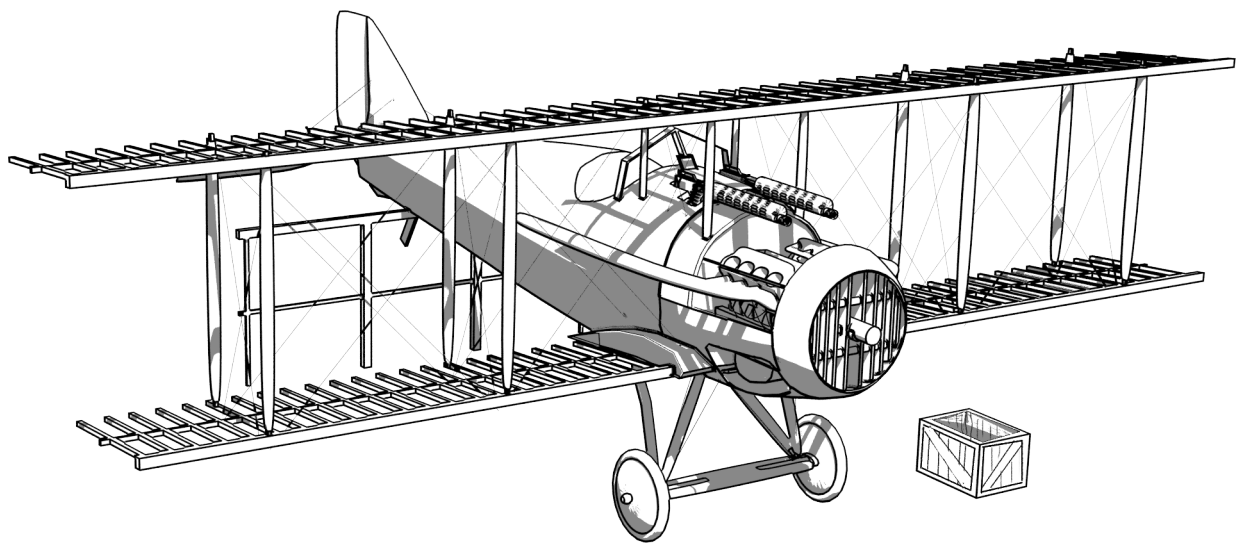


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# Flying Circus

Aircraft Catalogue  
Core

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Erika Chappell  
Calum McBain  
Arnd Koster

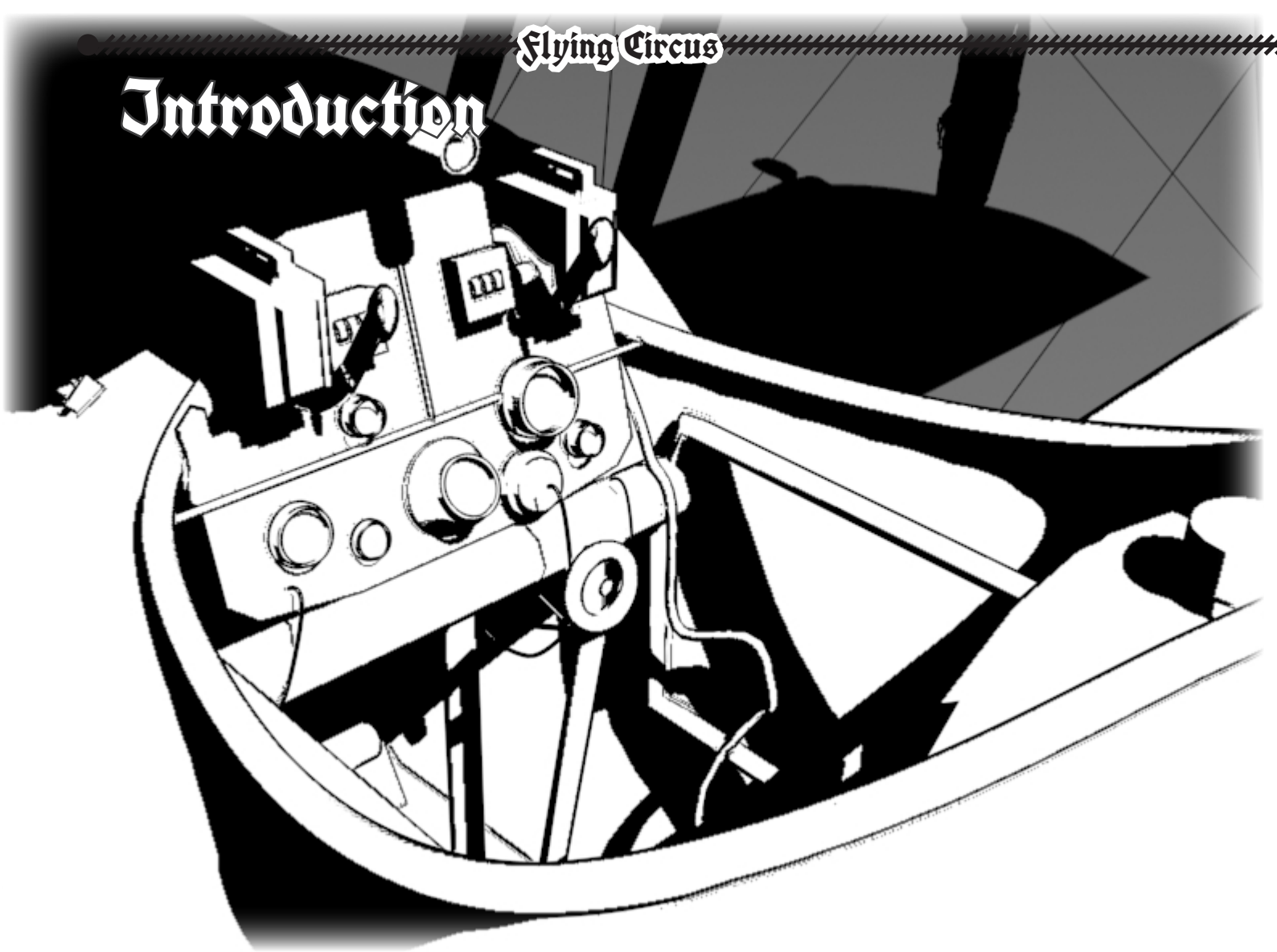
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# Introduction



## How To Use

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This document contains 50 aircraft (and 8 NPC aircraft) for use in *Flying Circus*, with profiles, lore, and links to the Aircraft Builder. With it, you can easily play a full campaign with a large variety of unique aircraft, each with their own strengths and weaknesses, history, origin, and role.

When you select an aircraft, fill out your Instrument Panel and Component Cards with the statistics listed. Alternately, you can load the aircraft into the plane builder by clicking the link or loading the aircraft's file, and clicking "Save Dashboard" at the top. This will automatically create filled out sheets you can print and use with your aircraft.

## Aircraft Designations

The aircraft contained within are a mix of historically-inspired designs which correspond to real aircraft and fantasy machines unlike anything that ever flew. Early aviation history is filled with bizarre machines: that's what makes it fascinating!

In early aviation parlance, a 'fighter' is specifically an armed two-seat aircraft design to fight other planes, while a 'scout' is a single-seat aircraft, armed or not. Scout is used for single-seat combat planes throughout this document for authenticity.



## Aircraft Engineering

You can play the game without modifying anything about any of the aircraft all, but the builder also makes modifying planes easy and quick, once you understand the principles. It might be intimidating at first blush, but with a bit of experimenting you can make airplanes in minutes.

### The Variations

It is easiest to learn to use the builder by making one of the variations offered for the aircraft in this book. Bring up its profile in the builder and then make just the modifications you need to change.

For instance, we can convert the Ritter Model F ‘Singvogel’ to its Model E configuration with just a few simple changes. First, scroll down to the “Tail” section, below “Frames and Covering” and above “Wings”. There, you can adjust the length of the aircraft’s tail. You can click the ‘Rules’ section here to see the math that will happen when you do, but you can also just experiment to find out what it does.

Click the drop-down menu and change the tail length from “Stubby” to Standard”. Then, scroll down to the “Weapons” section. The Singvogel has 1 Mount of 2 standard Machine-Guns, but the Model E we’re modifying it to loses one of those guns. All you have to do is change the number in the “Weapons at Mount” field to 1.

Now, when you scroll to the bottom of the sheet, we have a new aircraft. It carries fewer weapons, and the new longer tail has raised its Stability while lowering its Handling. The new aircraft is much safer now, and might be more suited for characters with low Calm.

### New Aircraft

Once you’ve made a few variations, you can take a crack at making your own airplane. Start by replicating a real life aircraft: go to the Wikipedia page for the Fokker DR.I, for example. Then, go through piece by piece: it has one cockpit, so add it. If you can’t find the historical engine, pick something that seems similar.

Be sure to read up carefully how the plane goes together. The Fokker DR.I is unusual for its era because it is built of steel spars, not wood. Add its weapons, use the Wing Area and Span stats that most aircraft have listed to add the wings, and put the supports in. A careful reading will reveal the aircraft has cantilever supports to hold the wings together.

The builder will require some trial and error to get used to, and there are times where it won’t cover every edge case and you’ll have to improvise or make judgement calls. Be advised that, for gameplay purposes, it deliberately produces planes 10-20% slower than real life, so don’t worry if your aircraft are coming out slower than you expect!

But with a bit of experimentation, you’ll be making awesome planes in no time. Make sure you get GM approval before springing a plane into a game, though: the builder is designed to make accurate planes more than balanced ones, so play fair!

# Paint Schemes

If you want to decorate your plane all pretty-like, it might be helpful to have some ideas of how a plane might be decorated in-universe.

## Farmer Planes

- The plane is a patchwork of mostly unpainted canvas, decades of repairs stitched into the skin in different colours and wears of fabric.
- The plane has been enthusiastically but crudely painted in emulation of a Great War ace. The colours are off and the lines aren't straight, but its a labour of love.
- The plane has been painted a bold, solid colour, like barn red or fence white. It's attention-grabbing, but also probably the only paint the pilot had access to.

## Soldier Planes

- The plane is simply an adaptation of a prewar paint scheme of a wartime power, perhaps with the roundels changed. The names of generations of previous pilots are written with great care on the side.
- The plane has a regional camouflage pattern that gives you an idea where the character is from, like snowy white-grey stippling or green and brown tiger stripes.
- The plane is lovingly maintained in expensive dyed lozenge-pattern camo or a complex dazzle scheme that hurts to look at.

## Fisher Planes

- The plane has been left in grey-blue primer, old roundels painted over, and was clearly neglected by a community with better things to do.
- The plane is covered in interlocking patterns of runes and symbols, not unlike a fisher's tattoos. At night, these symbols glow faintly, and looking at them makes your eyes water.
- The plane seems plain and unadorned to onlookers, painted a simple, desaturated colour. To the eyes of its fisher pilots, it dances with patterns in ultraviolet paint.

## Skyborn Planes

- The plane has elaborately dyed fabric wings with complex interlocking patterns, in bold colours like pink, turquoise, and gold.
- The plane has a highly polished stained wood surface, the grain highlighted.
- The plane has the paint scheme of a former imperial power, buried under hand-painted murals and patterns that have spread across its surfaces.

## Believer Planes

- The plane has a carefully designed military paint scheme, with registration numbers for division, squadron, and the individual plane. It was one of eight.
- The plane is covered, front to back, in inspirational or devotional quotes and phrases.
- The plane is painted all over to resemble a flag, such as a republican tricolour.

## Scion Planes

- The plane is unpainted, just gleaming polished steel and molded plywood showing the expensive materials in its creation.
- The plane has clearly been painted by a classically trained artist, with murals depicting religious and historical scenes in great detail.
- The plane is rendered to resemble the familiar heraldry, with the same colours, patterns, and imagery.

## Student Planes

- The plane was once a militia aircraft, with two bold colours and a jersey number. The pilot's name is inscribed in large, stenciled letters on the side.
- The plane was somebody's art project, with a swirl of abstract shapes and colours in cubist or modern avant-gard style. It clearly has a meaning nobody will understand.
- The plane has an advanced, scientifically-designed pattern of camouflage which is much more sophisticated than available elsewhere, such as real-life flecktarn, strichtarn, or splittertarnmuster patterns.

## Survivor Planes

- The plane is unpainted and unadorned. No thought has gone into its aesthetics at all, just primer and rustproofing.
- The plane once carried national colours, but the gas has bleached it out almost entirely, leaving it a ghostly green, mustard, or bone white.
- The plane has been painted with crude murals displaying its pilot's imaginings of the outside world, resembling the fanciful and enthusiastic paintings of a child.

## Worker Planes

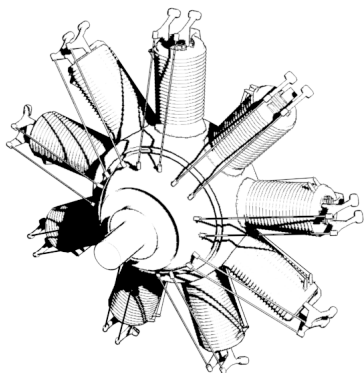
- The plane has been painted in flashy stripes and checkerboards in strongly contrasting white, black, and primary colours to grab attention.
- The plane bears the livery of a different pilot altogether, with somebody else's name, noseart, and kill indicators. A stain in the cockpit indicates how it ended up in the hands of a novice pilot looking for a good deal on a used plane.
- The plane has suffered the attentions of the pilot's children, with haphazard colours, fingerpainted scenes, and bright handprints on everything in reach.

## Witch Planes

- The plane is painted with a green and brown pattern designed to make it easy to hide in the woods. Its underside is a sky blue or grey.
- The plane was reprimed and then carefully painted with intricate knotwork covering it back to front, perhaps in bright green or blue.
- The plane appears to be painted in a disruptive pattern, but close inspection reveals that what you thought was plywood is bark, that canvas is in fact overlapping leaves, and the metal is weathering unnaturally and beautifully.

## Early Aircraft Anatomy

How exactly early aeroplanes work is fascinating in and of itself, and knowing can help you describe your aircraft in the narrative and make your game more engaging!



### Engines

The vast majority of aircraft in Flying Circus are powered by internal combustion engines, like in a car, with pistons in cylinders connected to a crankshaft, burning fuel for power. Engines are distinguished primarily by how they are kept from overheating. Engines can be roughly divided into air-cooled and liquid-cooled variations. Both are used on aircraft, and both have their own strengths and weaknesses.

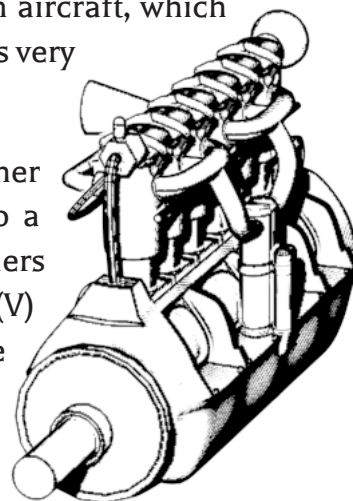
Air-cooled engines use the passage of air over the cylinders to keep from overheating. They are often arranged as radial engines, with the cylinders laid out in a circle. These engines have the advantage of not needing heavy cooling systems, but the primary downside is that the engine being exposed to the airflow means the engine causes a lot of drag. In the era Flying Circus is set in, there is also the problem that the air just isn't sufficient to cool these sorts of engines running at maximum power.

The clever solution to this is called a rotary engine. These are radial engines mounted backwards, causing them to spin while the crankshaft remains static. The propeller is then simply bolted to the engine. The spinning exposes the engine to more air, making it easier to cool, and this allowed for very light engines with very high power.

Rotary engines do have disadvantages. The biggest is that the engine cannot have conventional oil lubrication, because oil has to be able to move around the engine to stay cool. So instead, it is a total oil loss system, with the oil mixed directly in with the fuel. This requires a kind of oil that will still work when mixed: castor oil. As the engines tended to leak oil very badly, and castor oil can cause diarrhoea...

The other disadvantage is that rotary engines waste a great deal of their power moving the heavy engine around, which decreases their effective output. Additionally, a hundred and fifty kilograms of whirling steel has a gyroscopic effect on aircraft, which does odd things to their handling and tends to make these planes very unstable. It can be exploited for fast turns, but it's dangerous.

By contrast, liquid-cooled engines put a jacket of water (or other coolant) around the cylinder, and run them through pipes to a radiator. Liquid-cooled engines don't need to expose their cylinders to airflow, so they are often arranged in one (inline) or two (V) rows. This is more mechanically efficient and allows the use of superior valvetrains for more power, but liquid engines are heavier and have radiators which add extra drag and are quite vulnerable to damage.



## Wings

Most aircraft in this era are biplanes: they have two decks of wings, stacked one atop the other. This configuration has several advantages.

- It allows a greater amount of wing area for lift with smaller, easier to support wings.
- It works well with tension support to create strong frames (see next section).
- It allows high aspect ratios (wings are more efficient when they are long and thin) but shorter wingspans (the shorter a plane's wingspan, the faster it can roll.)

However, biplanes are not without disadvantages as well. Most notably, biplanes have higher drag (because they have more exposed forward surface area) and less efficient lift (because wings close together cause 'shadowing' in the airflow). Thus, biplanes are slower than a monoplane with the same design and equal wing area.

Triplanes, and planes with more wings, allow for an exaggeration of the strengths of the biplane, but also exacerbate the downsides. They were useful only in niche applications.

## Struts, Spars, & Piano Wire

Because of the need to stay very light, aircraft cannot be built the way a building might be. They need to support their weight, and resist the forces of flying, without being able to be built of solid materials.

Thus, early aeroplanes were made as tension structures from a mix of spars and wires. The spars, rigid poles of wood or metal in and between the wings, hold the parts of the plane apart, while the wires, strung in between the spars, pull them together. The same principle is used in suspension bridges.

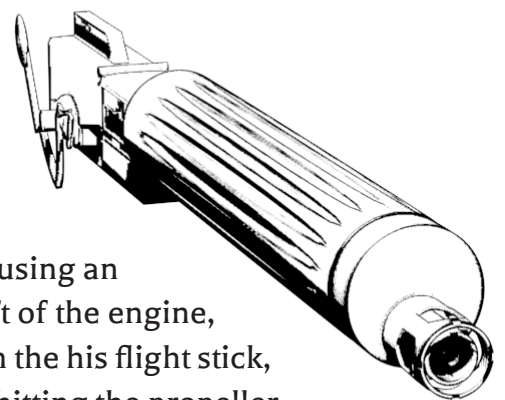
However, in 1915, aeroplane designer Hugo Junkers invented the cantilever spar, a single solid piece mounted through the wing and braced to resist strain. Not only did this eliminate the drag of the struts and wires, but it accidentally made the wing thicker than usual. They didn't know it yet, but thicker wings are actually much more efficient.

## Weapons

The majority of aircraft of this era used machine-guns firing rifle ammunition. Typically, they carried one or two, with five hundred rounds of ammunition each in cloth belts. Few planes carried more guns than that.

These weapons could fire through the arc of the propeller using an interrupter gear. This consisted of a cam on the crankshaft of the engine, connected to a trigger. When the pilot pulled the trigger on the his flight stick, the rotation of the cam would fire the gun, timed to avoid hitting the propeller.

These weapons would be supplemented by open-bolt light machine-guns, which were often preferred for being more reliable. Open-bolt action meant they fired too inconsistently for interrupter gears, so they would be mounted on the wings or turrets.





# Aircraft Companies of Gimmlgard

At one time, Himmilgard was home to hundreds of aircraft design organizations, ranging from cottage industry to massive nationalized corporations.

# Arntwerks

## Kaiserlandung, Gotha Plateau

Founded by the Brothers Arnt in 1573 to build knock-offs of the popular aircraft of the day, the machines of Klaus, Rudi, and Holger Arnt soon became common worldwide. After the war broke out, they made history for inventing the interrupter gear, but the breakup of their design team ended their creative streak. They still exist, unfortunately, as a nationalized arm of the Goth Armies.



# Braun Kitflugzeuge

*Free City of Lomende, Daimler Coast*

Prewar, the Braun company filled a niche of offering aircraft components at the cheapest rate possible, which allowed smaller nations, municipalities, and private clients to purchase planes for utility and military work. They continued to sell technically impressive, if not particularly innovative, designs to all parties of the Great War until Lomende was destroyed by a self-propagating incendiary in 1600.



## Hugo Bennhold

*Unknown*

The personal corperation of eccentric aircraft designer Hugo Bennhold, little is know about the man or his company, or if he survived the war. It is known that Bennhold designed a variety of revolutionary all-metal aircraft and invented the cantilever spar, but his machines found few buyers and exist today mostly as knock-offs or surviving trial submissions.



# Kreuzer Flugzeugwerke

### Kaiserlandung, Gotha Plateau

Founded as a crown corporation of the Gotha Empire to bring together several promising designers, Kreuzer was the cutting edge of the Empire's war technologies. However, they have no engine production of their own, and Theler jealously hoarded the best engines, leaving Kreuzer to make excellent airplanes with subpar power plants.



## König-Werke

*Kohligen, Voisin Valley*

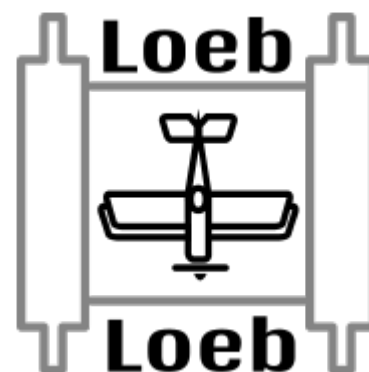
Founded by order of the late monarch King Albert, K-W was the primary manufacturer of aircraft for the Fokker Kingdoms throughout the war, building solid, reliable machines. Being very near to the Dark Sea, they were also the world's premier manufacturer of seaplanes, and had a large canal dug in the city for test flights. The company was gas bombed in 1600 and ceased to exist in any meaningful fashion.



## Loeb & Loeb

*Körtes, Lohner Forest*

A cooperative founded by two brothers, Loeb & Loeb was born in the short-lived East Lohner People's Republic and swiftly annexed into the UFW before the official start of the war. L&L built a series of promising designs, but with the defeat of the UFW by the Gotha Empire, the brothers refused to create any more aircraft, fleeing to Loring and eventually disappearing from records. Their assets were absorbed by Theler.



## Markgraf Schwerindustrie

*Carpodem, Island of Sopwith*

Markgraf Schwerindustrie began life as a company making wire trolleys for the Sopwith government. It was quickly pressed into service to make aircraft for the war effort, and produced a number of excellent machines in conjunction with the Royal Design Bureau. After the war, it has for the most part reverted back to public transport vehicles.



## Rathenau

*Seraeus, Macchi Peninsula*

Among the largest aircraft companies at the beginning of the war, Rathenau was a multinational not unlike Arntwerks or Theler, but unlike those two it closed down its factories in the Gotha Empire and Fokker Kingdom at the beginning of the war, manufacturing and selling to the UFW and Macchi Republic. This principled stand didn't save them from eventual collapse after the arrest of Sebastian Rathenau for attempting to bribe Macchi government officials, leading to the company being acquired by Ritter Flugzeugwerke.





## Recht AG

*Levamasse, Dorand Lowlands*

An agricultural and medical company, Recht began their aircraft production division to create utility aircraft for farming communities. Their line of sky tractors was among the most popular planes in the world at the outbreak of the war, and such was their importance to agriculture that the UWF was slow to shift them to a war footing. The company still exists today in much reduced form, now primarily producing medicine, fertilizer, and pesticide.



## Ritter Flugzeugwerke

*Westbeke, Schuckert Highlands*

Founded around the designs of Astrid Ritter and initially operating out of a small rented hanger, Ritter Flugzeugwerke would survive the collapse of the UFW government, an emergency evacuation to Macchi, and eventually grow to one of the world's largest corporations through a mixture of successful designs, desperate governments, widespread strikebreaking, and hostile takeovers of at least three rivals.



## Saft & Altmann Motorbau

*Free City of Eisenfluss, Daimler Coast*

Originally a company producing generators, SAM pivoted to aviation engines, building some of the best V8 engines on the market and selling them widely. As the wartime push for local production shrunk their client base, they began to produce aircraft as well. While the company no longer exists, much of their tooling has been recovered.



## Teicher Flugzeugfabriken

*Mitterben, Dornier Delta*

In the early history of heavier than air flight, it was generally easier to build heavy aircraft as flying boats, and Teicher specialized in doing so. This experience allowed them to design the world's first practical bombers for the UWF, but their factories were quickly seized by the Fokker Kingdoms and they were reverted to seaplane production.



## Theler Körperschaft

*Salzkirch, Gotha Plateau*

An enormous multi-industry, multinational corporation, and one of the oldest in the world, the Theler Corporation ended up producing aircraft for not just the Gotha Empire in which they were based, and their allies, but for other nations as 'independent subsidiaries'. They pioneered the use of steam molded plywood as an aircraft material and initially built very good machines, but over time the quality slipped due to a focus on mass production. Undeterred, Theler simply bought up enough of the government to ensure they would never lose contracts.



## Mitscher Industrie Gesellschaft

*Blackburn, Westsee*

Originally a tool and die company, Mitscher Industrial Company (commonly known as MIG) produced artillery, airships, rifles, aircraft, and armoured sky-trains for the UFW. Their aircraft division was untested and poorly staffed, considered less important than their airship yards, and they often had to sell production licenses to Ritter to fulfil government orders. Ritter eventually acquired the division outright, and MIG was broken up when the UFW fell.

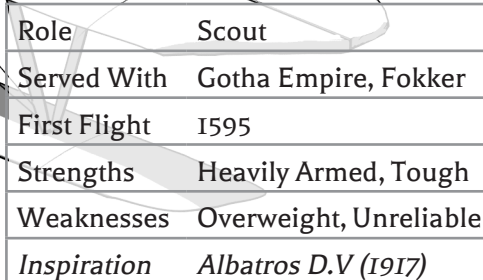


## von Morgen Flugzeuge

*Fürstenberg, Fokker Mountains*

Beginning as a manufacturer of transport aircraft during the war, Raphael von Morgen's company was a keen eye for both talent and good ideas, and soon began experimenting with high quality combat aircraft. These new designs were revolutionary, bringing together lessons from across the war into sleek and deadly machines, but very few of them made it into service before the war ended. There are rumours that Raphael von Morgen is still alive and that the company lives on, hidden somewhere in the Fokker Mountains.





## 36b New, 18b Used

**1b Upkeep**

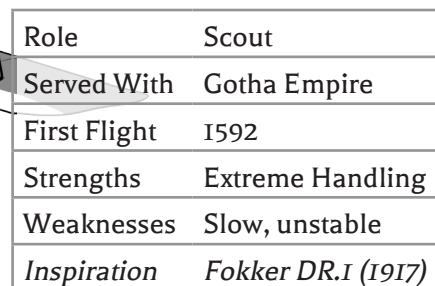
Vital parts
Engine, Radiator, Oil Cooler, MGs, LMGs, Controls, Fuel, Landing Gear
Pilot

Dropoff 10, Reliability -3, Overspeed 24, Ideal Alt. 0-29, Fuel 6
Visibility -2, Stability +1, Energy Loss 4, Turn Bleed 2
Toughness 10, Max Strain 22, Escape +2, Crash -1, Stress 1
x2 Forward Accessable MGs ✂, x1 Flexible Forward/Up Accessable Wing LMG Collimated Gunsight (+1 Attack), High Offset Water Radiator

It's generally believed that the Theler corporation essentially executed a coup of the Gotha Empire in order to preserve their order.

- MD Prototype: Remove Wire Root.
- Stripped Down: Field mod for drag Reduction. Remove overwing machine gun.
- von Morgen Kobra M(D): Licensed by Fokker. +Streamlining, +Reinforcement, --Mass.
- MDc: Bomber interception variation. Remove MGs, add +2 overwing LMG.

## Aircraft Factory Link



32b New, 16b Used

Ib Upkeep

## Vital parts

Engine, Oil Tank, Guns, Controls, Fuel, Landing Gear Pilot
--

Dropoff 9, Reliability -2, Overspeed 20, Ideal Alt. 0-29, Fuel 7

Visibility -2, Stability -4, Energy Loss 4, Turn Bleed I

Toughness I6, Max Strain 2I, Escape +2, Crash -I, Stress 3

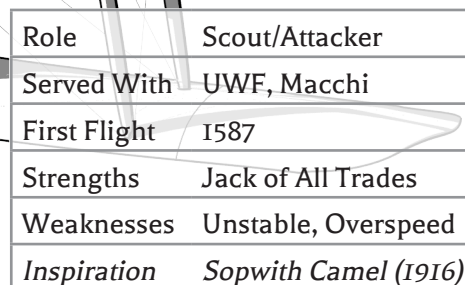
x2 Fixed Forward Accessable MGs ✖, Rotary Engine (+I to Dogfight when turning Right)

Despite their excellent characteristics, the M3's reliance on synthetic lubrication gave them chronic overheating problems in the northern heat, causing an early retirement from service which preserved a great many machines.

### Common Variations

- MI: Fragile early version. Remove I-Strut.
- Upengined: Replace engine with Schreiber B.IX looted from downed enemy Singvogels.
- Late Prototype: Add an IAF 2 Supercharger to the engine, replaces MGs with BMGs.
- Parasite: Replace Landing Gear with Zeppelin Hook and Landing Skid.

## 13



## 26b New, I3b Used

**Ip Upkeep**

Vital parts

---

Engine, Oil Tank, Guns,  
Controls, Fuel, Landing Gear,  
Electrics

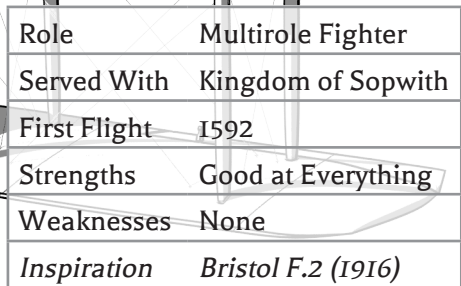
Pilot

The Model F continued to be produced in Macchi even as the UWF fell. Even now is a common sight in the hands of professional militias who can handle the training time and afford the losses that come with training new Singvogel pilots.

- Model E: Standard tail, remove I MG.
- F4: Upengined to W.O.I 150hp.
- Nachtvogel: Replaces MGs with x2 LMG on wing fore/up mounts, removes Wing Cutout.
- Panzervogel: 2/5+ Armour, x1 Mechanical MG.
- SeeVogel: Adds Floats, replaces MGs with BMGs

## Aircraft Factory Link





35b New, 17b Used

## 2b Upkeep

## Vital parts

Engine, Radiator, Oil Cooler, Pilot  
Pilot MG, Gunner LMGs, Controls,  
Fuel, Landing Gear  
Pilot, Gunner

Dropoff 10, Reliability 0, Overspeed 28, Ideal Alt. 0-29, Fuel 6

Visibility -I/O, Stability +I, Energy Loss 7, Turn Bleed I

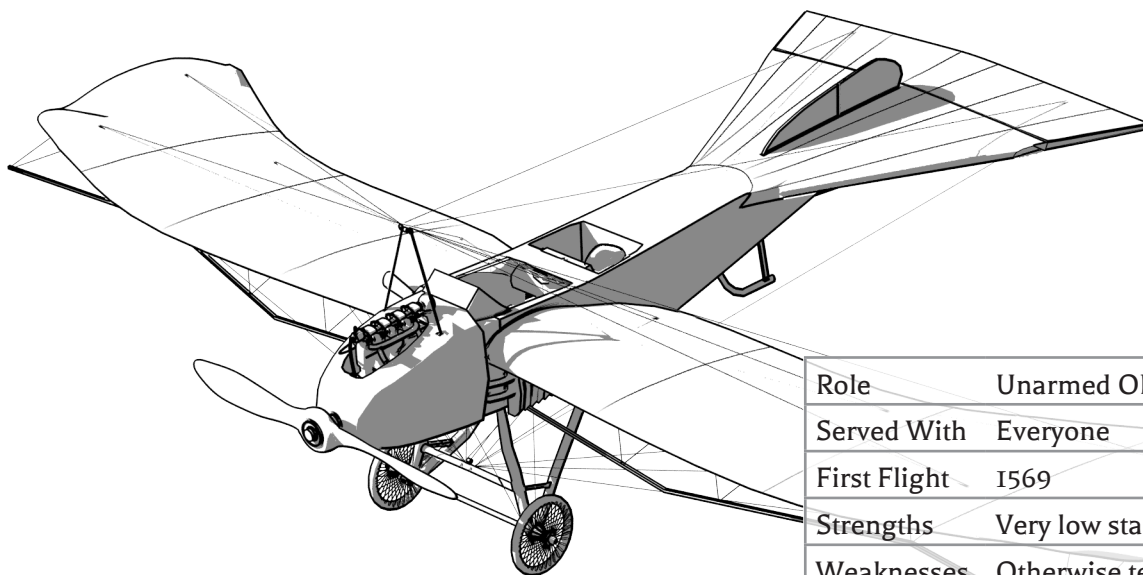
Toughness IO, Max Strain 25, Escape +2/+2, Crash -I, Stress I/I

Pilot: x1 Fore Accessable MGs ✨, Collimated Gunsight (+1 Attack), Negate 1 Injury on Go Down  
Gunner: x2 Rear/Left/Right/Up Access Turret LMGs  
Inline Radiator, 8 Mass Bombs

Many nations tried to copy the machine to varying results, and post-War, the Sopwith government sold off much of their reserve stock. This makes the Zerstörer a common sight in the skies.

- C-series: Wollsteinkraft Verteidiger H engine.
- Pilot Weapons: Twin LMGs on upper wing deck.
- Gunner: x2 LMGs, x1 LRC or Punt Gun.
- Gotha Copy: Plywood Monocoque Body, Bertha F4398 Dreifach-Sechs 490hp, High Power prop.
- Free Cities Copy: Duralumin frame, Aluminium skin and wings. Radio transceiver.

## Aircraft Factory Link



Role	Unarmed Observer
Served With	Everyone
First Flight	1569
Strengths	Very low stall
Weaknesses	Otherwise terrible
<i>Inspiration</i>	<i>Etrich Taube (1910)</i>

# Theler Drachen

5p New, 2p Used

### *"First in Service"*

Op Upkeep

	Boost	Handling	Climb	Stall	Speed
Full Fuel	2	93	10	2	10
Half Fuel	2	93	10	2	10
Empty	-	93	-	2	-

## Vital parts

Engine, Radiator, Oil Cooler,  
Landing Gear, Controls, Fuel  
Pilot, Passenger

Dropoff 4, Reliability 0, Overspeed 2I, Altitude 0-29, Fuel 7
Visibility 0/0, Stability 0, Energy Loss 5, Turn Bleed I
Toughness 6, Max Strain 32, Escape +2/+2, Crash 0, Stress I/I
Wing Warping (+I to Dogfight! when below 15 Speed)

Invented before the start of the Great War, the Theler Drachen was possibly the first plane to be built with a military role in mind. The Gotha Army made their first use of heavier-than-air observers in their border skirmishes in Lohner, using civilian two-seat aircraft to fly over the battlefield. The Theler Drachen was commissioned as a standard aircraft for this role.

Soon, the Drachen was one of the most common aircraft in the world, purchased by every nation and a great number of civilians. It was relatively easy to fly, easily modified, and cheap. Most pilots have their first training flight in a Drachen.

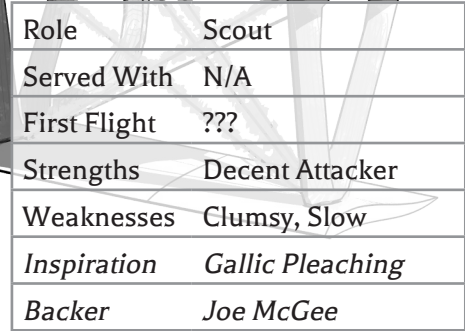
Though used in the first few years of the war for a variety of roles, they were soon withdrawn from any kind of combat service and redistributed as trainers, where most of them remain.

### Common Variations

- Fokker Drachen: Steel tube frame.
- Late Gotha Drachen: Molded wood monocoque.
- Macchi Geisterdrache: Celluloid wings.
- Homemade: Paper wings and skin.
- Civilian Drachen: Naked tail section.
- Combat Drachen: Post-war: remove second seat, add xI MMG forward with interrupter gear.

## Aircraft Factory Link





27b New, 13b Used

Ip Upkeep

## Vital parts

Engine, Radiator, Oil Cooler, Guns, Landing Gear, Controls, Fuel Pilot
--

Dropoff 9, Reliability -2, Overspeed 24, Altitude 0-29, Fuel 6

Visibility +3, Stability -1, Energy Loss 5, Turn Bleed 2

Toughness 9, Max Strain 20, Escape +2, Crash -1, Stress I

## x2 Fixed Forward Accessible BMGs, Wing Warping (+I to Dogfight! when below I5 Speed)

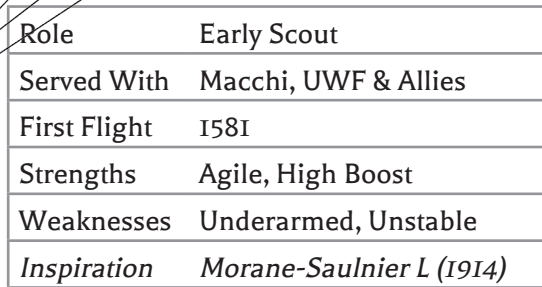
Flammable, Living Grove (Repairs to Max Strain are free), Inline Radiator

These examples are common in Lohner, likely based on UWF Sperlings and powered by engines taken from downed Gotha Kobras. The patterns carved into them are supposed to grant magical protection and guidance.

These planes need to be tended to carefully, and differently from most. Parking them on damp grass in the sun for at least a few hours every day is highly recommended.

- Salvaged Singvogel: Engine to Schreiber B.IX.
- Salvaged Panzer: Engine to N.M. Arbeiter.

## 17



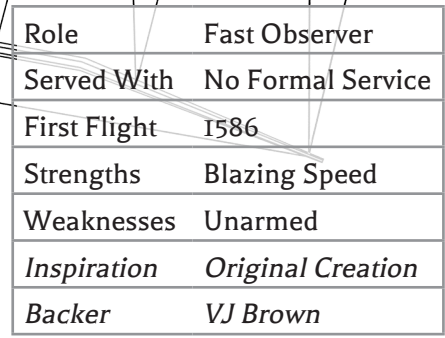
I4b New, 7b Used

**Ip Upkeep**

Vital parts
Engine, Oil Tank, Landing Gear, Gun, Controls, Fuel Pilot

The design of the engine mount, using a looped wire cage, made retrofitting an interrupter gear impractical. Before large scale revisions could correct this issue, the much better Rathanu-9 came into operation, using overwing guns and later interrupter gears themselves.

## 18



I2b New, 6b Used

**Ib Upkeep**

## Vital parts

<p>x2 Engines, x2 Oil Pans, Fuel, Controls, Electrics, Landing Gear Pilot</p>
---

Dropoff 6, Reliability +2/+2, Overspeed 23, Altitude 0-29, Fuel I2

Visibility +2/+2, Stability +1, Energy Loss 3, Turn Bleed 3

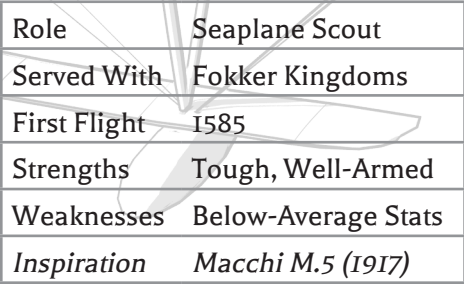
Toughness 6, Max Strain 20, Escape +2/+2, Crash -I/-I, Stress I/I

Radio Transciever, 2 Charge Generation, 5 Charge Battery

The most notable feature of the Model VJ, other than its blistering speed and lack of ailerons, is the ability to carry a lightweight radio, controlled by a passenger. This feature was rare originally, but became standard as the military used it more frequently.

### Common Variations

- ## Aircraft Factory Link



### “Cursed Gifts of the Fokker Kingdoms”

**Ip Upkeep**

Vital parts
Engine, Radiator, Oil Cooler, Controls, Fuel, Boat Hull Pilot


Dropoff 6, Reliability -I, Overspeed 25, Ideal Alt. 0-29, Fuel I3
Visibility -I, Stability -I, Energy Loss 5, Turn Bleed 2
Toughness 9, Max Strain 3I, Escape +2, Crash -I, Stress I
x2 Fixed Forward Accessible MGs
Hardened Inline Water Radiator

- SI-I: Guns moved inside the hull and covered.
- SI-5: Engine to Fleischmann F10 250hp.
- ST: SI with a co-pilot position.

## 20



Inspiration	Macchi M.33 (1925)
Backer	KUMO



47b New, 23b Used

2b Upkeep

## Vital parts

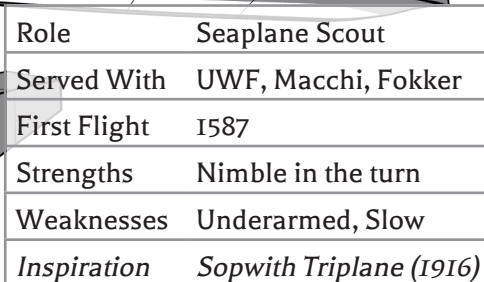
Dropoff 8, Reliability -2, Overspeed 34, Altitude 0-29, Fuel 9
Visibility -3/-, Stability +3, Energy Loss 4, Turn Bleed 2
Toughness 24, Max Strain 34, Escape 0, Crash -I, Stress I/O
Fixed Forward Accessible MGs, Telescopic Gunsight (+2 to Attack when Drawing a Bead) Sealed Cockpit (Passenger cannot see out), Inline Water Radiator

However, all was not well with the aircraft. It was heavier than originally advertised, so after Fokker's best seaplane ace removed one of his machine guns from the nose of his bright red plane, most new pilots followed suit, and soon they were produced that way in factories.

The S4 was in every way an improvement over previous models. The Fokker Empire's mastery of the cantilever spar was put to good use, allowing the plane to use a single long, aerodynamic wing for maximum lift. It was given a powerful V6 engine, twin guns, and all-plywood skin.

- S4-I: Replace 2nd crew with Tiny cargo and MG.

## 21



### *“Doom of the Caproni Push”*

Ip Upkeep

Vital parts

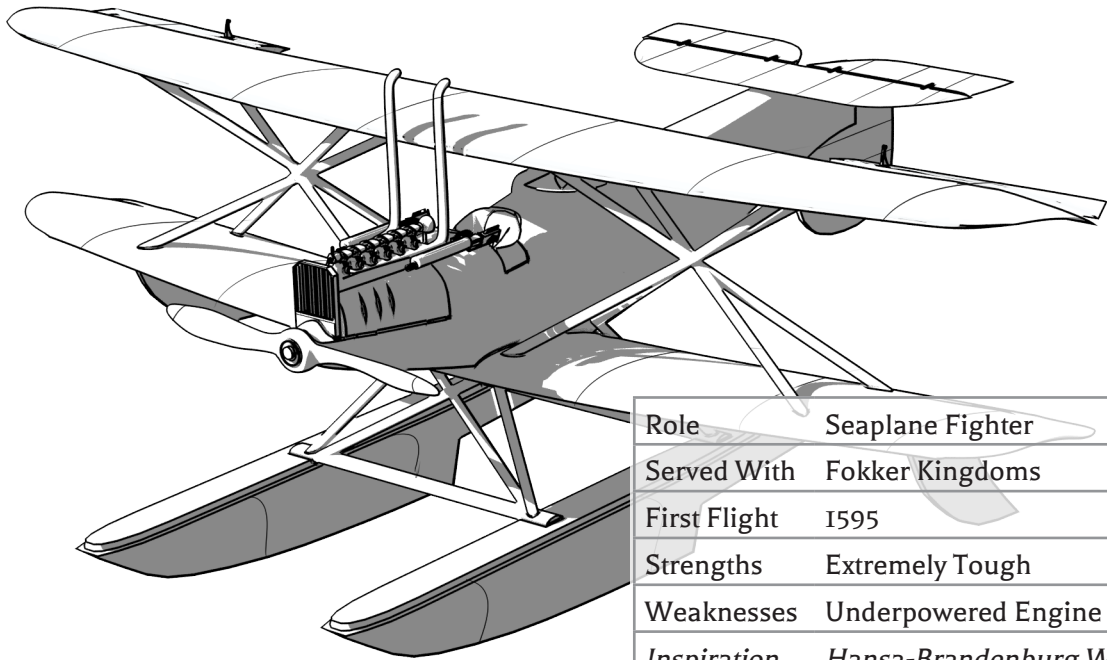
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Engine, Oil Tank, Floats, Controls,  
Fuel, Guns  
Pilot

Fixed Forward Accessible MG ✨  
Rotary Engine (+I to Dogfight when turning Right)

- Pfau: Floats to landing gear.
- Upgunned: Second MMG.
- KW S-5: Fokker knockoff. Steel frame & struts.
- Night Fighter: Replace MMGs with twin wing LMGs.

## 22



Role	Seaplane Fighter
Served With	Fokker Kingdoms
First Flight	1595
Strengths	Extremely Tough
Weaknesses	Underpowered Engine
Inspiration	Hansa-Brandenburg W.II/W.I2

Teicher Möwe I3S-J

43p New, 21p Used

“Fokker’s Forgotten Fleet-Killers”

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Load	I	89	6	8	I3	Engine, Radiator, Oil Cooler, Pilot Guns, Gunner LMGs, Controls, Fuel, Floats Pilot, Co-Pilot
½, Bombs	I	9I	6	6	I3	
Full Fuel	I	9I	8	7	I4	
Half Fuel	I	92	8	6	I4	
Empty	-	93	-	5	0	

Dropoff 8, Reliability 0, Overspeed 24, Altitude 0-29, Fuel I3
Visibility -I/-I, Stability +I, Energy Loss 6, Turn Bleed I
Toughness 3I, Max Strain 38, Escape +2/+2, Crash -I, Stress 0/0
x2 Fixed Forward Accessible MG ✕ Inline Radiator, Co-pilot Controls, IO Mass Bombs

Observation was considered a niche use for seaplanes during early Fokker campaigns. They were mostly seen as a means of maintaining scout coverage during the yearly flooding of the Doran Lowlands. Little thought was paid to the performance of two-seaters.

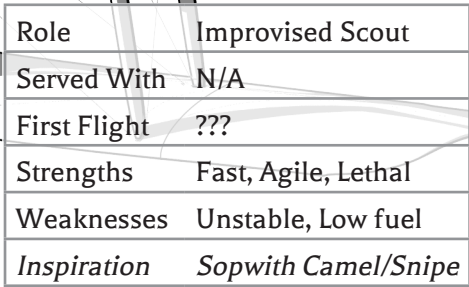
This changed as the war went north, especially once confronted with Macchi’s bizarre ‘Seeheer’ and its carriers, gunships, and u-boats. The Teicher Möwe I3S was designed in response with high endurance, forward and rear guns, robust steel construction, and a bombload. In theory, it could attack fleets far out to sea.

A good theory, but unfortunately, the engine it was supposed to have was earmarked for the von Morgen Vampyr. The Möwe was left underpowered and overweight, rotting as trainers in fischer villages. But it has potential...

Common Variations

- Wartime: Remove copilot controls, Rear/Up/Left/Right LMG Turret.
- Intended Powerplant: Replace engine with the Schrankhut RD.300V, add turret.
- I3L: Replace floats with wheels.
- I4S: Remove co-pilot & bombs. Long tail.





### *“Chopped Up & Welded Together”*

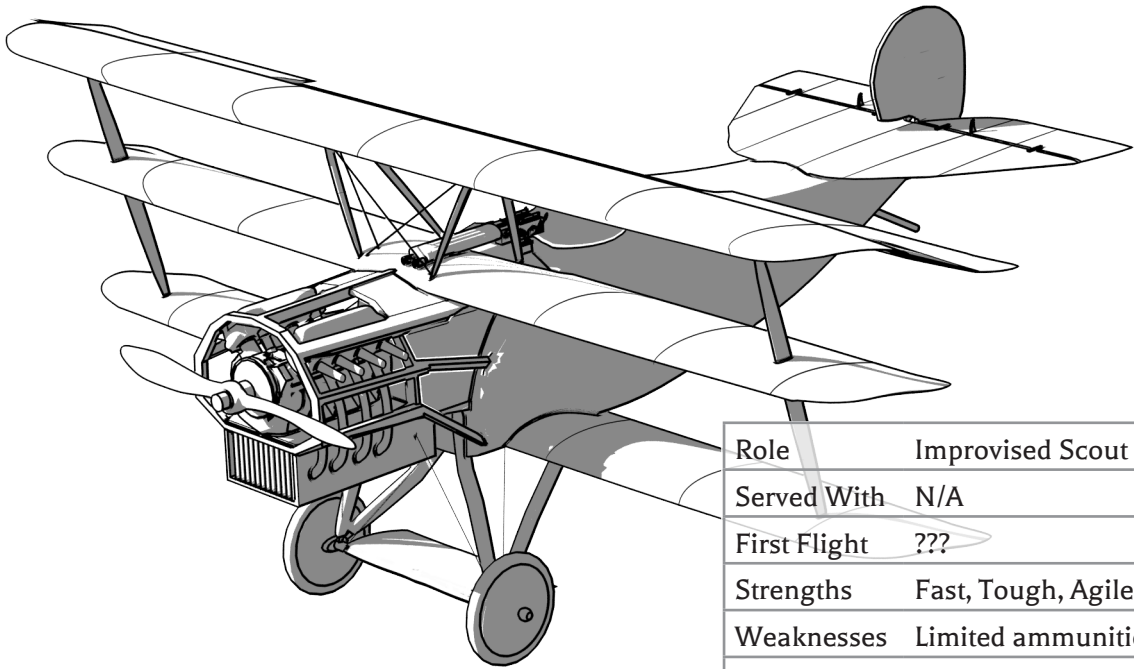
2p Upkeep

Rotary engines require castor oil for lubrication, and the Macchi Republic produced more than 90% of the castor oil in Himmilgard. As relations with Gotha and Fokker worsened, this supply was cut off, forcing Macchi's enemies to turn to liquid-cooled engines and synthetic lubrication.

If you were trapped in an industrial city in Gotha and you needed to make a plane to escape, you could do worse than attach one of those half-finished rotary engines to a cannibalized Model F airframe. There would be drawbacks, though: the engine is too large to fit the cowl, it'd need a heavy metal mounting frame, and would block the barrels of the machine-guns. But it could be done.

- Kreuzer Uncontrollable Spinne: Same principle, but with the body a Kreuzer Spinne.
- Turbo Sparrow: Same principle, but with the body of a Ritter Model C and a W.O.I.

## 24



Role	Improvised Scout
Served With	N/A
First Flight	???
Strengths	Fast, Tough, Agile
Weaknesses	Limited ammunition
Inspiration	Fokker V.6

## Kreuzer Spinne V8 Conversion

“Foolproof Escape Plan”

31p New, 15p Used

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Fuel	3	IO4	I3	8	I8	Engine, Radiator, Oil Cooler, Guns, Controls, Fuel, Landing Gear Pilot
Half Fuel	3	IO4	I3	7	I8	
Empty	-	IO5	-	6	0	
Dropoff IO, Reliability 0, Overspeed 28, Altitude 0-29, Fuel 7						
Visibility -2, Stability +I, Energy Loss 4, Turn Bleed 2						
Toughness I7, Max Strain 20, Escape +2, Crash -I, Stress I						
Fixed Forward Accessible Gast Principle BMG ✂						
Low Radiator, Roll Bar: Negates I Injury from Go Down						

Castor oil has a shelf life: it only lasts a year. While fuel and synthetic oils in Himmilgard have stablizing agents which have allowed stores of them to survive for decades, once castor oil goes off, it’s no longer useable, which can be a problem if you need to use one of these planes to escape a bombed out city.

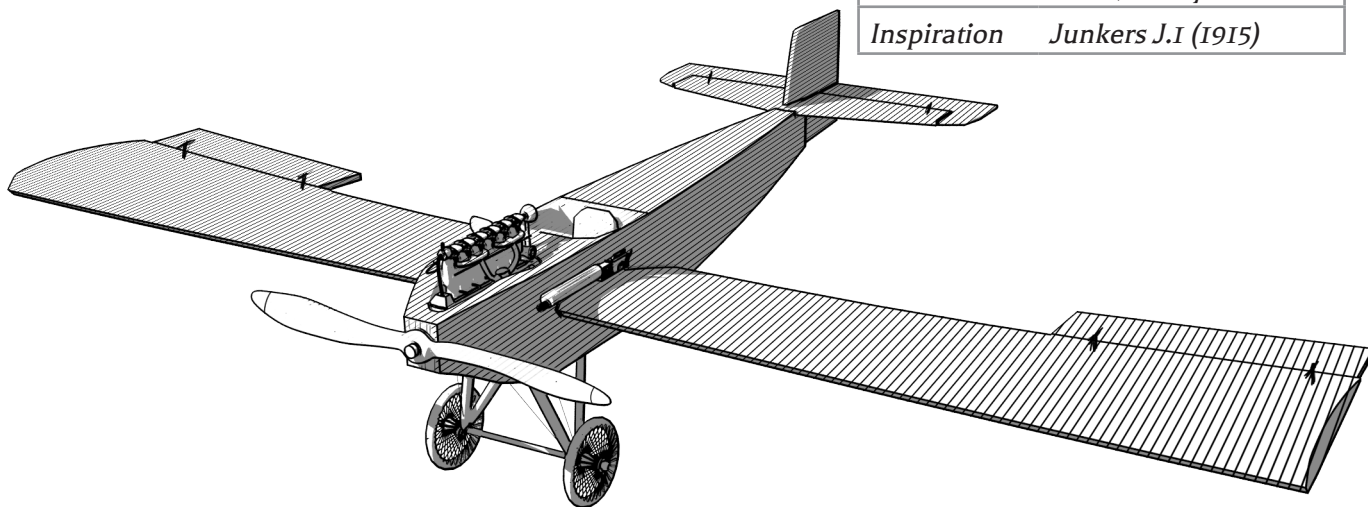
The Kreuzer Spinne was a solid design with an underpowered engine, so after the war in Macchi many were recalled to cities have their engines replaced, where they remain. If lack of oil prevents reinstalling their original engines, one can improvise a conversion to liquid-cooled engines.

A few of these conversions, most mounting V8 engines taken from downed KW Alder-Ns, are seen every year, often armed with prototype gast guns taken from the conversion factories. Their performance is so impressive that some workshops have begun converting intact aircraft.

### Common Variations

- Spider Six: Uses the Bertha F1466 Uber from the Kobra MD.
- Original Guns: Uses the original twin MMGs.

## Aircraft Factory Link



43b New, 21b Used

**Ib Upkeep**

	Boost	Handling	Climb	Stall	Speed
Full Fuel	I	9I	8	7	I4
Half Fuel	I	9I	8	6	I4
Empty	-	92	-	6	-

Engine, Radiator, Oil Cooler,  
Landing Gear, Gun, Controls, Fuel  
Pilot

Dropoff 8, Reliability 0, Overspeed 24, Altitude 0-29, Fuel II
Visibility 0, Stability -2, Energy Loss 4, Turn Bleed 2
Toughness 5I, Max Strain 49, Escape +2, Crash 0, Stress I
Fixed Forward Accessible MG ✂ Low Radiator, Armour 2/8+

That said, many engineers took note of the wings, which stayed on without external means of support. These cantilever wings were soon copied by a variety of designers, though none of them were as robust as the Bennhold designs.

- **Combat Ready:** Upgrade to Bertha FI466 engine.
- **Two-Seater:** Add second position with xI rear/upward facing MMG, change tail to Stubby.
- **Flying Tank:** Narrow canopy, sealed engine cowl, and 2 more points of Armour 2.
- **Folded 10,000 times:** Add Wing Blades.

## Aircraft Factory Link

Weaknesses	Slow
Inspiration	Caudron G.4 (1915)

Loeb & Loeb Kessel IIb

26th New, 13th Used

## 26b New, I3b Used

2b Upkeep

## Vital parts

## Pilot, Gunner

Dropoff 10, Reliability -I/-I, Overspeed 25, Altitude 0-29, Fuel 7

Visibility +2/+2, Stability 0, Energy Loss 10, Turn Bleed 1

Toughness II, Max Strain 35, Escape +2/+2, Crash -I/, Stress I/I

Forward/Up Access LRC Turret, 5 Mass Bombs

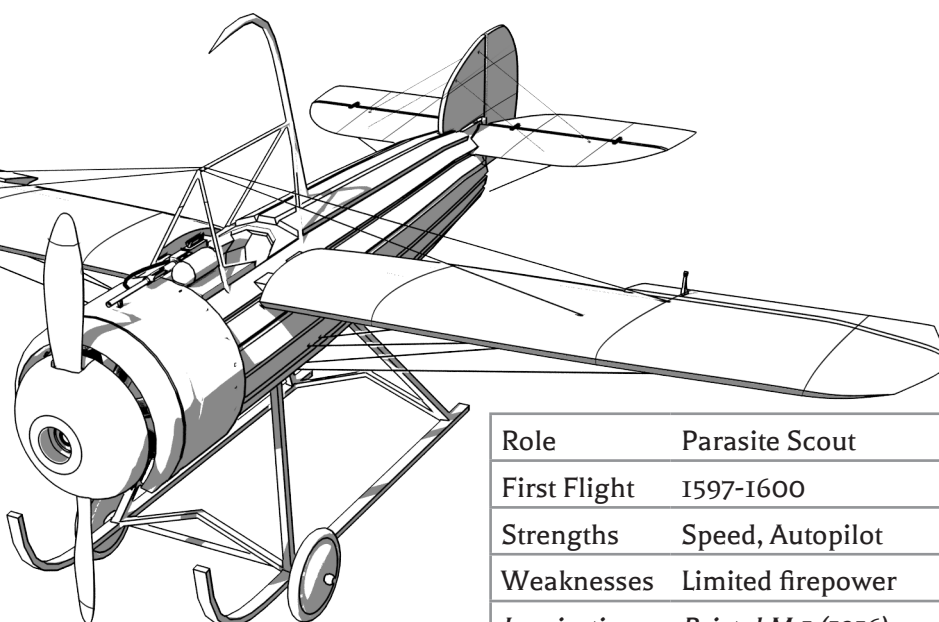
### Wing Warping (+I to Dogfight! when below 15 Speed)

After the end the wide distribution of these aircraft and their ability to use nearly any powerplant made them popular as multiroles, especially since the unique tail structure and warping wings make them remarkably manoeuvrable for a bomber. Many were left in the dead cities, though the Scholz Luchs X 10-cylinder radial engines on the Kessel IIb are remarkably easy to restore to working order for anyone who might want one...

- Kessel IIa: Rhona Motorbau ZI2 engines.
- Kessel IIc: Bertha FII6 & low radiators.
- Funkvogel: No bombs, radio

## 27





Role	Parasite Scout
First Flight	1597-1600
Strengths	Speed, Autopilot
Weaknesses	Limited firepower
<i>Inspiration</i>	<i>Bristol M.1 (1916)</i>

## Ajeet Interceptor

### *“Guardian of the Convoy”*

24b New, 12b Used

Ip Upkeep

	Boost	Handling	Climb	Stall	Speed
Full Fuel	2	96	13	7	18
Half Fuel	2	96	13	6	18
Empty	-	97	-	5	-

## Vital parts

Engine, Oil Tank, Landing Gear,  
Controls, Fuel, Gun  
Pilot

Dropoff 7, Reliability -2, Overspeed 20, Altitude 0-29, Fuel 7
Visibility +1, Stability -3, Energy Loss 3, Turn Bleed 2
Toughness 7, Max Strain 35, Escape +2, Crash 0, Stress 2
Fixed Forward Accessible Pneumatic MG ✨
Rotary Engine (+1 to Dogfight when turning Right), Programmable Autopilot, Zeppelin Hook

The Skyborn have their own cottage industry of aircraft production, using engines bought or salvaged from ground production to build unique craft to their own needs. Skyborn aircraft are all unique and hand-crafted, but they are built to recognizable patterns, their blueprints traded like anything else between convoys.

The Ajeet is the modern standard for Skyborn scouts: its wooden-plank construction makes use of tested shipbuilding techniques, the monowing makes using docking hooks easy, and the rotary engine keeps weight down. A clockwork autopilot allows the pilot to use their wingsuit if needed.

The Ajeet's pneumatic gun is a holdover from the Imperial age, when most nations prevented the Skyborn from owning firearms. These air cannons would slip right by inspectors, often disguised as automatic starters for engines.

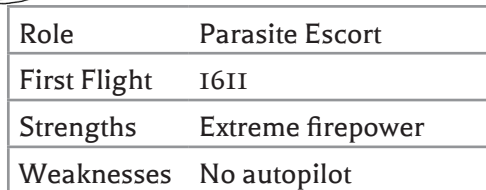
### Common Variations

No two Skyborn aircraft are exactly the same, being the product of cottage industry. Wing size, cowl configuration, and engine are all variable.

Copies of the Ajeet with canvas skin, no autopilot, and standard MMGs have been available for sale for the last few years as the Markgraf Korsar.

## Aircraft Factory Link





42b New, 2Ib Used

## 2b Upkeep

Vital parts

x2 Engines, x2 Oil Tanks, Guns, Landing Gear, Controls, Fuel Pilot
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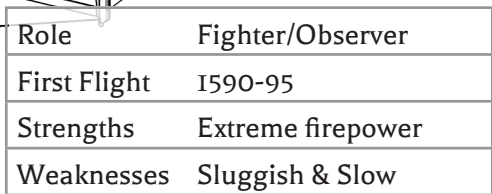
The Skyborn do not have the resources to pursue intense research and development of new aircraft types, so they are often slow to adopt new ideas. The more radical these new designs, the less likely they are to get traction. That a design as unusual as the Bahadur is starting to see widespread use should tell you how effective it is.

### Common Variations

The aircraft has an unusual wing design with heavy birch wing spars instead of the usual tension structures. The channel around the engine both reduces drag and increases lift, and means that additional weapons can be mounted without interrupter gears.

## 30





## 3Ib New, 15b Used

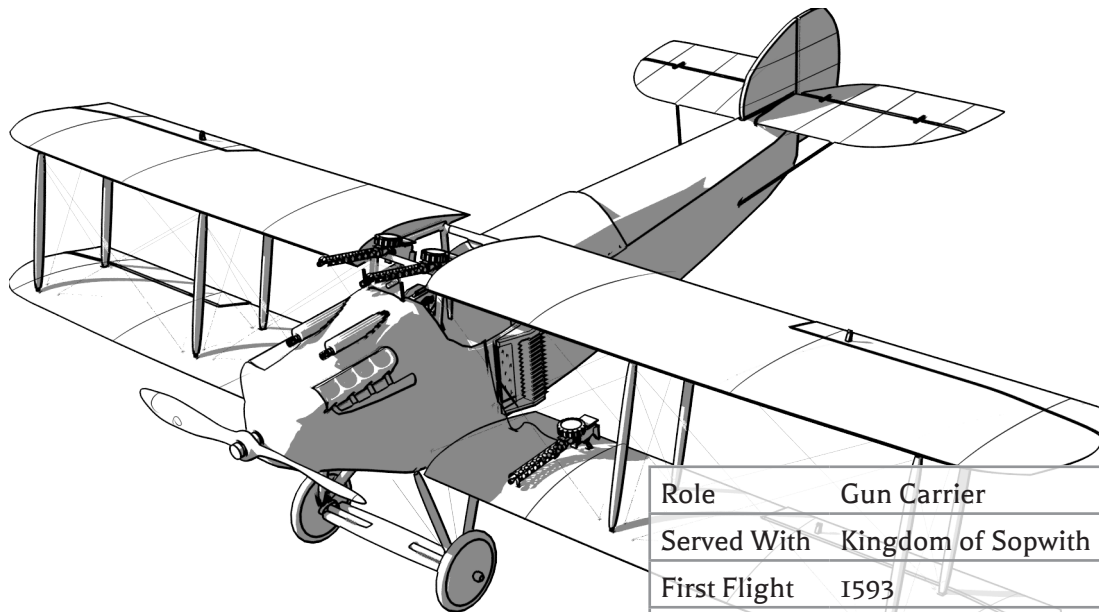
2b Upkeep

Vital parts
Engine, Oil Tank, Gun I, Gun 2, Controls, Fuel, Landing Gear Pilot, Gunner

Building longer-range monoplanes to do the same task soon became a priority, and the Cheetah is the most common indigenous Skyborn design for these purposes. Though not the fastest or most agile, it is among the most heavily armed aircraft in the world for its size.

In addition to their uses as heavily armed outriders, convoys have begun hiring out the Cheetal Fighter as escorts for trade companies. Their pneumatic scatterguns are feared enough to deter any attack.

- **Raid Rangers:** Replace fixed scatterguns with bombload.



Role	Gun Carrier
Served With	Kingdom of Sopwith
First Flight	1593
Strengths	Extreme firepower
Weaknesses	Poor dogfighter
<i>Inspiration</i>	<i>Sopwith Dolphin (1917)</i>

## Markgraf Attentäter C

33b New, 16b Used

### *"The Winged Fusilier"*

2b Upkeep

	Boost	Handling	Climb	Stall	Speed
Full Fuel	2	95	13	9	20
Half Fuel	2	95	13	8	20
Empty	-	96	-	7	-

### Vital parts

Engine, Radiator, Oil Cooler, x2  
Guns, Controls, Fuel, Gear  
Pilot

Dropoff 8, Reliability 0, Overspeed 42, Altitude 0-29, Fuel 7
Visibility -2, Stability -4, Energy Loss 4, Turn Bleed 2
Toughness 8, Max Strain 28, Escape +2, Crash -1, Stress 2
x2 Forward Accessible MGs ✂, x2 Up Accessable Wing LMGs, x2 Forward Wing LMGs Low Radiator

The Königliche Sopwith Fliegerkorps developed a divergent combat philosophy from their mainland counterparts, believing that dogfighting and the “ace pilot” mentality was useless continental grandstanding that had no place in modern war.

These planes can carry as many as six machine-guns depending on its intended role. Its primary disadvantage is its violent stall characteristics, but KSF pilots were never expected to do much turning anyway.

Instead, the KSF used a tactic they referred to as the airborne gunline, and the *Attentäter* was designed for it from the ground up. Though neither as agile as most mainline fighters with its V8 engine, or as tough with its long, fragile wings, the *Attentäter* didn't need either. Fast in a straight line and controllable, it was designed to joust with enemy aircraft, and was exceedingly good at it.

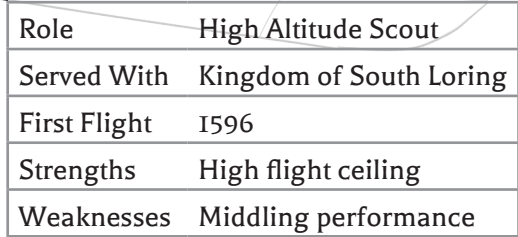
## Gun Configurations

Either set of LMGs can be removed or added before a mission for no cost.

### Attentäter E

Sopwith still operates this airplane in their much reduced military. Modern examples have SAM Transport I 300hp engines.

## Aircraft Factory Link



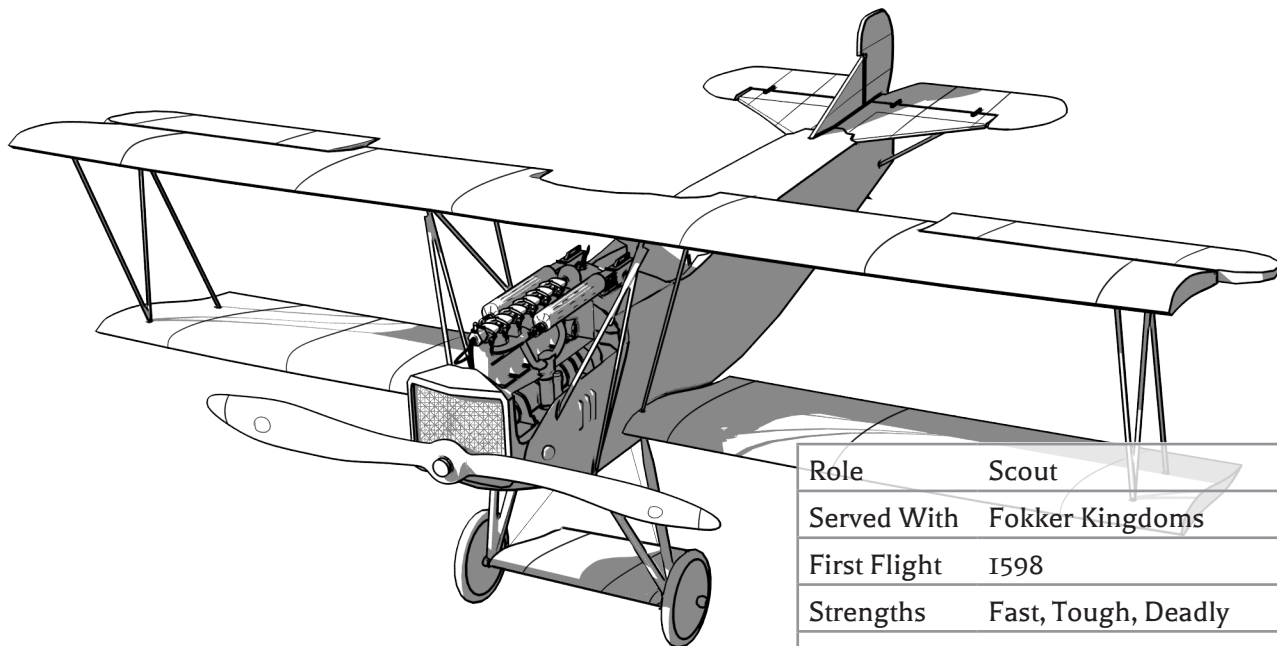
69b New, 34b Used

Ip Upkeep

Vital parts
Engine, Oil Cooler, Guns, Controls, Fuel, Landing Gear Pilot

While the Kingdom of South Loring no longer exists, there are several small republics in the region who use the machine exclusively. The heavily padded and reinforced cockpit is particularly valued, as it makes ditching the machine very safe.

## 33



Role	Scout
Served With	Fokker Kingdoms
First Flight	1598
Strengths	Fast, Tough, Deadly
Weaknesses	Handling, Reliability
Inspiration	Fokker D.VII (1918)

von Morgen Vampyr

38p New, 19p Used

1p Upkeep

"The Butcher Bird"

	Boost	Handling	Climb	Stall	Speed
Full Fuel	2	94	12	8	18
Half Fuel	2	94	12	7	18
Empty	-	95	-	7	-

Vital parts
Engine, Radiator, Oil Cooler, Landing Gear, Controls, Fuel Pilot

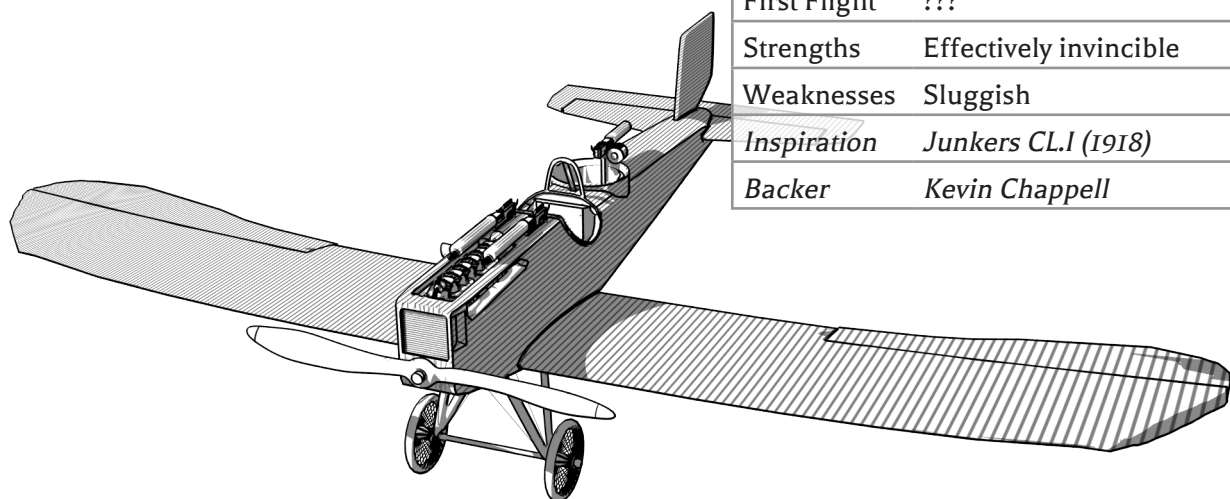
Dropoff 10, Reliability -3, Overspeed 24, Altitude 0-29, Fuel 6
Visibility -2, Stability +1, Energy Loss 4, Turn Bleed 2
Toughness 23, Max Strain 47, Escape +2, Crash -1, Stress 1
x2 Fixed Forward Accessable MGs ✕ Inline Radiator

The Vampyr was Fokker’s secret weapon in the coming war against the Gotha Empire. The Vampyr was stockpiled for the coming conflict, but due to the paranoia of the royal family, only a handful were deployed. Presumably, there are thousands of them sealed away in warehouses somewhere in the gassed out cities of the former Fokker Kingdoms.

Those that have made it into the hands of pilots are frightening enough. They are often seen with cowls removed to save weight and make maintaining their overcompressed engines less of a hassle, as well as to impress onlookers.

von Morgen Vampyr 240  
 Legend says that on the eve of the end, a number of Vampyrs were fitted with special high-compression engines. These near mythical aircraft are said to be able to hang on the propeller in a stall climb, and the mere rumour of a Vampyr 240 can spark war between towns or Circuses. Those that claim to have one flaunt them by removing the cowl to show off the chrome finish.

A Vampyr 240 replaces the regular engine with a Schrankhut RD.300V with an altitude throttle, Speed propeller, prop gearing, and open cowl. You cannot start with a 240, even if you can afford it.



Role	Fighter-Bomber
Served With	None
First Flight	???
Strengths	Effectively invincible
Weaknesses	Sluggish
Inspiration	Junkers CL.I (1918)
Backer	Kevin Chappell

# Hugo's Einzigartiger Stahl-Jagdbomber! 66p New, 33p Used

*"One of a Kind Steel Fighter-Bomber!"* 1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Load	I	9I	7	IO	I6	Engine, Radiator, Oil Cooler, Pilot Guns, Gunner MG, Controls, Fuel, Landing Gear, Electrics  Pilot, Gunner
½, Bombs	I	92	7	9	I6	
Full Fuel	I	92	9	9	I6	
Half Fuel	I	92	9	8	I6	
Empty	-	93	-	8	-	

Dropoff 6, Reliability -3, Overspeed 36, Altitude 0-29, Fuel 7
Visibility 0/0, Stability -2, Energy Loss 5, Turn Bleed 2
Toughness 53, Max Strain 49, Escape +2/+2, Crash -I, Stress I/I
x2 Fixed Forward Accessable MGs ✂, Rear/Up Access Turret MG, 5 Bomb Mass Inline Radiator, x2 Oxygen Masks, I Charge Generation

The third of the commonly scene Bennhold designs, usually seen as having been developed alongside the similar, though much smaller "Hugo's Metallisches Jagdflugzeug!", this fighter saw some limited success in militias and smaller nations, but is undergoing something of a post-war renaissance.

Like all of Bennold's design, the One of a Kind Steel Fighter-Bomber has no official designation, known only by its advertising blurb. Though perhaps less than a hundred were made before the war, their blueprints are widely available, so anyone with aluminium production can make one.

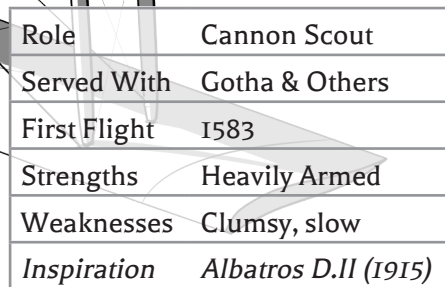
The machine is a great improvement over the first Bennhold design, with a more appropriate powerplant and a role that takes advantage of its robust construction.

The most common operators of these vehicles are shelter principalities, who often have the machine tools and materials to build them. Another prominent user is the aluminium-producing hydroelectric dam of Piav in the Fokker Mountains, operated by the communal militia.

Common Variations

- Original: No rockets. Reinforcements removed.





## 32p New, 16p Used

Ib Upkeep

### Vital parts

Dropoff 9, Reliability -2, Overspeed 24, Altitude 0-29, Fuel 6

Visibility -I, Stability +I, Energy Loss 5, Turn Bleed I

Toughness I2, Max Strain 30, Escape +2, Crash -I, Stress I

Flex Fore/Up Wing Light Repeating Cannon  
High Radiator (Dumps water in face!)

The Theler Kobra MA was revolutionary when it first hit the field. Though heavy and sluggish even then, the fact it carried two synchronized machine guns put it miles ahead of the competition.

It wasn't without problems, though. Most notable was the bulky box radiator, which not only caused a lot of drag but tended to drain rapidly if damaged. The MA was swiftly replaced with the upgraded MB model, which moved the radiator to a panel in the upper wing to solve both problems.

Only issue was that if damaged, the radiator tended to dump boiling water in the pilot's face.

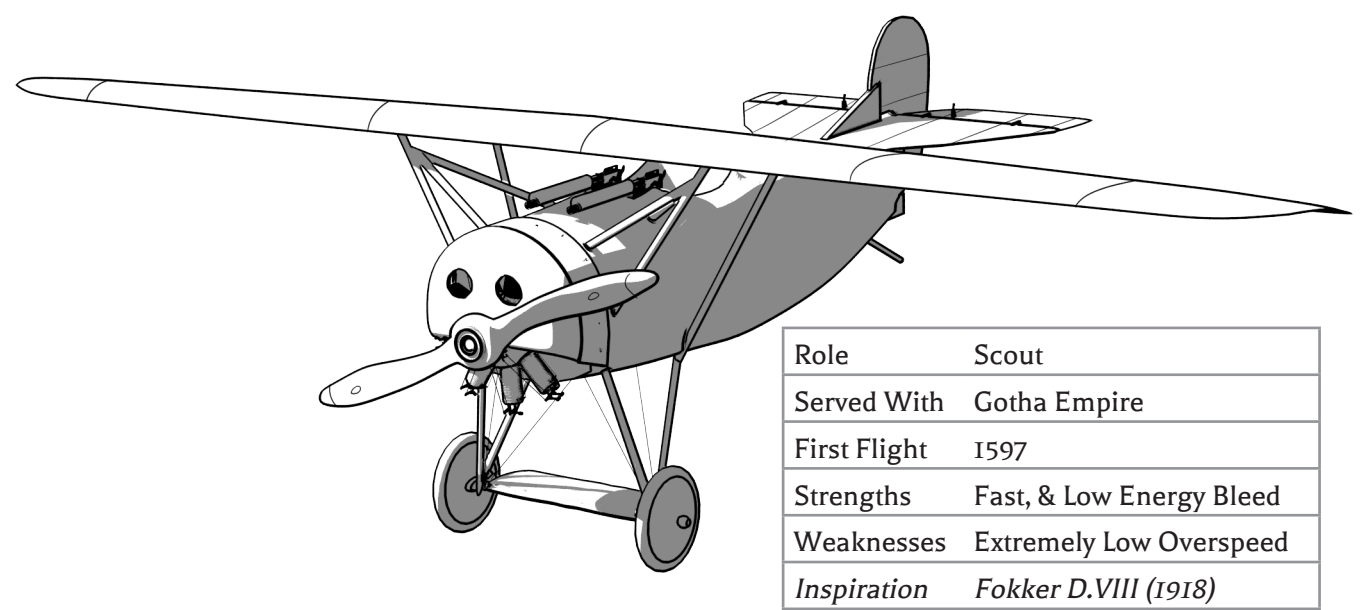
Though the problem was known, the MB stayed in production. Once the MC entered service, the MBs were pulled back to secondary duties. Balloon hunting with 20mm cannons were common, a hated job as you have to stand up to reload.

## Stock Configurations

The Kobra can be returned to stock configuration by removing the cannon and adding 2 fixed forward accessible uncovered hull MMGs instead.

### Common Variations

- MA: Replace radiator with Low Box radiator.
- Field Fix: Offset high radiator, Wing Cutout.



Kreuzer Skorpion

34p New, 17p Used

“Gotha’s Hunting Razors”

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Fuel	2	100	14	8	20	Engine, Oil Tank, Guns, Controls, Fuel, Landing Gear Pilot
Half Fuel	2	100	14	7	20	
Empty	-	102	0	6	-	
Dropoff 8, Reliability -2, Overspeed 20, Altitude 0-29, Fuel 7						
Visibility 0, Stability -4, Energy Loss 2, Turn Bleed 2						
Toughness 16, Max Strain 37, Escape +2, Crash 0, Stress 3						
x2 Fixed Forward Accessable MGs ✂, Rotary Engine (+I to Dogfight when turning Right)						

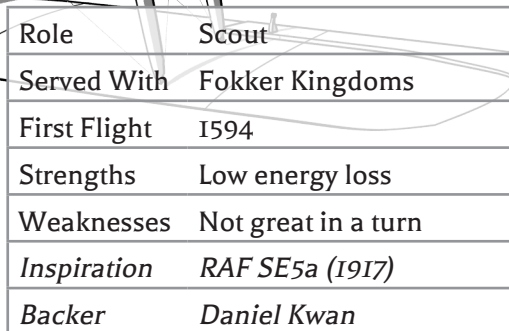
With the end of the War in Macchi, the Gotha Empire seized both the powerful Ritter engines and the tooling to make more. But the question soon arose: what to do with the thousands of 110hp engines already produced?

They might have just rotted away, but Kreuzer proposed a lightweight, streamlined scout using the powerplant to supplement other forces, which would use parts commonality with the Spinne to keep costs down. The project was approved as the Skorpion, a para-monowing single-seater whose steel tube construction and birch cantilever made it faster than its aging engine should have allowed.

In the final build-up, the Skorpion was swiftly issued to regional defence squadrons across the continent. They never saw action properly, and so are often overlooked by combat pilots hunting for wartime staples. This means that a surprising number end up in the hands of the desperate, who don’t know enough to mistakenly dismiss it on the engine power alone.

Common Variations

- Ritter Engine: Schreiber B.IX engine.
- Racing Plane: Remove weapons.



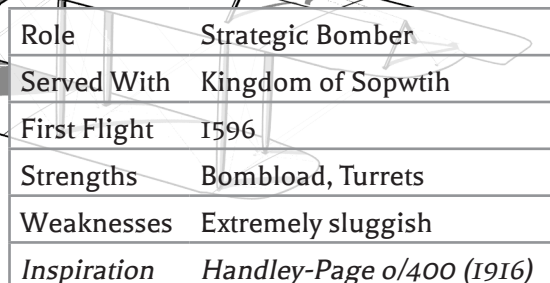
## 26b New, I3b Used

**Ip Upkeep**

Vital parts
Engine, Radiator, Oil Cooler, Landing Gear, Guns, Controls, Fuel Pilot

- KW-AA: Power propeller. 2 Mass bombs.
- Sniper Mode: Remove MMG. Replace LMG with Precision Rifle in the same mount.
- KW-SA: Change landing gear to floats.
- Late Model: Change cockpit to Narrow Canopy, upgrade powerplant to .

## 38



## 88b New, 44b Used

7b Upkeep

## Vital parts

Dropoff II, Reliability -I/-I, Overspeed 32, Altitude 0-29, Fuel II

Visibility -I/-I/-I/-I, Stability -I, Energy Loss IO, Turn Bleed I

Toughness 36, Max Strain II, Escape +2/+2/+2/+2, Crash -I, Stress I/I/I/I

36 Bomb Mass, Inline Radiators, Intercom, Windmill (I Charge), Connected Crew Positions  
Copilot: Controls, Quality IO Bombsight. Nose Gun: Turret Fore/Up/Down/Left/Right Access LMG  
Rear Gun: Flex Up/Rear Access LMG. Belly: Turret Down Access LMG

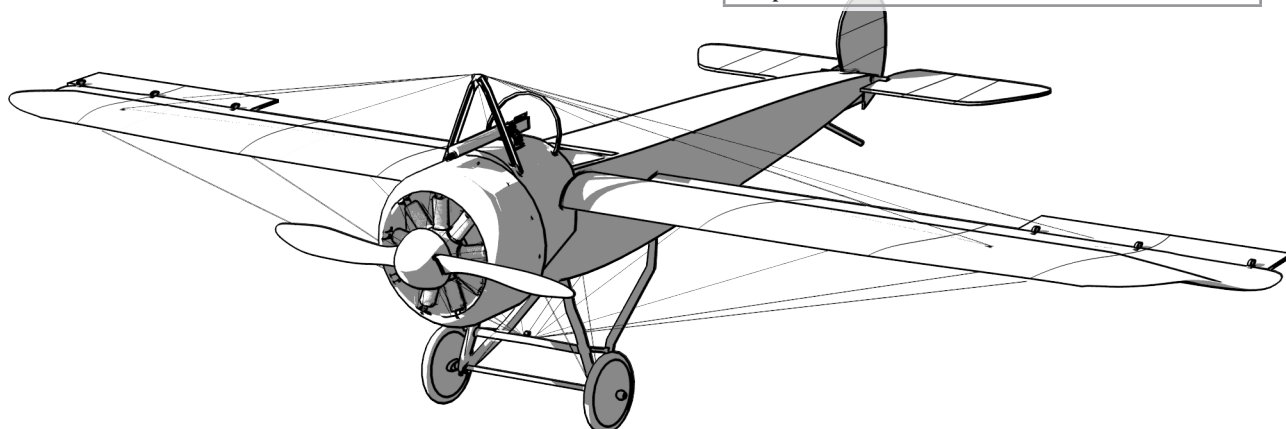
Unlike others, when the time came, these bombers had somewhere to come back to. Bombers, fewer each day, returned to the villages, loved ones snatching moments with each other as fuel and bombs were fitted and then taken aloft again. Eventually no bombers came back at all. The pilots and aircraft had scattered across the continent, preferring to risk the kindness of their victims to having to fly one more gas mission.

To build enough aircraft to equip a full bombing force and then hold them completely in reserve involved bankrupting the previously-rich Kingdom of Sopwith entirely and levying punitive taxes at all levels of society.

- Sky-Train Hunter: Removes exterior bombload. Replaces forward machine-gun with a recoilless cannon.

## 39

Role	Militarized Racing Plane
Served With	Militia
First Flight	1580
Strengths	Fast and Cheap
Weaknesses	Underarmed
<i>Inspiration</i>	<i>Fokker Eindeckers</i>



## Arntwerks c.7 Rennflugzeug

17p New, 8p Used

*"Now this is air racing!"*

**Upkeep**

	Boost	Handling	Climb	Stall	Speed
Full Fuel	2	I03	I3	6	I8
Half Fuel	2	I03	I3	5	I8
Empty	-	I04	0	4	-

## Vital parts

Engine, Oil Tank, Landing Gear,  
Controls, Fuel, Gun  
Pilot

Dropoff 5, Reliability -I, Overspeed 24, Altitude 0-49, Fuel 6
Visibility 0, Stability -4, Energy Loss 3, Turn Bleed 2
Toughness 6, Max Strain 30, Escape +2, Crash 0, Stress 2
Fixed Forward Accessible MG ✂, Rotary Engine (+I to Dogfight when turning Right) Altitude Throttle (Can WEP at altitudes 0-10)

Before the war, the c.7 race plane was a fairly common sight, with many villages owning one to compete in racing leagues. They were one of the first aircraft ever to use ailerons instead of wing-warping, which was such a new technology that the later military versions reverted to the older control scheme due to reliability concerns.

These days, the c.7 is a common sight in the hands of rural militias and adventurers. They have the advantage of appearing like a generic c.10 until you get close, disguising their potential speed, and many of them have been upengined or otherwise improved. In some places, the old racing leagues have even started back up.

After the war broke out, many rural villages retrofitted their c.7s with interrupter gears in the style of the c.10. They were better, one for one, than the c.10s used in the military. That said, they were also expensive custom aircraft, and for every militarized c.7 racer, there were a hundred c.10s.

### Common Variations

By this point, every racing plane is a unique beast, with a wide variety of unusual engines in use. A common factor is altitude throttles: nearly every racer goes out of their way to kludge in some sort of fuel additive injector for an extra boost.

## Aircraft Factory Link



Weaknesses: Slow and unstable

Inspiration: Airco DH.2 (1915)

## IIb New, 5b Used

Ib Upkeep

## Vital parts

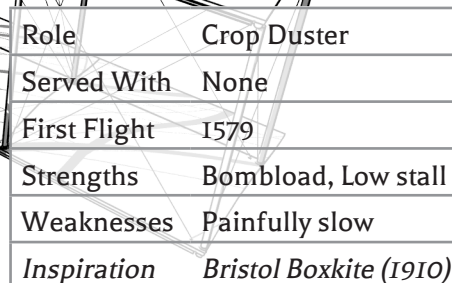
Engine, Oil Tank, Guns, Controls,  
Fuel, Landing Gear  
Pilot

The lead designer of Mitscher Industrielle Gesellschaft, Johan Farmann, was a great proponent of the central pusher engine to avoid shooting one's own propeller. This handy little scout was a testbed for the idea, though it had bad teething problems and didn't make field service until late 1582.

After the war they have seen a second lease of life as cropdusters, the pusher propeller apparently aiding chemical dispersal. If you own one now then the odds are good that this is not one of the ones with the manufacturing defect that causes cylinders to fly off the rotary engine and set fire to the aircraft. Not great odds, but good odds.

### Common Variations

- Ritter Sperling A - License production
- J-79MG/ Sperling B - LMG instead of Scattergun
- J-79/83 - +I Dihedral to both wings



22b New, IIb Used

1b Upkeep

Vital parts

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Engine, Radiator, Oil Cooler, Gun,  
Landing Gear, Controls, Fuel

Engine, Radiator, Oil Cooler, Gun,  
Landing Gear, Controls, Fuel

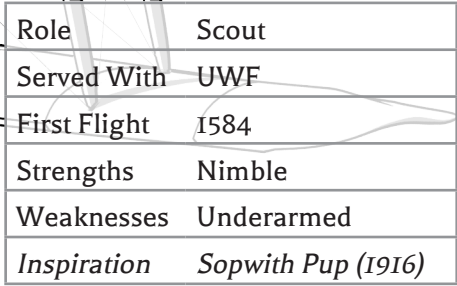
Pilot, Gunner

Nowadays, agricultural towns often count these machines among the forces their militia could potentially use, in an emergency, and a great many bush pilots got their start in ground attack by training to drop barrel bombs from an armed farm tractor.

Though nobody would think of using these aircraft as a front-line combat machine, many have been pressed into this role over the years. Thanks to its surprising load capacity, it can carry a fair number of bombs a fair distance, so they were sometimes used in dangerous night bombing missions.

Luftschleppers have been powered by every kind of engine under the sun over the years, as farmers retrofit it for whatever is on hand or appropriate for the job. Weapons, if present, are also highly variable.

## 42



I4b New, 7b Used

**1b Upkeep**

Vital parts

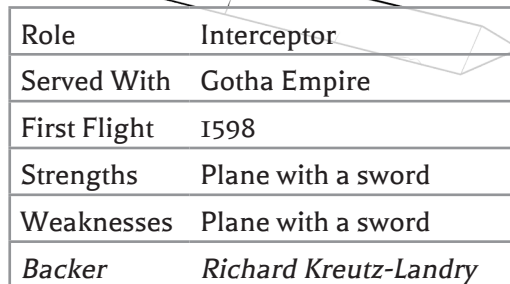
Engine, Oil Tank, Guns, Controls, Fuel, Landing Gear Pilot
--

Ritter's first interrupter-gearred scout, the Ritter Model C is remarkably easy to fly for a rotary-engine plane due to its long tail. This hurt manoeuvrability but Ritter considered it a worthwhile tradeoff to prevent the deadly spins and stalls so common in early air combat.

Large numbers of Spatz of all variants survived the war and the same docile characteristics make it an ideal fighter for poorly-trained militia today. The fact it can be mistaken at a distance for the Model F or S helps, and some aircraft are deliberately painted with disruptive patterns to make the tail look shorter and the stance of the aircraft more aggressive to assist this deception.

- C Spatz: 80hp engine
- Cz Spatz: Twin overwing flex LMG, no MMG
- Ca Spatz: 2nd seat, copilot controls, short tail

## 43



40b New, 20b Used

**Ip Upkeep**

## Vital parts

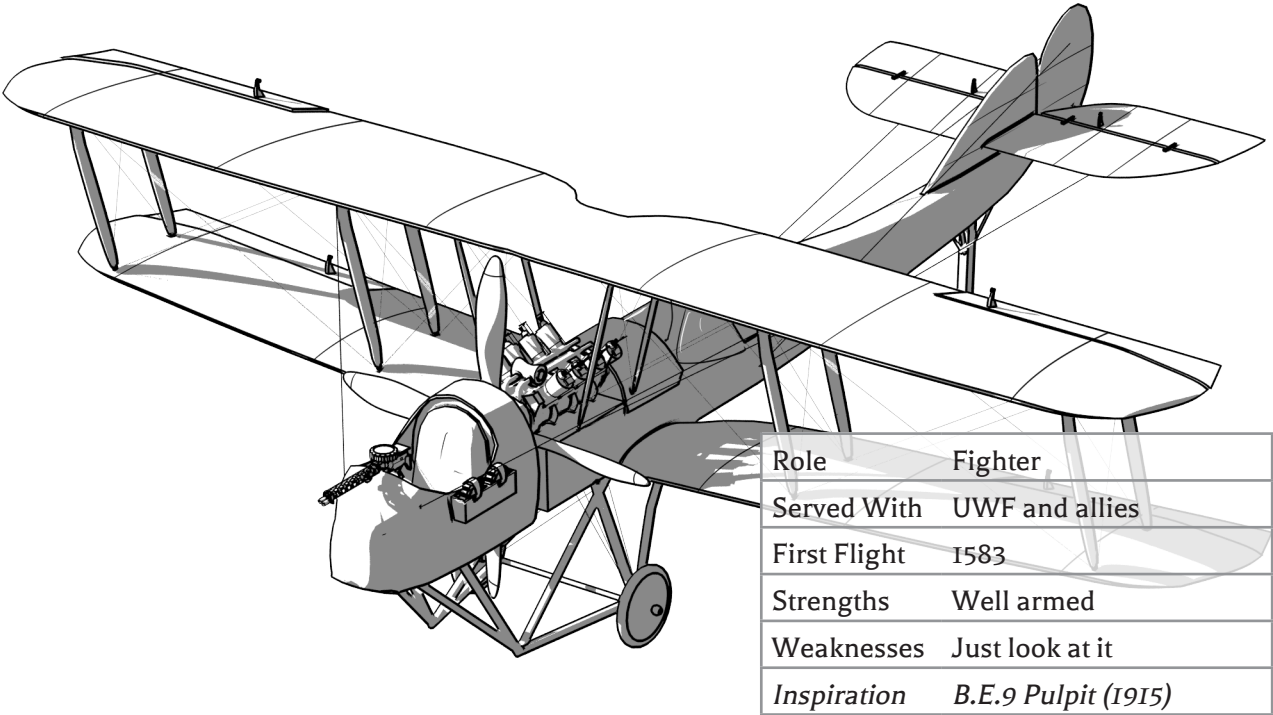
Engine, Radiator, Oil Cooler, Gun,  
Controls, Fuel  
Pilot

The Gotha Empire celebrated its 200th anniversary with an usual sight: a close formation of high-performance aircraft (for the era) flying in close formation above Kaisergrab. This was the start of a long and proud Gotha tradition of close stunt flying to celebrate the power and skill of the Empire's airmen.

When the final war with Gotha broke out, many of these machines were redesigned into emergency bomber interceptors, using blades on their wings to cut apart incoming aircraft. This duty was considered quite nearly suicidal, and with discipline breaking down there were increasingly few pilots willing to risk it.

Large numbers of these aircraft survived the war. Launched from outlying bases to defend cities which were often already lost, their pilots would simply fly away to rural areas and be marked as losses. Only the most foolhardy pilot would try to use these machines in their intended role.

## 44



Mitscher IG J-83 ‘Geistliche’

17p New, 8p Used

“An Ongoing Mistake”

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Fuel	2	94	II	5	I4	Engine, Oil Cooler, Gun, Controls, Fuel, Landing Gear Pilot, Gunner
Half Fuel	2	94	II	4	I4	
Empty	-	95	-	4	-	
Dropoff 5, Reliability +I, Overspeed 23, Altitude 0-29, Fuel 10						
Visibility -I/-2, Stability +2, Energy Loss 4, Turn Bleed I						
Toughness 9, Max Strain 38, Escape +2/+2, Crash -I, Stress 0/0						
Gunner: Accessible Fore/Up/Left/Right Turret Gast LMG, Telescopic Sight (+I after Draw a Bead), Isolated (cannot leave seat)						

The MIG J-83 is the result of the absurd conditions of the war before the invention of the interrupter gear. The earlier AJ-80/82 wedged a gunner behind the pilot with a flexibly mounted machine gun, but found difficulty fighting effectively. A gun mount on the front of the aircraft was devised instead, using supports hung around the propeller for a basket containing a LMG and a brave gunner.

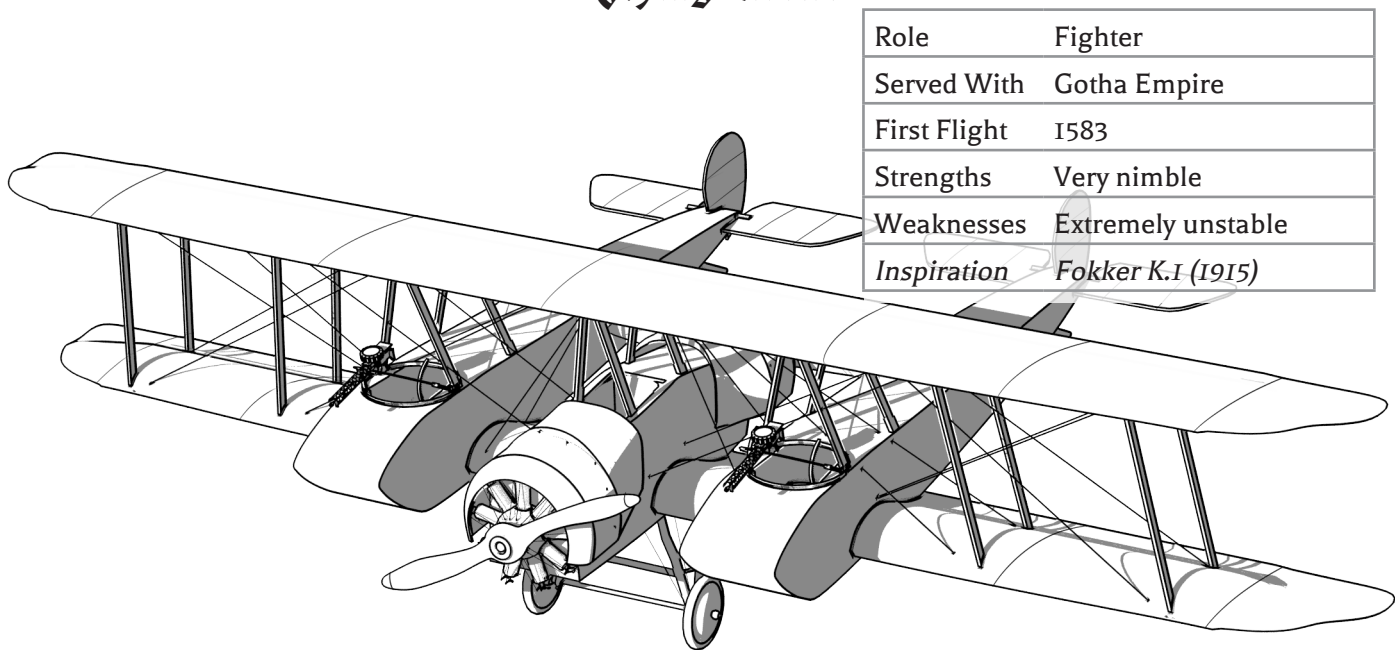
The aircraft’s combat service was disastrous. UWF observers assigned to the plane had a combat life expectancy of three hours, compared to a pilot’s forty eight hours. Most pilot losses were psychological casualties.

Today most J-83s are flown as single-seaters, using the basket for cargo hauling. Only the most suicidally brave observers would get in an J-83. But then, if you are the observer in an J-83 everyone knows you are suicidally brave, which has its benefits in bars.

Common Variations

- J3: Remove Isolate, remove LMG.
- J4: Remove Isolate, change gun to Rear/Up.
- Strengthened: Add Padding and roll cage.
- Waffentrager: Replace the turret with a fixed inaccessible Heavy Cannon.





Role	Fighter
Served With	Gotha Empire
First Flight	1583
Strengths	Very nimble
Weaknesses	Extremely unstable
Inspiration	Fokker K.I (1915)

Arntwerks d.I3

21p New, 10p Used

“A Failure of Aerodynamics”

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Load	I	I00	7	7	I3	<div> <div>x2 Engines, x2 Oil Tanks, x2 Guns, Controls, Fuel, Landing Gear</div> <div>Pilot, Gunner I, Gunner 2</div> </div>
½, Bombs	I	I02	7	5	I3	
Full Fuel	2	I02	I0	5	I3	
Half Fuel	2	I03	I0	4	I3	
Empty	-	I04	-	4	-	

Dropoff 5, Reliability -3, Overspeed I6, Altitude 0-29, Fuel I3
Visibility -I/-I/-I, Stability -9, Energy Loss 5, Turn Bleed I
Toughness II, Max Strain 46, Escape +2/+2/+2, Crash -I, Stress 3/3/3
Rotary Engine (+I to Dogfight when turning Right), Wing Warping (+I to Dogfight when <I5 Speed) 8 Mass Bombs x2 Turret Access LMG (One Fore/Up/Right, one Fore/Up/Left)

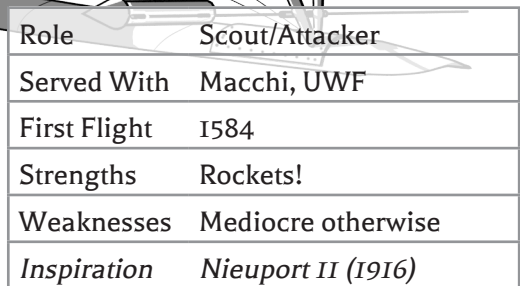
The Arntwerks d.I3 was a design any other company would call a failure. Using only components from the c.5 series of observers, the aircraft was intended to act as a heavy fighter with two gun positions that could fire uninterrupted by propellers. Unfortunately the use of wing warping controls and the two independent tails meant that when the aircraft was rolled the tails deflected in different directions.

This led to what the first test pilot to return described as “very divergent flight characteristics”, but Arntwerks was already tooled to make the d.I3 and orders for thousands had been made.

It was found that if the aircraft was handled with sufficient care it made a decent strafer, and was agile enough to tangle with interceptors. But by that point most had been dispersed to secretarian paramilitaries who were considered stupid and expendable enough to be entrusted with it.

Common Variations

The main priority of most wise pilots who find themselves having to fly a d.I3 is to add flap ailerons as soon as possible. Less wise pilots try to replace the tiny Schreiber L.VII engines with something bigger, or add larger guns to the pods, including fixed guns to use as a fighter.



I3b New, 6b Used

**Ib Upkeep**

Vital parts

Engine, Oil Tank, Gun, Controls,  
Fuel, Landing Gear

Pilot

Combat in the early years of the war showed the complete superiority of any aircraft that could fire directly forwards. Rathenau's first type, the 7, used a deflector plate but this was obviously a stopgap and Meike Kessler, Rathenau's chief designer, drew up a clean sheet aircraft in I582.

As Ritter planes became more common, Rathenau planes soon found a new niche in balloon-hunting squadrons, using rockets to down observers before they could be winched out of danger.

The early model 9b and 9c variants are extremely common and put up a fair fight, and their secondary balloon-busting capabilities are greatly valued by pirates and the less reputable sort of circus.

- 9b: 90hp engine
- 9d: 130hp engine
- 11a: 9d w/ Wire Root, Fixed Fore Hull MMG



### *“A Vision of the Future”*

## 2b Upkeep

## Vital parts

Dropoff I3, Reliability -I, Overspeed 32, Altitude 0-29, Fuel I2

Visibility -3, Stability -1, Energy Loss 7, Turn Bleed 2

Toughness II, Max Strain 38, Escape 0, Crash -I, Stress 0

Accessible Fore Heat Ray LRC, Telescopic Gunsight (+2 to attack if you Draw a Bead)

Armour 2/9+, Batteries (5 Charges), Alternator (2 Charge Generation)

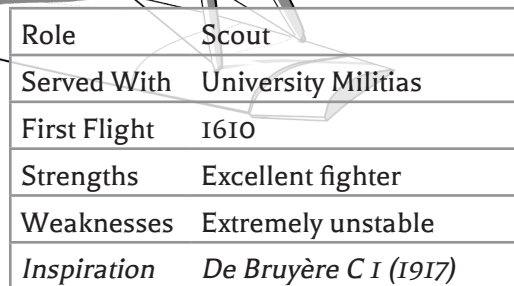
Guncam (Automatically confirms kills)

His grad students work tirelessly to assemble, test, and rebuild his increasingly large stable of experimental aircraft, often distributing them to other universities for testing. It isn't entirely clear if the numbers are serial numbers or production runs, but they are rare either way.

### Common Variations

- 00II: Wings have Extreme Positive Stagger
- 00IO: Wings have Extreme Positive Stagger, retractable gear
- 0009: Ejector seat
- 0007: Conventional covered Heavy Cannon

## 48



4Ib New, 20b Used

**Ib Upkeep**

## Vital parts

Dropoff 10, Reliability 0, Overspeed 25, Altitude 0-29, Fuel 8

Visibility +2, Stability -9, Energy Loss 4, Turn Bleed I

Toughness 22, Max Strain 32, Escape +2, Crash -1, Stress 2

In a great many engineering institutions, a final test for prospective aircraft designers is to actually design and build an airplane, usually in conjunction with local artisan guides training craftsmen. Many of these designs are fairly safe, but some are unique, a few are groundbreaking.

But Vera Mauss of the University of Steinfurth has the dubious honour of making the most well known and influential. Attempting to impress her notoriously demanding professor, she delivered a machine that attempted to reinvent every aspect of aircraft design. The resultant machine flew for fifteen minutes before flipping and crashing hard.

Vera's teachers began using the machine in their lessons as 'The Counter-example', an illustration of everything you aren't supposed to do.

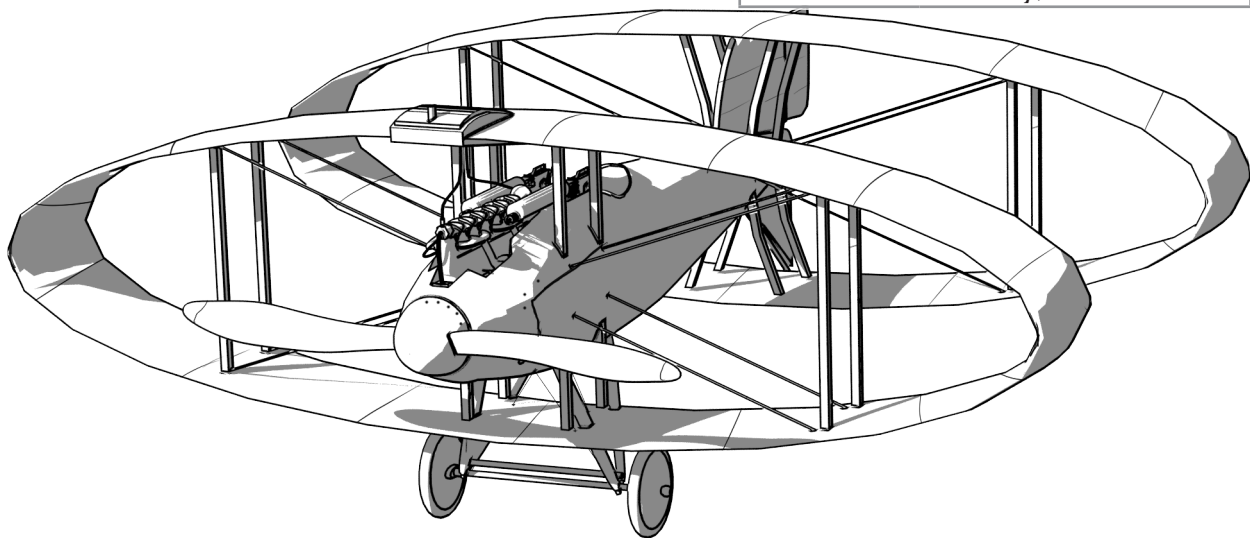
Unfortunately, every year there's a joker who tries to make it work anyway, and so many of them have piled up in the workshop that the University has started selling them off, often at such bargain prices that even starving students can potentially afford them. The fact they are likely to kill their operators in a flat spin is often left out.

Vera Mauss went on to design the Mauss X-65, often seen as the best fighter of the post-war era.

## 49



Role	Scout
Served With	University Militias
First Flight	I609
Strengths	Good all-rounder
Weaknesses	Visibility, Max strain



Universitt Kobra MOI

34p New, 17p Used

“The Final-Year Project”

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Fuel	2	98	14	6	18	Engine, Radiator, Oil Cooler, Landing Gear, Gun, Controls, Fuel Pilot
Half Fuel	2	98	14	5	18	
Empty	-	99	0	5	-	

Dropoff 10, Reliability -2, Overspeed 24, Altitude 0-29, Fuel 6
Visibility -4, Stability +2, Energy Loss 4, Turn Bleed 1
Toughness 13, Max Strain 22, Escape +2, Crash -2, Stress 1
x2 Fixed Forward Accessable MGs ✂, High Offset Water Radiator

The Kobra series, since it is so well known and well studied, is a common platform for experimental fits and Final Year Projects, the last make-or-break test of the engineering student. The idea of tandem annular wings has rather captured the imagination of the aerodynamics community in the last few years and many students have attempted investigations of the possible benefits.

So many of these aircraft have been built and studied that they are becoming something of a baseline in themselves, and some have received subsequent experimental conversions to create scouts that have little in common with their origins.

The Kobra-series are already known as extremely stable designs, but these tandem wing designs tend to be so stable that they are legitimately hard to fly, wanting to straighten out like an arrow. The generally accepted spin recovery procedure for these aircraft is to let go of the controls.

Common Variations

- Well Funded: Aluminium Skin wings.
- Lucky: Bertha FI466 ber Engine.
- Forward Thinking: Add 2 Microtanks.



Strengths	Fastest bomber
Weaknesses	Miserable to fly
Backer	Victor Coronado

## 39b New, 19b Used

#### 4b Upkeep

### Vital parts

## Pilot, Fore Gunner, Aft Gunner

Dropoff 10, Reliability -4, Overspeed 100, Altitude 0-29, Fuel 7

Visibility -2/-I/-I, Stability +2, Energy Loss IO, Turn Bleed I

Toughness 20, Max Strain 34, Escape 0/+2/+2, Crash -I, Stress 2/3/3

36 Bomb Mass, Windmill (1 Charge), Battery (5 Charges), Pulesjet Engines (Page 192)

x2 Turret Heat Ray LMGs (Fore/Up/Left/Right & Rear/Up/Left/Right)

The noise, vibration, and heat has been described as being locked in a blast furnace during an earthquake. This rendered the machine useless as a cargo carrier or long range bomber, but deadly as a shorter ranged attack craft.

While it can't necessarily outrun all interceptors in a straight-line fight, its speed makes safely intercepting much more difficult. The heat rays added help considerably.

- Schneller: Remove top turrets.

- Schnelltest: also +Streamline, -Leg Room.

## 51



## 26b New, I3b Used

**Ip Upkeep**

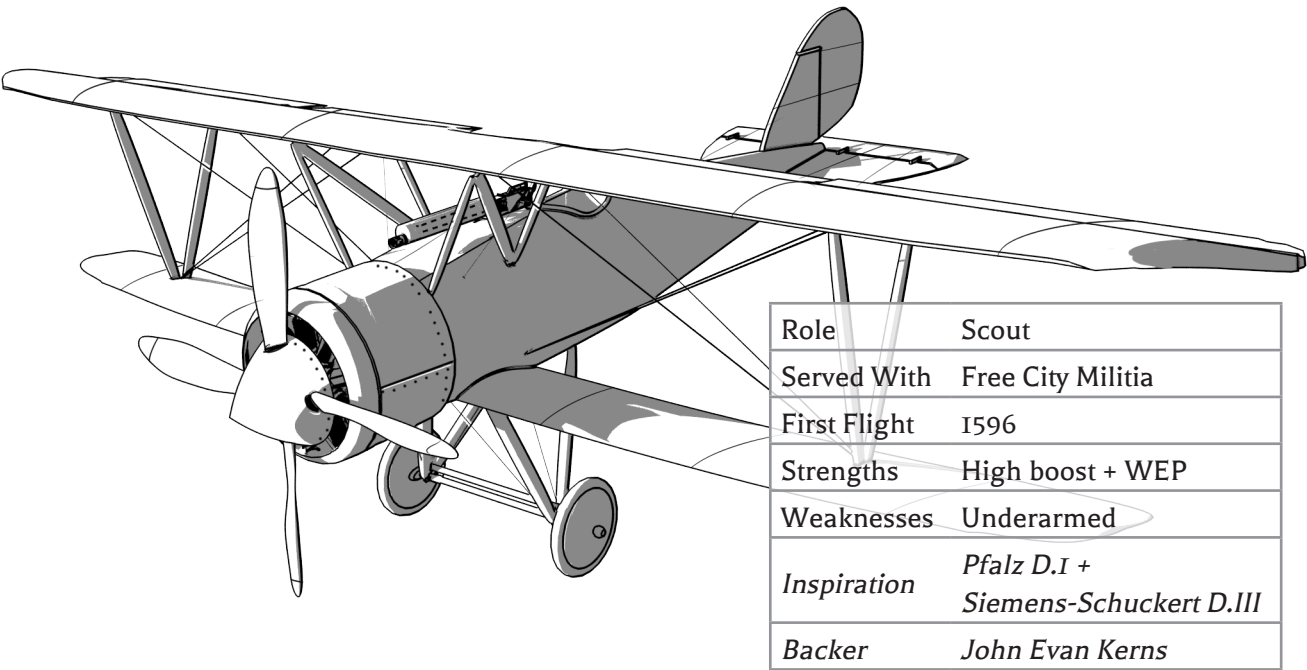
Vital parts
Engine, Oil Tank, Landing Gear, Guns, Cannon, Controls, Fuel Pilot

The late 1580s and early 1590s were a time in scout aircraft design known as the Lift Wars, where experience in the war was teaching designers that the most vital thing for fighter aircraft was high lift. This led to many aircraft with three or more wings, of which the Rathenau-I6 was a runner-up.

Probably the single greatest advantage the machine has is the reinforced weapon mount above the wing, added at the last minute to try and give the plane more utility.

- I6a: Twin Accessable LMGs, Flex fore/up.
- I6b: Accessable Precision Rifle, fore.
- I6c: Twin accessible Scatterguns, fore.
- I6e: Mechanical balloon gun, fore.
- I6f: x4 accessible SMG, fore.

## Aircraft Factory Link



Braun Model DC ‘Puma’

33p New, 16p Used

“Odd-One Out”

1p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Fuel	3	97	12	6	15	Engine, Oil Tank, Guns, Controls, Fuel, Landing Gear Pilot
Half Fuel	4	98	12	4	15	
Empty	-	99	-	3	-	
Dropoff 13, Reliability -2, Overspeed 36, Altitude 0-49, Fuel 10						
Visibility -2, Stability -2, Energy Loss 7, Turn Bleed 1						
Toughness II, Max Strain 22, Escape +2, Crash -1, Stress 2						
Fixed Forward Accessible MG ✂						
Rotary Engine (+1 to Dogfight when turning Right), Altitude Throttle (Can WEP at altitudes 0-10)						

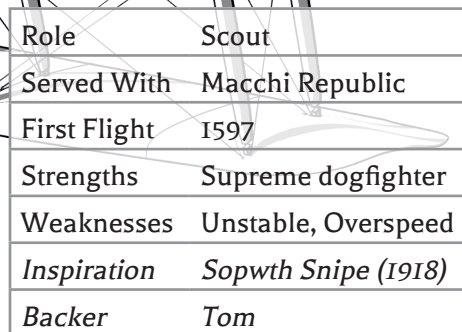
Many of the small nations, principalities, and free cities of Himmilgard were at various times incapable of securing orders of warplanes from the major nations, making alliances and armed neutrality difficult. A roaring trade in knockoff designs soon followed, with the most popular being the Braun Model D, derived from the Theler Kobra series and often considered superior.

Of these, the DC is the odd one out. Unlike the others in its series, it is equipped with a remarkable engine: A large ‘Contrarotary’, where the engine spins one way while the propeller and crankshaft spin the other, reducing torque.

Furthermore, the machine was equipped with a large, four-bladed propeller, which gave it a frightening ability to recoup lost speed. The result was a machine that, while not fast, could hold a sharp turn at a fixed speed quite nearly indefinitely, and even gain speed while in combat turns using its unique double-throated carburettor.

Ersatz Model DCs

Sometimes, other marks of the Model D, or even Theler Kobras, are adapted into ersatz Model DCs by switching in a rotary engine and a High Power propeller. They are of dubious utility.



38b New, 19b Used

2b Upkeep

Vital parts

Engine, Oil Tank, Guns, Controls, Fuel, Landing Gear, Electrics
Pilot

Though rare, many dogfight aces consider them to be the best rotary biplanes in the world. Few survived, most of them cut apart for the engines after Macchi surrendered, so each one is treasured.

The Finken was hyper-specialized for its role and employed for a relatively short time, and so few official variations exist. The most common is an armoured ground attack variation, used in the final sieges of the war to destroy guns and panzers.

The Finken had aggressive turn characteristics, robust construction, and could outrun anything that could outturn it. Though they never completely replaced the Model F, it was soon known and feared by its enemies, and it was the last, best chance for the doomed Macchi Republic.

## 54





60p New, 30p Used

## 5p Upkeep

## Vital parts

### Pilot, Fore Gunner, Rear Gunner

### Rear Gun: Turret Rear/Up/Down/Left/Right Access LMG

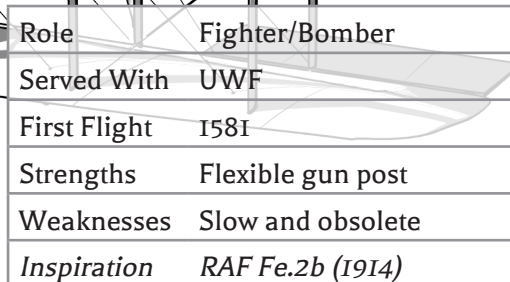
Starting with the ZC model, the Eklipse gained a gun tunnel, a slot in the tail that gave the gunner increased visibility as well as allowing them to cover the area under the tail, traditionally where bombers are most vulnerable.

### Common Variations

- ZB: Bertha FI466s, rear gun can't fire down.
- ZC: Bertha FI466Us, forward gunner replaces machine gun with 20mm cannon.
- ZE-I: 5 IAF superchargers on the engines.
- ZF: 28.8 litre, 8-cylinder Bertha F2080 engines for 330 horsepower. +2 Internal Fuel Tanks.

## 55





## 26b New, I3b Used

Ib Upkeep

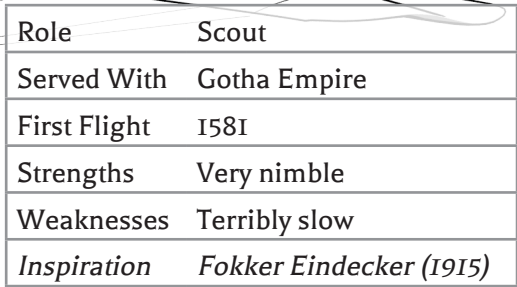
Vital parts

Engine, Oil Cooler, Radiator, Flex Gun, Post Gun, Controls, Fuel, Landing Gear
Pilot, Gunner

Ritter, flush with success from the Sperling, also licensed the JA-8I but only built a few hundred before focusing on Scout production.

- Ritter Kolkrabe - License Production. Removes the flexible gun, leaving just the gun post.
- A-8I - Gunner replaced by 5 Mass internal bomb bay, air brake added, xI steel internal bracing
- JA-8I/83 - Flexible gun replaced with fixed forward accessible LMG for the pilot.
- JA-8I/87 - Wollsteinkraft Verteidiger C

## Aircraft Factory Link



I4p New, 7p Used

**Ib Upkeep**

## Vital parts

Engine, Oil Tank, Gun, Controls,  
Fuel, Landing Gear  
Pilot

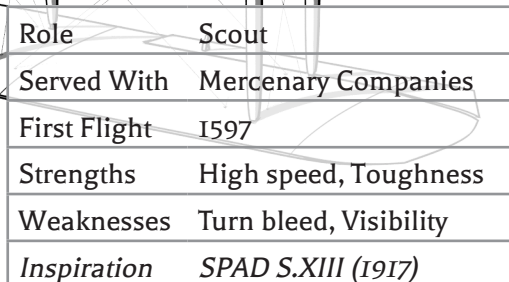
Dropoff 8, Reliability -I, Overspeed 20, Altitude 0-29, Fuel 7
Visibility 0, Stability -4, Energy Loss 4, Turn Bleed I
Toughness 6, Max Strain 30, Escape +2, Crash 0, Stress 2
Fixed Forward Accessible MG ✂
Wing Warping (+I to Dogfight! when below 15 Speed), Rotary (+I to Dogfight when turning Right)

## Variations

c.II Ace

A small number of c.10s were fitted with 170hp Rhona ZZ22 engines, a double-rowed ZII (21.8 Litre displacement, 18 cylinders in 2 rows) and attachment of two additional machine-guns. A small number were produced and issued to ace pilots and volunteers, but the huge torque made it nearly unmanagable. Planes were often given angled wings or new control surfaces to cope.

## 57



26b New, I3b Used

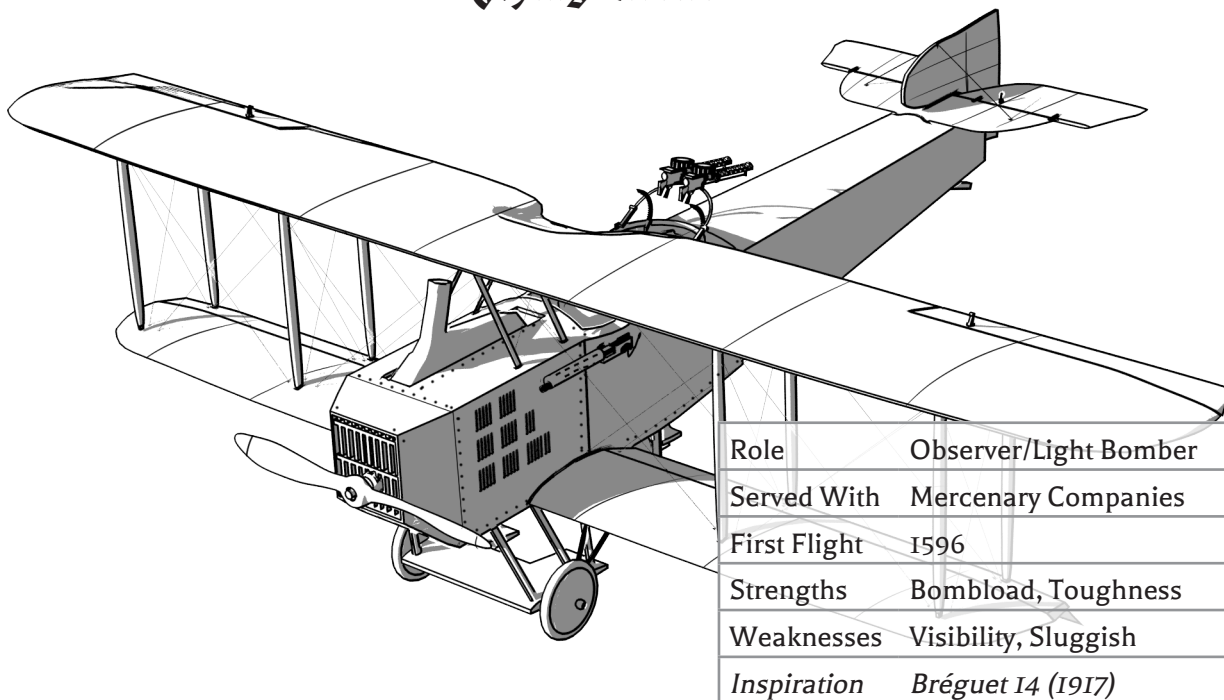
2b Upkeep

Vital parts

Engine, Radiator, Oil Cooler, Guns, Controls, Fuel, Landing Gear Pilot
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Though most replaced it with machine guns, some models instead mounted 20mm cannons in the same motorkanone configuration.

## Aircraft Factory Link



Role	Observer/Light Bomber
Served With	Mercenary Companies
First Flight	1596
Strengths	Bombload, Toughness
Weaknesses	Visibility, Sluggish
Inspiration	Bréguet 14 (1917)

Saft & Altmann Motorbau II44

61p New, 30p Used

“The Queen of the Skies”

3p Upkeep

	Boost	Handling	Climb	Stall	Speed	Vital parts
Full Load	2	85	14	4	17	Engine, Radiator, Oil Cooler, Pilot Gun, Gunner gun, Controls, Fuel, Landing Gear  Pilot
½, Bombs	2	87	14	3	17	
Full Fuel	3	87	16	4	18	
Half Fuel	3	88	16	3	18	
Empty	-	89	-	3	-	

Dropoff 7, Reliability -1, Overspeed 24, Altitude 0-29, Fuel 6
Visibility -3/-2, Stability 0, Energy Loss 6, Turn Bleed 1
Toughness 20, Max Strain 34, Escape +1/+1, Crash -1, Stress 1/1
Pilot: x1 Fixed Forward Accessable MGs ✕, Collimated Gunsight (+1 Attack), Quality 4 Bombsight Gunner: x2 Rear/Left/Right/Up Access Turret LMGs. Inline Radiator, 10 Mass Bombs

The SAM II44 used their massive SAM Transporter 300hp engine and was a conventional-looking light bomber, observer and auxiliary fighter. It is widely considered one of the best two-seaters in the world, with price being the primary drawback.

The austere styling of the II44 again hides some impressive features, including an all-steel frame and passively-operated flaps that reduce its stall speed significantly. Its closest equivalent is perhaps the Markgraf Zerstörer, but while the Zerstörer is a better fighter, the II44 concentrates on carrying a bomb load approaching a true bomber while retaining enough speed to challenge most scouts.

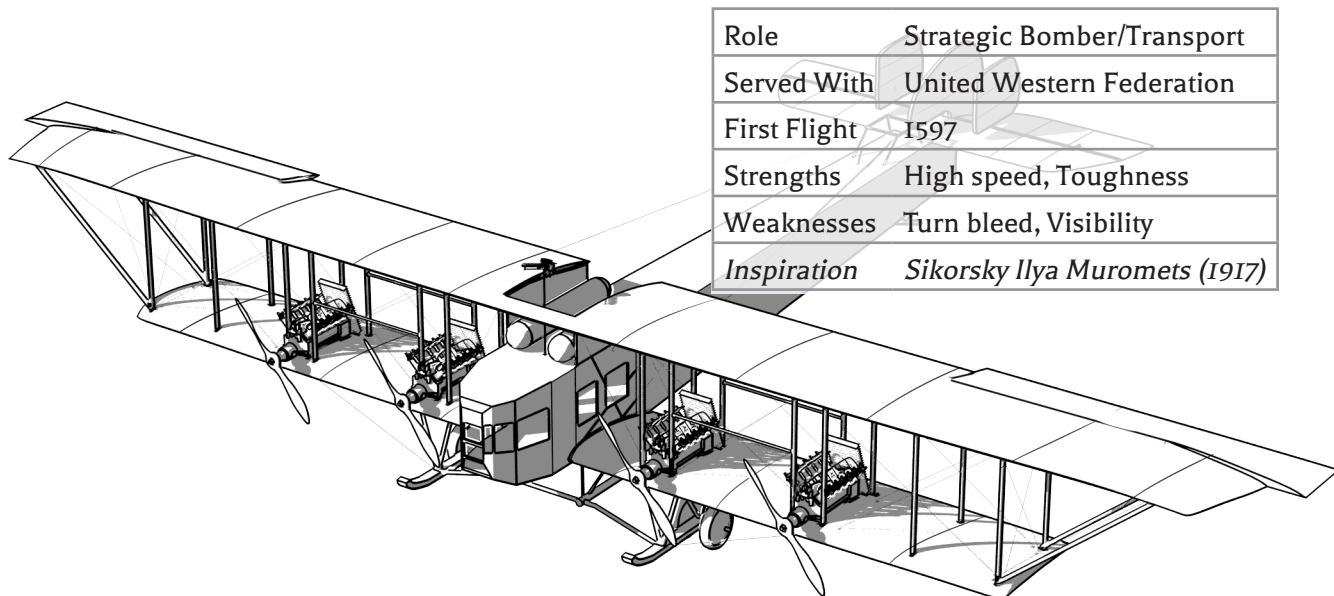
The toughness of the II44 is legendary all on its own. Despite lacking cantilevers, the cross-braced wings and steel construction means aircraft have returned from missions with considerable structural damage, including missing pieces of wing or shattered spars.

The most common complaint about the II44 is one shared with most SAM designs, visibility. The exhaust pipe, often referred to as ‘The Smokestack’, sits dead in the pilot’s vision for some reason.

Common Variations

- II44-Sturzbomber: Replace flaps with air brake.





Role	Strategic Bomber/Transport
Served With	United Western Federation
First Flight	1597
Strengths	High speed, Toughness
Weaknesses	Turn bleed, Visibility
Inspiration	Sikorsky Ilya Muromets (1917)

## Teicher Mammut

42p New, 21p Used

“Universal Carrier: People, Cargo, Bombs”

6p Upkeep

	Boost	Handling	Climb	Stall	Speed
Full Load	2	59	II	5	I4
½, Bombs	2	64	II	4	I4
Full Fuel	2	63	I3	4	I5
Half Fuel	2	66	I3	3	I5
Empty	-	69	-	3	-

### Vital parts

x4 Engines, x4 Oil Coolers, x4 Radiators, Fore guns, Aft guns, Controls, Fuel, Landing Gear

Pilot, Fore Gunner, Aft Gunner

Dropoff 9, Reliability 0, Overspeed 29, Altitude 0-29, Fuel I7

Visibility -2/-I/-I, Stability +2, Energy Loss IO, Turn Bleed I

Toughness 20, Max Strain 30, Escape 0/+2/+2, Crash -I, Stress I/2/2

36 Bomb Mass, Inline Radiators,

Guns: Turret Access LMGs (Fore/Left/Right Up & Rear/Left/Right/Up)

The Teicher Mammut is famous as the first four-engine aircraft, but post-war it is often considered underwhelming due to the low power of its engines. The majority were retrofitted for passengers or cargo even during the war, and those still in combat use are drastically modified.

If you are a cargo driver, however, the Mammut has much to recommend it. The glass cockpit is comfortable to fly from for long journeys, the machine is easily reconfigured for goods or passengers, and the low powered engines are fairly easy to maintain. It’s a very practical machine, if not a very powerful one.

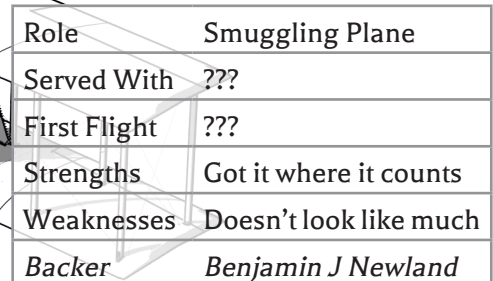
Most Mammut's have one or two defensive turrets on the roof: The gunners climb up from the cabin to operate a pivoting gun on a stand to hopefully deter any opportunistic attackers. Wholly exposed, this position is popularly known as The Stake (*Der Pfahl*), a reference to the poles firing squad victims would be tied to for wartime executions.

### Common Variations

- Transport: 2Large cargo bay or IO passengers.
- One Stake: Remove second gunner position, remaining one fires forward.
- Free Cities Albatrosbomber: Engines to SAM Transporter Is, x4 fuel tanks.

## Aircraft Factory Link





76p New, 38p Used

## 7b Upkeep

## Vital parts

## Pilot, Co-Pilot, Gunner, Gunner

Inline Radiators, Gyroscopic Autopilot, Copilot Controls, Connected Pilot seats, Medium Cargo Guns: Turret Access x2 Gast BMGs (Firing arcs: All but Down & All but Up), 2 Charge Generation Drogue Chute: Activate once per flight to: Give +3 to Go Down or take down a close pursuer.

This isn't a vehicle to simply be sold to Circuses, but instead can be used as part of a campaign. Having to catch it before it escapes would be a good challenge for a small group, as would be stealing it and flying to to a client through dangerous skies. Alternately, a whole group could operate one together.

## 61

Braun YA Post Runner

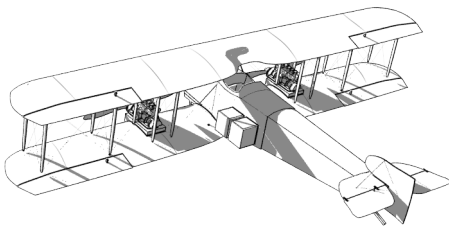
17p New, 8p Used

1p Upkeep

"Precious Lifelines"

Undoubtly the most common sort of aircraft in the skies of Himmilgard are post runners, a ragtag mixture of disarmed obsolete fighters and purpose built mail planes like this one.

Max Speed	Stall Speed	Handling	Structure
15	8	90	21
1 Crew. 2 Engines. Low radiator. Small cargo space. 20 Fuel Uses.			



Markgraf Pegasus

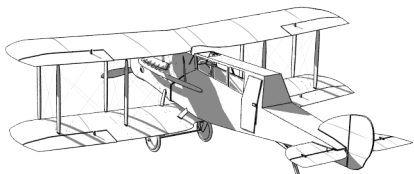
22p New, 11p Used

2p Upkeep

"The People-Mover"

With the end of the war, Markgraf returned to building public transit equipment, and as part of that transition, half-finished Zerstörer fighters were converted to fast short-hop airliners.

Max Speed	Stall Speed	Handling	Structure
18	6	92	38
1 Pilot, 5 Passengers. Inline radiator. 6 Fuel Uses.			



Recht Universal Transport

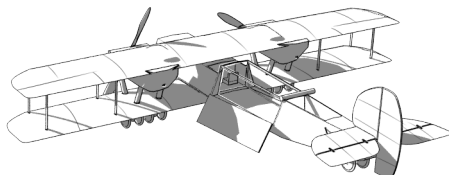
27p New, 13p Used

3p Upkeep

"Long Haul Transport"

Logistics in Himmilgard is nightmarish at the best of times, with airships as the primary arm of transport. Small cargo planes like these often handle the final leg of these journeys.

Max Speed	Stall Speed	Handling	Structure
17	12	84	50
1 Pilot, x2 Engines, High Radiator, 13 Fuel Uses Large Cargo Space, Altitude Autopilot			



Hugo's Halbmetall-Schwertransport!

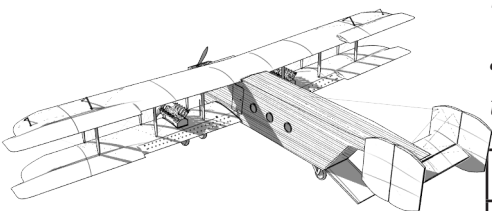
113p New, 56p Used

7p Upkeep

"The Pioneer"

The Fokker Kingdom was only able to maintain their war effort and holdings in the far north because of a robust system of transports, like these von Morgen copies of a Hugo design.

Max Speed	Stall Speed	Handling	Structure
16	10	65	100
3 V12 Engines, Low Radiator, 13 Fuel Uses 2 Pilots, 5 Passengers, Huge Cargo Space,			

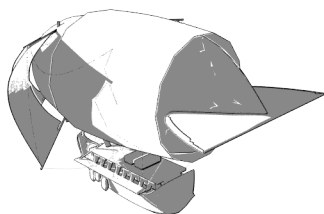


## Skyborn Dhow

"The Family Business"

20p New, 10p Used

0p Upkeep



*Skyborn convoys consist of a mix of small family ships like this, with crews of less than twenty, which can make short trips to small villages without risking the main convoy.*

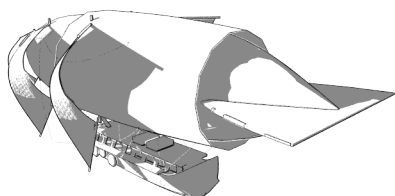
Max Speed	Lift	Handling	Toughness
IdIO + 3	55	90	20
Hydrogen. 4-12 crew. Large Cargo Space. x2 LMG posts. Randomize top speed each flight, add Wind penalty to speed.			

## Skyborn Windjammer

"The Last Sailing Airships"

40p New, 20p Used

0p Upkeep

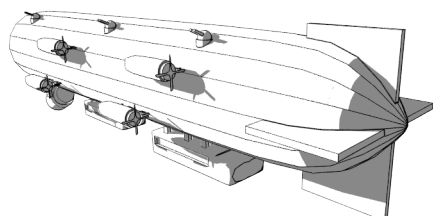


*The use of whalebone keels allows the Skyborn to use fast sailing airships, minimizing their costs and maximizing the profits of trade missions.*

Max Speed	Lift	Handling	Toughness
IdIO + 5	55	75	35
Hydrogen. 25-40 crew. Huge Cargo Space. x6 LMG or LRC posts. Randomize top speed each flight, add Wind penalty to speed.			

## K-class Air Corvette

"The Border Watchmen"

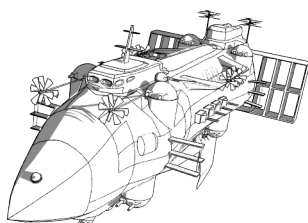


*The UWF's fleet of compact battle airships was their greatest asset in the early war with Gotha. K-Class corvettes were the last of these, known for their heavy spotlight turrets.*

Max Speed	Lift	Handling	Toughness
16	60	80	30
Hydrogen. 20-45 crew. x8 engines. Carries 2 small fighters. x6 twin MG turrets, forward Flak Cannon			

## Jörmungandr-class Air Destroyer

"Ship of the Line"



*The most common form of Air Destroyer in the war, forming the basis of the Gotha Empire's zeppelin fleet. A warlord repairing a downed Jörmungandr can threaten an entire region.*

Max Speed	Lift	Handling	Toughness
12	60	40	100
Luftane. 100-250 crew. x6 Engines. Armoured Skin 2, Armour 4/5+. x8 Flak Cannons. Large number of machine gun turrets. Pushes Weather Flak against attackers.			