150 color photographs, color paintings, and color profiles; 64 pages. SS6092

Squadron)Signal

IRCRAFT SPECIALS

The Aviation Art of Lou Drendel (SC) Drendel. Lou Drendel has been drawing and painting airplanes since he can remember. Inspired by the model airplanes his father built for him, he took pencil and paper and began drawing. He hasn't stopped yet, more than 60 years later. Lou's art has been featured in dozens of books published by Sauadron/



Signal. Now, they are gathered together in one volume. This book displays more than 200 of the extraordinary works of the famed aviation artist; 64 pages.

SS6093

Vietnam Scrapbook An Army Pilot's Combat Tour (SC)

Vietnam Scrapbook an Army Pilot's Combat Tour



Steinbrunn. In January 1966. Robert Steinbrunn entered the US Army for 4 memorable years. At Fort Rucker. Alabama, he received training in Bell helicopters, including the Huey and Iroquois (UH-1A, B and D models). Afterward, he was sent to Fort Knox. Kentucky, where he

was assigned to A Troop, 7th Squadron, 17th Air Cavalry, the 'Ruthless Riders', flying the short-cabin Bell UH-1C gunship. After honing their reconnaissance skills in training, the 3rd and 7th Squadrons became the 'eyes and ears' of the 4th Infantry Division, which was based at Camp Enari, Pleiku, in the Central Highlands of Vietnam. Steinbrunn documented his time flying helicopters in Vietnam and has compiled his memories into a memorable book. Illustrated with more than 200 photographs: 80 pages.

SS6098

Operation Enduring Freedom (SC)

Drendel. Noted military author Lou Drendel outlines the initial Allied military response against the al-Queda terrorist network and the Taliban government in **Afghanistan that** provided them safe haven and training facilities. Extensively illustrated with over 200 photos - half in full-color, 1 map; 64 pages. **SS6123**



Air War Iraq: Operation Iraqi Freedom (SC) Air Force Colors Volume 1 (SC)

Drendel. All new book covering Allied airpower in the war to topple Saddam Hussein. Full color and b/w photos of fighters, bombers, transports, helicopters. and the people who fly and maintain them. Also includes US **CENTCOM** - Air Forces and Navies Air Order of Battles, Illustrated with 100 b/w and 117 color photos; 64 pages. SS6124



World War II, nightly

bombers over Britain

fighting abilities. The

was created as a new

prototype with airborne

caliber machine guns in

a top-mounted turret

intercept radar. It also

forced the United States

raids by Luftwaffe

to develop night-

P61 Black Widow

featured four .50

and four 20mm

U.S. Army Aviation

in Vietnam

P-61 Black Widow Special (SC) Thompson, During



cannons underneath to handle any threats in the darkness. The crew consisted of a pilot, a gunner and a radar observer. This book takes a detailed look at the development and implementation of the P-61 Black Widow night fighters with about 200 photographs and detailed line drawings; 64 pages. SS6126

Army Aviation in Vietnam Special (SC)

Mutza. During Vietnam, the US Army employed a variety of aircraft to accomplish combat missions. Following turf and budget debates with the Air Force, the Army settled on the use of various helicopters and some fixed-wing observation planes. Using airmobility and air assault strategies, the Army was able to

demonstrate the ability to rapidly move significant amounts of men and equipment on the battlefield. Army aircraft were further used as gunships, medevacs, air controllers as well as surveillance and transportation. This book takes a detailed look at the development and implementation of Army Aviation in Vietnam with nearly 200 photographs, color profiles and detailed line drawings; 80 pages. SS6127

WWI timeframe to early WWII. Includes

Air Corps camouflage markings from the post Standard Insignia, markings and colors, unit markings, VIP aircraft. GHQAF and the Designator System, Training Colors, and Camouflage. Also covers Combat Groups

development and

Bell. Covers the



and Sauadron Insiania. Illustrated with 198 b/w and 3 color photos, 67 color aircraft profiles; 96 pages. SS6150



Vol 3 (SC) This volume traces the history

of WWII Army Air Force colors and marking in both the Pacific Theater and the Zone of the Interior (ZI). 96 pages, 16 in color, over 200 photos. SS6152

56th Fighter Group (SC) Flying P-47s, the 56th FG was one of the highest scoring USAAF Fighter Groups in Europe. Traces the Group from WWI I through action in Korea and Vietna m until today. Over 200 photos, 8 pages

of color, 64 pages. SS6172



357th Fighter Group (SC)

Formed in California in Dec of '42 and equipped with P-39s. More than one year later, the Group was thrown into combat flvina P-51 Mustanas against th e Luftwaffe. The history and combat opera tions from its formation to the end of the war in Europe. Over 140 photos, 8 pages color profiles, 64 pages. SS6178



Fighter Squadron 14 - Tophatters (SC) The oldest serving squadron in the history of the USN. VF-14 can trace its history back to September of 1919 and serve d in WWII. Vietnam and the Persian Gulf Over 175 photos, 8 pages of color, 80 pgs SS6173



Squadron)Signal

AIRCRAFT SPECIA 31st Fighter Group USAAF WWII (SC)

The USAAF's 31st Fighter Group had an outstanding record, flying Spitfires and Mustangs in the 8th, 12th and 15th Air Forces. Entering the war as the first American Fighter Group to participate in the European Theater of Operations, the 31st FG ended the war as the top scoring Allied fighter group



in the Mediterranean Theater of Operations and the fifth highest overall for the USAAF with 570 1/2 confirmed aerial victories. Approximately 200 b/w photos, line drawings and 40 color profiles; 80 pages.

SS6180

4th Fighter Group in WWII (SC)



The 4th initial operated with Spitfires but changed to P-47s and finally to P-51s. The first 8th AF fighter group to penetrate German air space and first to engage enemy aircraft over Paris and Berlin, the 4th claimed 1000 kills , the highest of any USAAF fighter group in WWII. Over 250b/w

photos, line drawinas, 10 color profiles; 80 pages. SS6181

Hawker Hunter in Color (SC)

Robinson. The Hawker Hunter was designed in 1948 as a RAF replacement for the Gloster Meteor. The Hunter served with the RAF in the 1950s and 1960s. and has served with nearly twenty foreign air forces. This title covers every RAF Sauadron to fly the Hawker Hunter. Illustrated with 54 b/w and 6 color photos, 200 color drawings; 32 pages. SS6506



USAF Europe Volume 2 in Color (SC)



Robinson. Covers the bombers of SAC, the fighters of TAC, transports, the Military Air Lift Command and the trainer and liaison aircraft. Illustrated with 43 photos. over 85 full-color drawings; 32 pages. SS6563

EA-6B Prowler in Detail & Scale (SC)

Kinzey. This title gives a comprehensive look. inside and out, of the US Navy's primary Electronic Countermeasures Aircraft. Illustrated with 171 b/w and 35 color photos, 24 b/w drawings; 72 pages. **SS8246**





F-84 Thunderjet in Detail & Scale (SC) Kinzey. Includes complete inside and out tour of the different variants and a 2-page modeling summary. Illustrated with 156 b/w and 48 color photos. 8 color drawings, 41 b/w line drawinas: 80 pages. SS8259



P-40 Warhawk in Detail & Scale Part 2 (SC) Kinzey. Includes a 2-page modeling summary. Illustrated WARHAWK with 152 b/w and 62 color photos, 10 color drawings, 26 b/w line drawings; 80 pages. **SS8262**



EA-6B PROWLER

in detail & scale

P-51 Mustang in Detail & Scale Part 1 (SC) Kinzey. Complete development WII DCAT of Allison-powered RAF Mustana Mk I. USAAF P-51, A-36, and P-51A and Merlin-powered P-51B and P-51C. Illustrated with 163 b/w and 30 color photos, and 37 b/w drawings; 72 pages. SS8250



in detail

P-40 Warhawk in Detail & Scale Part 1 (SC) Kinzey. Extensive interior and exterior photo coverage of the different variants. Includes a 2-page modeling summary. Illustrated with 166 b/w and 51 color photos, 10 color drawings, 29 b/w line drawings; 80 pages.



P-39 Airacobra in Detail & Scale (SC) Kinzev. Illustrated with 185 b/w and 58 color photos, 10 color drawings, 28 b/w line drawings; 83 pages. **SS8263**

DETAIL & SCALE

B-24 Liberator in Detail & Scale (SC) Kinzey. Includes a 2-page modeling summary. Illustrated with 177 b/w and 55 color photos, 10 color drawings. 23 b/w line drawings; 83 pages. SS8264





Bert Kinzes

in detail

F-106 Delta Dart in Detail & Scale (SC) Kinzey. Includes a 7-page modeling summary. Illustrated with 146 b/w and 30 color photos, 25 b/w line drawings; 72 pages. SS8269





FJ Fury in Detail & Scale (SC) Kinzey. This title has extensive photo coverage of the airframes, cockpits, landing aear, engines, and weapons. Includes a 2-page modeling summary.Illustrated with 170 b/w and 36 color photos, 10 color drawings, 22 b/w line drawings; 78 pages. SS8272

F/A-18E & F/A-18 SUPER HORNET









F-100 Super Sabre in Detail & Scale (SC) Kinzey. Includes a 8-page modeling summary. Comprehensive photo-archive showing the F-100 inside and out. Illustrated with 154 b/w and 40 color photos, 28 b/w line drawings; 72 pages. SS8270



F/A-18E/F Super Hornet in Detail &

Scale (SC) Kinzey. Also covers Operation Enduring Freedom and Iraqi Freedom, as well as a 4-page modeling summary. Illustrated with 206 b/w and 51 color photos, 5 color drawings, 4 b/w line drawings; 80 pages. SS8274





M551 Sheridan in Action (SC) Doyle. Beginning in 1966, the Allison Division of General Motors built 1,562 M551s with primary armament being a 152-millimeter gun/launcher capable of firing conventional ammunition or the Ford-built Shillelagh anti-tank missile. Whatever the conception, this vehicle proved an asset to the Army in Vietnam, Panama, and Operation Desert Storm. Illustrated with 91 color photos, 8 b/w photos, 7 color profiles, 3-view drawing, vehicle development illustrations,

and 2 colorized camouflage patterns; 60 pages. SS2041



World War II Jeep In Action (SC) Doyle. Jeeps were configured for radio gear, armed with weapons, and bore stretchers. Large numbers of Jeeps were also delivered to allied nations. This book takes a detailed look at these vehicles' service during World War II with more than 100 photographs, color profiles and detailed line drawings; 52 pages.



HMMWV In Action (SC) Doyle. This book takes a detailed look at HMMWV with more than 100 photographs, color profiles and detailed line drawings; 52 pages. SS2043

Italian Truck-Mounted Artillery



Italian Truck-Mounted Artillery in Action (SC) Riccio. Italian military planners saw the need for highly mobile artillery early in the 20th Century. Accordingly, Italy began mounting anti-aircraft weapons on truck chassis prior to WWI, giving birth to the autocannone, a weapon concept which would soldier through both World Wars. A unique and lavishly-illustrated survey of the various weapon combinations devised by the Italian military from the inception of the autocannone until the end of WWII. Illustrated with more than 200 photographs, plus color profiles and detailed line drawings; 56 pages. SS2044



M113 APC in Vietnam in Action (SC) Doyle. Although the M113 has largely been replaced by the Bradley Fighting Vehicle and is now only in limited use by the US armed forces, the vehicle remains in use today in the armed forces of other allies around the world. Illustrated with 130 photographs, plus color profiles and detailed line drawings; 64 pages. SS2045

MABAS In Vietnam

M48A3 in Vietnam in Action (SC) Doyle. Just as the Sherman tank was the quintessential 'American tank' in WWII, the M48A3 Patton tank was the most prominent US battle tank during the Vietnam War years of the 1960s and 1970s. Illustrated with 109 photos, plus color profiles and detailed line drawings; 48 pages. SS2046



Tiger I in Action (SC) Doyle. Illustrated with over 200 vintage photographs, plus color profiles and detailed line drawings; 72 pages. SS2047



WWII US Sherman Tank in Action (SC) Ervin and Doyle. Nearly 200 period photos, in rare original color, line drawings, turret, weapons used, Includes color profiles; 80 pages. SS2048



German Armored Cars in Action (SC) Doyle. Packed with more than 220 period photographs, chronicles development, deployment of Germany's six and eight-wheeled armored cars before and during WWII; 80 pgs. SS12050



M151 MUTT in Action (SC) Doyle. 220 photographs; 80 pages. SS12051



Squadron/signal publications Sturmgeschutz III Walk Around (SC) Cockle. Extensive coverage of the StuG III Ausf G variants armed with the 75mm 40 L/48 gun. Inside and out details of running gear, hull, fighting compartment, engine deck, engine, and fittings. Illustrated with 118 b/w and 107 color photos, 18 color drawings, 12 b/w drawings; 80 pages. SS5702



US Tank Destroyers Walk Around (SC) Mesko. This title follows the development of the M10, M36, and M18 tank destroyers, with inside and out details of running gear, hull, fighting compartment, engine deck, engine, and fittings. Illustrated with 145 b/w and 147 color photos, 12 color drawings, 8 b/w drawings; 80 pages. SS5703



M2/M3 Half-Track Walk Around (SC) Mesko. These halftracks saw service on every front during WWII, and served in many countries for decades after the end of the war. This title includes inside and out coverage of the US Army personnel halftracks during WW II. Also covers the M4 Mortar Carrier, M16 MGMC, and Israeli variants. Illustrated with 130 b/w and 114 color photos, 12 color drawings, 8 b/w drawings; 80 pages. SS5704



M42 Duster Walk Around (SC) Doyle. The lack of radar tracking system meant the M42 was a 'fair weather' shooter against low, slow targets; it just could not keep pace with the new generation of Soviet jet aircraft. As American involvement in Vietnam increased, 3 battalions of Dusters were sent to South Vietnam - initially for anti-aircraft duties, but with clear skies over the South, the M42 was usefully employed as convoy escort, perimeter and base security, and direct fire support. A detailed look at the M42 Duster with more than 200 photographs, color profiles and detailed line drawings; 80 pages. **SS5705**



M26 Pershing Walk Around (SC) Doyle. The basic design of the M26 - the designation the T26E3 had been given when it was classified 'standard' in March 1945 - was to form the basis of a long line of excellent tanks (M46, M47, M48 and M60) that would serve US armed forces for 40 years. Illustrated with 250 photographs, color profiles, and detailed line drawings; 80 pages. SS5706



US Military Motorcycles of WWII Walk Around (SC) Doyle. The advent of the Jeep took over the motorcycle's role in military service, and the bikes were relegated to veteran vehicles of the past. Illustrated with over 200 color photographs, 11 black-andwhite photographs and color art by Don Greer; 80 pages. SS5707



Cadillac Gage V-100 Commando Walk Around (SC) Doyle. The best-known American armored car of the post-WWII era, the Cadillac Gage Commando - a versatile, amphibious, 4x4 vehicle - still looks modern even though it made its debut in 1962. The V-100 Commando went through numerous changes in light of its extensive and varied experience in reconnaissance, convoy escort, riot control, security, and as a personnel carrier. Illustrated over 200 color photographs plus detailed line drawings; 80 pgs. SS5708



Sd.Kfz.251 Ausf.D Walk Around (SC) Stapfer. Considered the German Army's most important armored half-track in WWII, the Sd.Kfz.251 allowed the infantry to keep up with the Heer's fast armored elements. The vehicle came in 4 models and 23 variants, but the Ausf.D was the most produced model. Illustrated with over 150 color photographs, detailed line drawings, and 8 colored profiles. A must have book for the armor, modeling, history, and military enthusiast; 80 pages.

SS5709



GPA and DUKW Walk Around (SC) Doyle. Production of the GPA, essentially an amphibious Jeep, ended in 1943, just as the career of the DUKW, a virtual aquatic truck, was on its way to becoming the 'gold standard' by which other amphibians are measured to this day. Illustrated with 263 high quality photographs, color art, and profiles; 80 pages. SS5710



ARMOR WALK AROUND

Pre-Standardized Jeep



Pre-Standardized Jeep Walk Around (SC) Doyle. Three distinct versions of a reconnaissance car were produced before they were standardized into the World War II-era Jeep. This book takes a detailed look at Jeep's early evolution with more than 250 photographs, color profiles and detailed line drawings; 80 pages. SS5711



M3 Medium Tank Walk Around (SC) Doyle. The M3 Medium Tank was designed as an interim answer to European battlefield conditions at the start of World War II. This book takes a detailed look at the M3 Medium Tank with more than 200 photographs, color profiles and detailed line drawings; 80 pages.

SS5712



Pz.Kpfw Panzer 38(t) Walk Around (SC) Stapfer. The Panzerkampfwagen 38 (tschechisch) - Armored Combat Vehicle 38 (Czech) was one of the most important tanks in the Wehrmacht arsenal in the first half of WWII. Illustrated with over 300 photographs, color art, and profiles; 80 pages. SS5713

M24 Chaffee



M24 Chaffee Walk Around (SC) Doyle. As American-built armor came into contact with Axis forces in WWII - first of all in North Africa - it quickly became clear that the 37mm cannon favored on US armor was simply inadequate against the tough armor of their adversaries. Packed with over 200 photos, plus color art and profiles; 80 pages.



M113 APC Walk Around (SC) Doyle. The M113 family of vehicles is arguably the most successful series of armored personnel carriers of all time. The driver was provided with four M17 periscopes, and his hatch had provision for an M19 infrared periscope as well. The commander's station, just aft of the driver, had a cupola equipped with five M17 periscopes and an M2 HB machine gun. Illustrated with 170 photographs, plus color profiles and detailed line drawings; 72 pages.

SS5715



M88 Armored Recovery Vehicle Walk Around (SC) Doyle. The M88 Armored Recovery Vehicle was designed and developed in the late 1950s. The M88 had been so successful that it was taken as the basis for the new upgraded recovery vehicle, which is still in use today - the M88A2. Illustrated with 175 photographs, plus color profiles and detailed line drawings; 80 pages. SS5716



M7 Priest Walk Around (SC) Doyle. Nicknamed the Priest because of its pulpit-like antiaircraft ring, the vehicle was intended to provide armored units with organic, highly-mobile artillery support. Production began in April 1942 and it first went into combat with British at the Second Battle of El-Alamein in the autumn of that year, with US forces first taking the American-built vehicle into engagements in Tunisia somewhat later. Packed with more than 230 photographs, plus color profiles and detailed line drawings; 80 pages.



GMC CCKW Truck Walk Around (SC) Doyle. This volume is packed with detailed photographs and highlights modifications through the years of its service - a wooden truck bed to save on precious steel, an open cab to allow for more cargo room in ship holds, 2 designs for axles, negative electrical system and a winch that was installed on a third of the trucks. Illustrated with more than 190 photographs, plus color profiles and detailed line drawings; 80 pages.

SS5718



M5/M5A1 Stuart Walk Around (SC) Mesko. Illustrated with more than 190 photographs, plus color profiles and detailed line drawings; 80 pages. SS5719



M3A1 White Scout Car Walk Around (SC) Doyle. The White Motor Company began serial production of the four-wheel-drive M3A1 Scout Car in 1940. Illustrated with more than 200 photographs, plus color profiles and detailed line drawings; 80 pages. SS5720

Tal Dos An 109 Howitzer Walk Around

Squadron)Signal

M108/109 Self-Propelled Howitzer Walk Around (SC)

Doyle. Introduced in the early 1960s, the M108/109 marked the transition from open-topped to fully enclosed self-propelled artillery. Illustrated with more than 315 photographs, plus color profiles and detailed line drawings; 88 pages. SS572



Valentine Tank Walk Around (SC) Doyle. Though not the 1st tank to go into battle against the Axis in WWII, Valentine has distinction of having highest production numbers of any wartime British tank, arguably the most variations. After the war, Valentines continued to serve several British Commonwealth armies late as 1950s. Illustrated with 250 photos, plus color profiles and detailed line drawings; 88 pages.

SS5722



FT-17 / M1917 WWI Tanks Walk Around (SC) Doyle. Introduced in 1917, the Renault FI-17 and its American-built copy, the M1917, revolutionized tank design. The vehicle's rotating turret, rear-engine, driverforward design are characteristics of the most advanced tanks even today. This volume presents a careful study of the details and variations of this innovative vehicle, inside and out. Two-hundred thirty-seven photographs reveal the intimacies of no fewer than 14 of the finest surviving examples of these machines, preserved on three different continents. Nine detailed line drawings supplement the photos and comprehensive captions; 80 pages. SS27023

M41 Walker Bulldog



M41 Walker Bulldog Walk Around (SC) Hughes. The standard US light tank during the early years of the Cold War, the M41 Bulldog was developed as a more powerful successor to the M24 Chaffee. Illustrated with 250 photographs plus color profiles and numerous detailed line drawings; 80 pages.

SS27024 M26 Dragon Wagon David Doyle Walk Around

Squadron Signal M26 Dragon Wagon Walk Around (SC) Doyle. Examines the armored and soft-skin versions of this massive vehicle, and its trailers, through hundreds of color photos and some of the finest restored examples in existence. Illustrated with over 230 photographs; 80 pages. SS27025



M551 Sheridan Walk Around (SC) Hughes. Illustrated by more than 240 photographs plus eight detailed line drawings; 80 pages.

SS27026



Jagdpanzer 38 Hetzer Walk Around (SC) Stapfer. Illustrated with over 200 photographs, plus detailed line drawings, and color profiles; 80 pages. SS27027



M18 Hellcat Tank Destroyer Walk Around (SC) SS27029



Diamond T 4-ton Truck Walk Around (SC) SS27031





M50A1 Ontos Detail in Action (SC) Doyle. 'The Thing' - the meaning of the Greek word 'Ontos' is an apt name for this ungainly vehicle. Originally developed for the Army, which then discarded it, the Ontos was instead adopted by the Marine Corps. Conceived as a potent, lightweight, mobile 6-barrel tank killer to counter a feared mass Soviet armored attack in Europe, the Ontos instead rose to fame in the jungles of Vietnam where its six 106mm recoilless rifles proved deadly against massed infantry attacks, as well as being well-suited for urban assault work. This volume incorporates over 60 period photos chronicling the development and use of the Ontos, plus a further 150 detailed walk-around photos providing an in-depth exploration of this unique fighting machine; 72 pages. **SS5901**



Ferdinand / Elefant Detail in Action (SC) Doyle. In an effort to turn the proverbial lemon, in the form of an unsuccessful Tiger design, into lemonade, Porsche engineers at the behest of the German army, converted the failed chassis into one of the largest and most potent tank destroyer designs of World War II. Initially fielded as the Ferdinand, the vehicles were further modified, and ultimately given a new - and apt - name: 'Elefant.' This new volume explores not only the combat history of both the Ferdinand and Elefant, but also chronicles the development of the ill-fated Porsche Tiger design through 88 period black-andwhite photos. Further enhancing its utility to the enthusiast, 110 full-color photos of the only surviving examples of each type illustrate the nuances of the construction and subsequent wartime modification of these agant tank killers. Also features 16 detailed line drawings as well as 15 masterful color profiles; 80 pages. **SS39001**

DETAIL IN ACTION

K5(E) Railgun Detail in Action (SC) Doyle. The German K5(E) 280mm railgun is arguably the most effective weapon of its type ever developed. Boasting an 11-mile range, the 24 massive guns of this type were deployed from Italy to the Russian Front, and even along the English Channel Coast. Today, only two of these fearsome artillery pieces remain. Through a collection of 55 vintage black and white photos - many of them previously unpublished - and more than 170 photos of the two preserved examples in the US and France, the intricacies of these massive weapons are explored in detail. In addition, the book is augmented by nine illustrations; 80 pages. **SS5902**

MODELING SERIES



Converting and Detailing Plastic Figures (SC) Chilstrom. Renowned miniaturist Bill Chilstrom shares his tips and techniques for bringing injection molded plastic figures to life. His award winning diorama 'In the Footsteps of the Grand Armée' is the focus of this book. Bill detailed and converted 28 figures, three horses,

two wagons and a mule in the building of this diorama. Many step-by-step and in-progress photos accompany the informative text clearly illustrating what to do to really enhance stock plastic figures. All color; 64 pages. SS6097

& Markings of WWII (SC) Mesko. This book attempts to give a broad overview of the various schemes and identifications used on U.S. military vehicles from 1941-1945. Illustrated with 177 b/w photos, 27 color drawings; 64 pages. \$\$6090



ARMOR SPECIALS US Armor Camo & Markings of



Tank Warfare on Iwo Jima (SC) Harper. A small section devoted to Japanese tanks is also included.133 photos (many never before published), 14 vehicle color plates, 12 color movie stills and excerpts from official documents; 96 pages. SS6096



US Infantry-Vietnam (SC) Mesko. Includes an overview of operations in Vietnam from the first US involvment to US withdrawal. Also covers weapons and equipment. 108 photos, 51 detail drawings, 4 maps, 14 full color drawings; 50 pages. SS3006



LRRP's in Action Vol.1 (SC) Burford. These small units penetrated deep behind enemy lines to gather information on enemy base camp locations. SS3011 US Airborne in Action (SC) Thompson. Over 100 photos, 40 detail drawings, 16 color drawings; 50 pages. SS3010





US Destroyers in Action Part 2 (SC) Adcock. This title covers the development and operational service of the Farragut, Porter, Mahan, Fanning, and Craven class destroyers. Illustrated with approximately 100 photos, b/w line drawings, and 6 color profiles; 50 pages. SS4020



Gato-Class Submarines in Action (SC) Stern. More than 100 b/w photos, 6 color profiles, line drawings and color covers; 20 color photos, up-to-date information, where the surviving vessels can be viewed. SS4028



Japanese Light Cruisers of WWII in Action (SC) Patton. These fast ships, carrying seaplanes and heavy torpedo armament, generally were used as flagships for destroyer flotillas and submarine squadrons. Of these, 9 were sunk by Allied submarines, 11 were sunk by US aircraft, 2 were sunk by US torpedo boats or destroyers, and 3 were still afloat at the end of the war. Includes never before published photos, 90 b/w photos, 6 color profiles, line drawings, color covers; 58 pages. SS4025

WARSHIPS IN ACTION



US Subchasers In Action (SC) Connelly. During WWI, German U-boats took a heavy toll on merchant and military ships. This book takes a detailed look at US Sub Chasers with more than 100 photographs, color profiles and detailed line drawings; 52 pgs. SS4033

US 110' Subchasers In Action®

PT Boats in Action (SC)

Doyle. American Patrol Torpedo - or PT - boat crews served valiantly in every theater during WWII. From the Aleutians to the Mediterranean, these men harassed enemy shipping, launched attacks against much more formidable warships, rescued downed air crews, and spirited General Douglas MacArthur to safety from Corregidor Island in March of 1942. PT boats also laid mines and smokescreens, coordinated air-sea rescue actions, and conducted intelligence and raiding operations. This volume chronicles the evaluation, use, and eventual destruction of the US PT boat fleet through 180 photographs, many of them color. Coverage includes ELCO, Higgins, and Huckins boats; 64 pages. **SS4034**

SHIP SPECIALS

U-Boat War (SC) The story of Hitler's U-Boat fleet operations from 1939 to 1945. Provides an extensive collection of photographs and color paintings of the men, submarines and insignia of the Uboat fleet. Includes appendices, 8 pages in color. 64 pages. SS6078



SHIP SPECIALS USS Tennessee in World War II (SC)

Simmons. Commissioned in June of 1920, the US battleship Tennessee saw service in some of the most crucial and dramatic battles in the Pacific Theater of WWII. Docked on Pearl Harbor's Battleship Row on 7 December 1941, her crew manned anti-aircraft guns and fought back as bombs ripped through her deck. The year 1944 saw the



Tennessee take part in battle after battle (including Surigao Strait, the last battleship vs battleship action in naval history) as US forces worked their way towards the Japanese Home Islands. In 1945 she took part in the attack on Iwo Jima. Enriched with exclusive, eye-witness accounts from members of her crew, chronicles the dramatic career of one of America's most battle-tested warships with over 200 photographs, color profiles, and detailed line drawings; 80 pages. **SS6094**

US Navy Flying Boats and Amphibians in WWII (SC)



Adcock. Soon after the early aviation pioneers learned to fly, their attention turned to water. It was more abundant than land and presented a vast landing area. With nearly 200 photographs, color profiles and detailed line drawings, this special Squadron/ Signal book looks at the various flying boats and

amphibians and the contribution they made; 80 pages. **SS6095**



US Navy Ships Camouflage WWII, Part I Destroyers and Destroyer Escorts (SC) Adcock. When WWII ended in 1945, the fleet was restored to Standard Navy Gray to await the next revolution in deceptive paintwork. Illustrated with 116 b/w photos, 2 color photos, and over 30 color renderings/profiles; 68 pages. SS6099



USS Alabama on Deck (SC)

Adcock. Now a museum ship berthed at Mobile's Battleship Memorial Park in her namesake state, she is a unique floating memorial and tribute to the men who crewed her. Additional illustrations include 73 b/w and 85 color photos, detailed line art and color cover paintings; 80 pages. SS5601



USS Lexington (CV-16) On Deck (SC) Adcock. The USS Lexington joined the fleet in 1943 and saw extensive action throughout WW2. Post war modernization allowed her to continue in service until 1991! Extensive color and b/w photography, full color aircraft and ship paintings, 40 pages of color; 80 pages.





Ohio-Class SSBN on Deck (SC) Goodall. Since its inception in 1960, strategic deterrence has been the sole mission of the fleet ballistic missile submarine (SSBN), which provides the nation's most survivable and enduring nuclear strike capability. Unprecedented bow-tostern look, this critical US weapon system more than 200 color, b/w photos, line drawings and 8 color profiles; 80 pgs. **SS5603**

USS Pampanito



USS Pampanito On Deck (SC) Stern. The USS Pampanito, a Balao-class fleet submarine, was Doyle. More than 270 color photos, 88 pages. commissioned in late 1943 and went into action in the Pacific \$\$5607 at the height of WWII. Illustrated with 265 highly detailed photographs, color profiles, and intricate line drawings; 80 pages.

SS5604



ELCO 80 PT Boat On Deck (SC) Doyle. Say "PT Boat" and the image that comes to mind is that of the 80-foot patrol torpedo boat built by the Electric Launch Company (ELCO) in Bayonne, New Jersey. Packed with over 200 photographs, plus color art and profiles; 80 pages.

SS5605 Nimitz Class Aircraft Carriers



Nimitz Class Aircraft Carriers On Deck (SC) Goodall. The largest naval vessels in the world are the Nimitz-class super aircraft carriers. USS Carl Vinson was the first to launch air attacks as part of Operation Enduring Freedom in Afghanistan. In the mid-1990s USS Theodore Roosevelt supported NATO air strikes against Bosnian Serbs during fighting in former Yugoslavia. USS Abraham Lincoln backed up Operation Iraqi Freedom and Enduring Freedom in Afghanistan in the early 2000s. Illustrated with more than 300 photographs, plus color profiles and detailed line drawings; 80 pages. SS5606



Iowa-Class Battleships on Deck (SC)



Higgins PT Boat On Deck (SC) Doyle. Illustrated with over 120 photographs; 80 pages. SS26008



USS Kidd On Deck (SC) Doyle. Illustrated with 234 photographs; 80 pages. **SS26010**



USS Massachusetts On Deck (SC) Doyle. Illustrated with 286 photographs, and color profiles; 96 pages. SS26011



USS Arizona Squadron at Sea Series (SC) Doyle. Packed with rare photographs unearthed from sources throughout the country, this volume follows the history of one of America's most iconic naval vessels. Glimpse the life of the crews that manned her and follow her through the maintenance and refits that dramatically changed her appearance. Describes the horrific explosion that ripped through her hull on the dark morning of 7 December 1941, and a series of unique photos document the years of wartime salvage work aboard the sunken battleship. Chronicled too is Arizona's ongoing service as a tomb and memorial to the 1,177 men who perished with her. A testament to the Arizona and her men brought to you as you've never seen them before. Illustrated with 288 photographs, 5 detailed line drawings, 7 color illustrations: 120 pages.

SS34001



USS North Carolina Squadron at Sea (SC) Doyle. Laid down in 1937 and launched on 9 April 1941, the USS North Carolina was the first new construction battleship to enter service during WWII and took part in every major naval offensive in the Pacific Theater, becoming the most decorated US battleship of WWII. After a brief stint post war as a training ship, the North Carolina - dubbed in the press as the 'Showboat' - was laid up in reserve, before her eventual movement to Wilmington, in her namesake state, and her preservation as a war memorial. This volume traces the history of the North Carolina, photographically documenting the evolution of armament and electronics that elevated her pre-Pearl Harbor design to its peak - bristling with guns to counter the threat of kamikaze attack. Generously illustrated with more than 330 photographs - many of them color, detailed line drawings and 11 color profiles that document the various camouflage schemes worn by both the ship and her scouting aircraft.; 136 pages. **SS34002**



USS Texas Squadron At Sea (SC) Doyle. The USS Texas proudly saw combat in both World Wars I and II, and since 1948 has been preserved in her namesake state as memorial to American servicemen. Armed with 10 14-inch guns and displacing 32,000 tons, the battleship is still a formidable sight as she enters into her second century. This expansive volume tells the tale of the Texas and her crew. Loaded with black-and-white and color photos not only showcase the construction, numerous voyages, modifications, combat action, and ultimate preservation of the ship, but also show the vessel as a home, office, and workshop for the men who served as her crew. These historic images are augmented with five line drawings illustrating her key configurations, as well as nine color profiles depicting her aircraft, as well as the many camouflage schemes she wore. Illustrated with over 1930s until today. The book's dedication to the firefighters 350 photographs; 152 pages.

SS34003



USS Saratoga Squadron at Sea (SC) Doyle. Faced with the restrictions of the Washington Navy Treaty, the US Navy had a choice: either scrap their partially complete, battlecruiser Saratoga, which along with her sister ship Lexington were intended to be the most powerful in the world; or convert them into an aircraft carriers. Having survived two torpedo hits by Japanese subs, as well as repeated bomb and Kamikaze strikes, at war's end she took part in the huge Magic Carpet operation that transported thousands of US servicemen back to the mainland. Deemed too old for the victorious Navy's postwar needs, her final duty was to test the survivability of an atomic blast. Still afloat after the first nuclear explosion, she was sent to the bottom of Bikini Atoll by the second of the blasts, and still rests there today, where she welcomes the occasional scuba diver. All these exploits, as well as others, including Saratoga's numerous refits, are presented and profusely illustrated with 383 color and b/w photos capturing the ship, her crew and aircraft supplemented by 11 line drawings and 25 color renderings; 160 pages.

SS34004

NON-MILITARY VEHICLE



American Fire Apparatus Volume 1: Pumpers (SC) Mutza. Organized companies of firefighters first appeared in Colonial America and were mobilized, like local militias, on a volunteer basis. Like military equipment, firefighting apparatus evolved in tandem with technological advances. This volume traces the development of the chief and best-known fire-fighting apparatus 'the pumper or fire engine' from hand-drawn pumps, through horse-drawn vehicles in the 19th Century to the advanced fire trucks of the 21st Century. Chapters introduce the early years of the pumper, follow its motorization, and then, decade-by-decade, meticulously review the evolution of the fire truck from the who gave their lives on 9-11 serves as a reminder that the nation's First Responders stand guard together with the armed forces on the front lines of our defense. Illustrated with over 300 photographs; 96 pages.

SS6401



American Fire Apparatus: Volume 2 Aerial Equipment (SC) Mutza. As the urban skyline rose and horse power gave way to motorization, the need increased for better ladders and other aerial equipment to fight fires in tall buildings. Ladders grew longer and the trucks that carried them evolved. Improved aerial ladders were fixed to truck beds and new methods were devised to get water and firefighters to building heights. The hundreds of unique and dramatic photos that pack this volume feature fire trucks equipped with a wide spectrum of devices evolved over more than a century, including aerial ladders, elevating platforms, aerial ladder platforms, and water towers. The book illustrates the evolution of the styles and function of the vital 'hook-and-ladder trucks' that are an integral part of fire departments throughout the United States. Containing more than 320 photographs, including rare, historic photos and dramatic color shots; 96 pages. SS6402



GREAT BATTLES

Thermopylae 480 BC: The Most **Unequal Battle in** History (SC) Belezos and Kotoulas. The definitive history of the fabled battle at the pass of Thermopylae. For 2 and 1/2 days Spartan King Leonidas lead his 300 along with a contingent of Thespians against the massive Persian army of



Xerxes I. Amply illustrated with photos, maps and color plates to create a panorama of the men, equipment and the world they fought in. Written in Greece and expertly translated into English, includes glossary; 100 pages.

SS7001

Marathon 490 BC: Athens Crushes Persian



Might (SC) Belezos, Giannopoulos, Kotoulas and Grigoropoulos. The Battle of Marathon is a landmark in world history. Through their victory, the Athenian and Plataean hoplites did not merely saved their cities from destruction, but they also destroyed the myth of the 'invincibility of the Persians and

proved the superiority of their armor, weaponry and tactics. Reveals the causes of the Persian invasion, follows the unknown Marathon runner in his run to announce the victory and relates the captivating myths created by the historical battle that still remain a part of the oral tradition of this epic. Enriched with photographs, maps of the area and tactical battle movements and color illustrations of uniforms. Written in Greece and expertly translated into English. 104 pages. **SS7002**

El Alamein 1942: The Axis Major Defeat in Africa (SC)

After a bloody 12-day battle, the Africakorps was forced to retreat. The soon-to-be-legendary 8th Army had smashed German dreams of dominating North Africa. Enriched with color and b/w photographs, color maps, aircraft and tank profiles and color illustrations of uniforms; 120 pages. English text. SS7003



The Battle of Salamis 480 BC: The 'Wooden Walls' that Saved Greece (SC) Includes the historical

elements of the battle.

father of the great

addresses the lesser-

known details of the

battle to assist in

understanding the

overwhelmingly difficult

conditions under which

the Greek fleet prevailed.

a brief biography of the

victory, Themistocles, and

chapters from the Persian

point of view as well. Also



Enriched with color and b/w photos, maps and tactical movements and color uniform plates; 96 pages. English Text. SS7004

The Battle of Berlin: The Collapse of the 'Thousand-Year' Reich 1945 (SC)

Stavropoulos, Vourliotis, Terniotis, Kotoulas, Valmas, and Zouridis. By the dawn of 1945, the Western Allies had driven back Hitler's last, desperate effort in the Ardennes. However, the Allies' insistence on Germany's unconditional surrender deterred the Germans from making any concession over ending the war - Hitler and the Nazi

faithful saw their only option to be a fanatical Wagnerian stand leaving only Germany's ruins to commemorate the tragedy. Further, it was already clear that another kind of war was right around the corner. Illustrated with color and b/w photographs, color maps, 8 aircraft and 9 armor profiles, and 14 color uniform plates: 128 pages. English text. SS7005

Kursk 1943: The Greatest Tank **Battle in History (SC)** Great Battles of the



beginning of the end for the Third Reich. The elite panzer formations were decimated and would never again reagin their former strength. Nothing could turn the fortunes of the war for the Axis and their Soviet flood was not to be stopped until the ruins of Berlin. Illustrated with color and b/w photographs, color maps, 12 aircraft and 18 armor profiles, and 12 color uniform plates; 136 pages. SS7006

Berlin 1945

World; Kampouris,

Vourliotis, Gedeon,

Zouridis, Theodoratos,

Stavropoulos, Varsamis,

Valmas. In the summer

of 1943, after two years

Front, the Germans were

ready to meet the Soviets

on the decisive battlefield.

The areatest tank battle of

all time proved to be the



Stavropoulos, Terniotis, Valmas, Varsamis, and Vourliotis. The confrontation between Britain's Royal Air Force and Germany's Luftwaffe was the first large scale success against Hitler's aggression, and it is one of the defining episodes in the long history of the British nation. Enriched with color and b/w photographs (including 10



page Photographic Tribute to the Battle of Britain), color maps, 50 aircraft profiles and 9 color uniform illustrations. A fitting tribute and record of "their finest hour"; 160 pages. **SS7007**

D-Day 1944: The Allied Invasion of Normandy (SC)



Stavropoulos, Vourliotis, Papadopoulos, Valmas, Kampouris and Terniotis. The Allies launched their invasion of German-occupied Europe after 18 months of preparation - three and one half million troops. more than ten thousand warplanes and an armada of nearly five thousand

sea-going vessels stormed 'Fortress Europe' and opened the long awaited second front against Hitler's Reich. Includes the Allied bid for air superiority, the landings, a photo file, opposing commanders and forces, portable weapons and many lesser known details of the making of the new Western Front. Amply illustrated with more than 60 b/w and 30 color photos, 6 maps, 21 equipment profiles, 13 uniform plates and additional specially commissioned art: 136 pages. **SS7008**

MILITARY ESSAYS

Byzantine Armies 325 AD-1453 AD (SC)

Military Essays; Belezos. Reveals the checkered historical course of the of total war on the Eastern empire and its military organization, which was compelled to defend its territories and culture against a horde of belligerent enemies from without and from the state's own bureaucracy within. Illustrated with 75 photos, maps and



additional graphics plus 13 full color plates. Also includes a glossary of Greek and Latin terms; 136 pages. English text. SS8001



B-52G/H Stratofortress in Action (HB) Katz. More than any other weapon system, the legendary Boeing B-52 Stratofortress is the embodiment of American military power in the popular imagination. Boeing delivered the last B-52 in 1962. Five decades later, the B-52 remains in front-line service, most recently taking part in combat over Afahanistan and Iraq. Even more amazingly, current plans are for the B-52 to remain in service until 2040. This volume is packed with historical and recent photographs of the B-52, including some that were released by the US Air Force and its contractors just for use in the book. As part of his research, the author flew on a B-52 training mission, and the flight report in this volume is the most detailed description of a B-52 mission ever published. Illustrated with color profiles, detailed line drawings and over 190 photographs; 88 pages. SS50207



B-17 Flying Fortress in Action (HB) Dovle. The B-17 Flying Fortress dropped more bombs than any other US aircraft in WWII and is arguably the iconic bomber of that epic conflict. First flown in 1935, the aircraft was repeatedly modified, upgraded, and perfected in response to combat experience. Also highlights the roles played by individual aircraft and their crews, such as the 'Memphis Belle', which completed 25 missions over enemy territory; 'Stage Door Canteen', christened by Winston Churchill's daughter; and 'All American', which demonstrated the incredible toughness of the Flying Fortress by returning safely to base despite having its tail nearly sheared off by a Messerschmitt. An unmatched, lavishly illustrated account of one of the greatest warplanes of all time, a must have! Perfect binding. Illustrated with 200 vintage photographs, plus color profiles and detailed line drawings; 80 pages. SS50219



TBF/TBM Avenger In Action (HB) Doyle. Designed by Grumman as a replacement for the Douglas TBD Devastator, Avenger production began prior to the Japanese attack on Pearl Harbor and it remained in US Navy service until October 1954. This all-new edition is filled with 212 vintage photos, 29 of them in color, these are augmented by five color profiles and a like number of detailed line drawings; 80 pgs. SS50225



B-29 Superfortress In Action (HB) Doyle. While most often remembered as the type of aircraft that dropped the first atomic bomb, and for its extensive use in bombing Japan during the latter stages of WWII, the B-29 also saw plenty of combat during the Korean War. Individual sections of the book explore the interior and armament of these bombers, as well as their production by Boeing, Martin, and Bell. Illustrated with 248 photographs, 90 of them in full color; 88 pages.

SS50227



B-24 Liberator in Action (HB) Doyle. Lavishly illustrated with almost 250 authentic wartime photos, including over 80 in vintage color, with supplemental drawings and color profiles. Experimental versions, classic bombers, freighters, tankers, reconnaissance birds - even the rare gunship version - are shown; 88 pages. **SS50228**



F3D Skyknight in Action (HB) Carey. The US Navy's first all-weather jet fighter, the Douglas F3D Skyknight, traces its origins to 1945, when the Navy began studies for a jet-powered, carrier-based night fighter. This book chronicles the development and operational history of the Navy fighter from conception to duty in the Korean War, to service as a night interceptor in Vietnam, where it was an ECM/ELINT platform, jamming North Vietnamese missile and anti-aircraft sites. Illustrated with more than 196 photos and 10 line drawings; 80 pages.

SS50229



S-3 Viking In Action (HB)

Elward. The Lockheed S-3 Viking was developed in the late 1960s to serve as a dedicated carrier-based anti-submarine aircraft. . It also provides an overview of some of the more significant variants that were studied, but never fully pursued, such as the Carrier On-Board Delivery (COD) and dedicated (KS) refueling variants. It also discusses the aircraft's role in Operation Desert Storm and how the lessons learned from that conflict impacted the Vikings' mission during the latter part of the 1990s and early 2000s. Illustrated with 186 photographs, line drawings, and numerous color profiles; 80 pages. **SS50230**

AIRCRAFT SPECIALS

Aces & Wingmen II Volume 1 (HB)

Morris. Includes chapters covering thirteen different Fighter Squadrons, and histories of the 353rd and 354th Fighter Groups. Also lists Aces with the 355th Fighter Group. Over 600 b/w and 31 color photos, with 56 color drawings; 256 pages. **SSOOO 1**





A-4 Skyhawk Walk Around (HB) Drendel. The carrier-capable Douglas A-4 Skyhawk is one of the most successful modern combat aircraft. During the 25 years in which the A-4 was on the production line, 2,960 Śkyhawks were built. A relatively light aircraft, with a maximum takeoff weight of 24,500 pounds and with a top speed exceeding 600 mph, the Skyhawk was operated not only by the US Navy and Marines but also by the air forces of Australia, New Zealand, Israel, Malaysia, Argentina, Singapore, Brazil, Indonesia, and Kuwait. Introduced in 1956, Skyhawks played major roles in the Vietnam War, the 1973 Arab-Israeli October War, and the Falklands/Malvinas Conflict in 1982. Navy retired the A-4 as recently as 2003. Meanwhile, the battle-tested warrior continues to serve today other militaries around the world. Illustrated with 205 photographs, color profiles, and detailed line drawinas: 80 pages. SS65041



B-29 Superfortress Walk Around (HB) Savage. Equipped with pressurized cabins for high-altitude effectiveness, with an electronic fire-control system, and remote-controlled machine gun turrets, the B-29 Superfortress was the most advanced aircraft of WWII. Two of those planes, the Superfortresses Enola Gay and Bockscar, dropped the atomic bombs on Hiroshima and Nagasaki in 1945. Yet over all, the B-29 received less notoriety than its storied elder siblings, the B-17 and B-24, perhaps because its service areas - the China, Burma, and India Theater and the Western Pacific - were less publicized than was the war in Europe. Designed by Boeing, nearly 4,000 B-29s had been turned out by the time production ended in 1946. A unique look at the plane that ushered in the nuclear age. Illustrated with over 210 photographs; 80 pages.

SS65054

KC-135 Stratotanker



KC-135 Stratotanker Walk Around (HB) Katz. Many air forces can conduct missions such as air superiority and ground attack, but only the US Air Force has truly global reach. For more than five decades, the essential enabler of this global reach has been the KC-135 Stratotanker. Unarmed and unglamorous, the KC-135 has been one of the most successful and enduring aircraft in US Air Force history. Primarily based on the author's extensive access to operational KC-135 aircraft on the ground and in flight, this book contains the most detailed photographic documentation of the KC-135 inside and out that has ever been published, as well as color profiles of the KC-135R in the markings of every major USAF command that has operated that variant. Illustrated with 240 photographs, detailed line drawings and color profiles; 88 pages. SS65066



F9F Cougar Walk Around (HB) Neubeck. The first swept-wing carrier-based fighter aircraft built for the USN, the F9F Cougar marked a major leap forward in the area of naval aircraft design from its predecessor, the straight-wing Grumman F9F Panther. The prototype of the first version of the Cougar, the F9F-6, first took to the air in September of 1951, six months after contract award. There were several different models of the Cougar. The F9F-6 was followed by the F9F-7 and F9F-8. addition there were also two reconnaissance models - the F9F-6P and the F9F-8P - as well as a two-seater trainer version, the F9F-8T. The contemporary photographs in this volume illustrate in detail the differences between the various Cougar models, making use of over a dozen display aircraft located in museums across the United States as well as one Cougar on display in Argentina. Grounded in solid historical research, the book also features historical images from the photo archives of both the U.S. Navy and Grumman, and also includes rare photos of F9F Cougar in its final days, serving as a target drone for later generations of fighters. Illustrated with over 230 photographs; 80 pages. SS65068

B-26 Marauder Dwid byte Walk Around Control of the second second

B-26 Marauder Walk Around (HB) Doyle. Exclusive photos illustrate the rarely seen inner workings and outer features of the B-26G, with additional coverage of the B-26, B-26B, and B-26C. Initially dubbed "the Widowmaker" due to its high wing loading and high landing speeds. More than 220 photographs, plus numerous detailed line drawings and color profiles. SS65069



Heinkel He 111 Walk Around (HB) Mackay. Although produced in large numbers and exported to many countries before and during the war, few examples survive today. This volume features detailed photographic images of the He 111P-1 restored and preserved in Norway, and the He 111H-20 on display in the RAF museum. Illustrated with 228 photos, detailed line drawings and color profiles; 88 pages. \$\$65070



B-25 Mitchell Walk Around (HB) Doyle. Soaring into the pages of history with Jimmy Doolittle's famed Tokyo Raiders, the North American B-25 Mitchell was the most-produced American medium bomber of World War II. Profusely illustrated, this volume examines the nuances of the external features and explores the inner workings. Enhancing color photographs, taken on the ground and air, 4 vintage blk/wht images, 14 line drawings. Illustrated with more than 200 photographs; 80 pages. **SS65071**





Boeing 737 At The Gate (HB)

Tidwell. Few commercial aircraft have enjoyed a production run that spans more than four decades and service in nearly every nation on Earth. The Boeing 737 has such a track record. Takes the reader on a journey through the continuing story of the 737 from the first aircraft to roll of the production line in the 1960s, to the very latest airframes being delivered to major airlines today. The book also offers the reader a look at some of the most interesting 737 liveries as well as parts of the aircraft that few people get to see. Also covered are business jets, cargo carriers, and military versions of the 737 that are less familiar even to the thousands of air travelers who have flown aboard this legendary Boeing liner. Illustrated with over 220 photographs; 96 pages. **SS68002**

COMBAT CHRONICLES

Combat Chronicles of the Black Widow (HB)

Thompson. Dramatic firsthand accounts by the pilots, radar observers, and gunners who saw combat aboard the first dedicated US night fighter in WWII fill this unique volume, the first in Squadron/Signal's new Combat Chronicles series that brings you actionpacked, eye-witness war stories, interviews, and firsthand reminiscences from the front lines. In this volume



we hear from the crews who rode the Black Widow into battle all over the world. The outbreak of war in Europe left no room for doubt that the United States needed quickly to come up with a specialized night fighter to confront the totally new face of air combat. Northrop was able to come up with designs for a new, specially designated night fighter and a contract for what was to become the P-61 Black Widow was signed on 11 January 1941. After the first production aircraft rolled off the assembly line in October 1943, the P-61 went on to operate in the European, Pacific, China-Burma-India, and Mediterranean Theaters of the war. Experience WWII as it was seen by the men in the cockpit of this history-making radar-equipped night interceptor. Illustrated with 152 photographs; 112 pages. **SS7701**

COMBAT CHRONICLES

B-29 Superfortress Combat Chronicles (HB)



Hilton. With its pressurized cabins for high-altitude operation, its long range, large bomb capacity, and turbosupercharged engines, the B-29 Superfortress was the epitome of cutting edge American air power during WWII. The author, a photographer with the 40th Bomb Group and a veteran of 83 Superfortress

missions, offers a first-hand, eye-witness account and shares his experiences on reconnaissance and bombing missions, flying the 'Hump' and taking off from an advanced base in Sichuan, China, to pummel Japanese occupation forces throughout Asia. Then in early 1945, the 40th BG moved to newly-liberated Tinian from which they took part in the final chapter of WWII - the aerial assault on the Japanese home islands. Introduces you to fellow veterans of the 40th who relate their no-less extraordinary experiences - ditching in the Bay of Bengal, lost in the Siberian Taiga, downed behind enemy lines in China, taken prisoner after bailing out over Tokyo. Personal accounts from the men who served on the front lines of the air war in the Pacific, a unique primary historical source and a truly exciting read. Illustrated with over 100 photographs; 120 pages. SS76002

Aeroscouts in Vietnam Combat Chronicles (HB)

Mutza. During the late 1950s and early 1960s, U.S. Army planners sought to increase the Army?s helicopter force. The Army developed new tactical doctrine using helicopters - the airmobile concept which was based largely on air cavalry units. Such units were descendants of the US Cavalry, which had operated as light, horse-mounted infantry.



Air cavalry troopers were, in essence, horse soldiers, and helicopters were their steed. True to their proud and colorful heritage, the Air Cavalry not only employed tactics used by their forefathers of the Indian wars, they embraced their culture as they deployed in the grueling conflict in Indochina. Packed with more than 30 action packed, often hair raising first-hand accounts of helicopter scout combat in Vietnam, this latest addition takes you into the thick of the action. Besides being exciting reading, these personal recollections by dozens of the fighters themselves provide invaluable, primary source historical coverage of one of America's epic conflicts as experienced by frontline helicopter scouts. Illustrated with over 160 photographs; 136 pages. **SS76003**



German Armored Cars in Action (HB) Doyle. Germany began developing its heavy armored cars well before the outbreak of World War II. Germany's early six-wheel armored cars were based on 6x4 truck chassis, and their off-road mobility was limited. These vehicles soon gave way to an expanding series of eight-wheel drive/eight-wheel steer vehicles fitted with a variety of armament. In time these too were supplanted by even larger armored cars incorporating refinements based on lessons learned from the vehicles' field experience, such as heavier armor, armament, and an air-cooled engine. Packed with more than 220 period photographs, this book chronicles the development and deployment of Germany's six and eight-wheeled armored cars before and during WWII; 80 pages. SS52050



M151 MUTT in Action (HB)

Doyle. The M151 was intended to be a lightweight, highmobility replacement for the M38A1, itself a successor to the famed World War II jeep. Dubbed the Military Utility Tactical Truck or "MUTT" by the military - GIs almost universally referred to the vehicle as a "jeep." The series' service life spanned more than 40 years and four manufacturers, and the vehicles saw service everywhere the US GI was deployed. This volume chronicles the development and field use of the M151 series in Europe, the Middle East and, of course, there is extensive coverage of the vehicles' service in Vietnam. The photos, many previously unpublished, are augmented by seven line drawings. Illustrated with 220 photographs; 80 pages.

SS52051



FT-17 / M1917 WWI Tanks Walk Around (HB) Doyle. This volume presents a careful study of the details and variations of this innovative vehicle, inside and out. Two-hundred thirty-seven photographs reveal the intimacies of no fewer than 14 of the finest surviving examples of these machines, preserved on three different continents. Nine detailed line drawings supplement the photos and comprehensive captions; 80 pages. SS67023



M41 Walker Bulldog Walk Around (HB) Hughes. The standard US light tank during the early years of the Cold War, the M41 Bulldog was developed as a more powerful successor to the M24 Chaffee. Illustrated with 250 photographs plus color profiles and numerous detailed line drawings; 80 pages.



M26 Dragon Wagon Walk Around (HB) Doyle. This volume examines armored and soft-skin versions of this massive vehicle, and its trailers, through hundreds of color photos and some of the finest restored examples in existence. Illustrated with over 230 photographs; 80 pages. SS67025



M551 Sheridan Walk Around (HB) Hughes. First deployed in combat in Vietnam, the M551 Sheridan is the first US tank to be fully amphibious and also airborne capable. Photos of the sub-variants of the M551 Sheridan, such as the 'Product Improvement Program,' A1, and VISMODs round out this profile of the versatile historic tank. Illustrated by more than 240 photographs plus eight detailed line drawings; 80 pages.

SS67026



Jagdpanzer 38 Hetzer Walk Around (HB) Stapfer. Pictures of Jagdpanzer 38 vehicles in Bulgarian and Swiss service appear here for the first time, and the SK-23 steam-powered recovery vehicle based on the Hetzer is also documented along with extensive coverage of the G 13, including the first-ever color photographs of that variant's interior. Illustrated with over 200 photographs, plus detailed line drawings, and color profiles; 80 pages. SS67027



M18 Hellcat Tank Destroyer Walk Around (HB) Doyle. Engine and drive train, driver's compartment, weapons and sighting systems, and stowage - both interior and exterior - are all carefully presented. Illustrated with 230 color photographs, 5 black and white photographs, 5 line drawings, and 4 profiles; 80 pages. SS67029



Diamond T 4-ton Truck Walk Around (HB) Doyle. As it became increasingly apparent that the United States could not avoid getting involved in World War II, the US Army stepped up its efforts at modernization and industrial mobilization. Toward this end, the Quartermaster Corps ordered a series of 4-ton 6x6 trucks from Chicagobased Diamond T Motor Car Company. The chassis of the artillery prime mover was adapted for use a dump truck, a long-wheelbase truck to transport bridging equipment, and what would become the US Army's standard medium wrecker during WWII. The design of the Diamond T was so successful that it is widely recognized as the forerunner of the Army's post-WWII M-series trucks, which were utilized for 50 years. For this book, the finest preserved examples of the classic Diamond T were sought out and extensively photographed, resulting in a volume packed with color photographs auamented by five period black-and-white photos. Illustrated with 232 photographs; 80 pages. SS67031



Ferdinand / Elefant Detail in Action (HB) Doyle. In an effort to turn the proverbial lemon, in the form of an unsuccessful Tiger design, into lemonade, Porsche engineers at the behest of the German army, converted the failed chassis into one of the largest and most potent tank destroyer designs of World War II. Initially fielded as the Ferdinand, the vehicles were further modified, and ultimately given a new - and apt - name: 'Elefant.' This new volume explores not only the combat history of both the Ferdinand and Elefant, but also chronicles the development of the illfated Porsche Tiger design through 88 period black-and-white photos. Further enhancing its utility to the enthusiast, 110 full-color photos of the only surviving examples of each type illustrate the nuances of the construction and subsequent wartime modification of these giant tank killers. Also features 16 detailed line drawings as well as 15 masterful color profiles; 80 pages. SS79001



USS Arizona Squadron at Sea Series (HB) Doyle. Packed with rare photographs unearthed from sources throughout the country, this volume follows the history of one of America's most iconic naval vessels. Glimpse the life of the crews that manned her and follow her through the maintenance and refits that dramatically changed her appearance. Describes the horrific explosion that ripped through her hull on the dark morning of 7 December 1941, and a series of unique photos document the years of wartime salvage work aboard the sunken battleship. Chronicled too is Arizona's ongoing service as a tomb and memorial to the 1,177 men who perished with her. A testament to the Arizona and her men brought to you as you've never seen them before. Illustrated with 288 photographs, 5 detailed line drawings, 7 color illustrations; 120 pages. SS74001



USS North Carolina Squadron at Sea (HB) Doyle. Laid down in 1937 and launched on 9 April 1941, the USS North Caroling was the first new construction battleship to enter service during WWII and took part in every major naval offensive in the Pacific Theater, becoming the most decorated US battleship of WWII. This volume traces the history of the North Carolina, photographically documenting the evolution of armament and electronics that elevated her pre-Pearl Harbor design to its peak - bristling with guns to counter the threat of kamikaze attack. Records not only the ship's wartime operations that earned her 12 battlestars, but also her crew and their work and recreation. Generously illustrated with more than 330 photographs - many of them color, detailed line drawings and 11 color profiles that document the various camouflage schemes worn by both the ship and her scouting aircraft.; 136 pages.

SS74002

SQUADRON AT SEA



USS Texas Squadron At Sea (HB) Doyle. Armed with 10 14-inch guns and displacing 32,000 tons, the battleship is still a formidable sight as she enters into her second century. This expansive volume tells the tale of the Texas and her crew. Loaded with black-and-white and color photos not only showcase the construction, numerous voyages, modifications, combat action, and ultimate preservation of the ship, but also show the vessel as a home, office, and workshop for the men who served as her crew. These historic images are augmented with five line drawings illustrating her key configurations, as well as nine color profiles depicting her aircraft, as well as the many camouflage schemes she wore. Illustrated with over 350 photographs; 152 pages.

SS74003



USS Saratoga Squadron at Sea (HB) Doyle. When commissioned in 1927, Saratoga's decks teamed with fabric-covered biplanes, and the ship and her crew projected US military power far beyond the nation's shores. So impressive was Saratoga that she and her crew served as a backdrop for two major Hollywood motion pictures. In 1941 she was called to do what she was built for, and for the next four years plied the Pacific, her biplanes replaced by the famed Wildcats, Hellcats, Dauntlesses and Avengers that prosecuted the war against Japan. Having survived two torpedo hits by Japanese subs, as well as repeated bomb and Kamikaze strikes, at war's end she took part in the huge Magic Carpet operation that transported thousands of US servicemen back to the mainland. Still afloat after the first nuclear explosion, she was sent to the bottom of Bikini Atoll by the second of the blasts, and still rests there today, where she welcomes the occasional scuba diver. Profusely illustrated with 383 color and b/w photos capturing the ship, her crew and aircraft supplemented by 11 line drawings and 25 color renderings; 160 pages. SS74004



Higgins PT Boat On Deck (HB) Doyle. This illustrated volume showcases details of Higgins PTs preserved in Massachusetts, Texas, even an operational example in Oregon - the sole operational WWII PT . More than 80 color photographs, these preserved vessels are augmented by nearly 40 vintage photos illustrating rarely seen fine details of the wooden shipbuilders' craft. Illustrated with over 120 photographs; 80 pages.

SS66008



USS Kidd On Deck (HB)

Doyle. Documented in color close-up photos are the details of the exterior of the ship, as well as her interior spaces, where destroyer sailors lived, fought, and some died, painstakingly restored and preserved today in Baton Rouge by the Louisiana Naval War Memorial Commission. Illustrated with 234 photographs; 80 pages. SS66010



USS Massachusetts On Deck (HB) Doyle. This book documents the warship through an impressive collection of images and data tables revealing the ship the ship and how it functioned as a fighting machine as well as a home to her almost 1,800-man crew. Illustrated with 286 photographs, and color profiles; 96 pages. SS66011

OLIVER PUBLISHING

Viking Summer: 5.SS-Panzer-Division in Poland



Our first title, Viking Summer: 5.SS-Panzer-Division in Poland, 1944, includes:

A general history of the period and detailed accounts of the Kovel and Warsaw battles. 13 pages of colour artwork by Dennis Oliver depicting over 40 different vehicles including Sdkfz 251

half-tracks, Pzkw IV and Pzkw V Panther tanks and others. Many never before published black and white photographs. Detailed tables showing vehicle types and allocations. Comprehensive explanation of vehicle markings and numbering systems.

ADH027

STUG: Assault Gun Units In The East



The second title in this series, STUG: Assault Gun Units In The East, Bagration To Berlin, is the first volume in a two part set and includes: Histories of the German Army's assault gun units, volume two will contain Waffen SS, Luftwaffe and obscure units. Colour artwork by Dennis

Oliver depicting over 40 different vehicles with details of unit markings and insignia. Explanation of vehicle characteristics and production and field modifications. Campaign maps and diagrams ADH028

Fortress: German Armour In The Defence Of Sicily



A detailed history of the units involved and their actions in Sicily by well known author and researcher Claude Gillono 13 pages of colour artwork by Dennis Oliver depicting over 30 different vehicles and guns including half-tracks, assault guns, Pzkw III, Pzkw IV, Pzkw VI Tiger

tanks and the deadly 88mm Flak gun. Black and white archive photographs, many never before reproduced Campaign map. Detailed tables showing vehicle types and allocations. Illustrations of unit insignia and vehicle markings.

ADH029



Project LTVs Amtanks: LVTA1,

LVT(A)4, LVT(A)5 (SC) Information from factory blueprints, tech manuals and bulletins, photos, personal narratives and exhisting vehicles. Tips on building, detailing and weathering are provided throughout. Figure sculpting and painting pointers provided by Bill Chilstrom. LPP008



Project LTVs Amtracks: LVT2 and LVT(A)2 (SC) Models, photos and layout with tips on building, detailing, painting and weathering. LPP009



Model Tech Manual LVT2 and LVT(A)2 (SC) LPP010



Model Tech Manual LVT(A)1, LVT(A)4, LVT(A)5 (SC)



LVT Line Drawings: LVTA1, LVT2, LVTA2, LVTA4 (SC)
LPP012



Airframe & Miniature No 2: The Hawker Typhoon inc. The Hawker Tornado by Richard A. Franks. 128 pages packed with vital information that no active aviation modeller should be without.

- 40+ pages of technical information
- 20+ pages of walkaround images and technical diaarams
- 5+ pages of camouflage and markings
- 25+ pages of model builds and modelling information
- 200+ photographs including wartime images
- Colour side views and four-views by Richard Caruana
- 3D isometric views of all variants by Jacek Jackiewicz
- 1/72, 1/48 and 1/32 scale full kit builds
- A full set of fold-out 1/48 scale plans

ADH015



Airframe & Miniature No.3 The Focke-Wulf Fw 190D and Ta 152

by Richard A. Franks. 160 pages packed with vital information that no active aviation modeller should be without.

- 60+ pages of technical information
- 20+ pages of walkaround images and technical diaarams
- 5+ pages of camouflage and markings
- 20+ pages of model builds and modelling information
- 200+ photographs including wartime images
- Colour side views and four-views by Richard Caruana
- 3D isometric views of all variants by Jacek Jackiewicz
- 1/72, 1/48 and 1/32 scale full kit builds
- A full set of fold-out 1/48 scale plans

ADH017



Airframe & Miniature No 4: The Hawker Tempest This fourth book in our much acclaimed series contains a massive 128 pages packed

with vital information that no active modeller and Tempest enthusiast should be without.

- Over 40 pages of technical information
- Over 20 pages of walkaround images and technical diagrams
- Over 5 pages of camouflage and markings
- Over 25 pages of model builds and modelling information
- Over 200 photographs including wartime images
- Colour side views and four-views by Richard Caruana
- 3D isometric views of all variants by Jacek Jackiewicz 1/72 and 1/48 scale full kit builds by Libor Jekl and
- Steve Evans A full set of fold-out 1/48 scale plans is included

ADH026







Captured **Butcherbirds Vol.1** J.Jackiewicz & R.Bock English text, soft cover, 128 pages, 329 photos, 28 multiviews painting schemes and 127 side profiles. Entire book is published in colour

ADH021

Hacks Utility Planes of the Mighty Eighth J. Jackiewicz

Continuation and seauel for the 'Assembly Ships'. English text, soft cover, 132 pages, 267 photos, 195 colour profiles. Entire book is published in colour. **ADH022**

FW-190 In Foreign Service (Captured Butcherbirds Vol. 2) J.Jackiewicz, S.Fleischer, R.Bock English text, soft cover, 100 pages, 215 photos, 112 side profiles. Entire book is published in colour. **ADH023**

Japanese Aircraft in Foreign Service J.Jackiewicz & S.Fleischer English text, soft cover, 128 pages, over 300 photos, 187 side profiles and colour plates. Entire book is published in colour.

ADH024

Thunderbolts of the Hell Hawks

The Messerschmitt Me 262



Airframe & Miniature Series: Under the expert auidance of series editor **Řichard Franks**, this exhaustively researched book covering the popular Messerschmitt Me 262 for the avid enthusiast. 116 pages of technical information, full colour profiles, walkaround images, diagrams,

camouflage and marking details, a wealth of photographic resource plus comprehensive model builds and information on kits both past and present. Every active aviation modeller should have this series by their workbench. This is the first in the series, The Messerschmitt Me 262 by Richard Franks, available now. **Bv** Richard A. Franks

- 116 pages packed with vital information that no active modeller of aviation subjects should be without
- Over 40 pages of technical information
- Over 10 pages of full colour profiles
- Over 20 pages of walkaround images and technical diaarams
- Over 5 pages of camouflage and markings
- Over 25 pages of model builds and modelling information
- Over 200 photographs including wartime images
- Colour side views and four-views by Richard Caruana
- 3D isometric views of all variants by Jacek Jakiewicz
- 1/72, 1/48 and 1/32 scale full kit builds by Steve **Evans and Richard Franks**

ADH013

Thunderbolts of the Hell Hawks By Don Barnes, John Crump & Roy Sutherland Ninth Air Force P-47 units have been long overlooked, despite their significant contribution to victory in WWII. Their war was close to the ground, dive-bombing and strafing in support of the US Army at the Normandy landings, and in the race across France, Belgium and Germany. "Thunderbolts of the Hell Hawks" is a new book offering a personal view of one of the most decorated and effective P-47 units in the Ninth Air Force. This rich visual account of the 365th Fighter-Bomber Group, the "Hell

Hawks", is presented in 320 pages with over 500 photos, most published for the first time. The book also features 98 thoroughly researched and detailed colour profiles of their Thunderbolts, illustrated by Don Barnes. All but three of the aircraft profiled have languished in obscurity for the past 65 years, brought to light for the first time here. Published with full cooperation of the 365th FG Association, and with the kind help of the men and families who shared memories and personal photo albums, this book is a testament to their strength, courage and sacrifice helping bring an end to the war in Europe. Don Barnes, John Crump and Roy Sutherland interviewed and befriended over 20

surviving pilots from the 365th FG. Maps, charts and photos of surviving artifacts illustrate the very detailed, almost day-to-day record of the Hell Hawks' missions. Additionally, more than 100 sidebars, many written by the men of the 365th, themselves, give life and humanity to the story. This unique book offers an extraordinarily personal and illustrative portrait of the lives of P-47 pilots.

Inspired by the excellent book "Hell Hawks" by Bob Dorr and Tom Jones, this book is a companion piece, providing much additional information and a rich visual picture of the 365th during the last year of the war in Europe. **ADH025**

ATTACK ON PEARL HARBOR



Attack on Pearl Harbor

Covering all of the major aspects of the Japanese attack on Pearl Harbor, this book is written so that it will appeal to both the layman, seeking an understanding of what happened on the "Day of Infamy," and to the enthusiast who wishes to learn much more information than is usually found in a book of this size. Photos with detailed captions, extensive artwork, charts, tables, maps, and text combine to make this a comprehensive yet very affordable reference on one of the most important dates in world history. By Bert Kinzey.

- More than 145 Photographs
- 46 Art Illustrations
- 6 Maps
- 8 Tables
- Illustrations showing all types of Japanese aircraft used in the attack with markings applied to the aircraft flown by many of the group commanders and other pilots
- Illustrations of American Army and Navy aircraft that were in the air over Oahu during the attack including those flown by pilots who shot down Japanese aircraft
- Information and data on each of the six aircraft carriers used by the Japanese as well as illustrations of the markings carried by their aircraft
- Complete information on the composition of both attack waves including numbers and types of aircraft flown, armament carried, carrier assignments, unit assignments, targets assigned, and the names of group leaders
- Maps showing the routes of the attack waves and how the torpedo, dive bombing, and horizontal bombing attacks were carried out in the Pearl Harbor area
- List and map of American ships present in or near Pearl Harbor during the attack
- Table of ships of the Pacific Fleet not at Pearl Harbor during the attack and indicating their locations
- Official U. S. Navy damage report and information as to when all but three of the sunk and damaged ships were returned to action with the fleet
- Photographs showing the ships listed on the Navy damage report before, during, and after the attack
- Japanese mistakes and the eventual fates of each of the Japanese ships that took part in the attack
- A look at the Special Attack Unit of five midget submarines and the U.S. Navy ships that engaged them

ADH014



Airframe Album No 1: The Heinkel He 219 Uhu This new series of books will offer everything that modern modellers want when they are tackling a specific subject and will

- Period diagrams
- Data from flight manuals
- Data from spare parts catalogues
- Walkaround images of preserved examples
- Fully detailed 3D isometric views of prototype and production machines

include:

- Full colour profiles and concise camouflage and marking notes
- A wealth of pictures of the recently restored NASM example
- Pictures before, during and after restoration
- Isometric views by Jacek Jackiewicz
- Colour profiles and camouflage detail by Richard J. Caruana
- 100 pages in total
- Publication well in advance of the Revell and
- Zoukei-Mura 1/32 scale kit releases.

by Richard A. Franks

ADH030



Album No.2: The Hawker Sea Fury A Detailed Guide to The Fleet Air Arm's Last Pistonengine Fighter by Richard A. Franks

Airframe

Our second title in the Airframe Album series will cover the Hawker Sea Fury, and follows on neatly from our Airframe and Miniature titles on The Hawker Typhoon and recently published Hawker Tempest.

- Period diagrams
- Data from flight manuals and spare parts catalogue
- Walkaround images of preserved examples
- Pictures before and during restoration of the restored TFC and airworthy FAA examples
- Fully detailed 3D isometric views of prototype and production machines by Jacek Jackiewicz
- Colour profiles and concise camouflage detail by Richard Caruana
- 100 pages
- An overview of all Hawker Sea Fury kits available in 1/32, 1/48 and 1/72 scales

ADH031

How to build the Tamiya Steel Wheeled Tiger I

The Tiger I is one of the most popular modelling subjects in 1:35 scale. In this book, world-renowned modeller Angus Creighton concentrates on the Steel Wheeled version of the famous German WW2 Tank. With five

versions of the Tiger portrayed in great detail, particular attention is paid to subtle production differences, as well as focusing on the rare command version and Borgward BIV control vehicle. With step-by-step guides covering and painting, applying zimmerit and adding markings. ADHOO1



How to build the Tamiya Fairey Swordfish A full colour, high quality guide describing in great detail the building, detailing and painting of Tamiya's stunning 1:48 Fairey Swordfish. Inside you'll find over fifty pages of clear, easy to follow photographs of the model

being constructed plus shots of the real thing. TMMI's Geoff Coughlin has built two complete models, one in grey with wings extended and a camouflaged machine with wings folded back for carrier stowage.

ADH002



How to build the Tamiya Bristol Beaufighter

The 60 page book includes information on:

- Building the basic model;
- The six detailed versions of the Beaufighter;
- Details of production variations;
- Weathering;
- and many other handy hints and tips!



How to build the Tamiya Spitfire Mk.IXc and Mk.VIII

Mk.IXc and Mk.VIII Revised edition with extra pages covering the Spitfire Mk.VIII. The complete guide to bulding Tamiya's amazing 1:32 Spitfire Mk.IXc written by Brett Green. The

book now features 4 models, by Brett and Marcus Nicholls, Roy Sutherland and now Chris Wauchop. Hundreds of images, reference photos and how to get the very best from the model. Also features lists of after market parts... ADHO11



How to build the Tamiya P-51D Mustang

The complete guide to bulding Tamiya's amazing 1:32 P-51D written by Brett Green. Exhaustive step-by-step guide to construction plus models, by Brett, Mark Glidden and Roy Sutherland.

Hundreds of images, reference photos and how to get the very best from your model. Also features lists of after market parts and decals.