World War One Aircraft Models

I have always held a fascination with early military aircraft. I'm now retired after working initially as Tool Maker, after which I served 27 years in the Royal Air Force and finally 20 years as a Military Aerospace Technical Author/Editor.

As most modelers, I got involved in the world of construction kits at an early age, but stopped for most of my service career and for some years afterwards, getting back into the hobby in 2015.

I now enjoy the challenge of building aircraft of World War One and in 1:32nd scale. Since posting photographs of my completed models online, some modelers asked if I would create 'build logs' for my future builds, which is what I now do for each build.

I don't consider myself a 'master' of this hobby, but hope to be able to pass on what I have learned. As such, here is my build log, which covers the 'Copper State Models' 1:32 scale model of the reproduction Bristol Scout C, Serial No.1264, built and owned by David Bremner and Theo Willford and flown at displays by David Bremner.

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CONTENTS

INTRODUCTION

Before I start with the build log, I'd like to show how I've set up my work area. I prefer to keep the work area as clear as I can (I've lost too many small items in the past). I think it's important to have the tools etc you need ready to hand and other, non-essential stuff tucked out of the way until needed.

I'm lucky in that I have my 'man cave', which is sorted into a modelling area, airbrush spray booth in addition to my work station PC, games PC and games console.

AFTERMARKET

NOTE: *I have not detailed all of the aftermarket parts used for this build, just those that differ from my previous Scout build, the build log of which can be downloaded from the 'Logs' page on my web site at:*

https://mikesWW1aircraftmodels.com

Detailed in this build log are only those specific aftermarket parts used to represent the aircraft as it is today.

'Gaspatch' - British Wicker Perforated Back - Short and Tall With Small Leather Pad 1/32 (22-32249)

'Copper State Models' - Standing RNAS pilot (F32-053)

'Xtradecal' Parallel Stripes Black (XPS1) decals

'Xtradecal' Parallel Stripes White (XPS2) decals

'Aviattic' Off White on Linen (ATT32241) decal

'SpiderWire' Stealth Smooth Braid (0.08 mm)

'ProperPlane' hand made wood laminated Bristol propeller

'Albion Alloy's' 0.4 mm diameter Brass tube

'MFH' 0.4 mm diameter Black tube (P-961)

'Steelon' or 'Stroft GTM' 0.08 diameter mono-filament

'Gaspatch' 1/48th scale metal turnbuckles (Type C, One Ended and Anchor Points)

'PlusModel' 0.4 mm diameter lead wire

'EZ' stretch line (Black Heavy)

'Artool' Ultra Mask sheet

'Model Scene' Cut Meadow Late Summer (F003) grass mat.

THE AIRCRAFT

THE AIRCRAFT

This model represents Bristol Scout C, Serial No.1264, rebuilt by David Bremner and Theo Willford and flown by David Bremner. The aircraft is a reproduction of the Bristol Scout C flown by David's grandfather with No.2 Wing (RNAS), operating from the Greek island of Thasos, off the coast of Bulgaria, during 1916.

References:

'Copper State Models' instruction manual.
'Windsock' date file No.44 - Bristol Scouts (J.M. Bruce).
'Warpaint Series No.128' - Bristol Scout (Matthew Willis).
'Bristol Scout - Rebuilding Granddad's Aircraft' (David Bremner)
(https://bristolscout.wordpress .com)

General:

NOTE: *The following text is based on descriptive text from the 'Copper State Models' instruction manual and information in the 'Windsock' data file No.44 and online resources.*

The Bristol Scout was designed in 1913 by Frank Barnwell and the company's chief test pilot, Harry Busteed and the first flight of the prototype took place on 23rd February 1914 with Busteed at the controls. Two subsequent aircraft, completed shortly after the outbreak of the First World War in August 1914, were requisitioned by the Royal Flying Corps and allocated to No.3 and 5 Squadrons for evaluation. Powered by a Le Rhone rotary engine generating 80 hp the Scout's performance impressed the War Office and in November 1914 an order was placed for 36 machines.
Initial trials to provide RFC aircraft with guns used the Scout as a test-bed. One early attempt involved strapping a rifle to each side of the fuselage with both aiming outwards to clear the arc of the propeller. This quickly gave way to a Lewis 0.303 machine gun attached to the port side of the fuselage. No Royal Flying Corps (RFC) or Royal Naval Air Service (RNAS) squadron was equipped solely with the Scout, although No.2 Wing (RNAS) operated around 6 aircraft at any one time in the Eastern Mediterranean theatre. Instead it was deployed as an escort fighter to larger 2-man aircraft in which role it saw action against enemy fighters, bombers and even Zeppelins.
A small number of Bristol Scouts were sent to the Middle East (Egypt - training at Abu Qir, Macedonia No.47 squadron, Mesopotamia No.30 and 63 squadrons and Palestine No.14, 67, 111 squadrons and No.1 squadron AFC) in 1916 with the last known Bristol Scout in military service being the former RNAS Scout D No. 8978 in Australia, which was based at Point Cook, near Melbourne, as late as October 1926.
The Scout soon became obsolete as far more capable aircraft came off the production line, such as the pusher DH2 fighter. Eventually it was withdrawn from front line service in the summer of 1916. Thereafter, some Scouts were used by training units with others being retained by senior officers as personal transport.
Despite its short service on the front line, the Bristol Scout saw service with 27 RFC Squadrons and was also flown by the RNAS, the Australian Flying Corps (AFC) and the Hellenic Navy.
A total of 375 machines were built.

The only airworthy Scout flying today is Serial No.1264, built and operated by David Bremner and his team. It was built over a fourteen year period and included parts from the aircraft flown by his grandfather, Flt. Sub. Lt. F.D.H. 'Bunnie' Bremner, from the island of Thasos, Greece in 1916.

The first version of the Scout was the Scout type A, which was followed by two Scout type B aircraft, being identical to the modified Scout A type but with the more powerful 80 hp Le Rhóne rotary engine. These two aircraft were sent to the RFC for operational evaluation. These aircraft had some differences, for example half-hoop-style underwing skids and a widened rudder surface.
The Scout type C aircraft was similar to the previous Scout type B. It was first ordered by the British government in a 12 aircraft production batch for the RFC and in a 24 aircraft production batch for the RNAS.

Later Scout type C production batches, comprising 50 aircraft built for the RNAS and 75 for the RFC, had a modified cowl, rudder and other details.
The last and the largest production batch of 210 aircraft was the Scout type D, of which 80 were delivered to the RNAS and the other 130 to the RFC. The Scouts type D series had a larger rudder and a different shaped engine cowl which had a larger front opening for engine cooling. The more powerful, nine cylinder 100 hp Gnóme Monosoupape rotary engine was used to improve its performance.

Scout type A

The design of the Bristol Scout was as an equal-span single-bay biplane with staggered parallel-chord wings with raked wingtips and ailerons fitted to the upper and lower wings, which were rigged with about half a degree of dihedral, making them look almost straight when viewed from the front. The wing section was one designed by Coanda which had been used for the wings of the Bristol Coanda Biplanes. The rectangular-section fuselage was an orthodox wire-braced wooden structure constructed from ash and spruce, with the forward section covered with Aluminium sheeting and the rear section fabric covered. The rotary engine fitted was the 80 hp (60 kW) Gnome Lambda rotary engine enclosed in a cowl that had no open frontal area, although the bottom was cut away to allow cooling air to get to the engine. It had a rectangular balanced rudder with no fixed fin and split elevators attached to a non-lifting horizontal stabilizer. The fixed horizontal tail surfaces were outlined in steel tube with wooden ribs and the elevators constructed entirely of steel tube.
After flying at Larkhill the prototype, later referred to as the Scout type A, was returned to the factory at Filton and fitted with larger wings, increasing the chord by six inches (15 cm) and the span from 22 ft (6.71 m) to 24 ft 7 in (7.49 m). These were rigged with an increased dihedral of 1+¾°. Other changes included a larger rudder, a new open-fronted cowling with six external stiffening ribs distributed in symmetrically uneven angles around the cowl's sides (especially when viewed from the front) and fabric panel-covered wheels. It was evaluated on the 14th of May 1914 at Farnborough and when flown by Busteed, the aircraft achieved an airspeed of 97.5 mph (157 km/h), with a stalling speed of 40 mph (64 km/h). As two Scout type B aircraft were being constructed, the prototype Scout type A was eventually sold to Lord Carbery for £400 without its engine. He had a 80 hp Le Rhône 9C nine-cylinder rotary engine fitted and flew this aircraft in several air races before it was lost after ditching in the sea during the London to Paris race.

Scout type B

Numbers 229 and 230, later designated the Scout type B, were identical to the modified Scout A, except for having half-hoop-style underwing skids and what appear to have been six stiffening ribs positioned around the engine cowl's exterior circumferential surface, which was also made with a larger circular front opening for engine cooling when compared to the Scout A.
Also an enlarged rudder. Completed shortly after the outbreak of war in August 1914, they were requisitioned by the War Office and given RFC serial numbers 644 and 648. Serial 648 was allocated to No.3 Squadron (RFC) and 644 to No.5 Squadron (RFC) for evaluation. Number 644 was damaged beyond repair on 12 November 1914 in a crash landing. Serial 648 subsequently served with No.4 and No.8 squadrons before being struck off charge on the 4th of October 1915.

Scout type C

Impressed by the performance of the Scout type B aircraft, the War Office ordered twelve examples on the 5th of November and the Admiralty ordered a further 24 on 7th of November. The production aircraft, later called the Scout type C, differed from their predecessors mainly in constructional detail, although the cowling was replaced by one with a small frontal opening and no stiffening ribs, the top decking in front of the cockpit had a deeper curve and the Aluminium covering of the fuselage sides extended only as far as the forward centre-section struts, aft of which the decking was plywood.

Scout type D

The last and most numerous production version, the Scout type D, was the result of a series of further improvements to the Scout type C design. One of the earliest changes appeared on 17 of the 75 RNAS Scout type C aircraft, which saw an increase in the wing dihedral angle from 1+¾° to 3°.

Other aircraft in the 75 aircraft RNAS production run introduced a larger-span set of horizontal tail surfaces and a broadened-chord rudder, shorter-span ailerons and a large front opening for the cowl, much like that of Scout type B, but made without the external stiffening ribs.
The newer cowl was sometimes modified with a blister on the starboard lower side for more efficient exhaust-gas scavenging from the engine, as the aircraft were intended to have fitted the more powerful, nine-cylinder 100 hp Gnôme Monosoupape B2 rotary engine to improve the performance of the Scout type D. In total 210 Scout type D aircraft were built with 80 of these being ordered by the RNAS and the other 130 being ordered by the RFC.

Engine types:

The Bristol Scouts were fitted with various rotary engines for operational flying or for engine trials. Engines that were fitted included the 80 hp Gnome Lambda, Le Rhône and Clerget, the 100 hp Monosoupape-Gnome, and the 110 hp Clerget or Le Rhône rotaries.

Scout type C - **typical** specifications:

Wing span - 24' 7" (7.49m)

Length 20' 8" (6.30m)

Height - 8' 6" (2.59m)

Wing area - 198.00' (18.4m$^{2)}$

Empty weight - 789 lb (358kg)

Loaded weight - 1,195 lb (542kg)

Speed - 92.7 mph (149.2kph)

Rate of climb - 21m 20sec to 10,0000' (3,048m)

Service ceiling - 15,200' (4,724m)

Endurance - 2.5 hr

Weapon - single Lewis .303 machine gun

Engine - Gnome Lambda (80hp) rotary.

Notable pilots of the Scout:

Captain Lanoe Hawker:

A pilot with No.6 Squadron (RFC), Hawker shot down two German aircraft and forced down a third on 25th July 1915 over Passchendaele and Zillebeke. For this action he was awarded the Victoria Cross. Captain Hawker also enjoyed the distinction of becoming the first British fighter 'ace'.
Hawker flew flew Scout type C , Serial No.1611, which with help from an air mechanic Ernest Elton devised a mount for attaching a Lewis gun to the left side of the fuselage during June of 1915. It was whilst testing his invention in combat on the 25th of July that he was awarded the Victoria Cross, the first awarded to a pilot for aerial combat. Eventually Hawker was shot down and killed in one of the longest dog fights of the war.
On the 23rd of November 1916 and flying a DH2 pusher fighter, he engaged in combat with Manfred von Richthofen flying an Albatros fighter. After a 30 minute dog fight, he was shot in the head and was killed. The Germans buried him next to his downed aircraft near Bapaume, but his grave was lost and he is now commemorated on the Flying Services Memorial at Arras.

Charles Gordon Bell:

Charles Gordon Bell was a well known pre-war aviator. He was an experienced and aggressive pilot when he joined the RFC in 1914. Bell was posted to No.10 Squadron (RFC) and claimed 5 victories during 1915, becoming the highest scoring Bristol Scout pilot of the war. Eventually ill health forced his return to England. He was killed during a test flight in 1918.

Albert Ball:

Albert Ball was the first British ace idolized by the public. In October 1915 he was granted the Royal Aero Club Certificate and immediately requested to be transferred to the RRFC. In
February 1916 he joined No.11 Squadron (RFC) at Marieux in France, flying a Bristol Scout. There he scored his first aerial victory on the 16th of May when he drove down an Albatros C. He Subsequently moved on to fly Nieuport 16, 17 and SE5 fighters. He shot down 43 enemy planes and one balloon. On the evening of the 7th of May 1917, near Douai, Albert Ball was in combat and was last seen by his fellow pilots pursuing an Albatros fighter into clouds. Ball's aircraft was last seen diving inverted into the ground. Albert Ball was only 20-years-old at the time of his death, but was awarded the Victoria Cross. There is debate as to whether Ball was actually shot down or became disorientated in cloud, but his death was credited to Lothar von Richthofen.

Bristol Scout C, Serial number 1264:

Bristol Scout C, Serial number 1264 was one of a batch of 24 aircraft built under contract CP 67209/14 (serials 1243 to 1266). The Bristol Scouts had various armament fitted, which included Lewis machine guns mounted obliquely on one or both sides of the fuselage or forward facing on the top forward fuselage decking or forward facing on the upper wing. This particular aircraft had a single Lewis machine gun fitted to the fuselage right side, next to the cockpit.
The engines fitted to the Scout aircraft, other than the initial Gnome Lambda (80hp) only started to be trial fitted from March 1916. During its service, 1264 was retro fitted with the Le Rhone 9c (80hp) rotary engine, as denoted by the air intake pipes for the carburetor protruding from the engine side access panels.
At the start of the war the RFC and RNAS aircraft had Union flag markings painted on the fuselage sides and on the undersides of the wings. However, the Union flag markings led to some of the aircraft being mistaken for German aircraft. On the 11th of December 1914 the RFC Headquarters in the field decreed that roundels should be applied on RFC aircraft, based on the French cocarde (roundel), but with the coloured rings reversed. These markings were applied to the underside of the wings and the rudder. The RNAS however marked their aircraft, from October 1914, with roundels that had an outer ring of red (with a thin white outer) and a white centre. Some aircraft had a blue centre added the white inner. Eventually in June 1915, it was decided to standardise on the RFC roundel for all British military aircraft.

Bristol Scout 1264 was received by No. 2 Wing RNAS in Thasos in August 1915. It was fitted with a Lewis machine gun, mounted in front of the cockpit on the fuselage decking panel. It also had a bomb rack fitted to the fuselage under shield to carry four Hales bombs. In the spring of 1916 the Wing were operating from the Greek island of Thasos, off the coast of Bulgaria. Bulgaria had recently joined the Axis powers. From August 1915 until September 1916, Scout 1264 should theoretically have had the later RFC roundels. However, markings took time to be applied after being changed and also, there was great rivalry between the RNAS and the RFC. The following photographs show, after a landing mishap in Thasos, Scout 1264 had what appear to be the standardised roundels.

This model represents David Bremner's reproduction of Bristol Scout 1264, which carries the older RNAS roundel markings and has the Lewis machine gun mounted on the fuselage side to the right of the cockpit.

Profile of wartime Scout 1264

Photographs of present day Scout 1264


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THE PILOT

THE PILOT

References:

‘Copper State Models’ instruction manual.
‘Windsock’ date file No.44 - Bristol Scouts (J.M. Bruce).
‘Bristol Scout - Rebuilding Granddad’s Aircraft’ (David Bremner)
(https://bristolscout.wordpress .com)

NOTE: ***The following text is from David Bremner’s online blog*** *(address above).*

In those days, a pilot was expected to be able to cope with many different types of aircraft and no significant training was given to acquaint you with the various different features or handling characteristics. No. 2 Wing RNAS at Imbros was very small and on average they only had 23 aircraft, 17 pilots and 10 observers available. But the 23 aircraft sported an astonishing variety of types. Granddad’s logbook records an Avro 504K, Voisin III, Bristol Scout C & D, Caudron G3 and G4, Nieuport 12 (‘Gunbus’), Nieuport 11, BE2c and occasionally a FarnmanHF20. That’s ten different types. Maintenance and the provision of spares, particularly as far away as the Eastern Mediterranean, must have been incredibly difficult.

Sub. Lt. Francis Holden ‘Bunnie’ Bremner arrived at the island of Imbros, Turkey on the 19th of December 1915, fresh from the Naval Air Station at Chingford, with his Royal Aero Club certificate No.1884 and with less than 30 hours’ flying time. (There was no such thing as a pilot’s licence in those days).

Imbros was an island about 15 miles off the coast of the Dardanelles peninsula and so every flight involved a return flight across water, something sport aviators still shudder at even today. The decision had already been taken to abandon the Gallipoli campaign and after three flights in an Avro 504K to familiarise himself, he made his first solo flight in the Voisin on the 27th of December and was out on his first operational mission the next day, spotting for the Naval guns. The anti-aircraft fire didn’t trouble him much, and he ‘*sighted Hun and chased him a short way, but he was a long way off and far too fast.*‘ This was the first time he’d ever taken a passenger. On his seventh operational flight, on the 8th of January1916, he was spotting for the guns of HMS Peterborough, flying the Voisin. The engine wasn’t performing well, and he couldn’t get above 8,300ft. On his way back, while still over the peninsula he was *‘…attacked by the Hun who came up unobserved behind and slightly above me*.’ He tried to manoeuvre to get his Lewis gun to bear, but the Hun peeled off and though he tried to follow he was *‘far too fast and nippy for me to bring my gun to bear on him.*‘ (the German was flying the infamous Fokker Eindecker monoplane). He found his engine misfiring and it eventually gave out altogether, which meant that he had to make an emergency landing on the airstrip on the peninsula at Cape Helles. The Turkish guns opened up as he came in and they had to dodge the 6in shells whilst trying to push the Voisin into a dugout. On investigation he found that the damage to the engine had been caused by enemy gunfire, which had wrecked one cylinder and peppered the water cooling system, though he and his observer had been unaware of it at the time.

Unfortunately he had landed on the very evening of the final evacuation of Allied troops from the peninsula, so he was told to destroy the aircraft without setting fire to it (which would have made an easy target for the Turks). He did the best he could with *‘a pick, a shovel and a sledge hammer*‘, but he reckoned it was surprisingly difficult to inflict permanent damage in a short time with these.

He was attacked some time after 1630 and was on board a lighter by 1830, which departed at 0130 and took him to SS Partridge, the second last ship to leave.

You might think that with the ground forces gone, there would be nothing for the air forces to do, but they stayed on until the end of May, carrying out an astonishingly varied number of tasks. Ten days after the evacuation, he had his *‘first flip in a fast machine’,* the Bristol Scout.

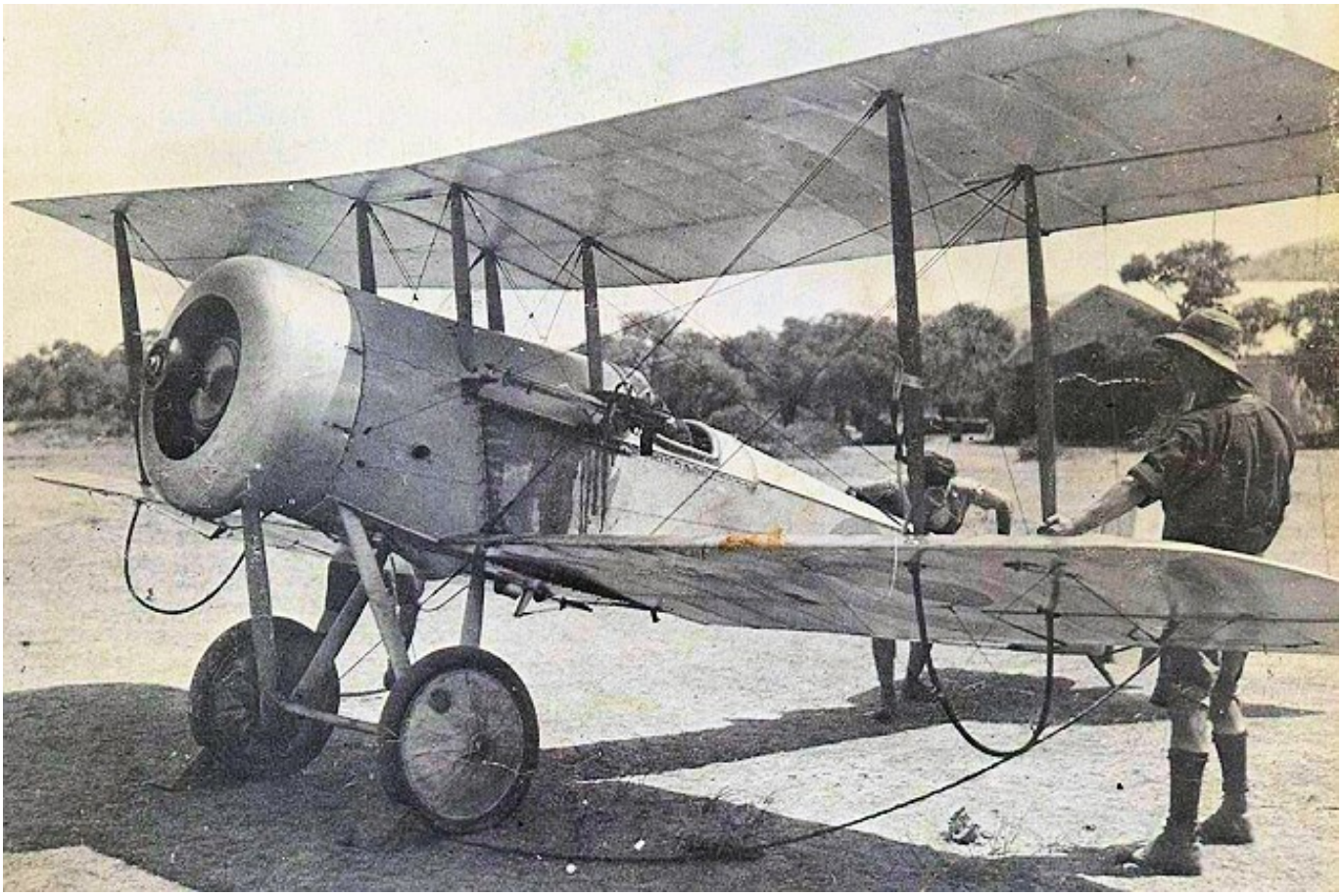
He *‘did not like right handed turns at first, but got better towards the end. On the whole much easier to fly than I expected, though not so comfortable as pusher.’* On the 20th of January he was *‘Escorting M.F.1383 over Kithia and Fusilier Bluff. Flew in too slowly and pancaked on landing. It was an off day for me and although I flew with confidence and was quite comfortable the whole time I was flying damn badly. A most unsatisfactory performance. Came down 9,000ft in 7 or 8 min. Too damn fast.’*

January was all escorting two-seaters doing observation work, but on the 4th of February he carried four 16lb bombs to drop on Galata aerodrome, accompanied by two Nieuports. '*Had great difficulty aiming machine as I had to fly with left hand, looking down through hole in bottom of fuselage. Dropped bombs too soon and too far to left. My first go at bomb dropping. I have never even practiced it before.*' This with no training and only 55 hours total time in the air.
The next day he had his first go in a twin-engined Caudron. '*Very heavy on rudder. Had great difficulty keeping her straight just before landing. This difficulty would probably have disappeared if I had wangled the engines. Rather unwieldy in the air, but with proper use of engines she might become fairly controllable.'*
On the 12th of February he was off submarine hunting between Kephalos and Tenedos and on the 23rd of February he was bombing a destroyer in Kilia Leman. On the way back he thought one of his bombs had stuck up so he paid very particular attention to his landing.
On the 6th of March he slowed right down to 35knots on his bombing run and the bomb contacted the aircraft's axle. The Scout was apparently quite steady at 35kt. There were quite a lot of practice flights in March, interspersed with chasing submarines, Huns (flying) and escort flights and then on the 18th of March, on his third flight of the day, the engine of 1259 cut out at 1000ft. He made a good circuit dead stick, but left the final turn a bit late and stalled the last few feet. The undercarriage collapsed and the aircraft turned over on its back. He was fine, but his pride and confidence were shaken, and the machine was written off. *'My first smash. I did not mind it in the least.'* But his troubles weren't over.
The very next day, he tried 1264 with the Le Rhone 9J rotary engine instead of the Gnome Lambda rotary and once again tipped up on landing. *'I must have had a good deal of drift on. Why the devil didn't I see that? Two crashes in two days and I was flying very well in the air. Poor old '64. She was such a ripper and I did love her. Only two machines have I damaged in any way, and they were the two machines I loved best.'* But things looked up after that. Only three days later the mechanics had repaired 1264 and he took her up again, using the more powerful Le Rhone engine once more and this time all went well, and he was able to keep up with his colleague in the Nieuport 11.
Two days after that he had an encounter with a Fokker Eindecker. In a letter home he wrote *'I waited a bit to entice him a bit further from his home, and then swung round and went straight for him. He also came straight at me and went above me. I let him do this as I guessed his game. (The usual Fokker trick is to come over a machine and then turn very sharply indeed and so swing round just behind the other machine). Sure enough just before he got to me he started to turn left. I said to myself "Here's a fool showing his hand in that manner*." *So I judged a pause, so to speak, and then did a vertical bank left turn. In consequence, instead of his coming out on my tail, I came out jolly near his and I gave him a little dose of machine gun medicine. He started to dodge and weave all over the place like a frightened pigeon, but I was all over him and he could not get behind me, also unfortunately I could not quite get behind him, so I had to fire with a good deal of deflection and I don't think I hit him in a vital place. He then suddenly went into a devil of a nose dive and got away from me. He was flattening out a good way below and I was just starting after him when there was a flash past me and the other escort, who had been flying a bit above us, came by in a nose dive, got behind him, and gave him beans good and proper. I was then about 9,000ft so I up with my tail and let her go. I had a glance at my speed indicator, but that only goes up to 95 knots, so it was not much use, and in what seemed to me to be an interval of a few seconds only, I found myself at 4,000ft, and once more about 30 yards behind old Fokker. 'He had by this time dived away from my pal and I don't think he quite expected me, for it seemed to startle him somewhat when he got another dose of medicine. Again I could not quite get behind him, and he dived away and I lost sight of him. 'That dive of mine, 5,000ft in one swoop, was one of the most exhilarating things I have done. My little bus fairly hummed down.'* And bear in mind that any one of the bullets he fired at the Fokker could have taken his own propeller off. From then on he was flying very regularly, mostly on escort duties.
There were occasional days off and even ten days at one point, but very often he was flying two or three times a day. On the 18th of May he carries out his first night flight. It's not clear whether he had any illumination for his instruments, but he seems to have managed okay and on the 30th of May they transferred to Thasos, which involved a 75 mile water crossing or about an hour and a half over water with an engine which he describes as vibrating very badly.

They had flown to Thasos to bring the war to Bulgaria, and they did this mostly by bombing, sometimes towns (on the 8th of June they attacked Xanthi) and sometimes crops, using incendiary bombs. His log book becomes more and more involved with the technical details, such as getting the engines to run nicely, making adjustments to the airframe to get them properly trimmed, and so on.
At the end of July 1916 he was invalided back with a persistent and ill-defined illness that resulted in heart irregularities. He was only declared fit for ground duties in March 1917 and was posted as First Lieutenant of RNAS Redcar. By March 1918 he was posted, also as First Lieutenant, to the Experimental Station at Orfordness in Suffolk and finally got a clean bill of health to go flying on the 4th of April, by which time he had been a Captain in the RAF for three days (the RAF was formed on 1 April). He made a few flights in April and May of that year, but never resumed combat flying. He had a total of about 140 hours flying.

‘Bunnie’ Bremner (on the right) with an unknown French pilot. They are stood in front of a Nieuport 12. The photograph was taken by fellow pilot Sam Kinkaid.

‘Bunnie’ Bremner (at the port wing) with Sam Kinkaid in the cockpit
(Scout serial number not known)



PART 1
BUILD
DETAILS

PART 1 - BUILD DETAILS

This particular model build represents Bristol Scout 1264 as it is currently. This aircraft reproduction was built by David Bremner and Theo Willford to represent the aircraft flown by David's Grandfather, Sub. Lt. Francis Holden 'Bunnie' Bremner, during WW1.

Although Scout 1264 is detailed in the kit instructions and can be built, there are differences to the aircraft as flown today by David Bremner.

NOTE: ***I have not detailed the basic model build in this build log as that is fully detailed in my previous 'Bristol Scout 'C' build, the build log of which can be downloaded from the 'Logs' page on my web site at:***

https://mikesww1aircraftmodels.com

Detailed in this build log are the primary changes or modifications I made to represent the aircraft as it is today.

Note: *The basic cockpit and the fuselage were assembled following the kit instructions. However, the following changes for modelling Scout 1264 as it is today are necessary.*

Remove the opening panel in the cockpit rear cross member

Remove the control lever from the upper right longeron

Fit the Pulsometer to cockpit right side frame and add associated pipe

Replace Tachometer drive with lead wire

Fit curved quarter panels at the front and rear of the cockpits upper longerons

Create engine controls (with control rods) at the cockpit left side frame, lower left of pilots seat

Replace pilots seat with better quality 3D printed seat (Gaspatch 22-32249))

Remove the pre-molded clock from top, left side of the instrument panel

Add representation of the clock above magneto switch at lower left of the instrument panel

Remove compass and its housing from between the pilots foot boards

Add blip switch cable to rear of control column and under pilots foot boards

Add all visible cockpit bracing wires and control cables (rudder, ailerons and elevators)

Add modern four point safety harness to pilots seat

Fit kit supplied lap straps behind the pilots seat

Add 'Bunnies' flying certificate to the map holder (printed from online).

Replace the pre-molded pitot static pipes from lower left wing root.

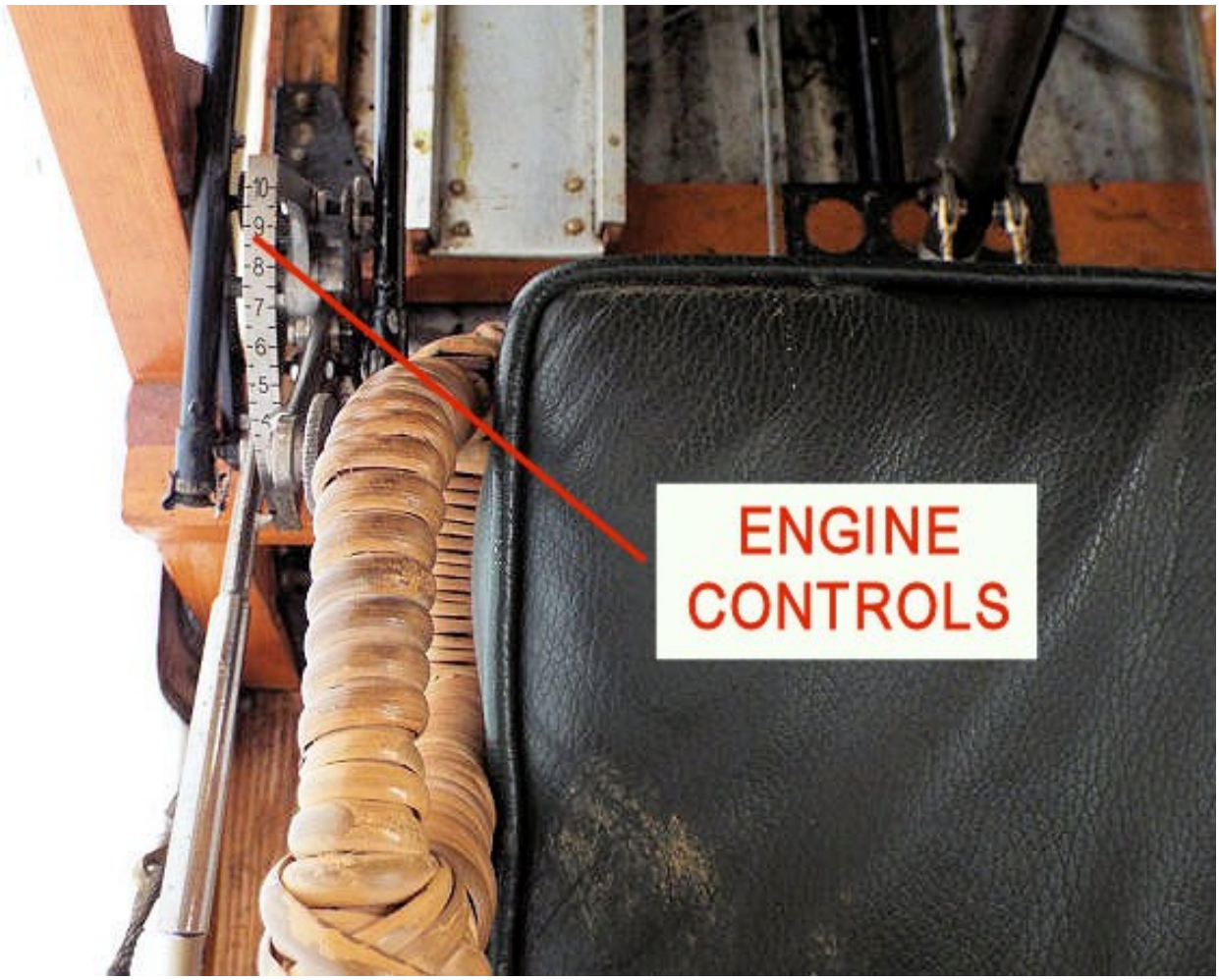
Add drain pipes (x 2) to fuselage under tray.

Replace fuel indicator feed pipe at rear end of fuselage decking panel, forward from the cockpit.

Separate the upper wing sections.

Addition of a Teddy Bear mascot.

The following photographs show the cockpit of 1264 and finished model cockpit.

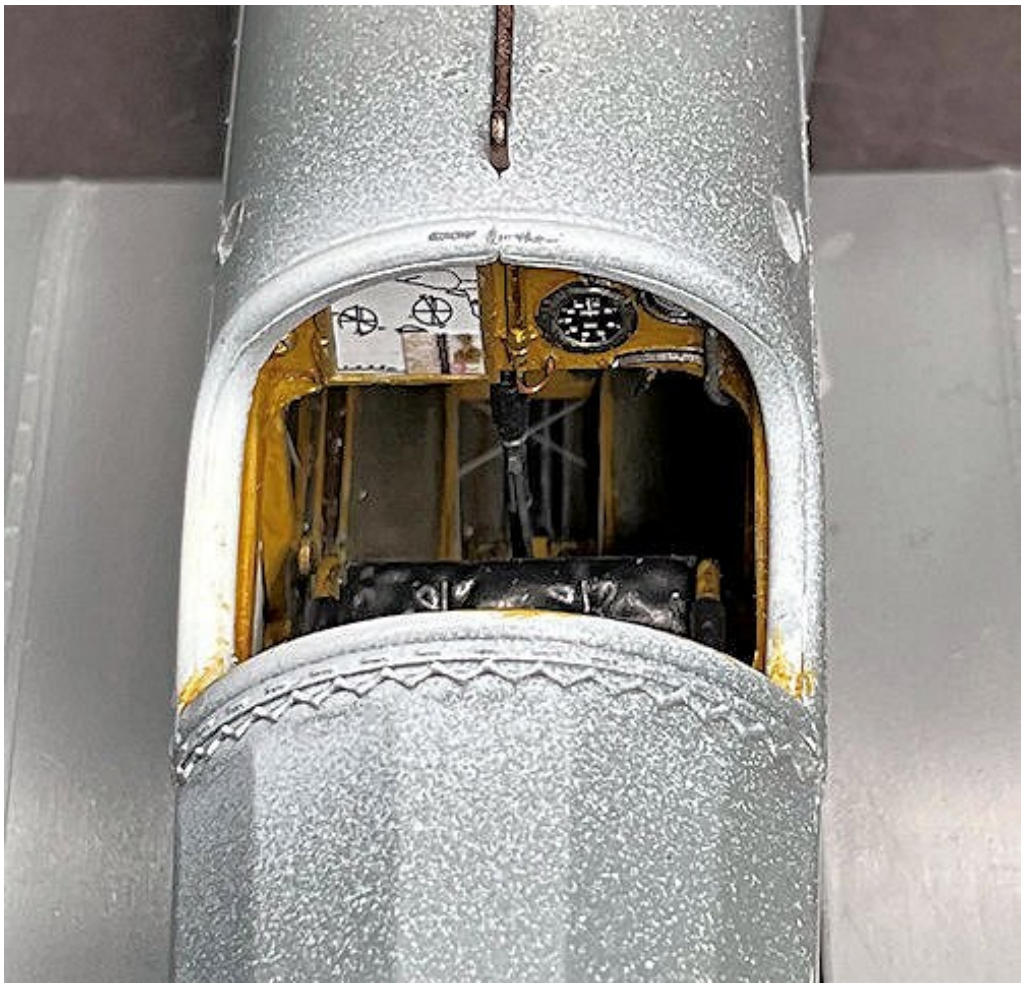

ENGINE
CONTROLS


FLIGHT MAP
AND
'BUNNIES' CERTIFICATE


KIT LAP
STRAPS
FOUR POINT
HARNESS


PULSOMETER
LOCATION

COCKPIT



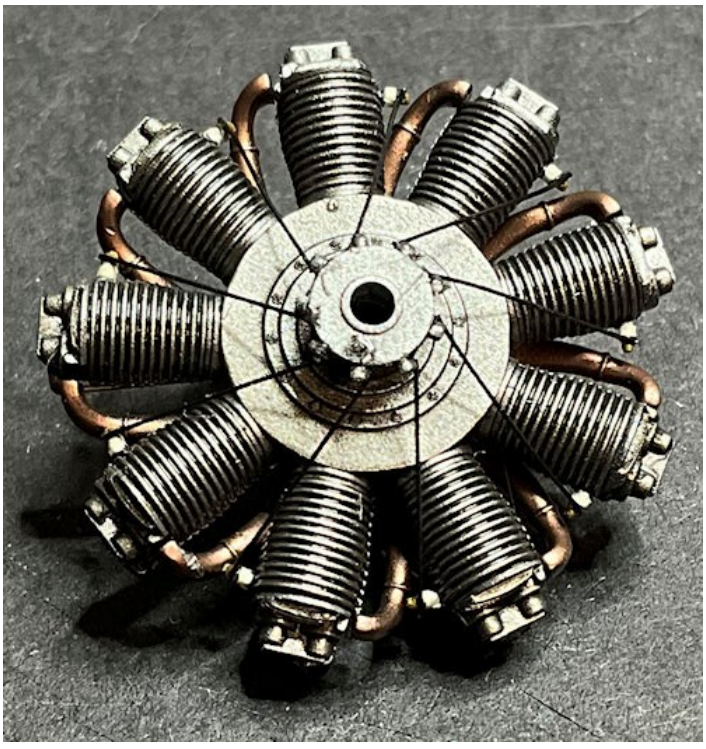
Engine:

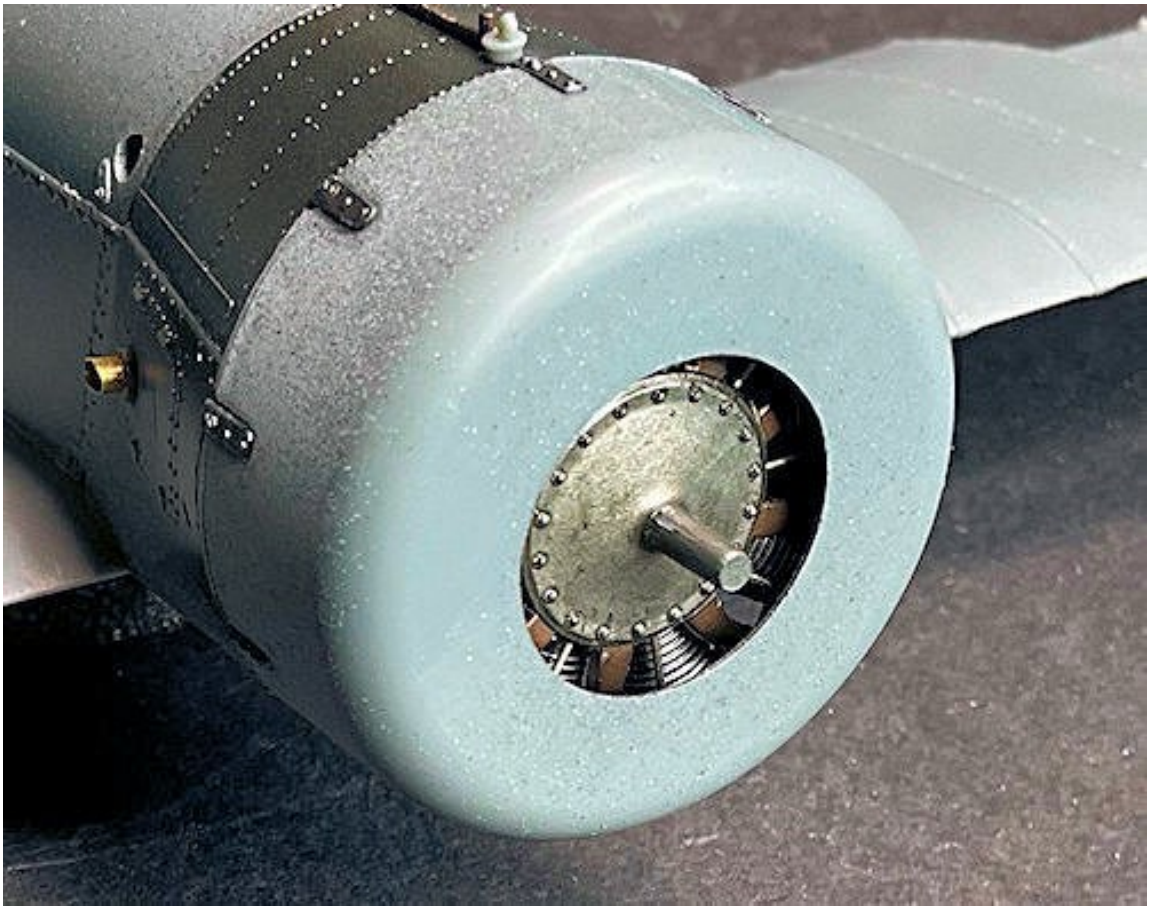
NOTE: *The engine fitted to Scout 1264 was a Le Rhone 9J rotary. This engine was supplied in this particular kit (pre-orders only).*

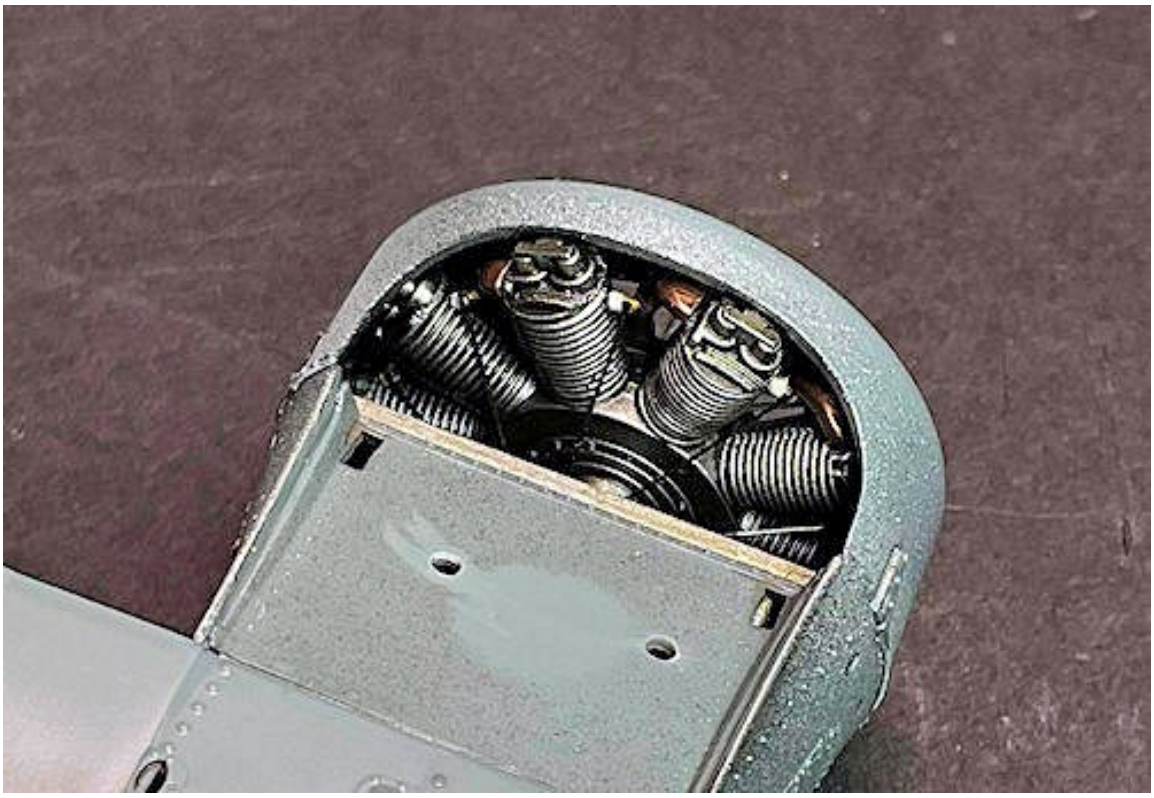
The engine was built as supplied in the kit, apart from:

The valve push rods were replaced with 0.4mm diameter Nickel-Silver tube from ‘Albion Alloy’s (NST04).

Spark plug leads were added using 0.12mm diameter line from ‘Modelkasten 0.6’ (0.13mm diameter).







Preparation:

Upper wing separation:

NOTE: *Originally, the gap between the upper wing centre section and the outer wings was filled with 'Kapon'. However, this was found to detach in flight so was removed on many of the Scout aircraft.*

The current Scout 1264 has its centre section of the upper wing is separated from the outer wing sections. These sections are joined at the front and rear wing spars. The kit supplied wing is molded as one piece with shallow 'slots' to represent the original 'Kapon' filled gap between the centre and outer wing sections on the original aircraft.

Normally, when joining separate wing sections, I would drill holes and insert Brass rod to both join and give rigidity to the wing assembly. However, in this case, the rods would pass through the locating recesses for the fuselage cabane struts, reducing the depth of the recesses and weakening the strut to wing joint. Therefore, I chose to leave the upper wing as one piece and instead drill out the separating slots, leaving the front and rear spars of the upper wing intact.

I point marked the along the centre line of the pre-molded wing slots, leaving the area of the wing front and rear spars as molded. Using the point marks as guides, I then 'chain' drilled along the slots using a 0.6 mm diameter drill. The same drill was then angled and used to drill through the holes to form an open slot. A drill of 0.7 mm diameter was then angled and used to slightly widen the slots and smooth out the edges. Finally, a straight edged scalpel blade was carefully scrapped along the slot sides.

Pitot Static tubes:

NOTE: *The pitot static tubes on the present day Scout 1264 are located on the forward, left interplane struts and are different to those on the kit part. Also the routing of the two pipes are through the lower left wing and looped around the rear, left landing gear strut into the fuselage.*

The pitot static tubes and pipes etc were carefully cut away from the forward, left interplane strut.

The cut edges were sand smooth.

A correct pitot static tube assembly was cut from the strut of a 'Wingnut Wings' Sopwith Camel spare part collection.

The pitot static tube assembly was then cemented onto the leading edge of the prepared interplane strut.

File or sand away the pre-molded pitot static pipes on the top surface of the lower, left wing at the wing root.

Drill two holes of 0.6 mm diameter into the top surface of the lower, left wing, forward from the front interplane strut locating recess.

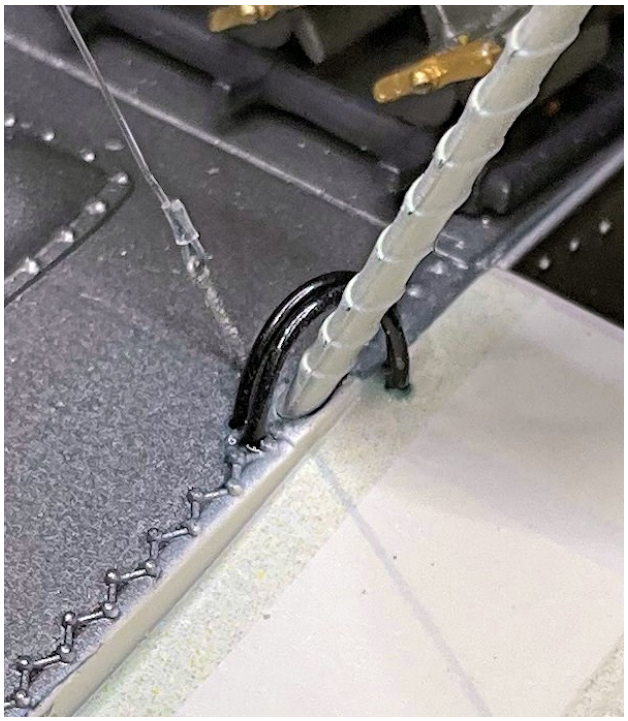
Drill two holes of 0.6 mm diameter into the underside of the lower, left wing, forward from the front landing gear strut.

Drill two holes of 0.6 mm diameter into the underside edge of the fuselage, rear of the front landing gear strut.

Cut two lengths of 0.4 mm diameter 'MFH' Black tube (P-961).

NOTE: *The following photographs show the steps carried out later in this build.*

Secure the two tubes into the pre-drilled hoes, using thin CA adhesive.



Assembly:

NOTE: ***I have not detailed the basic model build in this build log as that is fully detailed in my previous 'Bristol Scout 'C' build, the build log of which can be downloaded from the 'Logs' page on my web site at:***

https://mikesww1aircraftmodels.com

Detailed in this build log are the primary changes or modifications I made to represent the aircraft as it is today.

Fuselage:

Assemble the fuselage as described in the above referenced build log and the kit instruction manual.

Painting base coat:

Blank off all fuselage openings and cockpit.

'AK Interactive' White primer (AK759) was airbrushed over the:

Fuselage, lower wings, upper wing, ailerons (x 4), rudder and tailplane/elevator.

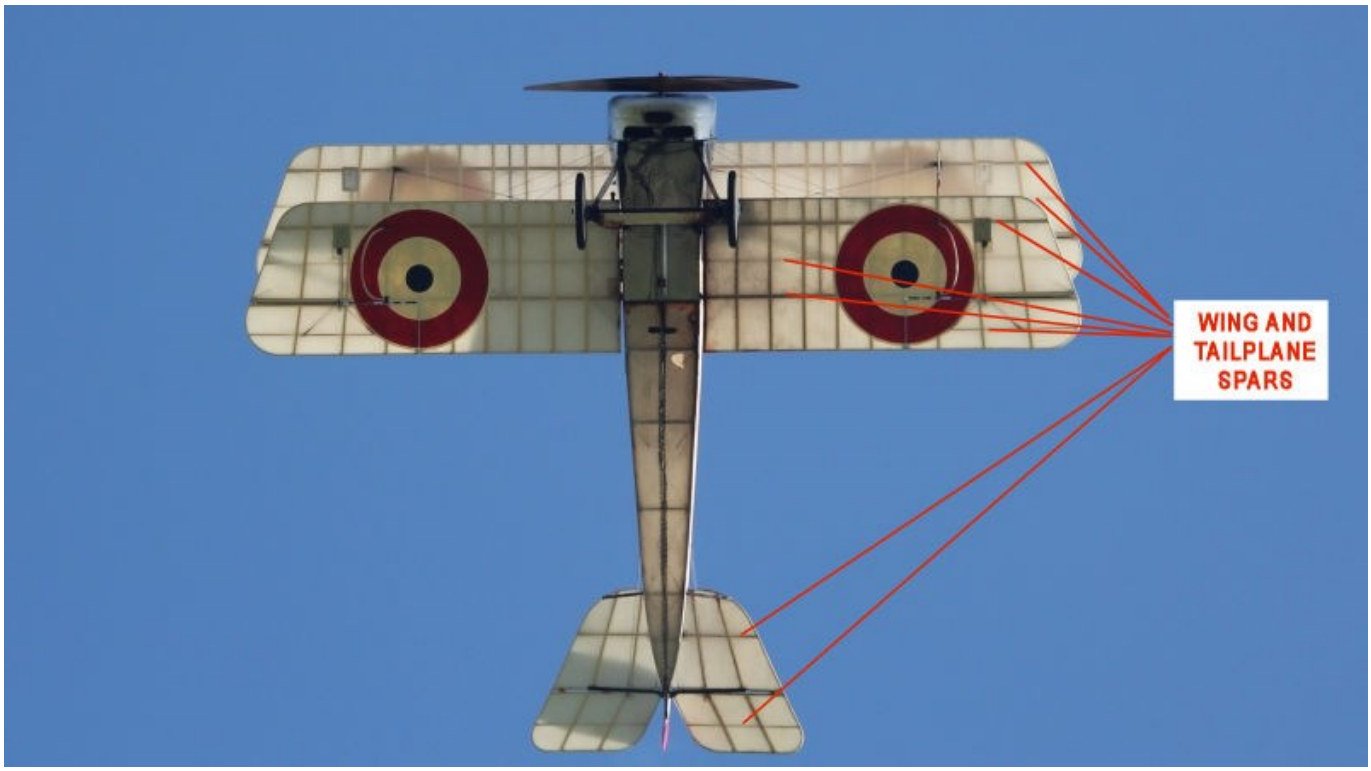
A light coat of 'MRP' Clear Doped Linen (MRP-256) was then airbrushed over the same parts.

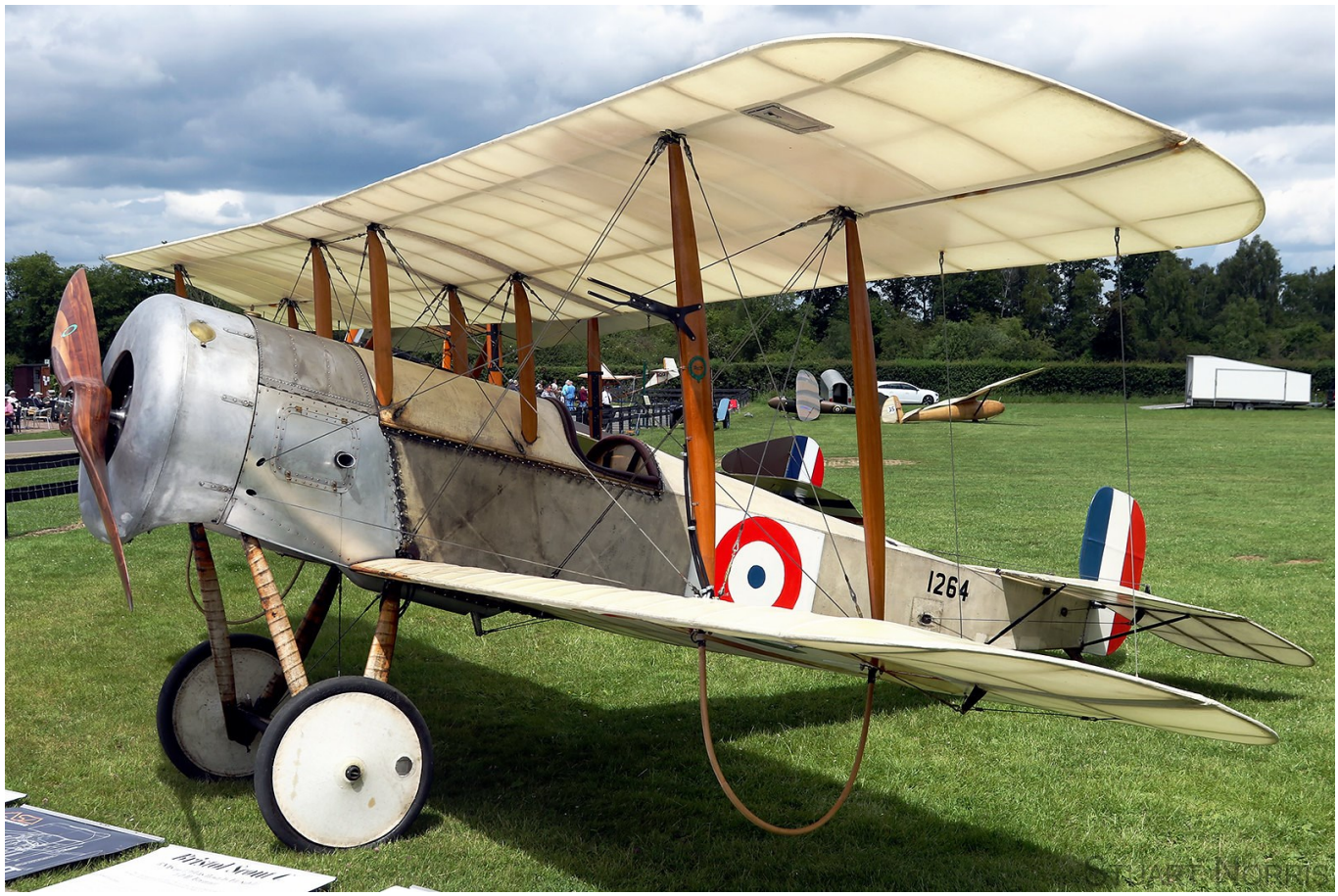
Wings and tailplane assembly - undersides:

NOTE: *Due to the semi-transparent nature of the doped linen covering, the roundel markings on the upper wing show through the underside of the wing. Also visible are the internal wing ribs, spars and corner braces on both upper and lower wings.*

Internal structure:

NOTE: *The internal spars, ribs and bracing wires were created using 'Xtradecal' Parallel Stripes Black (XPS1)*





Internal spars and ribs:

Cut ‘Xtradecal’ No.7 Parallel Stripes Black (XPS1) decals and apply them to the undersides of the wings and tailplane to represent the internal spars and ribs.

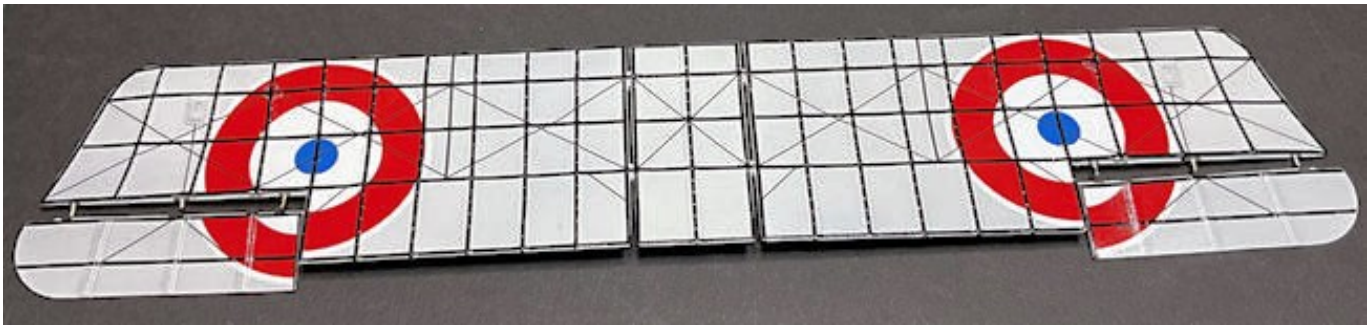
Internal bracing wires:

Cut ‘Xtradecal’ No.8 Parallel Stripes Black (XPS1) decals and apply them to the undersides of the wings to represent the internal bracing wires.

Upper wing ‘Ghost’ roundels:

NOTE: *I used roundel decals from a second kit sheet. If none are available, the only option is to create roundel masks and airbrush the roundels onto the underside of the wing.*

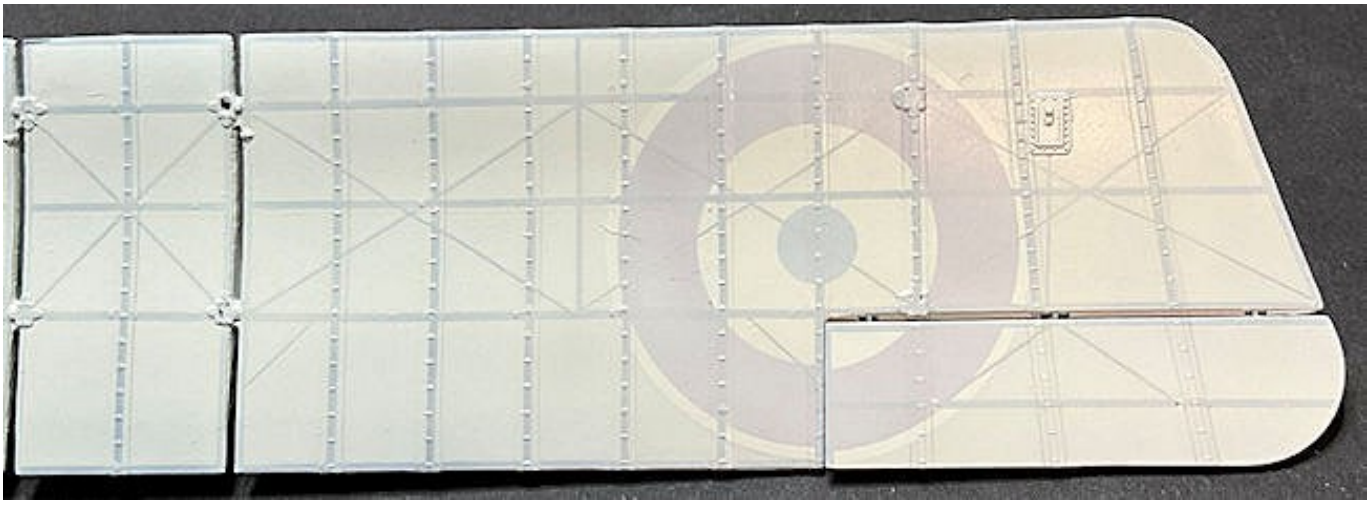
Apply the roundel decals to the underside of the upper wing and the two ailerons.



Fading:

NOTE: *The following step is intended to ‘fade back’ the upper wing ‘Ghost’ roundels, internal structure and bracing wires into the base colour to give a faded appearance. Several ‘misting’ coats may be required, checking the effect between coats until the desired effect is achieved.*

Airbrush light coats, as required, of ‘MRP’ Clear Doped Linen (MRP-256) over the undersides of the wing, ailerons and tailplane/elevator.

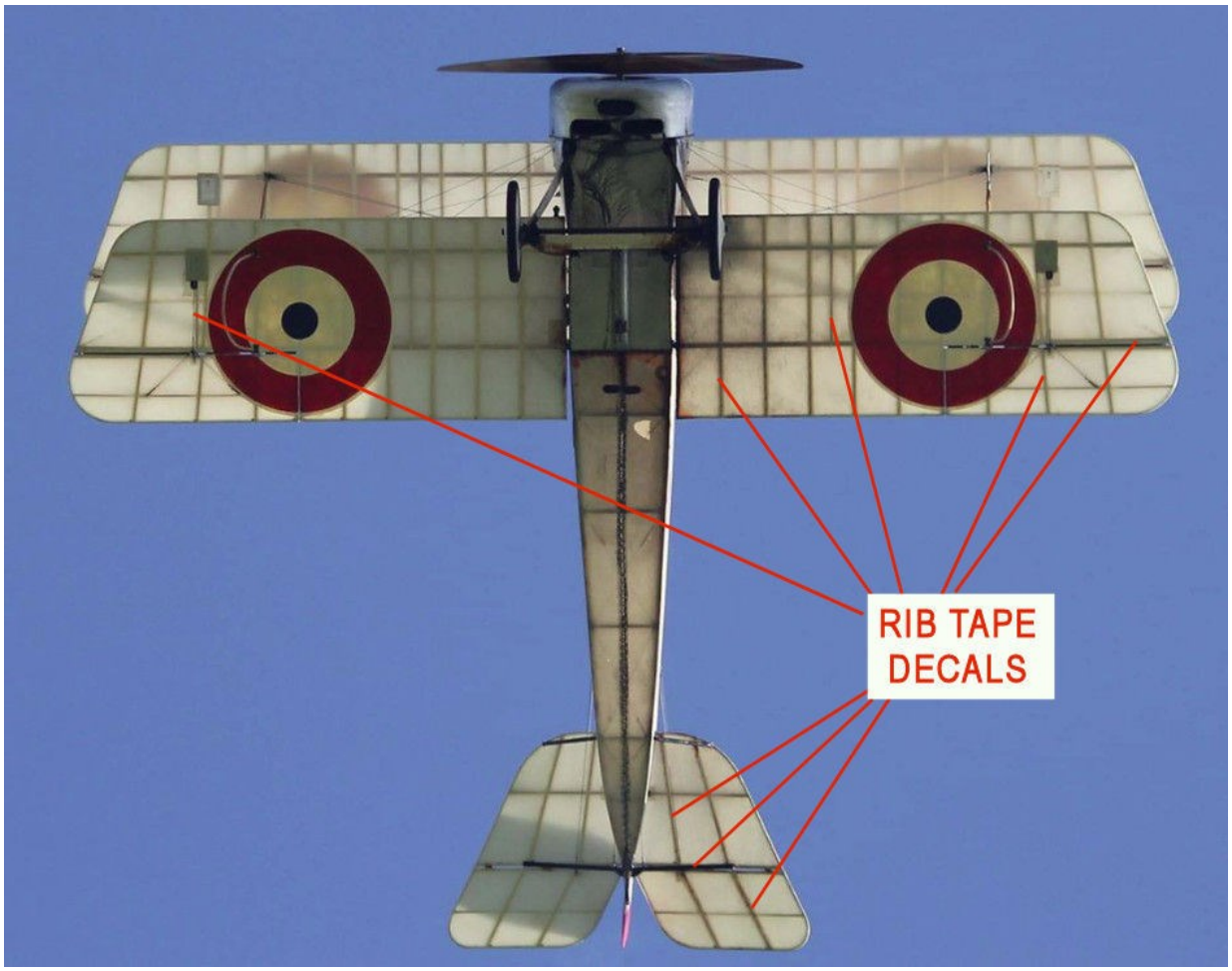


Underside rib tapes:

NOTE: *The rib tapes on the wings, ailerons and tailplane/elevator were of linen, which were sewn and glued over the linen covering of the internal ribs. As this effectively doubled the linen, the colour of the rib tapes would have been a slightly darker shade to that of the surrounding linen covering.*

Using the above photographs as guides, cut 1.5 mm wide strips of the ‘Aviattic’ Off White on Linen (ATT32241) decal, long enough to cover the rib on the underside of the wings, ailerons and tailplane/ elevator.

Apply the decal strips to the various ribs.


RIB TAPE
DECALS


RIB TAPE
DECALS

Detail painting (continued):

Brush paint the four aileron control access panels with ‘Mr. Colour’ Stainless Steel (213) or similar.

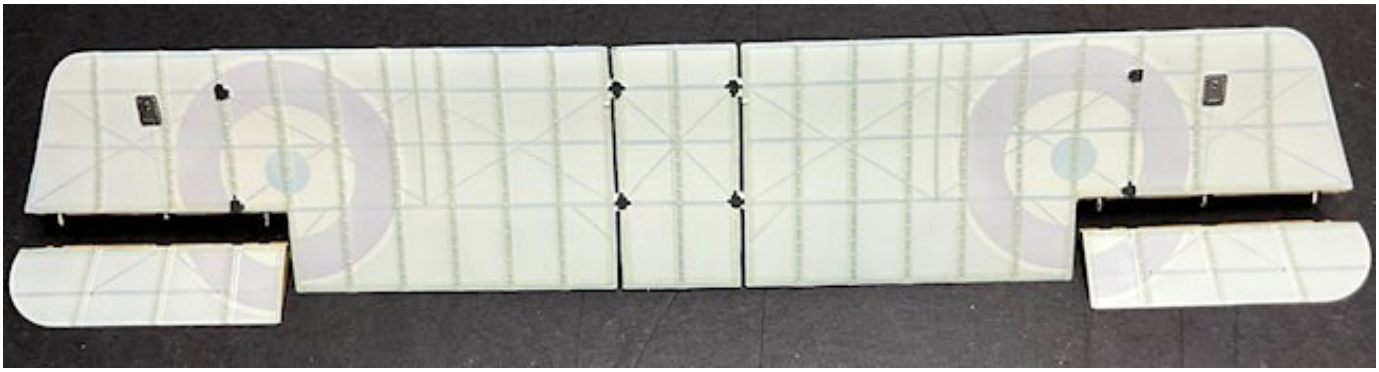
Brush paint the metal fittings with ‘Tamiya’ Rubber Black (XF85) or similar.

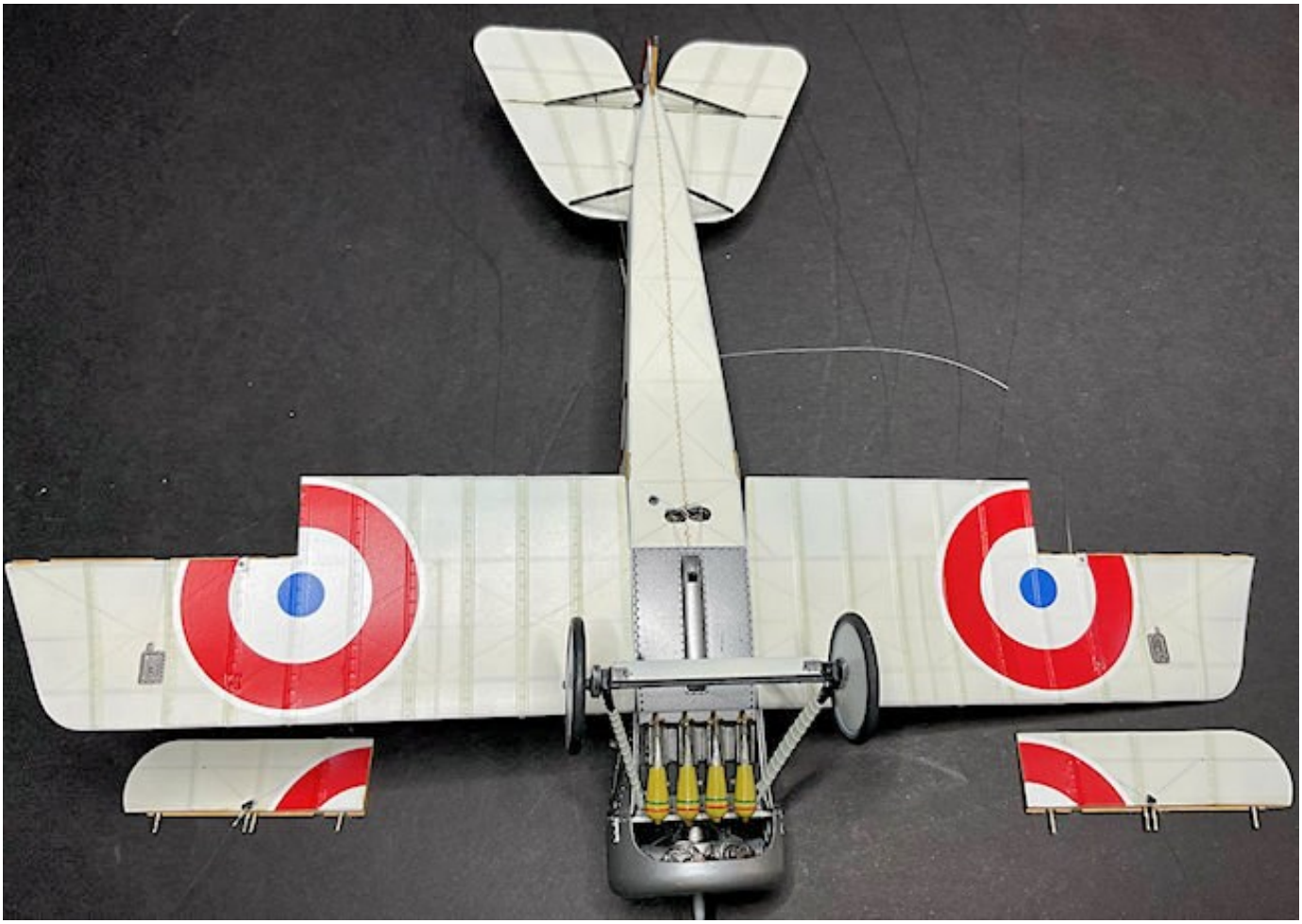
Brush paint ‘Tamiya’ Desert Yellow (XF59) or similar:

Along the trailing face of the aileron bays on the wings.

Along the front face of the four ailerons.

Decals completed - shown later in the build.





Wings and tailplane - top surfaces:

NOTE: *The doped linen covering is semi-transparent. However, from above the internal structure is less visible, due to daylight refection from the linen covering. However, rib tapes are visible covering the wing ribs and spars on both upper and lower wings and the tailplane/elevators.*

Airbrush a coat of ‘MRP’ Clear Doped Linen (MRP-256) over the top surfaces of the:

Upper wing
Lower wings
Ailerons (x 4)
Tailplane/elevator.

NOTE: *I used ‘Xtradecal’ Parallel White Stripes (XPS2) to create the rib tapes.*

To represent the wing spar tapes, cut appropriate lengths of the number 6 stripes.

To represent the wing rib tapes, cut appropriate lengths of the number 6 stripes.

To represent the thinner tapes, cut appropriate lengths of the number 7 stripes.

Apply the decals (as for normal decals) onto the top surfaces of the wing, ailerons and tailplane (refer to the previous photographs).

Final fading:

NOTE: *The following step is intended to 'fade back' the overall appearance of the wings, ailerons and tailplane/elevator to blend the painted surfaces and applied decals. A light 'misting' coat is all that is required.*

Airbrush a light coat of 'MRP' Clear Doped Linen (MRP-256) over the wings, ailerons and tailplane/ elevator underside and top surfaces.

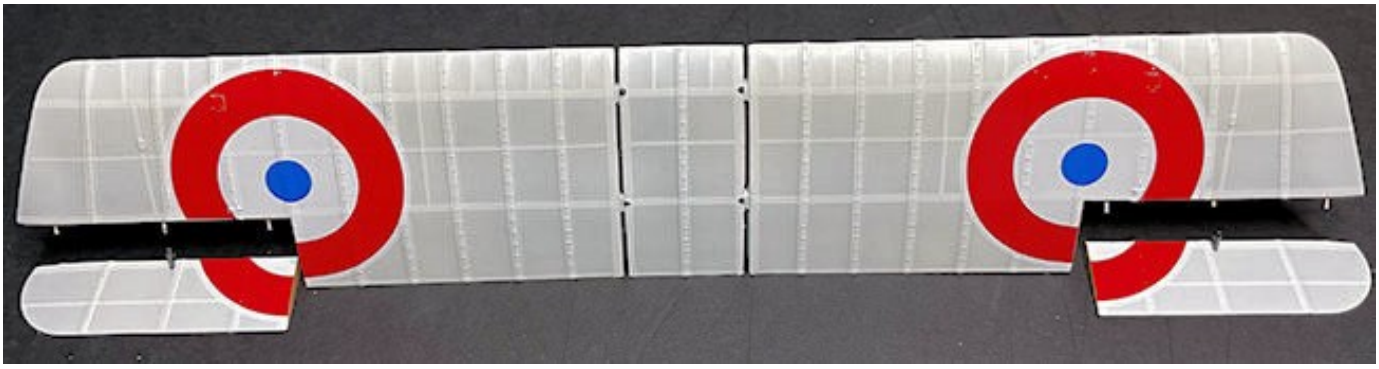
Upper wing top roundels:

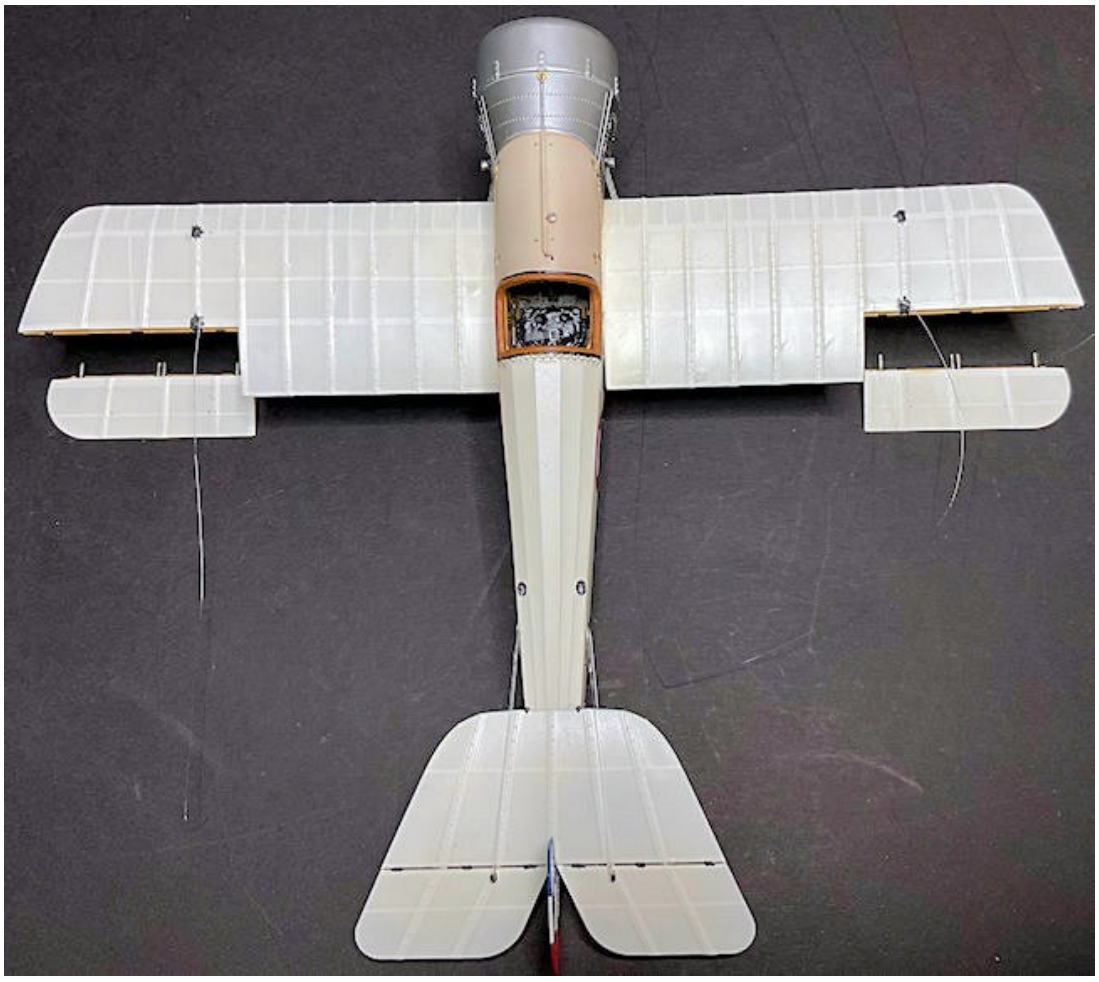
Apply the roundel decals to the top surface of the upper wings and its ailerons.

Detail painting (continued):

Brush paint the four metal fittings on the upper wing centre section with 'Tamiya' Rubber Black (XF85) or similar.

Decals completed - shown later in the build.





Fuselage:

NOTE: *The fuselage internal longerons, edges of the frames and the crossed bracing wires show a shadow through the fuselage, due to the semi-transparent nature of the doped linen covering.*

Airbrush a light coat of 'MRP' Clear Doped Linen (MRP-256) over the fuselage.

Internal structure:

NOTE: *I used 'Xtradecal' Parallel Black Stripes (XPS1) to create the fuselage longerons and frame edges.*

To represent the fuselage top longerons, cut lengths of the number 9 stripes.

To represent the fuselage top and bottom longerons and frame edges, cut lengths of the number 8 stripes.

To represent the angled braces rear of the cockpit, cut two lengths of the number 6 stripes.

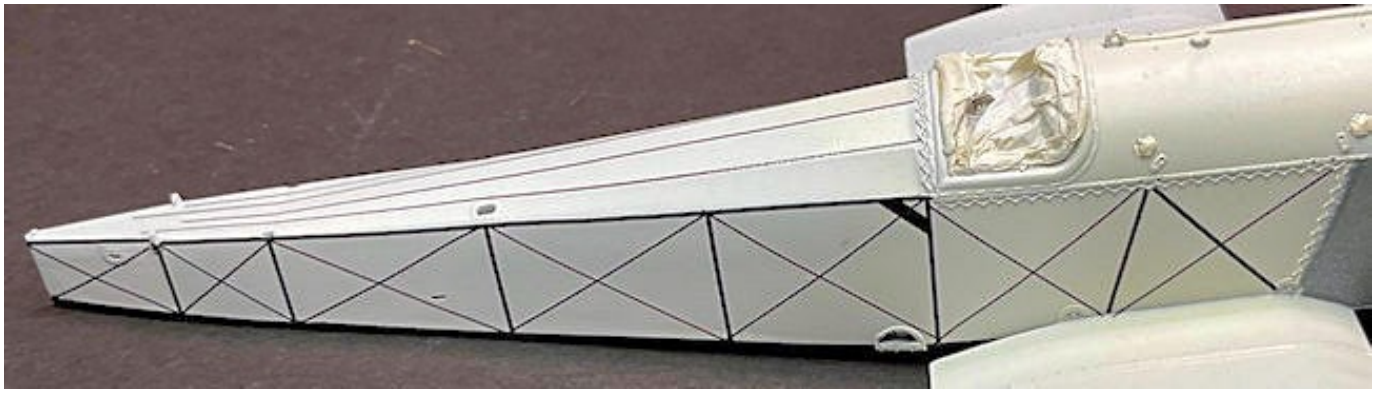
Apply the decals (as for normal decals) onto the fuselage top, sides and underside (refer to the following photographs).

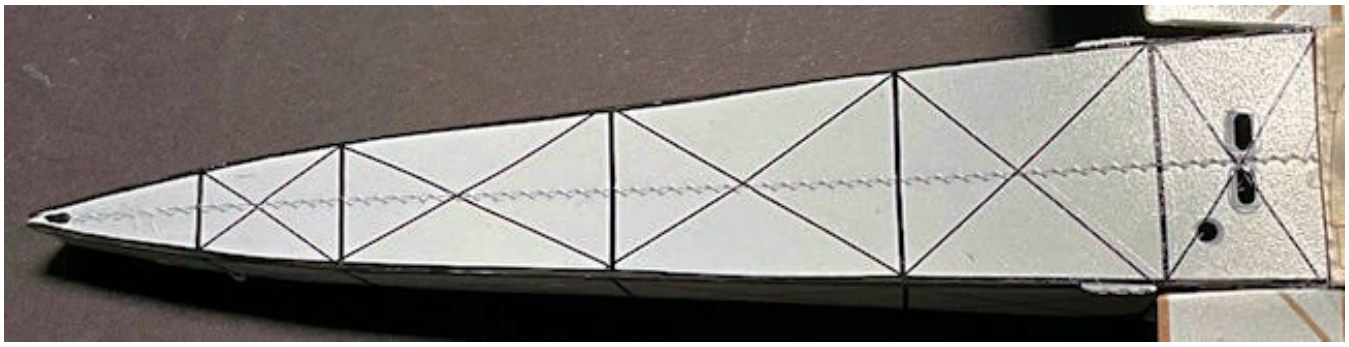
Internal bracing wires:

NOTE: *I used 'Xtradecal' Parallel Black Stripes (XPS1) to create the bracing wires.*

To represent the fuselage bracing wires, cut lengths of the number 9 stripes.

Apply the decals (as for normal decals) crossed onto the fuselage top, sides and underside (refer to the following photographs).





Fading:

NOTE: *The following step is intended to 'fade back' the internal structure and bracing wires into the base colour to give a faded appearance. Several 'misting' coats may be required, checking the effect between coats until the desired effect is achieved.*

Airbrush light coats, as required, of 'MRP' Clear Doped Linen (MRP-256) over the fuselage.

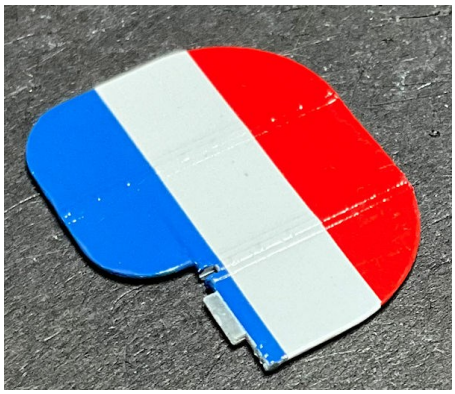
Decals:

Airbrush the two sides of the fuselage with a clear gloss coat, such as 'Alclad' Aqua Gloss 600 or 'Ammo' A-Stand Aqua Gloss Clear (A.Mig-2503).

Apply the roundel decals and 1264 serial number to the fuselage sides.

Rudder:

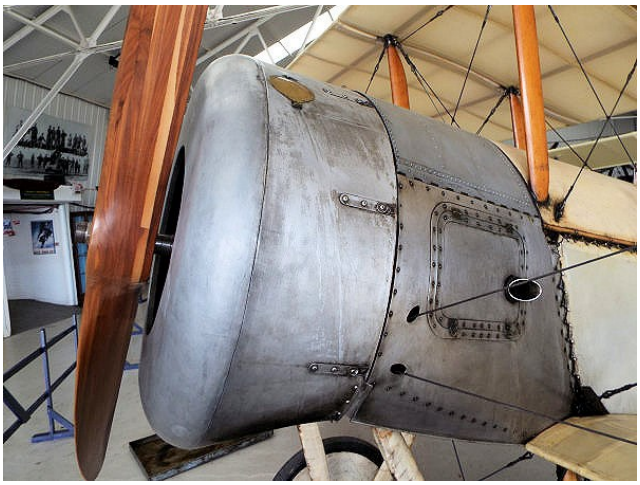
Airbrush the two sides of the primed rudder with a clear gloss coat, such as ’Alclad’ Aqua Gloss 600 or ’Ammo’ A-Stand Aqua Gloss Clear (A.Mig-2503).



Surface finish:

Airbrush a light coat of semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar over the upper wing, lower wings, fuselage, ailerons and tailplane/elevator.

Fuselage forward panels/engine cowl:



Fuselage forward side/underside panels:

NOTE: *During the following step, care is required when masking over any applied decals, to avoid them being damaged when masking is removed.*

Mask off the areas around the fuselage underside and the lower side panels. The exposed rear of the fitted engine needs to be covered.

Airbrush the exposed panels with ‘Alclad’ Steel (ALC112) or similar.

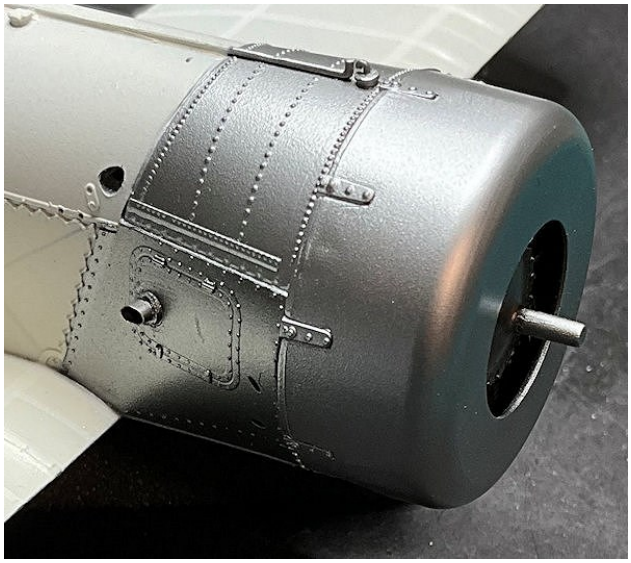
Carefully remove all of the masking.

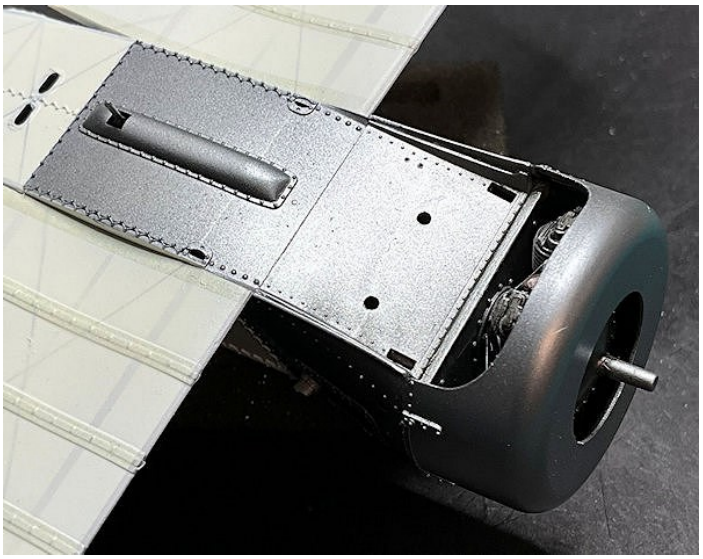
Fuselage forward upper panel/engine cowl:

Mask off the areas around the engine cowl and the fuselage top panel to its rear. The exposed front and rear of the fitted engine need to be covered.

Airbrush the exposed panels with ‘Alclad’ Duraluminium (ALC102) or similar.

Carefully remove all of the masking.





Fuselage forward decking panel:

NOTE: *During the following step, care is required when masking over any applied decals, to avoid them being damaged when masking is removed.*

Mask off the areas around the fuselage top decking panel (between the cockpit and engine cowl).

Airbrush the exposed decking panel with ‘Tamiya’ Desert Yellow (XF59) or similar.

Airbrush painted decking panel with a light coat of ’MRP’ Grünblau (MRP-182) or similar.

Carefully remove all of the masking.

Underside drain pipes:

NOTE: *The under tray under the forward fuselage has two drain pipes.*

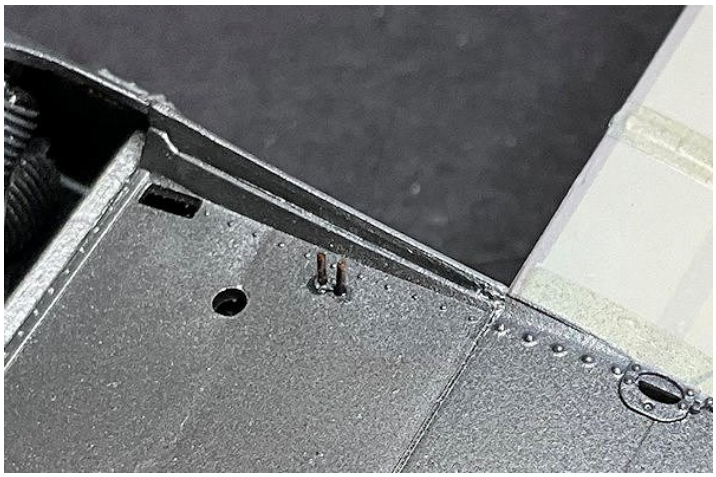
Temporarily fit the kit supplied bomb rack into its locating holes in the fuselage under tray.

Drill two holes of 0.4 mm diameter into the left side of the fuselage undertray, avoiding the bomb rack structure (with bomb temporarily located).

Remove the bomb rack.

Cut two short lengths of 0.3 mm diameter copper wire.

Secure the wires into the pre-drilled holes using thin CA adhesive.



Fuel indicator feed pipe:

NOTE: *The feed pipe to the fuel indicator in the cockpit was located on the rear of the fuselage decking panel. This pipe on the kit supplied part is overscale.*

Cut away the pre-molded pipe on the rear end of the fitted feed pipe for the fuel indicator.

Drill a hole of 0.3 mm diameter into the rear of the feed pipe.

Drill a hole of 0.6 mm diameter into the fuselage decking panel and to the right, rear of the end of the feed pipe.

Cut a short length of 0.2 mm diameter copper wire.

Secure one end of the wire into the pre-drilled hole at the feed pipe, using thin CA adhesive.

Bend the wire into a loop and insert the free end into the pre-drilled hole in the decking panel.

Detail painting (continued):

Prime:

Airbrush all remaining unpainted parts with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

General:

Brush paint or airbrush the following details:

'Tamiya' Dark Yellow (XF60) - Interplane struts (x 4), fuselage cabane struts (x 4), tail skid, underwing hoops (x 2).

'Tamiya' Rubber Black (XF85) - all metal fittings for struts, rigging points, tailplane supports, bottom of exposed control column (elevator), edge of cockpit padding, support rings around carburettor air intake pipes, tailplane support struts (x 4), axle, bomb rack, wheel tyres (x 2), control horns (rudder, elevator x 2 and ailerons (x 4), tail skid and pitot static tube assembly forward, left interplane strut.

'Mr. Colour' Stainless Steel (213) - oil tank filler cap, pilot foot steps, carburettor air intake pipes.

'Mr. Colour' Brass (219) - fuel tank filler.

'AK Interactive' WW1 British Uniform Light (AK3082) - Cockpit padding (base coat), longerons inside pilot foot steps, bottom edging strips of fuselage decking panel, aileron filler strips (wings and ailerons).

'AK Interactive' Brown Leather (AK3031) - Cockpit padding (highlights).

'MRP' Grünblau (MRP-182) - landing gear struts (x 2).

'MRP' Clear Doped Linen (MRP-256) - Axle fairing.

'Tamiya' Blue (XF8) - Top of forward, right interplane strut.

'Tamiya' White (XF2) - Top of rear, right interplane strut.

'Tamiya' Red (XF7) - Top of forward, left interplane strut.

Struts wood effect:

Painting:

NOTE: *The wood effect for the various struts was created using 'Windsor & Newton' Griffin (Alkyd) Raw Sienna paint.*

Brush a covering coat of the 'Windsor & Newton' Griffin Alkyd **Raw Sienna** paint over the interplane and cabane struts. Also the tail skid.

Brush a covering coat of the 'Windsor & Newton' Griffin Alkyd **Yellow Ochre** paint over the underwing hoops.

Leave the oil paint to settle for approximately a minute.

Decant a small amount of White Spirits into a suitable dish.

Dip a soft brush into the White Spirit then wipe the brush on a sheet of kitchen roll (which should not deposit any fibres in the oil paint) to remove most of the White Spirit.

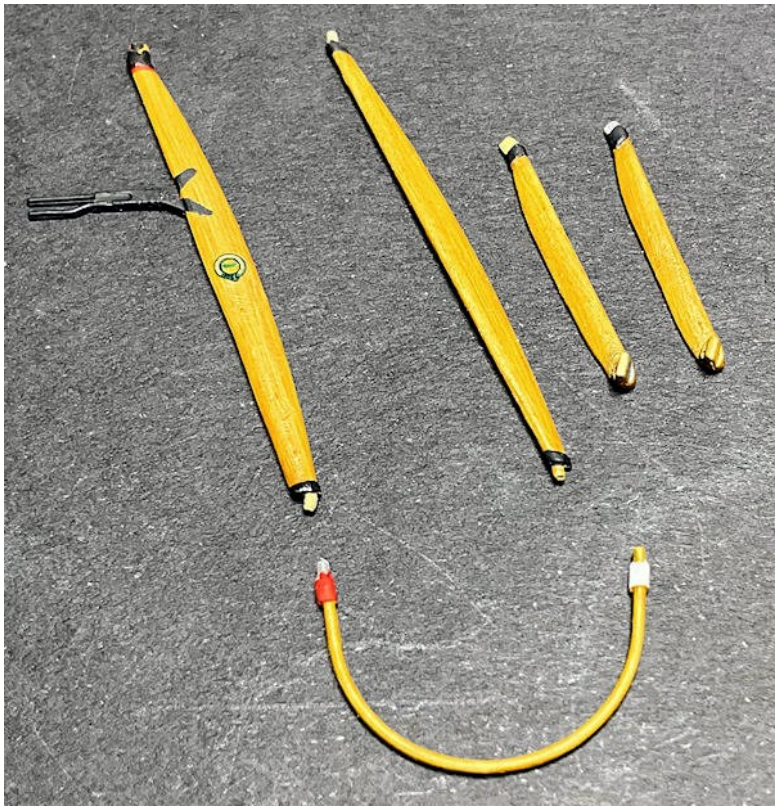
Brush the oil paint in the required direction of the wood grain and keep wiping the brush on the sheet to remove residual oil paint.

Repeat dipping and wiping the brush in the White Spirits and brushing the oil paint until the desired density and effect is achieved.

Leave the oil paint to fully dry. It should be touch dry in an hour or so and fully dry within 12 hours.

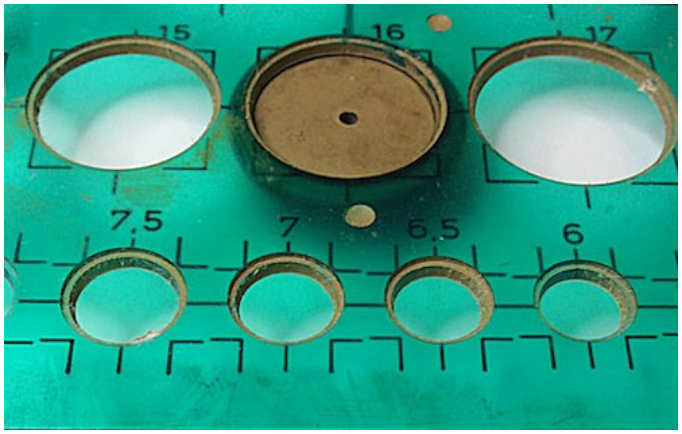
Decals:

Apply the two kit supplied ‘Bristol’ logo decals onto the outer surface of the forward interplane struts.



Wheels:

NOTE: *To airbrush the rear cover on the two wheels, without over spraying the surrounding tyres, I use a circle drawing tool (Linex 1217 T).*



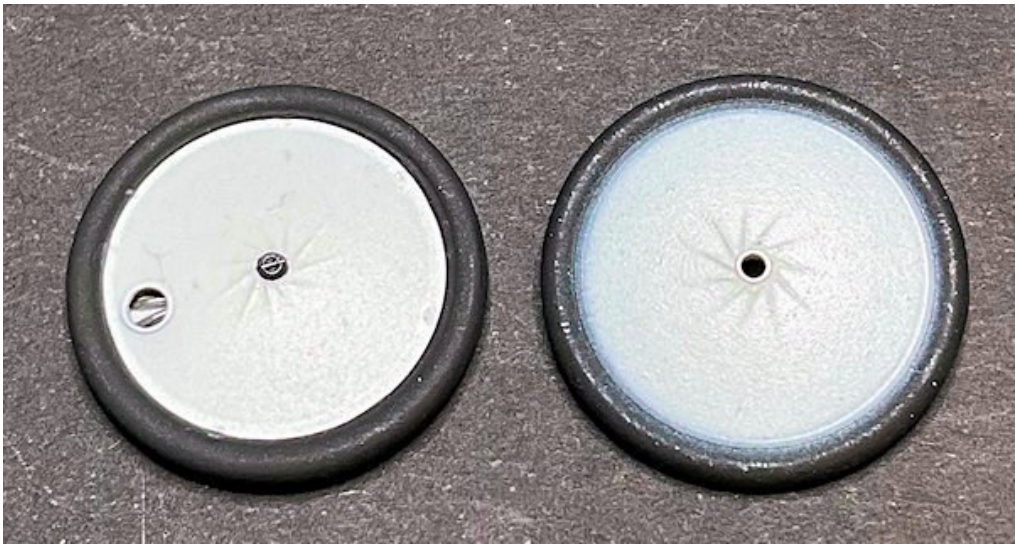
Select the best sized hole in the drawing tool that matches the covers (not including tyres) of the wheels.

Position the wheel under the hole to mask the painted tyres.

Airbrush ‘MRP’ Clear Doped Linen (MRP-256) over the wheel covers and the separate outer covers (x 2).

Cement the outer covers into the wheels.

Brush paint the wheel nut on the outer covers ‘Tamiya’ Rubber Black (XF85) or similar.



Bombs:

Airbrush the body of the bombs with ‘Tamiya’ Yellow Green (XF4) with approximately 10% of Desert Yellow (XF59).

Brush paint the tail and fins of each bomb with ‘Mr. Colour’ Stainless Steel (213).

Brush paint the tail spinner and detonator nose of each bomb with ‘Mr. Colour’ Brass (219).

Airbrush each bomb with a gloss clear coat, such as ’Alclad’ Aqua Gloss 600 or ’Ammo’ A-Stand Aqua Gloss Clear (A.Mig-2503).

Apply the kit supplied red and green stripes to the bombs.

Airbrush each bomb with a ‘Tamiya’ Semi-Mat clear acrylic (XF35) or similar.

Landing gear suspension cord:

To represent the ‘bungee’ type suspension cords I used ‘SpiderWire’ Stealth Smooth Braid (0.08 mm), which was secured with thin CA adhesive around the suspension housings at each end of the landing gear axle.

Propeller:

NOTE: *The kit supplied propeller is replaced by a ‘ProperPlane’ hand made wood laminated Bristol propeller.*

Preparation:

Apply the kit supplied single ‘Bristol’ logo decal onto the front face of one propeller blade.

Saw the two ‘ProperPlane’ resin hub plates from their casting blocks and flat sand their rear faces to the thickness of the back plates.

NOTE: *The shaft locating hole in the propeller is larger than the engine propeller shaft. Do either of the following steps:*

Scrape or sand the engine propeller shaft until the propeller rear hub plate fits onto the shaft

OR

File out the hole in the propeller rear hub plate until it fits onto the shaft.

Painting:

Brush paint the two propeller hub plates with ’Mr. Colour’ Stainless Steel (213) or similar.

Using thin CA adhesive, secure the front hub plate into its recess in the front of the propeller.

Using thin CA adhesive, secure the rear hub plate centrally onto the rear of the propeller.

Airbrush the propeller with a semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar.

Brush ’AK Interactive’ Kerosene wash (AL3029) over the two hub plates on the propeller.

Using thin CA adhesive, secure the propeller rear hub plate centrally onto the rear of the propeller.

Pass the two tube assembly through the hole in the propeller rear hub plate and against the propeller front hub plate.

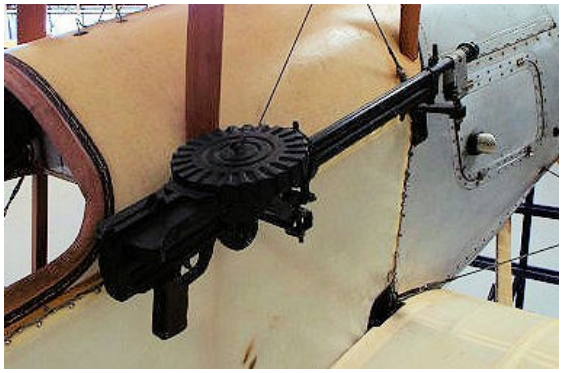
Using thin CA adhesive, secure the tube assembly into propeller and rear hub plate.

Lewis machine gun:

NOTE: *Originally the mock Lewis machine gun fitted to Scout 1264 has the hand grip located on the rear end of the weapons breach block. As can be seen in the following photograph taken later of Scout 1264, the hand grip has since been removed.*

Original

Present day



Preparation:

Cut away the grip handle from the kit supplied Lewis machine gun and file or sand smooth the cut surface.

Cement the ammunition drum onto the weapon.

Painting:

Prime the weapon with ‘Tamiya’ Gloss Black (X1) or similar.

Airbrush the weapon with ’Alclad’ Gunmetal (ALC120) or similar.

Brush the outer face of the forward gun mounting with ‘Mr. Colour’ Super Iron 2 (203) or similar.

NOTE: *Dry brush by using a domed and soft brush, which has a very light dusting of paint. Dry off paint on the brush on an absorbent paper before dry brushing the part.*

Brush paint the grab strap on the ammunition drum with ‘AK Interactive’ Brown Leather (AK3031) or similar.

Dry brush the weapon with ‘Mr. Colour’ Super Iron 2 (203) or similar.

Surface finish:

Airbrush a sealing coat of ‘Alclad’ Light Sheen (ALC311) or similar over the painted and weapon.

Pre-rigging:

NOTE: *I have not detailed the basic model build in this build log as that is fully detailed in my previous ‘Bristol Scout ’C’ build, the build log of which can be downloaded from the ‘Logs’ page on my web site at:*

https://mikesww1aircraftmodels.com

Detailed in this build log are the primary changes or modifications I made to represent the aircraft as it is today.

Pre-rig the model parts as described in the above referenced build log. For this model the materials used were:

‘Steelon’ or ‘Stroft GTM’ 0.08 diameter mono-filament

‘Albion Alloy’s’ 0.4 mm diameter Brass tube

‘Gaspatch’ 1/48th scale metal turnbuckles (Type C, One Ended and Anchor Points).

Assembly (continued):

NOTE: *Pre-rig the model parts as described in the above referenced build log.*

Fit the fuselage cabane struts into their correct location recesses.

Use masking tape to hold rigging lines clear of the lower wing strut locations recesses.

Fit the upper wing onto the four fuselage cabane struts.

NOTE: *If necessary the upper and lower wings can be held together with elastic bands or similar to keep the interplane struts fully located until their joints in the wings have fully set.*

Fit the four interplane struts into their respective location recesses in the underside of the upper wing and top surface of the lower wing.

Remove the masking tapes holding the rigging lines.

If used, remove the elastic bands or similar from around the wings.

NOTE: *From this point onwards, hold the model by the fuselage, never the upper or lower wings.*

Final rigging:

Final rig the model parts, including fitting the four ailerons, as described in the above referenced build log. For this model the materials used were:

‘Steelon’ or ‘Stroft GTM’ 0.08 diameter mono-filament

‘Gaspatch’ 1/48th scale metal turnbuckles (Type C, One Ended and Anchor Points)

‘Albion Alloy’s’ 0.4 mm diameter Brass tube.

Pitot static pipes:

NOTE: *The two pitot static pipes should be fitted down the forward, left interplane strut and into the pre-drilled holes in the lower wing (refer to previous description).*

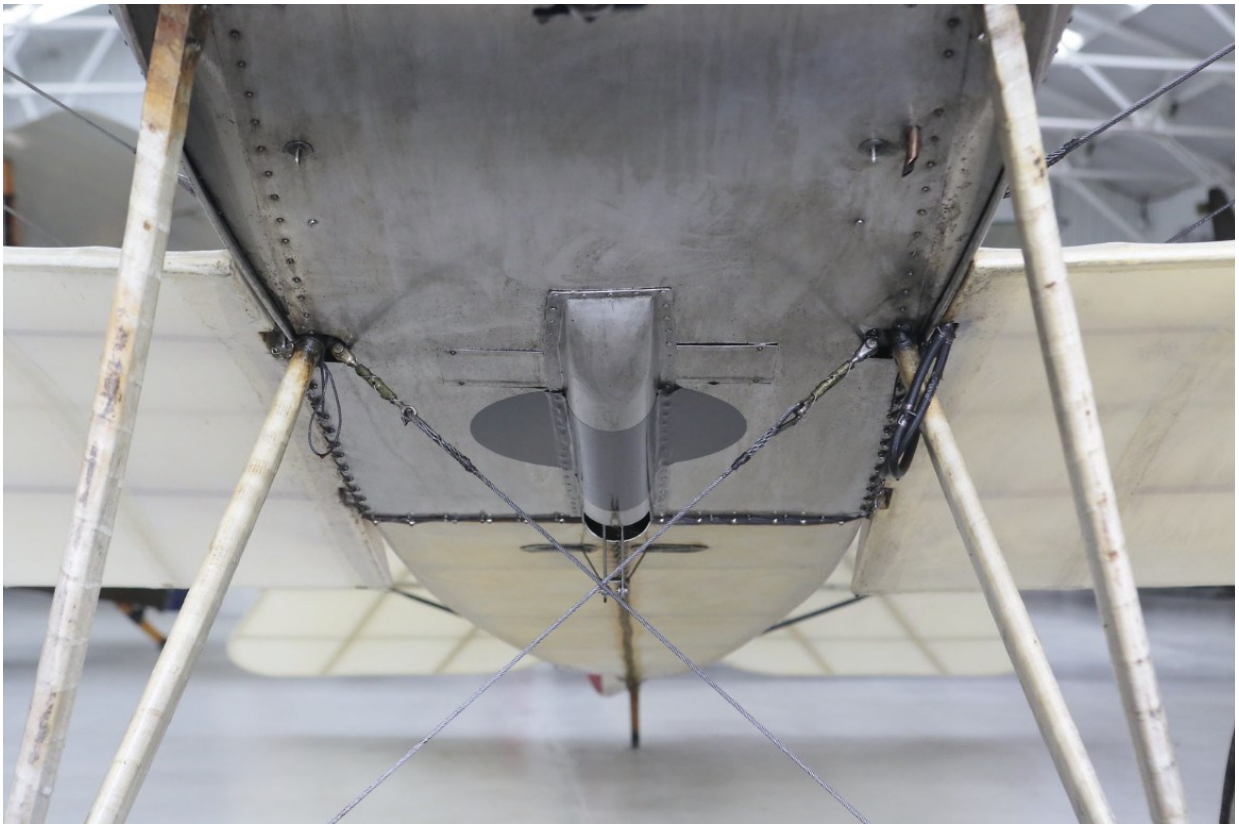
I cut two lengths of ‘PlusModel’ 0.4 mm diameter lead wire. One end of each wire was attached to the Pitot Static pipes on the left, forward interplane strut, using thin CA adhesive. The wires were then formed to route down the inboard face of the strut to the pre-drilled holes in the lower wing. Lengths of ‘EZ’ stretch line (Black Heavy) were wrapped around the strut and wires to form attachment straps and were secured in place using thin CA adhesive. Finally the lead wires were carefully brush painted with ‘Tamiya’ Rubber Black (XF85).

Rigging surface finish:

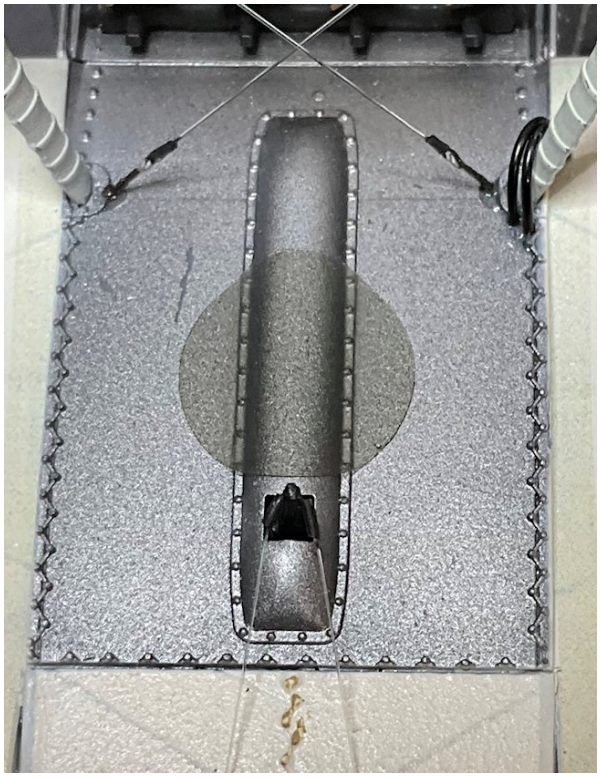
Airbrush a light coat of semi-matte clear coat, such as ‘Alclad’ Light Sheen (ALC311) or similar over all of the rigging lines. This will reduce the gloss sheen on the lines and make them more visible.

Underside circular panel:

NOTE: *The underside of the fuselage appears to have a dark, circular area, located over the fairing and forward from the elevator control levers on the bottom of the protruding pilots control column.*



To create the circular area, I cut a disc of the appropriate size from a sheet of ‘Artool’ Ultra Mask. When applied over the fairing is creates a slightly darker colour than the surrounding Duraluminium surface.



Lewis machine gun:

Using thin CA adhesive, secure the prepared Lewis machine gun into its four locating holes in the ride side of the fuselage.

Lower wing hoops:

NOTE: *The lower wing hoops, when fitted, should angle outboard slightly.*

Cement the two hoops into their locating holes on the underside of the lower wing.

Propeller:

Apply CA adhesive onto the engine propeller shaft and locate the prepared propeller onto the shaft and in the desired position.

PART 2
FIGURE

PART 2 - FIGURE AND BEAR

NOTE: *The figure used for this model is the 'Copper State Models' Standing RNAS pilot (F32-053) and was painted based on the following photographs of 'Bunnie' Bremner.*

FIGURE:

Preparation:

Cut away the casting blocks from the figure legs.

Sand and the bottom of the feet on the figure and any other residual casting block material.

Check the figure for any resin flash or seams. If found, remove by either sanding or scraping.

Check that the figure right hand/hat locates fully into its location in the right arm and if necessary, adjust the parts to achieve this.

Drill a hole of 0.8mm diameter up into a leg of the figure, making sure the hole is drilled centrally up into the leg (to avoid the drill breaking through the side of the leg). This will be used to hold the figure for painting and to mount the final figure in the display base.

Cut a length of 0.8mm diameter Brass rod, such as that from 'Albion Alloy's' or similar.

Using thin CA adhesive, secure the rod into the pre-drilled holes in the leg. This will be used to both hold the figure whilst painting and to mount the figure into the base of the display case.

Painting:

Airbrush the figure with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Brush paint the figure as follows:

Jacket/Trousers - 'Tamiya' Flat Blue (XF8) mixed with NATO Black (XF69). Shadows were added using the same mixed paint but adding more NATO Black (XF69).

Jacket buttons/Rank stripes - 'Mr. Colour' Brass (219).

Shirt/Collar - 'AK Interactive' Faded White (AK3029).

Tie - 'Tamiya' Rubber Black (XF85).

Shoes - Tamiya Semi-Gloss Black (X18).

Cap - Top ('AK Interactive' Faded White (AK3029), Peak (Tamiya Semi-Gloss Black (X18), Band ('Tamiya' Rubber Black (XF85), Badge ('Mr. Colour' Brass (219), 'Tamiya' Red (XF7) - Crown of cap badge.

Puttees - 'Tamiya' Flat Blue (XF8) mixed with NATO Black (XF69).

Hair -'AK Interactive' Black Uniform Base (AK3002.

Flesh

NOTE: *The following paints for flesh are water based and can be thinned as required using water, which is also used to clean the brushes. It's easier to use a 'wet palette' when applying these paints as this keeps the paint from drying and allows mixing of paints as required. A basic wet palette can be a water proof plastic lid with dampened kitchen roll paper laid inside. The paints are then dripped onto the damp paper and applied from there.*

The paints used for the flesh of the figures are from the 'Citadel' colour range:

Base coat - 'Bugmans Glow'.

Shading - 'Reikland Flesh Shade'.

Flesh tone - 'Cadian Flesh Tone'.

Flesh highlights - 'Kislev Flesh'.

Brush 'Bugmans Glow' over the exposed head and hands of the figure and allow to dry.

Brush thinned 'Reikland Flesh Shade' over the painted head and hands of the figure and allow to dry.

Brush thinned 'Cadian Flesh Tone' over the painted head and hands of the figure and allow to dry. Do not apply the paint such that it completely covers the previous coat, as subtle shadows are necessary around such as the ears, eyes, nose and chin etc.

Brush thinned 'Kislev Flesh' over the painted head and hands of the figure and allow to dry. This should very lightly and is intended to highlight areas such as the eye brows, ears, bridge of the nose and jaw line etc.

Using a sharp point, apply 'Tamiya' Rubber Black (XF85) or similar to create the eye pupils.

Assembly:

Using thin CA adhesive, secure the right hand/hat into its location in the right arm.

Weathering:

To create crease shadows, brush thinned (White Spirit) 'AK Interactive' Kerosene (AK2039) into the creases of the jacket, trousers and puttees.

Sponge lightly 'Tamiya' Weather Master Set A (Mud) as desired, to represent dirt/dust on the shoes.

Finish:

Airbrush a light coat of matte (flat) clear coat, such as 'Alclad' Flat (ALC314) or similar, over the figure.

Teddy bear (optional):

NOTE: *The Teddy Bear was from spares of a used 'Wingnut Wings' kit.*

Painting:

Airbrush the figure with a grey primer, such as 'AK Interactive' Grey (AK758) or similar.

Brush paint the figure, as desired, using a combination of 'Citadel' colour range:

'Bugmans Glow' - 'Reikland Flesh Shade' - 'Cadian Flesh Tone' - 'Kislev Flesh'.

Using CA adhesive, secure the Teddy Bear onto the top of the cockpit decking panel, at the two rear and crossed cabane strut bracing wires.

PART 3
DISPLAY CASE

PART 3 - DISPLAY CASE

The display case is made from two sheets of 3mm thick Piano Black Acrylic sheet cemented together with a transparent top fabricated from 3mm thick Clear Acrylic sheet. This was custom made for me by Paul Moss at 'Inperspextive' (Ebay). The name plaque was also made by an on-line retailer 'The Engraving Shop'.

The grass mat was cut to shape from a sheet of 'Model Scene' Cut Meadow Late Summer (F003).

The cut mat was then positioned on the base and the model and figure test placed to achieve the best effect and to make sure the transparent cover of the case would be able to be located without touching the model. The model and figure were then removed with the grass mat left in position on the display base. The edges of the grass mat were then carefully lifted and a soft marker pen was used to mark the outline of the grass mat, but approximately 5mm inside the mat edge. The grass mat was then removed and the area of the display base inside the marks was scuffed using a coarse grit sand paper, in order to give a key for the adhesive.

NOTE: *When applying the adhesive, make sure it is not applied too thickly and close to the edges of the finally positioned grass mat. Otherwise the adhesive may be squeezed out from under the grass mat once weight is applied to hold down the mat during setting of the adhesive.*

The underside of the grass mat was lightly sprayed with water to dampen its surface. A coat of PVA adhesive (white glue) was then applied to the scuffed area on the display base and to the back of the grass mat. The grass mat was then laid onto the PVA adhesive and positioned correctly. Light pressure was applied to ensure the mat was in contact with the adhesive.

Finally an acrylic plaque stand was positioned to the left, front corner of the display base (just in from the edges of the shoulder for locating the transparent acrylic cover. The area on the underside of the stand and its contact area on the display base were scuffed using a coarse grit sand paper, in order to give a key for the adhesive. A thin coat of 'Araldite' two part epoxy adhesive was then applied to the scuffed area of the stand and then the stand was carefully position onto the display base and pressed down to make full contact.
Once the stand adhesive was fully set, the rear face of the Brass plaque was scuffed and secured to the stand with the same adhesive.

The model and figure were then positioned on the base in their final positions and the support pin for the pilot figure marked into the grass mat. A hole of 1.0mm diameter was then drilled through the grass mat and into, but not through, the base. The hole was cleared of residual acrylic to ensure the pin in the figure would fully locate. The figure was then test fitted and where necessary, the support pin for the figure was snipped to the required length to fully locate into the display base.

NOTE: *The aircraft model is not secured to the display base as this can cause shock damage to the model if the display is transported to shows etc. For that the aircraft model would be packed separately for transporting.*

Thin CA adhesive or PVA adhesive was then applied to the support pin of the pilot figure, which was then located, in the desired position, into the pre-drilled location hole. The aircraft itself, being light in weight, will tend to sit on top of the grass on the mat, rather than seat fully down, as would a real aircraft. Therefore the location of the aircraft wheels and tail skid were marked onto the grass mat and those areas scrapped through the mat to create slight and unobstructed troughs, into which the aircraft could be located.

COMPLETED MODEL PHOTOGRAPHS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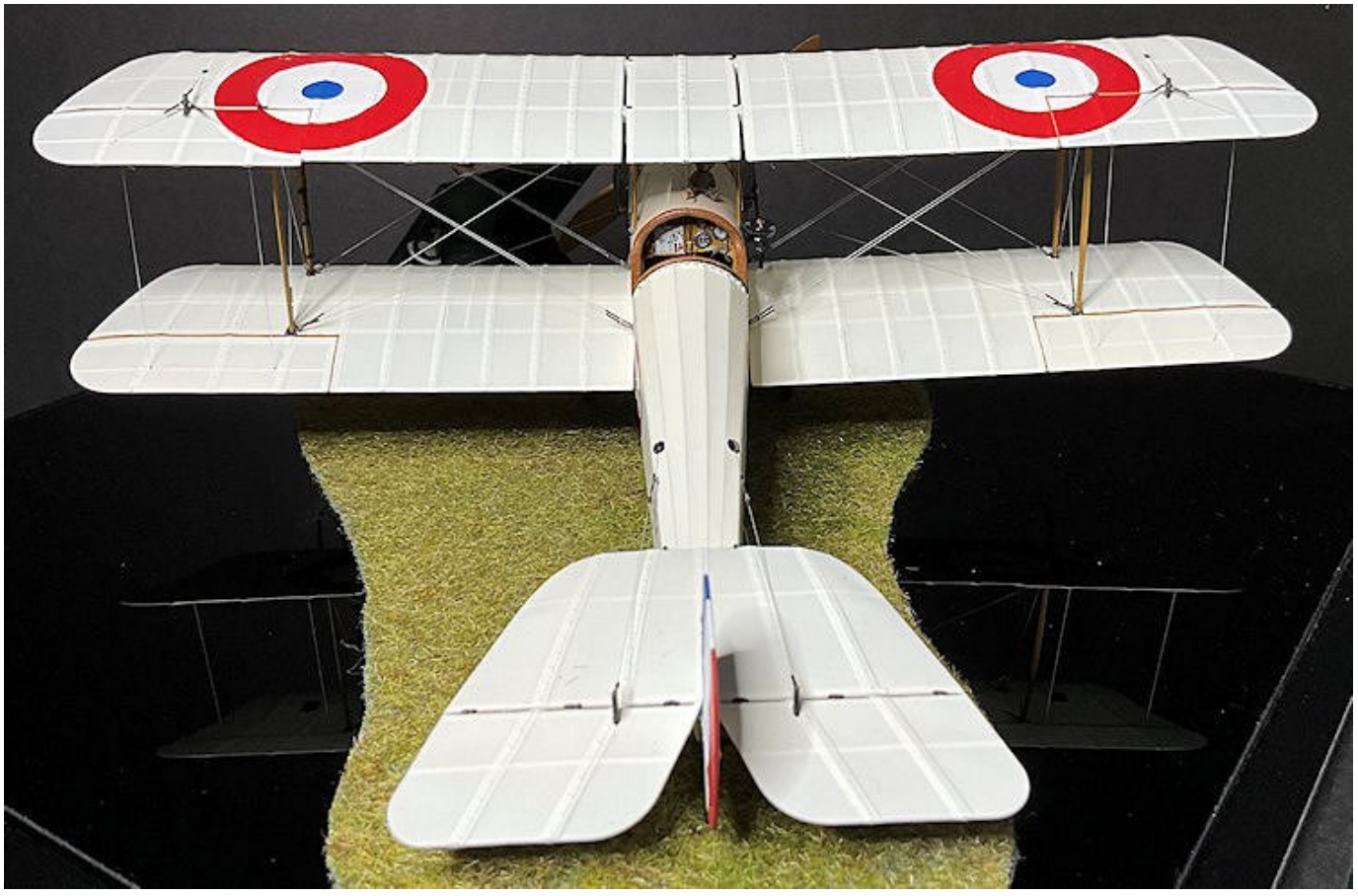

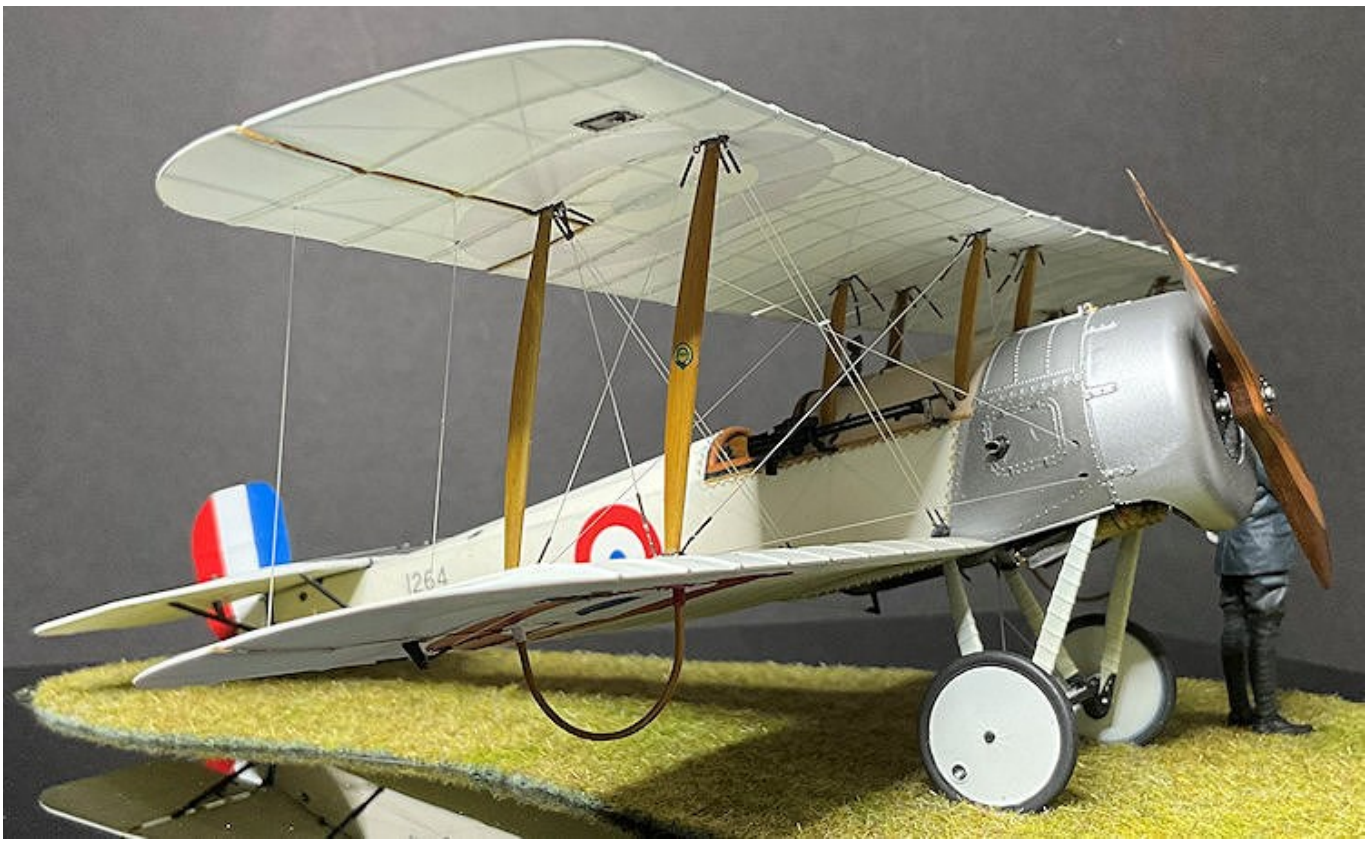
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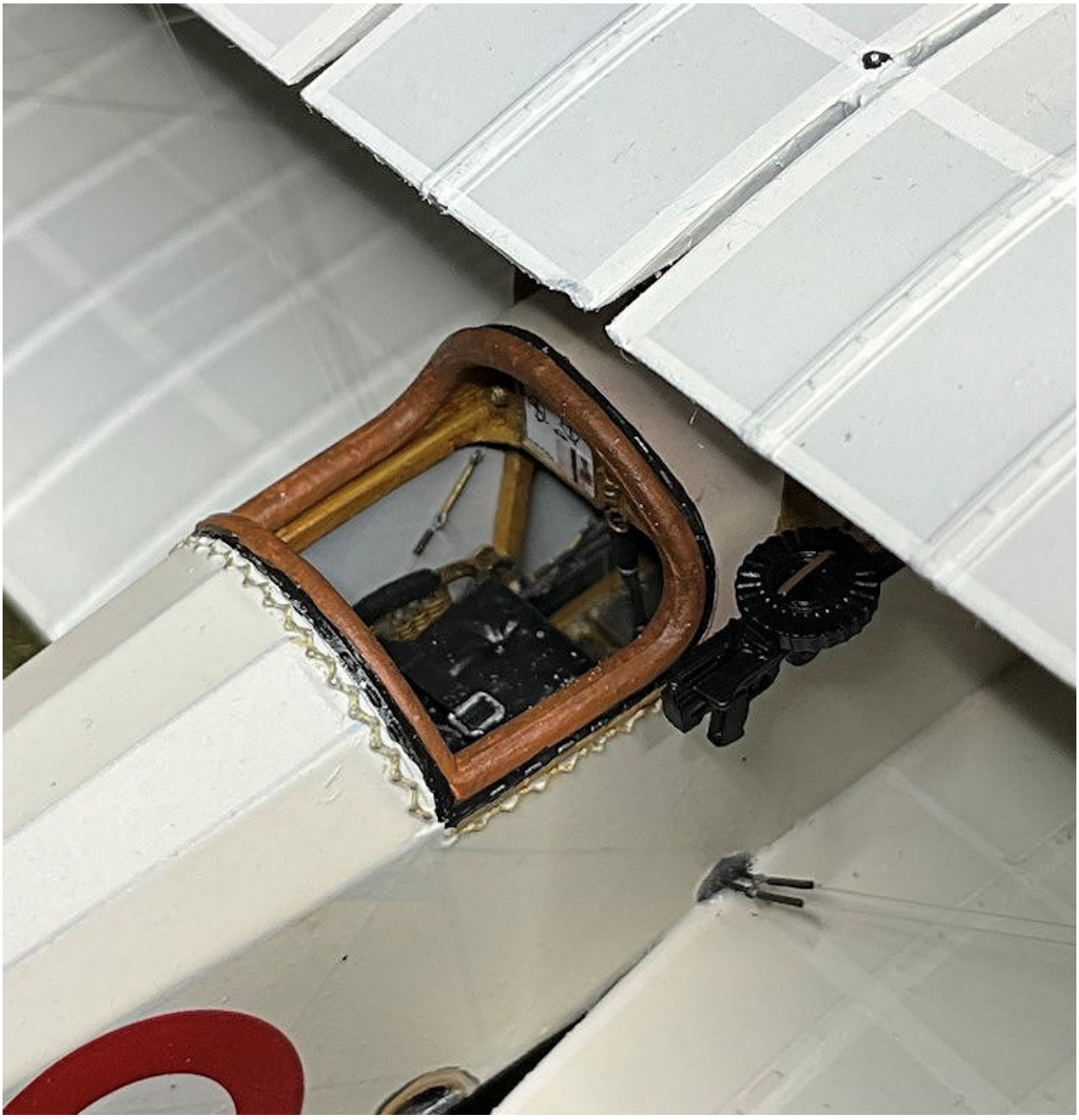

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