

FOKKER  
'EINDECKER'

EIII & EIV



Bedienungsanleitung für den

# Fokker 'Einderker'

EIII & EIV

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AEROPLANE HEAVEN  
**AH**

Dieses Buch  
gehört

*A. Heaven*



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## Kapitel 1. INTRODUCTION.



Anthony Fokker's design for a new monoplane fighter was 'inspired' by the French Morane-Saulnier monoplane. The first aircraft flew in 1915 and was armed with a synchronized machine gun - one of the first designs to use interrupter gear to enable through the propeller firing. Notable design features were the use of wing-warping for lateral control (no ailerons) and an 'all-flying' horizontal tail (no separate elevator).

Powered by an 80-hp Oberursel rotary engine (a derivative of the French 'Gnome' rotary) the Eindecker was not particularly fast for its day but in the dark days of 1915, the forward firing, 'point and shoot' advantage scored numerous victories over the outmoded Allied machines. This led to its nickname "The Fokker scourge".

The E.III was the most widely used version and built in the greatest numbers (approximately 260). Sporting a more powerful 100hp Oberursel, it was with this machine that famous aces cut their teeth in combat. Ernst Udet, Max Immelmann and Oswald Boelke were among the list of elite airmen to steer fly an Eindecker to victory.

The E.IV was an attempt to create a faster, more powerful version with more protection for the pilot. Sadly, the extra weight of the 14 cylinder engine and increased cowling had a marked effect on the performance of the machine. It gave no real improvement over the earlier E.III.

For a few months in early 1915 the Eindecker destroyed the Allies superiority in the air. Pilots were prohibited from dogfighting over Allied territory to prevent details of the forward firing mechanisms falling into enemy hands.



Kapitel 2.  
TECHNICAL SPECIFICATIONS.

EIII

|             |  |
|-------------|--|
| Wingspan    | 31ft 23/4 in (9.5m)                      |
| Length:     | 23ft 71/2 in (7.2m)                      |
| Height:     | 9ft. 13/4in (2.4m)                       |
| Weight:     | (empty) 399k<br>(gross) 1,342 lb (610kg) |
| Power:      | Oburursel U.I. 9 cylinder Rotary 100hp.  |
| Max. Speed: | 88mph (140 kph)                          |
| Ceiling:    | 11,500 ft (4,100m)                       |
| Endurance:  | 11/2 hrs                                 |
| Armament:   | 1 x Spandau Machine gun. 7.2mm cal.      |





### Kapitel 3. WALKAROUND.

Approaching the aeroplane from either side, you'll note the absence of separate ailerons. This is because the Fokker uses a system of wing-warping to achieve lateral control. Hence the mass of control wires leading up to a central post, mounted on the forward fuselage. These wires lead to the control stick via a system of pulleys.

The engine is a rotary Uberursel. In the EIII it has 9 cylinders with exposed valve gear.

In the EIV, you'll see the more impressive but less reliable 14 cylinder version.

Note the simple undercarriage/suspension system and basic box section fuselage.

At the rear, you will find the one-piece tailplane /elevator and 'signature' Fokker circular rudder. Climbing on board, you'll find a stark interior cockpit with few instruments and controls. These aeroplanes were from a very early time in aviation and are a stark contrast with their more modern counterparts.





## Kapitel 4.

## THE COCKPIT.

Immediately ahead of you are the three main flight gauges for altitude, speed and engine revolutions. There is a small fuel gauge, magneto switch, starting handle and two items not normally found in an Eindecker. These are mixture control and throttle. The real aircraft had neither of these as the rotary was designed to run at full revolutions all the time. One controlled the speed of the aeroplane by cutting the fuel/ignition supply with a 'blip' switch on the control column.

However, for your convenience and more relaxed flying, we have supplied you with a specially designed throttle and mixture control.

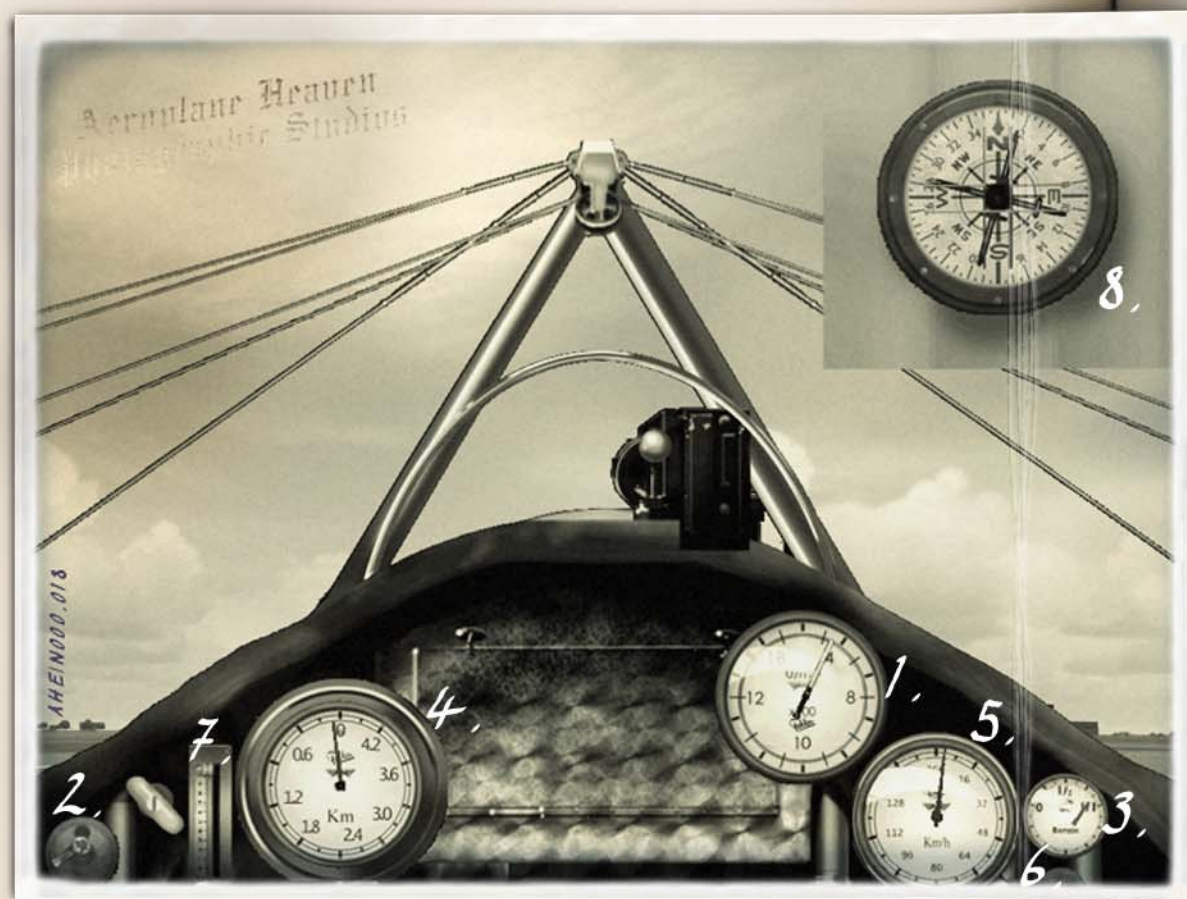
The big metal box in front of you is a storage container for spent cartridges.

In the EIII the machine gun is exposed on top of the cowling and off-set to the right.

In the EIV, twin machine guns are mounted within the front cowling.

A simple rudder bar and wire arrangement takes care of rudder control.

(Cont...)



1. Tachometer (Engine revolutions).
2. Magneto Switches
3. Fuel Gauge.
4. Altimeter.
5. Airspeed.
6. Oil Pressure.
7. Mixture Control.
8. Compass (Available in the 'views/instrument panel/compass' pull-down menu)





## Kapitel 4. THE COCKPIT. (Cont.)

A marine-style compass is carried in a gimbaled mount in the starboard wing.

Select the "Wing Compass" window from the Views drop-down menu (FS2002/4)

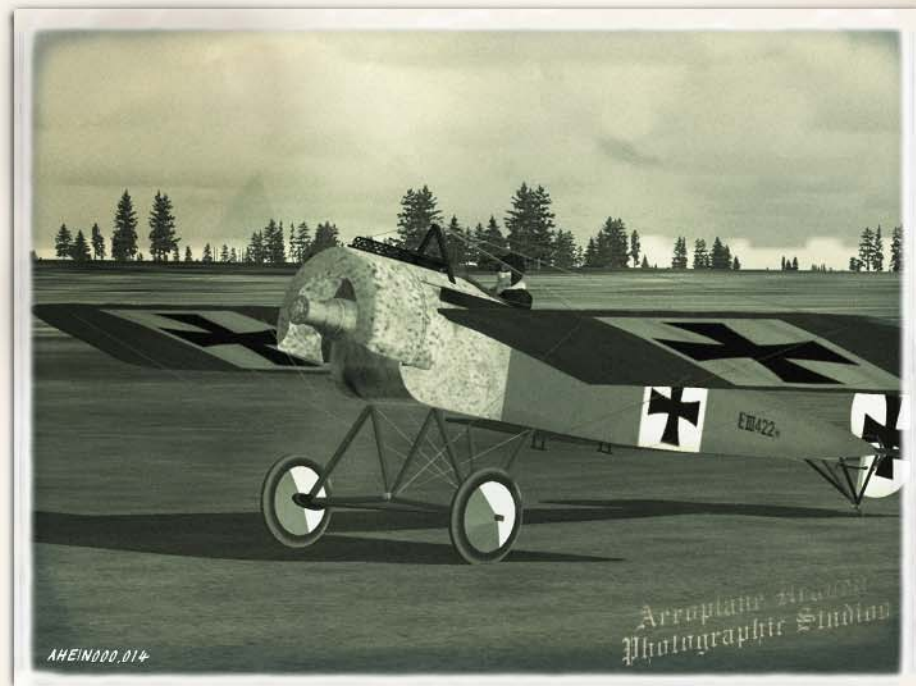
### Engine start

In the absence of anyone to swing the big prop for you, we've added a set of engine start switches. So, proceed as follows:

- 1) Mixture to full rich
- 2) Magnetos to both +
- 3) Crack the throttle slightly
- 4) Pull the starter handle which will turn red when operated.
- 5) Allow the engine to settle to idle.

These engines were inclined to be temperamental so it is more than likely that the motor will stall and cut occasionally. If this happens just restart and 'catch' the engine with a little throttle. Remember that you have no brakes so the aeroplane will lurch forward and attempt to taxi!





## Kapitel 5. TAKE-OFF.

Open the throttle to full.

Keep straight using a little rudder.

At around 40-45 kph (30mph) she should lift off with very little assistance. If not, just a gentle back pressure on the stick will unstick.

Climb out at around 80kph (50mph) in a gentle climb. Do not raise the nose too high or you will stall.





## Kapitel 6. GENERAL FLYING.

This simulation must work within the confines of the core simulator. Good approximations of real flight can be made in most simulators but you may need to make adjustments for CFS3. It is worth the trial and error with throttle settings and trim to achieve the recommended indicated speeds. This way you will get a real 'feel' of what it would have been like to fly and fight in these machines.

Level off at around 110 kph (68mph) and settle to a cruise of around 70-75kph. Back off the throttle to achieve the correct cruise speed.

For aerobatics, open the throttle and climb to good altitude (at least 1,500ft.) The roll rate on an Eindecker is abysmal due to the wing-warping system for lateral control. So don't expect any snap rolls! The Eindecker is capable of executing most conventional manoeuvres and with practice, is a rewarding machine to fly.

With a full tank you have about 11/2 hours duration. (Non-combat)







## Kapitel 8. COMBAT.

The Eindecker has interrupter gear permitting firing of machine guns through the arc of the propeller. So, combat is very much a 'point-and-shoot' affair. The Eindecker's slower handling will present a challenge to the combat pilot against more nimble craft like the Airco DH2. The key to success is to remain concealed until the last moment and then pounce with quick sharp bursts of fire. Dive through the enemy and then zoom climb back to safety. Use cloud cover and approach from behind, above or below a DH2 (the blind spot) firing into the engine. Do not approach head on if possible- you will lose. The DH2 pilot has superior visibility on his side and will spot you a lot earlier. Try the famous Immelman manoeuvre! Put the Eindecker into a half loop, at the top, roll from inverted to upright and you are heading back toward the enemy from a higher position.

With practice and careful flying, you will discover why the E III became the "Fokker Scourge" of 1915.



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