

TONY RAY'S BLERIOT X1

Mike Watters builds this charming micro scale kit available from Steve Webb Models

Over the past few years we have been met with a predominance of ARTF foam models within our small modelling world. The presence of a new range entering the model kit market is particularly nice to see, especially when they're aimed at those who of us who like to build balsawood kits.

Tony Ray, a college student with a keen passion for micro balsa scale models, designed each model which can be built either as a static or as a flying RC or free flight model. Although mainly designed for

electric propulsion, there is no reason why they could not be adapted for rubber or CO2 powered.

Originally Tony Ray kits were distributed by an electronics retailer 'Banggood'. However, poor kit packaging (i.e. parts only packed in a plastic bag) resulted in many a kit broken during shipping. To help these matters, Steve Webb, of Steve Webb Model (SWM) shop located in Frodsham Cheshire teamed up with Tony Ray to offer the kits in a sturdy cardboard box.

Bleriot building instructions have been compiled in English by the SWM team

and are available for download from the SWM website. Alternatively, an extra £5 will get you a printed set at the time of ordering. Given this extra work done by SWM, those who choose who choose to buy a Tony Ray kit elsewhere may well be disappointed...

Box Contents

Opening the box reveals CNC balsa and plywood parts, CAD drawn plans, carbon rods, rubber wheels, lightweight tissue paper. A very nice brushed coreless geared motor with 5.5" plastic propeller (Set A) is

available as an add-on from SWM.

The quality of the balsawood and laser cutting is exceptionally good. Even the strip wood is laser cut, which is a neat idea. The balsa/plywood parts were easy to remove by cutting the nibs with a sharp scalpel blade. Each part popped out with a cleanly cut edge. None of the parts have any markings; with the aid of the step by step instructions, they are easily identifiable.

One thing that struck me as unusual was there is only CAD drawings for the wing, tail and rudder. On first thoughts you would think the fuselage drawing is missing. However it really isn't require. With the aid of the very detailed instruction booklet, the superbly accurate CNC cut parts are a snug fit, and can be assembled dry, prior to applying any glue. This is an added bonus, as it prevents any parts assembled in the wrong place or wrong way around.

Building

The fuselage is constructed in two parts, i.e. a front interlocking sheet box with a 1/16" stringer rear section. Care must be taken when building the rear section,

as the structure is quite fragile, therefore no over sanding the strip wood. When completed, the two fuselage sections are glued together, packing the rear section of the fuselage to ensure everything is square.

Short plywood spars protrude from the front fuselage box, which later sets the wings to the required dihedral. It's clear, even at the early stages of the build, a lot of thought has gone into the design of this

model.

Rudder and tail is quite straight forward. Flat sided interlocking parts with associated stringers build into a strong, light weight structure, which is a must for a model such as the Bleriot with such a short nose. The all moving control surface hinges are made up from neatly cut ply eyelets, hinged with supplied 1mm carbon rods, enable an almost friction free hinge. I found it best to add the hinge eyelets after



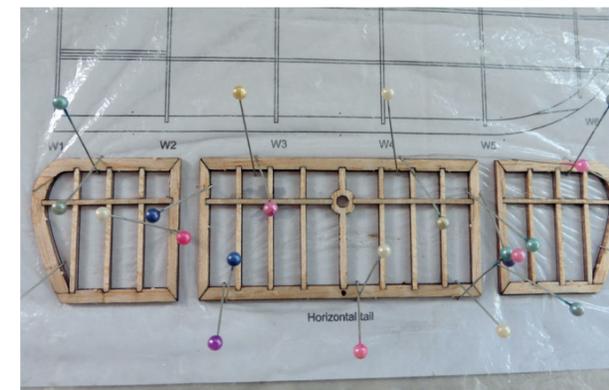
The Steve Webb Models UK edition of the Tony Ray's Bleriot is packed in a sturdy box. The kit is well thought out and designed, with accurate laser cutting. Kit parts shown here along with optional RC board and prop/motor.



The front and back basic fuselage parts slot together accurately, but when joining the sections together it is wise to use a straight reference line on your building board.



A straightforward and satisfying build. The laser cut lightening holes in the ribs would be almost impossible any other way.

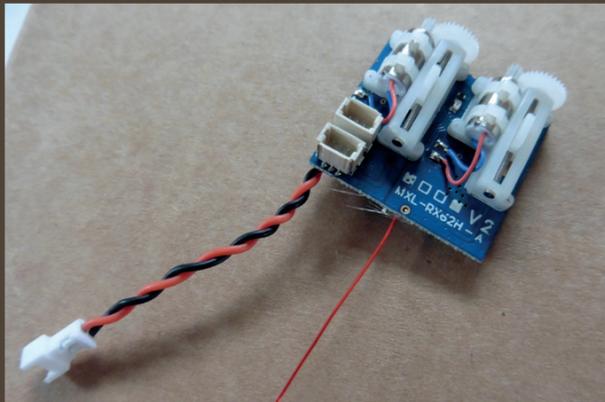


The tailplane has scale elevator tips.

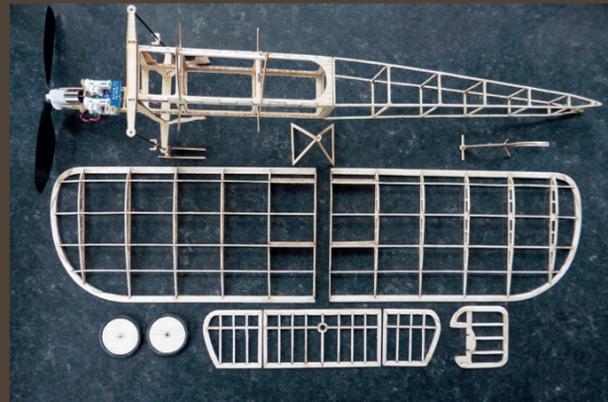


The sprung undercarriage is the fiddliest part of the build but worth it.





The optional RXH62-A micro RC board includes 2 linear servos, Rx and ESC. See the SWM online site www.servoshop.co.uk for details on the different versions.



Components ready for covering and final assembly.

the covering was completed.

Wing assembly is easy. The wing uses a simple Clark Y wing section with the addition of 'scale like' lightening holes in each rib. A carbon rod spar with a number of balsa spars top and bottom produce a relatively strong light-weight wing.

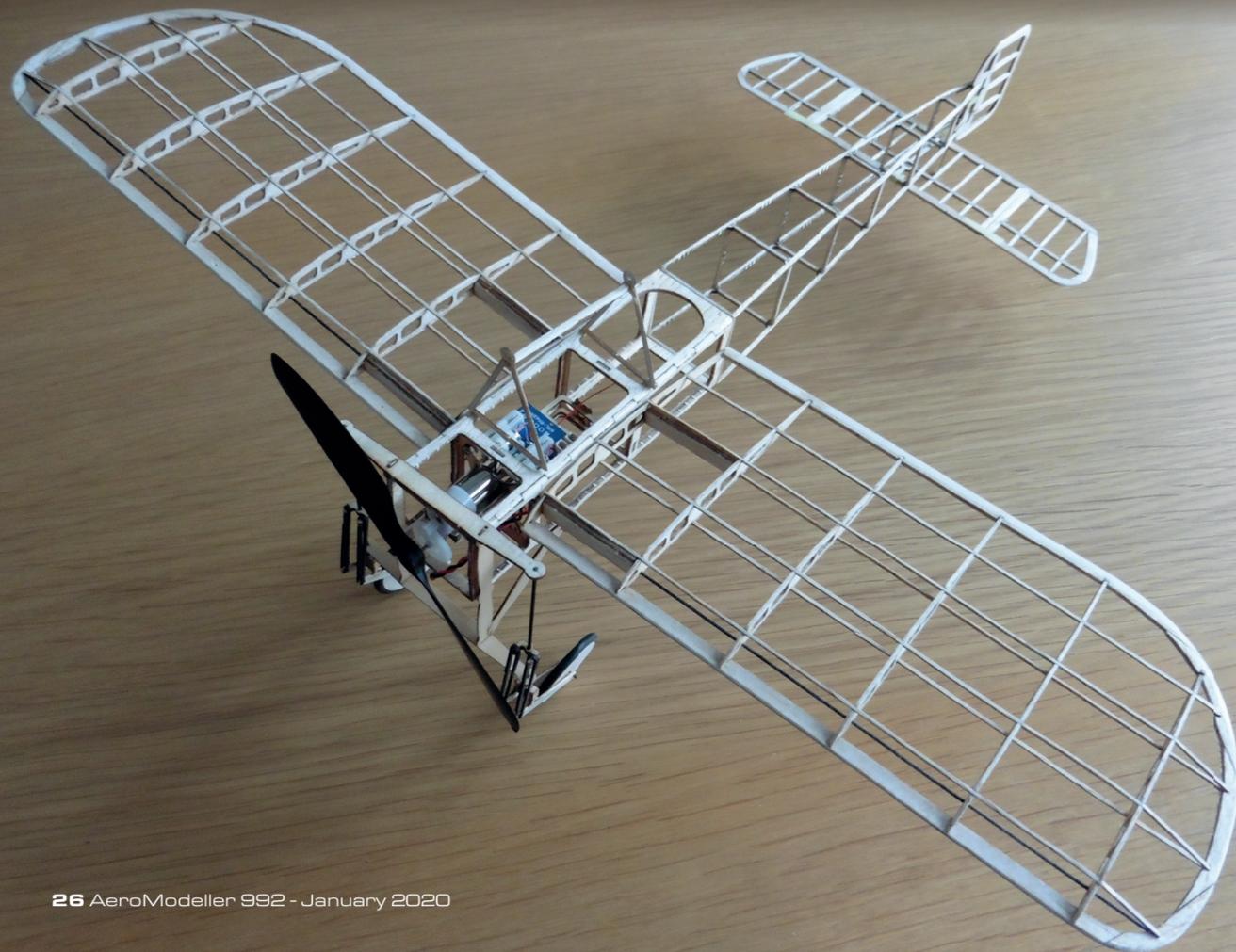
The wings attach to the fuselage via

small balsa boxes built into the wing to support the ply, pre-set dihedral spars. There was one small error with the wing plan, which showed the rear wing box as drawn in the wrong place, therefore not aligning with the fuselage dihedral spar. This was of no concern due to the jigsaw nature of the actual parts, but it pays to

study the drawing before any gluing of parts commences.

Sprung UC Technik!

The undercarriage is quite ingenious, as this model features a working 'sprung' wheel axial via small rubber bands, either side of the undercarriage. A plywood



The motor/RC unit is screwed to a bulkhead and allows some thrust adjustment if necessary.



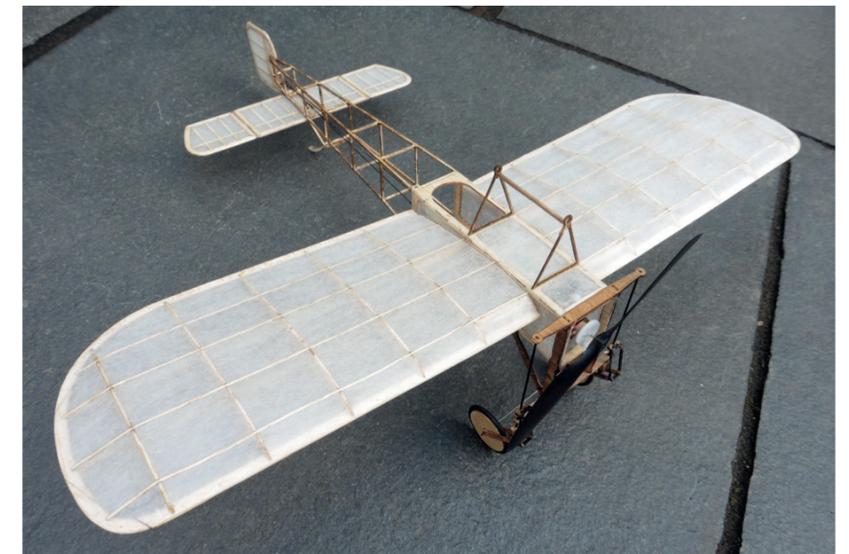
Thin carbon pushrods move the rudder and elevators, and provide the joiner for the outer elevator components.

INFORMATION

Tony Ray's Bleriot XI Laser Cut Kit, Price £24.99
 MXL-RX62 Micro RC dual servo board in FrSky, Futaba or DSMX/DSM2 versions, Price £34.99
 Steve Webb Models have a shop at 80 Church St, Frodsham, Cheshire, Tel. 01928 735225
 Buy online at www.servoshop.co.uk

frame, with associated 1mm carbon support rods forms the basic structure. Part of the undercarriage suspension has some very small intricate plywood parts, which to some degree can be a little tricky to assemble, as they have to line up with a small hole within each part. To make the laminated parts assembly easier, I found it best to stack each part onto an old 1mm drill bit and then add a drop of cyano, before carefully sanding to shape.

Wheels are formed from three laminations of balsa, with laminated plywood bearings. Two flexible rubber O rings form the tyres. All looks quite neat



Although only 42cm span, the Bleriot XI looks just right. A pilot (even a profile card drawing) would add to the feel when flying...

when finished.

Kindly supplied by SWM as part of the review is a 5 channel, RXH62 receiver board, which is a perfect combo for the Bleriot and other Tony Ray's models. My version of the receiver board is DMS2 compatible, consisting of two on-board linear servos, a dual aileron servo socket, 3amp brushed ESC with a total weight of 3.5g. Binding is a very simple process, smooth servos with no jittery movements.

A small solder job is required to connect the motor to the receiver. The 7mm coreless motor, powered with a 1s 210mAh Lipo provides an astonishing amount of power. The motor is mounted on a plywood frame, seating the receiver board underneath. The whole motor/receiver frame is cleverly secured with four small screws to the inside fuselage former. This is an idea I liked, as it's allows the option to adjust the motor thrust quiet easily and keeps the weight as far forward as possible.

Finishing and Flying

Three sheets of lightweight tissue are supplied for covering the model. To my surprise, the tissue did have the characteristics of Esaki Japanese variety. I choose to cover the flat surfaces with the tissue applied dry. The wings were covered with the tissue applied wet, as this helps to pull any wrinkles around the wing tips, finally sealed with two thin coats of non-shrinking dope.

The final assembly is a relatively quick process with all associated parts held in

place with a drop of cyano. Pushrods are simply made up from 1mm carbon rod, with 'Z' bent ends on each end of the carbon rod formed from thin brass or piano wire, held in place with heat shrink tube and a drop of cyano.

The balance with such a short nosed model is critical. Clearly stated in the instructions, it's recommended to keep the motor battery as far forward as possible. To help achieve this, and to keep the motor battery in place, I glued two thin pieces of EPP foam to the motor tray as a battery cradle, balancing the model 40mm from the wing leading edge, with a total weight of 39g

With the controls checked that they are moving in the right directions, it was now time to see how well the model performs. As with all my small models, I prefer to test them outside, on a calm day, before committing to indoor flying.

A gentle hand launch over long grass gave a nice flat glide; it was pleasing to see that no additional weight would be needed in the nose. Another flight was attempted, this time with the motor running, the model flew beautifully, responding very well to the control movements. Full power is not required; half throttle gives a nice sedate flying speed, perfect for indoors. Flight times in the range of eight minutes, gives plenty of satisfying stick time.

All in all, a nice scale kit, probably best for a modeller with a bit of prior building experience. Well thought out, innovative design ideas and rewarding flights. ■