

# WINGNUT WINGS



Often overshadowed by its more famous contemporaries Fokker and Albatros, Pfalz Flugzeugwerke GmbH was nevertheless responsible for manufacturing what was possibly the most elegant of all Great War aircraft, the Pfalz D.III and D.IIIa fighters. After spending the first few years of the war essentially building aircraft designed by other manufacturers, in 1917 Pfalz became serious about entering the competitive German fighter market with one of their own designs.

Their Pfalz D.III incorporated many design features and construction techniques learned while manufacturing Roland aircraft, the most obvious of which was the extremely streamlined fuselage and their innovative construction method. Each fuselage half was created from 2 layers of long plywood strips of between 70mm to 100mm wide, each layer applied at an opposing angle, formed over a buck. Once completed each half of the fuselage was glued and tacked onto the internal framework, the centerline seams were taped and then the whole fuselage was finally covered with doped on fabric. This technique allowed the lightweight construction of a sleek fuselage featuring many compound curves without resorting to the many small panels of Albatros' D.V design. The 2 LMG08/15 'Spandaus' were positioned inside the fuselage out of the air stream contributing to the very sleek lines of the aircraft.

Despite all this the Pfalz D.III was received with mixed reactions from the Jasta pilots when it entered front line service in September 1917. The maneuverability was excellent but performance in other areas was lacking when compared to its contemporary the Albatros D.V. One area which raised much concern was the internal gun arrangement which made clearing a jam particularly inconvenient during combat. Part way through the initial production run of the D.III the specifications were altered to include a tailplane of larger cord and raising the guns so they were mounted externally, thereby creating the improved D.IIIa. Unfortunately not a single Pfalz D.III or D.IIIa survives to this day. Any history here is of necessity very brief, therefore we encourage you to seek out any, or all, of the reference books mentioned below for a more thorough understanding of this important aircraft.

WW1 colour schemes are contentious at the best of times and we have done our best to provide what we consider to be accurate painting information for this model. The colourful unit and personal markings applied to the various German fighters of the Great War have attracted more than their fair share of debate over the years and, while we have been as meticulous as we could be, I'm sure some will not find our choices to their liking. Pfalz D.IIIa fuselages left the factory painted with silver grey exteriors while the interior walls and framework of the fuselage appear to have been painted in grey-green primer on early aircraft. Later aircraft may have had their interiors painted in a medium grey or, some suggest, the same silver grey used for the exterior but photographic references available to us do not support this. The cockpit 'floor' and small instrument boards appear to have been left unpainted plywood.

The fabric covered wings and elevator on early D.IIIas were doped in a silver grey colour which on some aircraft appears slightly darker than the silver-grey of the fuselage. Later aircraft had their wings and elevators covered in 5 colour pre-printed lozenge camouflage material. On final production aircraft the rudder was also covered in lozenge material. The spinner and engine cowl panels were usually left in their unpainted aluminium finish. Metal strut fittings were painted in grey-green primer or black. Undercarriage legs and other metal parts were usually painted in grey-green primer. The silver grey fuselage was often painted with strikingly colourful unit or personal markings providing a great variety of decal schemes for modellers.

Wingspan:	Length:	Max Weight:	Max Speed:
9.4m (30.84ft)	6.95m (22.8ft)	Early 915kg (2017lb) Late 905kg (1995lb)	164kph (102mph)
No. manufactured:	Production:	Engine:	Ceiling:
D.IIIa 750 (D.III 260)	June 1917 - May 1918	Daimler-Mercedes D.IIIa	6000m (19685ft)

#### Armament:

2x 7.92mm LMG08/15 'Spandau'

#### References:

Pfalz D.IIIa Windssock Datafile 21, PM Grosz 1990 - Pfalz D.III Windssock Datafile 107, PM Grosz 2004  
Flight Global Archives ([www.flightglobal.com](http://www.flightglobal.com)), April 1918 to August 1918 - Osprey Pfalz Scout Aces of WW1, Greg VanWyngarden, 2006  
Colin Owers - 1914-18 Aviation Heritage Trust - The Vintage Aviator LTD - Private Collections.

# Pfalz D.IIIa

1/32 Scale

**Warning:** Choking hazard. Keep small parts and plastic bags away from children. Use glue and paint in a well ventilated area. Always wear protective eyewear when cutting and a protective mask when painting, gluing and sanding. Do not breathe dust from polyurethane resin parts (if included). Beware of sharp edges on metal parts.

**Assembly:** Read all the instructions carefully before starting assembly. Use glue intended for plastic models. Assemble metal and resin parts (if included) using Cyanoacrylate (CA) or epoxy glue. Before assembly select a marking option and note optional parts required in instructions.

**Rigging:** If installing rigging please drill out all location holes with a 0.5mm drill bit to a depth of at least 1mm.

**Painting:** Only use paints suitable for plastic model kitssets.

**Decals:** Cut out each decal as required. Soak in warm water for 15 seconds. Slide off backing paper onto gloss painted surface of model. For large decals it is helpful to apply a drop of water to the area they are being applied to. This will make it easier to maneuver them into the correct position.

## SYMBOLS

**1** Construction Step



Choose



Attention



Remove

**A1** Part Number



Do Not Cement



Option



Drill

**5** Decal



Cement For Metal



Other Side



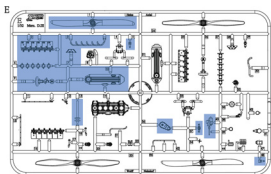
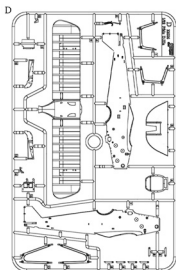
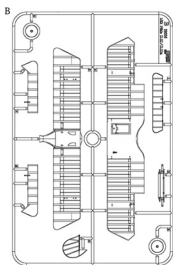
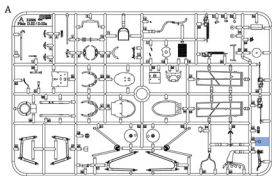
Paint Colour

**P1** Photo Etch Part

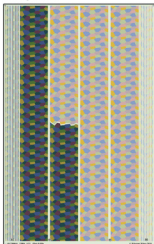
## PAINT COLOURS

	All colours	Tamiya	Humbrol	Misterkit
a	Brass	X31	54	
b	Gun Metal	X10	27004	
c	Aluminium	XF16	27001	
d	Black - semi gloss	X18	85	
e	Dark Wood - gloss	XF68	98	
f	Leather - semi gloss	XF52	62	
g	Dark Blue - semi gloss	XF8	25	
h	Interior Grey Green - matt	XF76	90	
i	Red - semi gloss	X7	19	
j	Rust - matt	XF9	113	
k	White - semi gloss	XF2	34	
l	Light Wood - gloss	XF59	93	
m	Steel	XF56	27003	
n	Clear Doped Linen - matt	XF55	148	GC10
o	Copper	XF6	12	
p	Silver Grey - semi gloss	XF16(x2) + XF19(x1)	27001(x2) + 64(x1)	GC17
q	Rubber - matt	XF69	66	
r	Blue - semi gloss	X14	48	
s	Matt varnish	X21(x1) + X22(x4)	49	
t	Light Grey - matt	XF19	64	

**Note:** Apply clear varnish to achieve the desired gloss or semi-gloss finish.



Lozenge Sheet



Decal Sheet

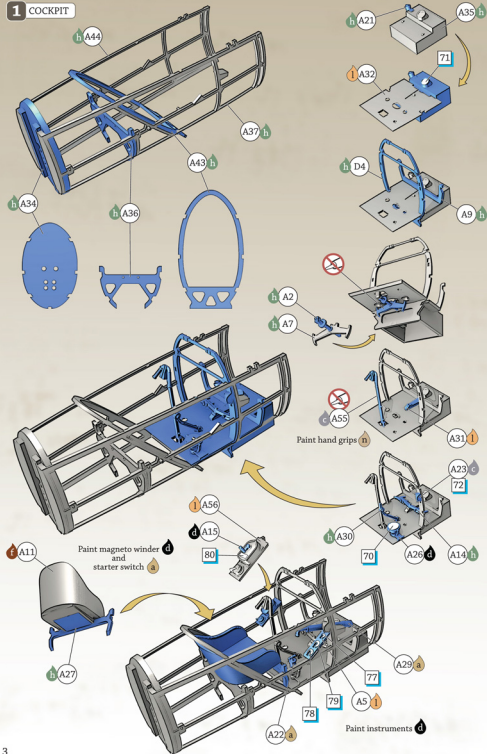


■ = Not Used

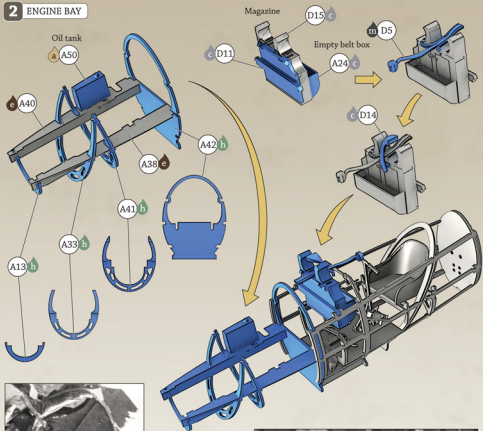
Photo Etch



# 1 COCKPIT



## 2 ENGINE BAY



The sad wreckage of Pfalz D.IIIa 8023/17 from Jasta 34b. Note the darker tone of the fuselage interior and that the metal brackets on the instrument panel appear to be painted black while the ammunition magazines are unpainted aluminium. The seat appears to have a pouch of some sort fixed to its rear and is missing its cushion.

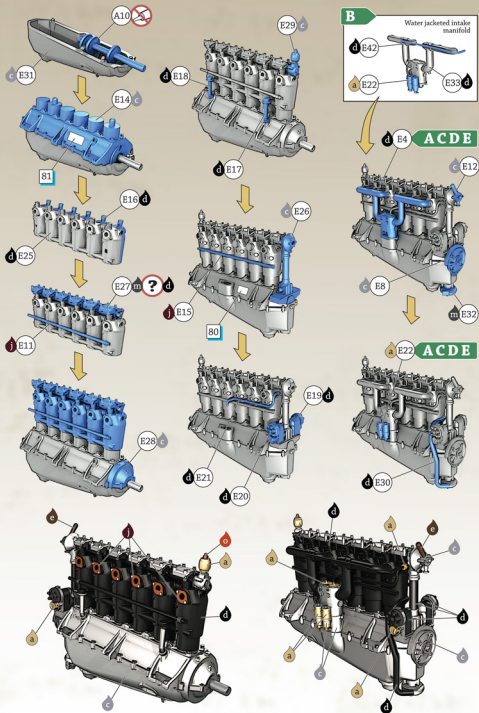


The remains of Pfalz D.IIIa 4196/17 allow us a very rare glimpse inside the cockpit. Note the control column and the darker tone of the cockpit interior walls.

Fuselage interior details from captured Pfalz D.III 4184/17, stripped down for public exhibition in London's Agricultural Hall in 1918. Note that this is a Pfalz D.III so differs slightly from our D.IIIa but several useful details are shown for the super detailer including the wires leading from the right side instrument board towards the engine bay.



### 3 DAIMLER MERCEDES D.IIIa 180PS ENGINE





Left hand side of the engine, the red-brown pipe carries the plug leads from the magnetos to the spark plugs.



Large air pump (E28) characteristic of the 180ps Daimler Mercedes D.111A.



Rear right side of the engine. Note the position of the data plate.

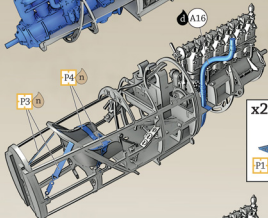
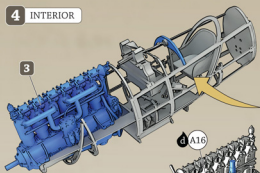


Rear left view showing the empty magneto mounts, water pipe and spark plug details.

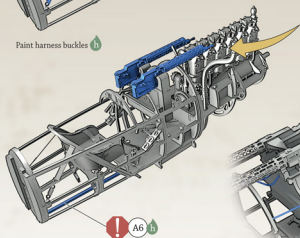


Rear right view.

#### 4 INTERIOR



Paint harness buckles **h**

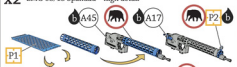


Don't forget to install this part

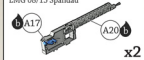


Anneal **P1** to assist rolling into shape around a 2.5mm drill bit

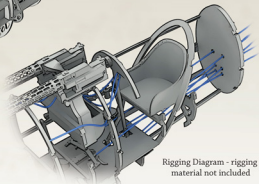
#### x2 LMG 08/15 Spandau – high detail



#### LMG 08/15 Spandau



x2



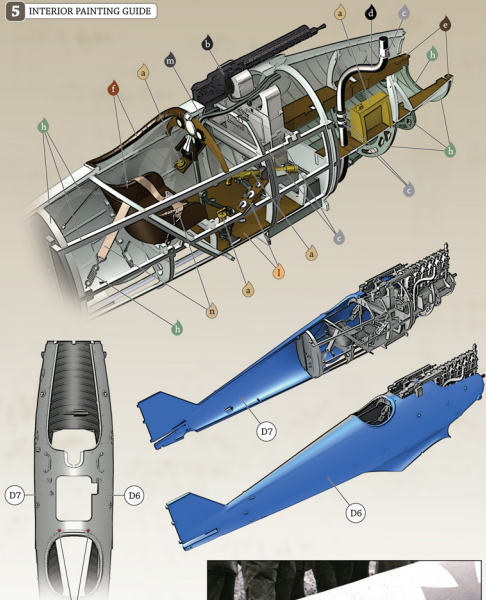
Rigging Diagram - rigging material not included



Pfalz D.IIIa 4165/17 is believed to be the very first airframe completed to D.IIIa standards. The Pfalz factory work number 1285 and acceptance marks (burnt into the bare wood at the rear of the upper wing cut out) are very obvious while the serial number 4165 is only faintly visible on the upper wing just forward of them. Note that the instrument panel and its metal brackets have been painted a uniform colour, most likely **h**. The cabane struts are of the early blunt D.III type and the brackets have been painted **d**.



## 5 INTERIOR PAINTING GUIDE

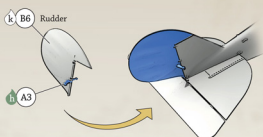
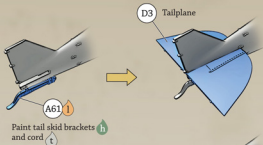
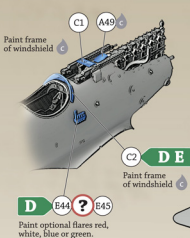


Drill holes for optional windshield (C)

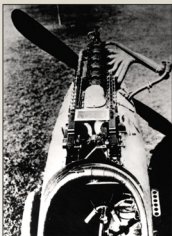
Another view of crashed Pfalz D.IIIa 4196/17. The piece of port side fuselage wreckage under the serial number shows its interior colour and contrasts markedly with the silver grey of the fuselage but matches the tone of the strut brackets (inset) very well. This piece is from just to the rear of the seat, the front left harness strap would have been attached to a bracket which has been torn from the gap now present, just under the 7 in the serial number.



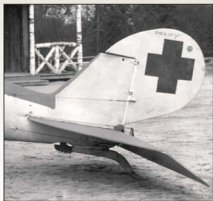
## 6 FUSELAGE DETAILS AND TAILPLANE



▽ Note the small rectangular windshield **C1** mounted between the twin LMG 08/15 'Spandaus' on captured Pfalz D.IIIa 8033/17.

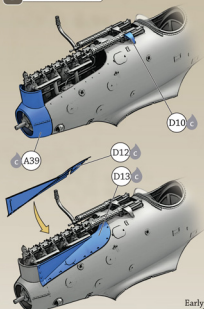


> Tailplane detail from Pfalz D.IIIa 8143/17. Note the converted cross, and the stencil 'Hjer Unterstutzen' **65** above the tail skid.



< Tailplane detail from Pfalz D.IIIa 6050/17 displaying the Pfalz logo decal **69** and serial number stenciling on the rudder.

## 7 ENGINE COWLS



We recommend leaving off **D12** & **D13** to better display your engine detail.

## 8 LOWER WINGS

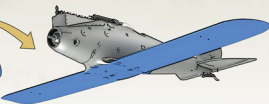
**AC** B5

Early



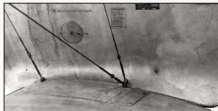
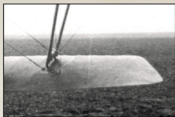
**BDE** D9

Late



The captured Pfalz D.IIIa 8282/17 of Andreas Köhler from Jasta 35b. Note the word 'propeller' **62** stenciled on the spinner, arrows on the inspection covers **54**, water jacketed intake manifold, partially modified fuselage cross and the variation of weight table **68**.

Early D.III style lower wing with angular tip from Max Hittschler's Jasta 18 Pfalz D.IIIa. Unlike the single spar lower 'Nieuport half wings' of other contemporary German designs, the Pfalz D.III/IIIa featured two spars thereby avoiding the structural failure problems associated with the Albatros D.III and D.V/Va.

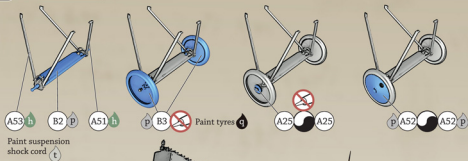


Wing root detail from Pfalz D.IIIa 4208/17 showing the aileron control cable access hatch and non slip foot plate detail. Note the rigging diagram **59**, makers plates **49** and how ill fitting the trailing edge of the wing is where it meets the fuselage. (Greg VanWyngarden)



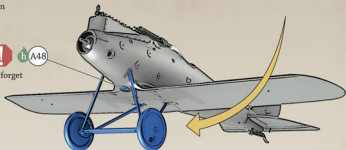
Late style lower wing with rounded tip from Walter Ewers' Jasta 77b Pfalz D.IIIa 8143/17.

## 9 UNDERCARRIAGE



Paint suspension  
shock cord

! h A48  
Don't forget



< Wheel detail from captured Pfalz D.IIIa 8151/17 showing its suspension shock cords. Despite the appearance of rubber bungee cords these were in fact coiled springs with a woven 'rope' cover.



> Undercarriage detail from Pfalz D.IIIa 6050/17. Note the Pfalz factory logo decal [61] on the wheel cover and the protective canvas bag over the suspension shock cords.



Another view of the original Pfalz D.IIIa 4165/17. Sunlight shining through the clear doped linen areas of the upper wing contrasts nicely with the ply covered center section. The nose cowling panels and spinner are unpainted aluminium as is one of the access hatches. The remaining hatches have been over painted with the silver grey of the fuselage which is already wearing off the foot step covers. Strut end brackets and undercarriage legs are painted black. Other than the cross the fuselage is devoid of stencils and information plates. The front portion of the tail skid was probably wrapped in linen to prevent fracturing.

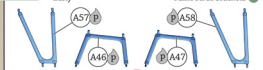
## 10 STRUTS

> Early D.III style struts with blunt ends from captured Pfalz D.IIIa 8033/17. Note the slight 'bow' in the lower wing, the repair patch below the cockpit and that the rigging diagram and makers plates have been silvered.

### A C

Early

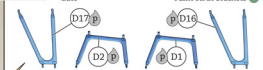
Paint strut brackets **b**



### B D E

Late

Paint strut brackets **b**



Late style struts with pointed ends from Pfalz D.IIIa 8143/17. Note the wing strut lower brackets appear to have been over painted with silver grey. The remaining strut brackets retain their original colour **b** which has also been carried into the small gaps normally left silver grey, indicating that they were probably painted after being assembled onto the struts. Note the anemometer attached to the rear strut, rigging and various stencil details including the most common version of the weight table **18**

## 11 EXHAUST

### D

Note the angle of the exhaust

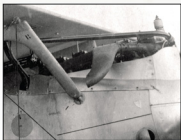
D8

D8 x5

A poor quality image but it does show the individual exhaust stacks peculiar to Max Holtz's Jasta 16b Pfalz D.IIIa. Note the late style pointed ends of the cabane strut.

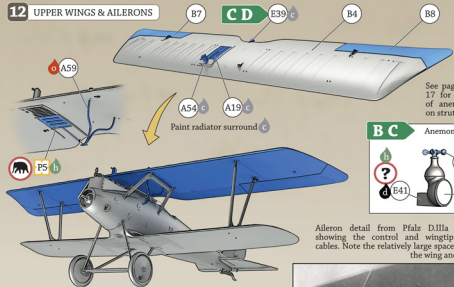


### A B C E



Exhaust detail from Pfalz D.IIIa 6050/17. The engine side and nose cowlings are unpainted aluminium.

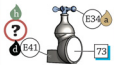
## 12 UPPER WINGS & AILERONS



See pages 16 & 17 for location of anemometer on strut.

BC

Anemometer



Aileron detail from Pfalz D.IIIa 6050/17 showing the control and wingtip bracing cables. Note the relatively large space between the wing and aileron.

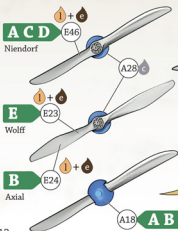


Pfalz D.IIIa 4215/17 of Armin Undiener. Note the fuel lines leading down from the gravity tank built into the ply covered centre section of the upper wing. Also note the large Pfalz logo decal [69] on the rear cabane strut and the earliest style of weight table [67].

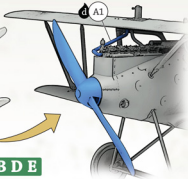
Cabane strut detail from Pfalz D.IIIa 6050/17. Note the small Pfalz logo decal [61], stencils [54], [52] & [64] and early style blunt ends of the cabane struts, which appear to be painted in the same colour as the inspection hatch [4].



## 13 FINAL ASSEMBLY, PROPELLER & SPINNER



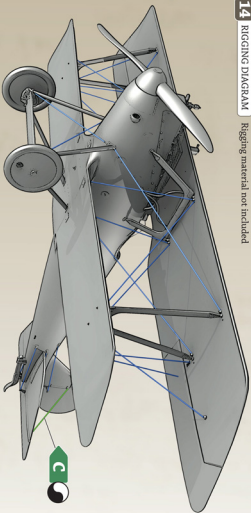
Propellers were frequently damaged and replaced. While a photo may depict a particular aircraft with a particular propeller it usually would not last very long and there was no guarantee that it would be replaced with another from the same manufacturer.



Propeller and spinner detail from Pfalz D.IIIa 6050/17. Note the serial number 6050 stenciled on the unpainted spinner and the location and orientation of the Axial propeller decal [46]. In photos of some aircraft a Pfalz factory logo decal [69] is visible on the tip of the spinner.

# 14 RIGGING DIAGRAM

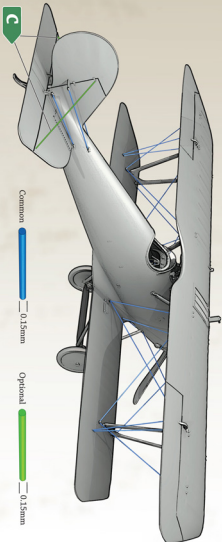
Rigging material not included



Wing rigging detail from Palz DIIIa 6050/17.

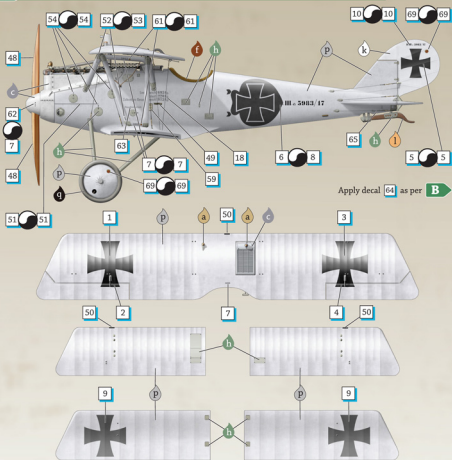


Wing rigging detail from Palz DIII 1405/17 which is identical to those of the DIIIa



Common  0.15mm

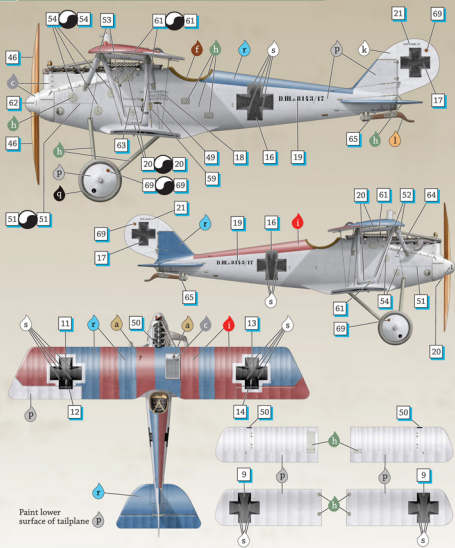
Optional  0.15mm

**A Pfalz D.IIIa 5983/17, Hans Joachim Buddecke, Jasta 30, February 1918 (13 victories)**

Hans Joachim Buddecke sits atop Jasta 30 Pfalz D.IIIa 5983/17 featuring his personal marking of what appears to be a stylized beetle. Note the unpainted aluminium engine cowl panels. No other image of 5983/17 is known to us but because it comes from the same production batch as 6050/17 on page 21 it is presumed that the rudder was also painted white (previously thought to be finished in the same silver grey as earlier production machines). Born in Berlin, Hans joined the army at 14, became an officer 6 years later in 1910 and left during 1913 to work for his uncle in America where he learnt to fly. At the outbreak of war he returned to Germany and re-enlisted. He scored his first victories in late 1915 while flying Fokker Eindeckers, served in Europe and Turkey, had been awarded the Blue Max and was deputy leader of Jasta 30 when he was shot down and killed by a 3(N) Sqn Sopwith Camel on March 10 1918. He was 27.



**B Pfalz D.IIIa 8143/17, Walter Ewers, Jasta 77b, April 1917 (8 victories)**

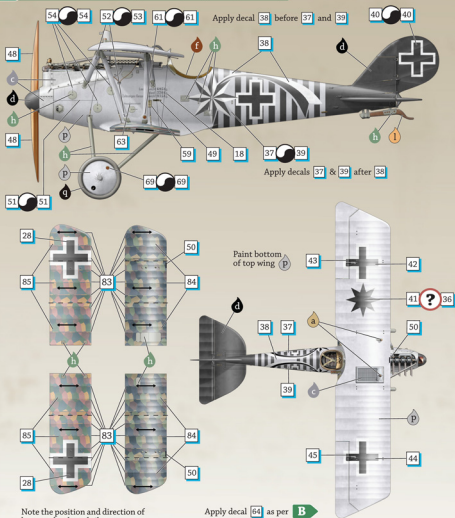


Rear view of Walter Ewer's Pfalz D.IIIa 8143/17 showing the 3 main colours of this aircraft, silver grey fuselage sides and lower wings and 2 other colours in roughly applied stripes on the upper wing and along each side of fuselage spine. We have depicted Walters aircraft painted in the red and blue stripes from the flag of the Prussian province of Schleswig-Holstein in which the town he was born in, Lubeck, is situated. The province flag is actually red, white and blue but we can't imagine he would be very popular having his aircraft painted in these 3 colours! The optical illusion of multi toned upper wing crosses is caused by the matt black paint used to convert the earlier style crosses not reflecting sunlight as well as the original gloss black.



Max Hitschler's Jasta 18 Pfalz D.IIIa. In keeping with contemporary German fighter design practices the Pfalz D.III/IIIa upper wing was constructed as a single part but, unlike the Albatros D.III and D.V, the Pfalz centre section (which contained the radiator and a fully enclosed gravity fuel tank) was skinned in plywood before being covered with linen. Note the rear view mirror (E39), anemometer (E41) mounted to the front left strut and the irregular white border of the right upper wing cross as it meets the aileron, indicating a possible replacement.

**D Pfalz D.IIIa, Max Holtzem, Jasta 16b, early 1918 (2 victories)**



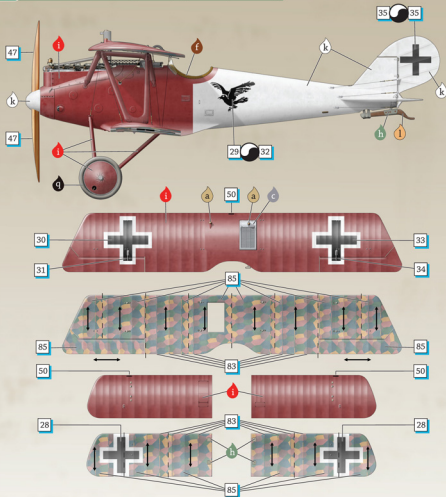
Note the position and direction of lozenge decals and rib tapes.

Apply decal 64 as per **B**



Max Holtzem's Jasta 16b Pfalz D.IIIa displaying his personal black and white comet. Max started flight training in 1913 and spent much of the Great War as a test pilot for Pfalz and an instructor before being posted to Jasta 16b in early 1917 where he saw out the rest of the war. After emigrating to Argentina in 1920 Max began a barnstorming career that lasted until he again emigrated, this time to America where he became a test pilot for Anthony Fokker's Atlantic Aircraft Corporation (later to be merged with North American Aviation).

Now a US Citizen he would become a flight inspector on the P-51 Mustang assembly line during WW2 and retired in 1957. He remained active in aviation circles until his death in 1980. He was 87. We have included an optional comet decal 36 for the upper wing as it seems reasonable that, given enough time, Max's personal emblem would have been completed.



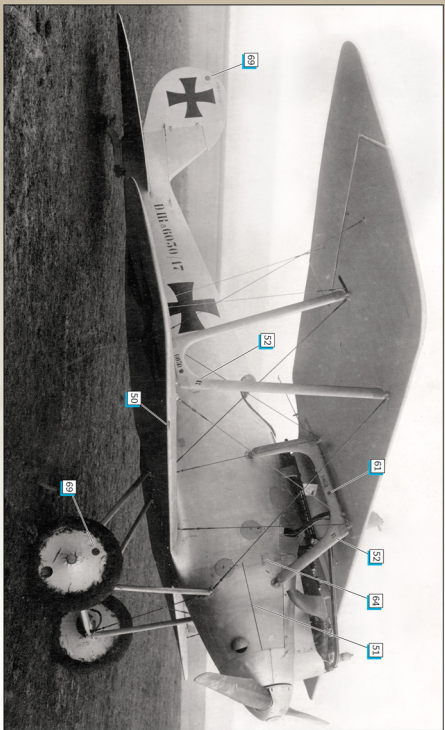
Note the position and direction of lozenge decals and rib tapes



Hans Muller sits on the wheel of his severely damaged Jasta 18 Pfalz D.IIIa. Hit by flack or possibly just a catastrophic engine failure causing severe vibration damage he was nevertheless pleased enough to have survived to record the event with this photograph. Hans served in Jasta 12 and 15, where he scored 2 of his victories, until he was involved in the 'swap' of Jasta 15 personnel with Jasta 18. His Pfalz D.IIIa shown here features the striking red and white 'Raben' markings of Jasta 18 where he achieved his remaining 10 victories. (Greg VanWyngarden)



Side view of Walter Ewers's Pfalz D.IIIa 8143/17 showing the painted fuselage spine, tailplane and leading edge of the fin. After service in a Bavarian Artillery Regiment Walter transferred to the Air Service where he achieved 8 victories flying with Pfalz 6, 12 and 77b before being shot down and killed in Albatros D.Va 7220/17 on May 13 1918. He had just turned 26. The optical illusion of a multi-toned fuselage cross is caused by the matt black paint used to convert the cross reflecting sunlight differently from the gloss black of the earlier style of cross. There is spirited debate about whether the Pfalz rudder left the factory painted silver, or was it painted white before the cross was applied. This photograph almost certainly shows a white painted rudder, and hence we have asked Ronny to follow this theory on our profiles. But as the owner of this kit, the final decision is yours!



Pfalz D.IIIa 6050/17 in all its glory. Note the extended radiator shutter handle above the cockpit and the makers plate [50](#) on the leading edge of the lower wing just forward of the struts and the datum line [51](#).



Pfalz D.IIIa 4208/17 of Marine Field Jasta (MFJ) 1 showing the initial style of weight table [67]. The blunt ends of the cabane struts have been painted after being attached to the struts. Note the worn appearance of the silver grey paint and the staining under the fuel lines from the gravity tank. (Greg VanWyngarden)



#### 3-D Modelling by Rhys Clapcott

Born in the sunny Hawkes Bay of New Zealand, Rhys moved to Wellington in 2000 to complete a Bachelor of Design. After graduating in 2004, Rhys joined Weta to work on the television series "Jane and the Dragon". After working on a variety of projects for Weta, Rhys began work modeling planes in 2006, assisting on the Bristol F2b fighter and finally as lead modeller on the Pfalz D.IIIa.

He enjoys doing anything creative in his free time, from painting, to 3D modeling and animating. But he is also a computer gamer so a lot of his spare time is taken up trying to keep up on the latest releases.



#### Profile Art by Ronny Bar

Ronny Bar developed a keen interest in airplanes from an early age, living close at the El Palomar Air Force Base in Buenos Aires. He first flew in the back seat of a T-34 Mentor trainer at the age of ten, and was soon drawing airplanes and building models: Spitfires and Messerschmitt first... Camels and Fokkers later.

He became a successful bass player with a career lasting over 35 years in several Rock bands, recording ten albums (one of them being a National hit selling more than 100,000 copies) and performing countless concerts, TV shows and tours all over Argentina.

Now retired from the R'n'R scene, his interest returned to his early passion: Aviation Artwork. Visiting the WW1 aircraft collection at Hendon focused his already growing interest for that historic period. His artwork is regularly appearing in journals and publications like Windsock Worldwide, Windsock Datafiles, Cross & Cockade and Over the Front.

Visit Ronny's website at: [www.ronnybarprofiles.com](http://www.ronnybarprofiles.com)



#### Box Art by Steve Anderson

Steve Anderson is an avid historian of military aviation, with a special interest in the many beautiful biplanes and triplanes of World War I. The aircraft and battles of famous World War I aces such as Baron Manfred von Richthofen (better known as the "Red Baron"), James McCudden, Raoul Lufbery, Ernst Udet, Werner Voss, and other pioneers of dogfighting are among Steve's favorite subjects.

An Artist Fellow of the American Society of Aviation Artists, Steve creates works that reflect scrupulous attention to historically accurate detail, from the colorful markings on the fuselages to the time of day of an actual battle.

Visit Steve's website at: [www.anderson-art.com](http://www.anderson-art.com).



#### Project Co-ordinator, Richard Alexander

A native of Wellington New Zealand, Richard Alexander has a long term interest in military history, race cars & local drivers from motor sports golden era of the '60's. Other interests include mountain biking, scotch and cigars.

An accomplished modeller Richard's models have twice been awarded Best Overall in Show at IPMS(NZ) National Conventions and earned him the inaugural TamiyaCon(NZ) Master Modeller award (along with the associated trip to Japan) in 2001. Many of his works are in private collections around the world, though he no longer accepts commissions.

Richard has been in the model and hobby industry since 1991 and brings with him a keen eye for detail and a passion for ensuring our models are enjoyable to build. So if there is anything you don't like about this model, you can blame him.

If you do have comments, requests or suggestions, Richard is contactable at [richardwingnutswings.com](mailto:richardwingnutswings.com)



32006	1/32 Pfalz D.IIIa	Qty
0132006A	A parts	1
0132006B	B parts	1
0132006C	C parts	1
0132006D	D parts	1
0132006P	Photo-etched metal parts	1
132E0005	E parts Merc D.III engine	1
7132006	Instructions	1
9132006a	Decals	1
9132006b	Lozenge decals Pfalz D.IIIa	1

If you have any damaged or missing parts please contact [help@wingnutwings.com](mailto:help@wingnutwings.com) for assistance.



32001 - 1/32 Junkers J.1



32009 - 1/32 Albatros D.V



32015 - 1/32 Albatros D.Va

Also available from  
[www.wingnutwings.com](http://www.wingnutwings.com)

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