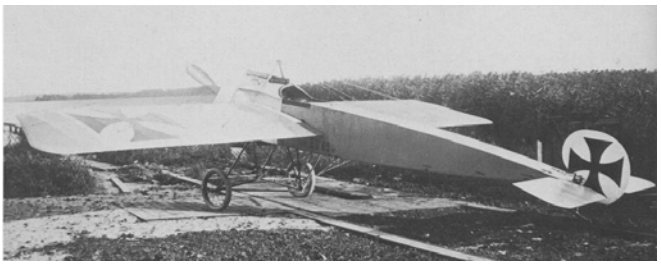
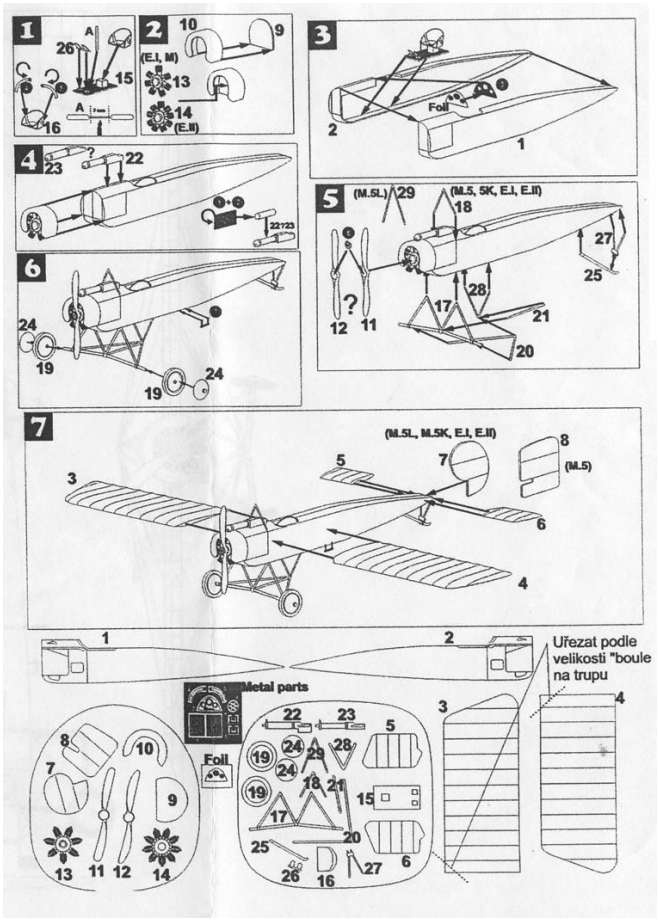
Fokker E.II HR Model resin kit

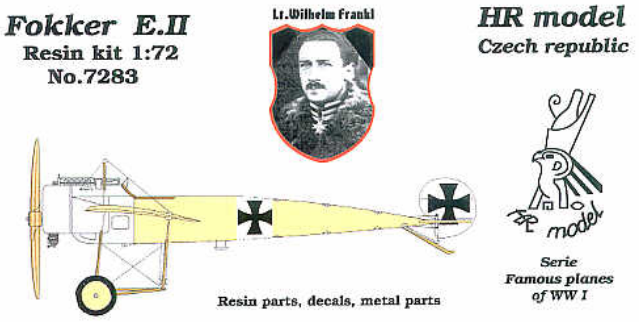
Monoplane fighter

Scale 1:72

In literature many photographs are available of the Fokker E.II, which made its first flight in June 1015 and had the factory designation M.14. I even found one (Bruce, ref. 9, p. 8 and Imrie, ref. 10, p. 12) of an aircraft carrying the same registration number as included in the decal set. Although this E.II has wheels with spokes, I have used the solid hub wheels supplied in the kit.







The kit contains resin parts, a printed transparent sheet material for windscreen and instrument panel, an instruction sheet with an exploded view, a three-view dimensioned drawing and some summary painting instructions, a decal set with several registration number and photo-engraved parts for instrument panel, safety belts, propeller hub, cockpit steps and machine gun detailing (if desired). The resin parts are well detailed and need few rework. The instructions address the M.5, M.5L, E.I and E.II; they are sufficient to build the model with some exceptions. These will be addressed in the building report.

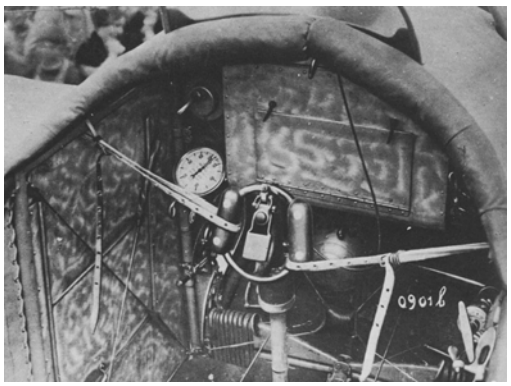
Dimensions and other characteristics are collected in the table. The references clearly fall into two groups; references 1 through 5 quote the same span as for the E.I (factory designation M.5K/MG), while references 6 through 8 quote the span to be equal to that of the E.III (same factory designation as the E.II: M.14 or M.14v according to ref. 5). May be the explanation lies in this: " In an attempt to match the speed of the Pfalz E.I, the wing span was decreased slightly to 9 m." (Leaman, ref. 5, page 40). Also the wing area was decreased in proportion and the pylon for the bracing cables was made lower. This apparently was not a success (the climbing performance got worse and roll control by means of wing warping required a great physical effort), which led to the "development" of the E.III with again a slightly larger span, wing area and a higher pylon. The table also includes the scaled dimensions and those of the model.

	Ref. 1 - 5	*Ref. 6 - 8*	*1:72*	*model*
Span	8.90 – 9.00 m	9.51 – 9.52 m	123.6 – 125.0 / 132.1 – 132.2 mm	130.4 mm
Length	7.22 – 7.30 m		100.3-101.4 mm	98.4 mm
Height	2.79 – 2.80 m		38.8 – 38.9 mm	37.8 mm
Engine[1]	Oberursel U I, 100 hp			
Crew	1			
Armament	1 machine gun LMG 08, 7.92 mm			

Apparently HR Model has opted for a wingspan somewhere in between that of the E.I and the E.III, which is about correct[2]. The other dimensions are a bit at the low side, but quite acceptably scaled.

Cockpit interior

The cockpit interior has the fundamental error of each World War I (Fokker) kit of HR Model[3]: It has a far too fancy instrument panel, composed of black printed dials on the transparent sheet and the etched control panel, which represents clearly a post-war status. I have not replaced it by custom made parts representing the individual controls and instruments, which were mounted on the real Fokkers of that time.



Instrument panel of Fokker E-type fighters (Imrie, ref. 10)

Control components have been painted dark grey (Humbrol 126). The backside of the plastic dials has been painted white, the plastic part cut out and glued to the rear of the grey painted etched part. The inside of the two fuselage halves have been painted matt linen (Humbrol 74) and some plasticard strips painted light grey have been added to the walls to simulate the welded fuselage frame. Finally the cockpit interior is attached to one of the fuselage halves.

Elevator and rudder

It is not clear which part in the kit is intended to connect the elevator halves together. I have used a short length of 0.4 mm brass wire, fitted in 0.3 mm holes drilled in each elevator half. Control horns made of 0.5 mm thick plasticard (Evergreen), have been mounted at the same time, as well as on the comma-shaped rudder. The elevator have been given a linen finish prior to assembly to the fuselage, the rudder has been painted white. I have also applied the rudder decal at this moment. In order to fit it smoothly around the control horns the decals have to be cut in a bit prior to putting them in the water[4]. Finally, a coat of satin varnish has been applied.

Fuselage

The two fuselage halves fit poorly and need several coats of putty before a smooth top and bottom surface is achieved. I have added some engravings representing the access panels in the front fuselage. From the pictures it can be seen that two pairs of bracing wires are attached to the engine cowling and front part of the fuselage. At these locations and at the locations in the rear fuselage where the rudder and elevator control cables leave the fuselage 0.3 mm holes have been drilled. Also, a 0.5 mm hole has been drilled in the forward fuselage to mount the Spandau LMG 08 machine gun, as I have not used the gun provided in the kit, but the finer detailed white metal Spandau from Aeroclub. The fuselage has been painted natural linen and the cockpit edges matt leather (Humbrol 62). The area were decals will be located has been given a coat of gloss varnish to improve adhesion. The decals have been applied using Microscale Industries Micro Set and prior to assembly I have given the fuselage a coat of satin varnish.

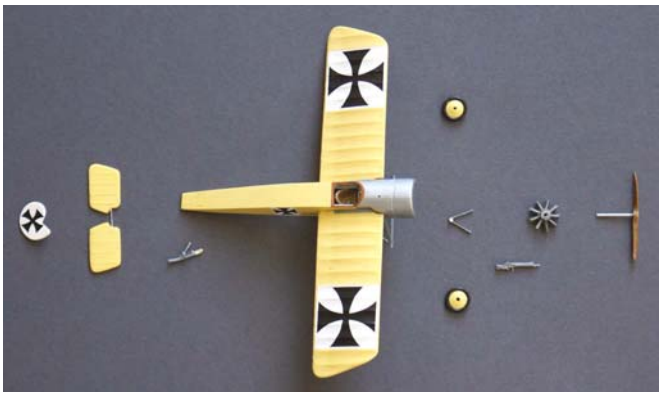
Wing assembly

0.3 mm holes have been drilled in the wing at the eight locations where the bracing and warping control cables are attached to the wing according to the three-view drawing included in the kit. The wings have been painted natural linen and the decals have been applied. The stepping area next to the fuselage has been painted dark grey and I have finished the wings with a coat of satin varnish[5]. Finally the wings have been glued to the fuselage.

Undercarriage and over-wing pylon

The undercarriage is correctly dimensioned. I have added a simulated 1.35 mm diameter pulley at the rear end of the central undercarriage longeron and a small 0.75 mm diameter extension at the front end to ease the attachment of the wing bracing cables, which come all together at these locations. A simulated pulley has been added to the pylon on top of the fuselage too. I have painted the undercarriage and pylon dark grey (Humbrol 127) prior to assembly. The pulleys have

been painted matt natural wood (Humbrol 110).



0.3 mm holes have been drilled in the V-struts to accommodate the bracing cables. The tailskid support does not have the correct angle when the original part is used. Shortening it by some millimetres solves this problem. The picture shows the parts of the model prior to assembly.

Machine gun

The Aeroclub Models Spandau LMG08/15 machine gun has been painted gun metal (Humbrol 53). After gluing it to the front fuselage I have provided it with ammunition feeds made of thin plasticard, which were easy to bend in the desired shape. The feeds have been painted aluminium (I use Humbrol 11, silver, as the aluminium Humbrol 56 looks very grey), as the feed covers are an integral part of the engine plating. I have mounted the pylon after gluing the ammunition feeds in place.

Engine

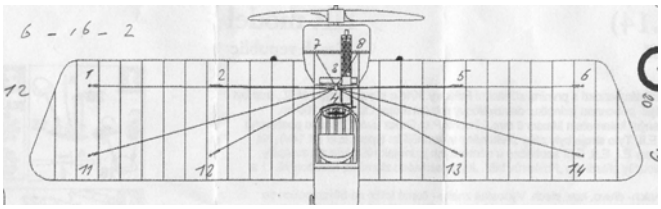
I have added some detail to the engine; small lengths of 0.25 mm wire strand represent the valve rods of each cylinder.

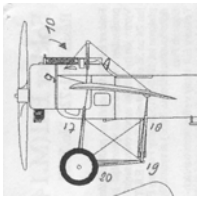
The propeller has been painted matt natural wood streaked with satin brown (Humbrol 133) to simulate the sandwiched wood material and mounted on a short length of plastic rod of 1.05 mm diameter. The attachment bolts have been painted silver. I still think this looks better than using the photo-etched propeller hub supplied with the kit.

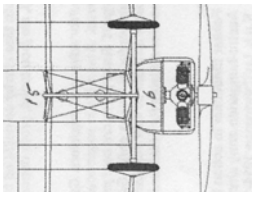
Wing bracing

The wing bracing is rather complex; there are a lot of wires and they pass often at the same places. Therefore I have established the order in which the wires have to be put in place established beforehand on the five-view drawing that comes with the kit. The drawing of the wing bracing wires in the instruction sheet does not indicate the routing of the cables from the holes in the forward fuselage to the wings. I have derived their routing from photographs. All wiring is 0.08 mm fishing line.

First the undercarriage bracing is applied: two lines from points 17 to 19 (left and right side) and from 18 to 20. Points 17 and 18 are at the top of the inverted W and points 20 and 19 at the bottom middle leg. Then the forward wing bracing is mounted. Two short lengths wire are glued in the holes 9 and 10. When dry they are passed through 2 and 5 respectively, but not glued yet; they are only put under tension with a small piece of Tamyia tape. Next one piece of line with a length of four times the span is passed through the points 16-2-3-5-16-1-3-6-16. The line is put under tension by pulling the two ends and fixing it with a short bit of tape. Then a drop of glue is put with a piece of 0.25 metal strand at each wing passage end at points 3 and 16. It should be noted that point 16 is not a hole, but the short 0.75 mm diameter extension added to the front of the undercarriage. The line is passed at the lower side of the extension.







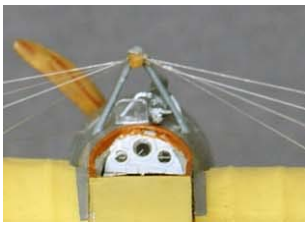
The rear bracing of the wing is mounted the same way. This time the order is 15-12-4-13-15-11-4-14-15. Point 15 is the simulated pulley; the line is passed between the pulley and the undercarriage styles. The line is put under tension and glue is applied at each location were the line passes through the wing and at points 4 and 15. Finally two short lengths of line are glue in holes 7 and 8 and when dry glued to point 3.

Cutting the excess line after the glue is dry is best done with a new, sharp scalpel blade; cutting with scissors either pulls the glued joints loose or risks to cut also the other lines (it happened to me with this model, and repairing it invisibly is virtual impossible).

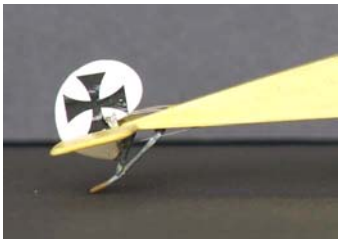
Wing bracing wires under tension

Finishing up the model

The engine is mounted by sliding it in the cowling and passing the propeller cum axle through the holes in the engine and the firewall and fixing the engine to the axle with a drop of glue. I had to fix also the axle to the firewall, as the propeller tended to drop downwards.



In examining the pictures of E.II's, it appeared some did not have any windshield, while other had a very small, almost rectangular one. I have chosen to mount a windshield, cut out from clear plastic sheet, according to that model. It is glued with Humbrol Cristal Clear. The picture shows it is fighting for place with the machine gun and the wing pylon.



Final steps are to add the elevator and rudder control cables (again 0.08 mm fishing line), adding the photo-etched cockpit stairs and attaching the wheels. The pictures below show the completed model.

References

1. P. Alting, *Fokkers in Uniform, Driekwart eeuw militaire Fokker vliegtuigen*, p. 59, Rebo Produkties, Sassenheim
2. A.S. Engels, *Fokker und seine Flugzeuge*, pp. 111-112, ISBN 3-930571-52-8, 1996
3. A.S. Engels, *Die Umlaufmotoren der Motorenfabrik Oberursel A.G.*, pp. 8, 25, 86-117, ISBN 3-930571-55-2, 1996
4. A.R. Weyl, *Fokker: The Creative Years*, pp. 114-117, Putnam, London, 1965
5. P. Leaman, *Fokker Aircraft of World War One*, p. 40, ISBN 1 86126 353 8, 2001
6. P.M. Grosz & V. Koos, *Fokker Flugzeugwerke in Deutschland 1912-1921*, pp. 38-39, ISBN 3-89880-355-4, 2004
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8. V. Koos, *Die Fokker-Flugzeugwerke in Schwerin, Geschichte - Produktion – Typen*, p. 30, ISBN 3-928820-21-4, 1993
9. J.M. Bruce, *The Fokker Monoplanes, Profile Publications No. 38*, Profile Publications Ltd., Leatherhead, Surrey, 1965
10. A. Imrie, *Fokker Fighters of World War One*, Vintage Warbirds No. 6, ISBN 0-85368-782-X, 1986
11. H. Hooftman, *Fokker, Bekende en onbekende vliegtuigtypes van A.H.G. Fokker, Neerlands grootste vliegtuigbouwer*, p. 16, ARTI beeld encyclopedie 36, Alkmaar, 1959

[1] References 2 and 3 quote the Oberursel U 0 of 80 hp, the same engine as the E.I had.
[2] 130.4 mm corresponds to 9.39 m.
[3] HR Model produces the following Fokker W.W. I airplane model kits: M.5, M.5K, M.5L, M.5K/MG (E.I), M.7, M.10E, M.10Z, M.14 (E.II, E.III), M.17E, M.17Z (D.II), M.19 (D.III), V.4 and V.9. The M.5 variants and the M.14 are monoplanes; the others are bi- or triplanes.
[4] Gluing the control horns after painting and applying the deals almost certainly damages the decals, when they come off by accident .
[5] In general it is advised to “re-drill” all holes after each painting step.