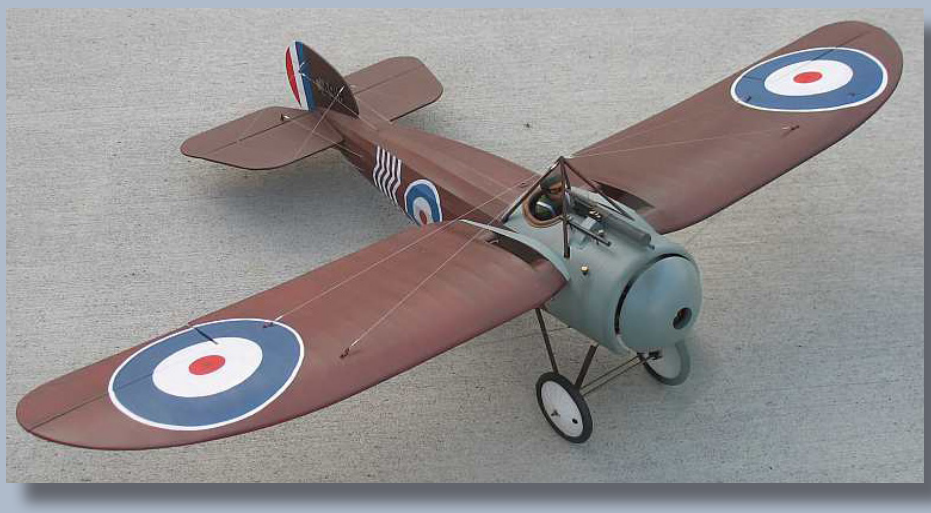

BRISTOL M1C

by Belair Kits

Belair Small Electric Scale Range

The Bristol monoplane scout was never going to be a first line fighter. Official distrust of monoplanes meant that although it was accepted for service it would be used only against lesser opposition, mostly in Mesopotamia. Some very colourful schemes were used on machines at training units.

GENERAL

As you'll see, the fuselage is built as two, separate half shells. By making them upper and lower shells it means that most, if not all the fuselage sheeting and stringers can be added while the frames are still secured to the building board, thereby eliminating the risk of distorting either shell.

When fitting the joiner tubes to the wings, only extend them inwards as far as R1, not into R1. Otherwise you will have great difficulty shaping the laminated R1 parts to fit the fuselage curve.

The holes in R2 and R3 will automatically set the dihedral once the wings are plugged onto straight wire joiners that pass right through the fuselage tubes.

FUSELAGE

Since assembly of both fuselage shells is essentially the same I'll just describe one. Simply repeat the process for the opposite shell.

Pin down the side keel parts, gluing where required. Assemble the sheet side parts (FST/FSB) with any formers that slot into them and fit any tubes that need to be installed in the half you're working on, along with any parts P. Now glue that assembly into the side keel slots. Add the remaining formers, followed by the upper/lower keel parts, forward fuselage sheeting and the stringers. Note that there are no stringers on the upper and lower centre lines, or the side centre lines. The covering itself will bridge those areas.

Once the that is dry, remove the shells from the board and complete as much of the installation as you feel necessary before the shells are glued together. As a minimum requirement I would suggest the rudder and elevator cable exit tubes, which should be installed in the scale positions and packed around with scrap balsa. Join the shells.

Fit the 1/16 sheet areas between the stringers before cutting the slot for the tailplane.

COWL

The cowl is simply formed by gluing a strip of 1/32 ply around formers C1 and gluing the laminated parts N to the front. Sand to shape, noting the section through N shown on the plan.

The cowl may either be permanently fitted to the fuselage (there's ample motor access through the front), or be retained using your favourite method. Locating pegs and rare earth magnets works well

If you feel unable to produce a glassed foam spinner that will be in balance I would suggest you chose a prototype that didn't have a spinner. Otherwise, only use pink or blue foam as the basis. White, beaded foam is far too likely to shed beads during the shaping which will then fill with resin, making the spinner almost impossible to balance.

WINGS

Despite the number of different ribs, building the wings really is very easy, the hardest part being laminating the leading edge. Pin down the l.e., spars, aileron leading edge and laser cut t.e., notching, tapering and gluing as required. Now glue in the wing ribs including the laminated R1 ribs and allow to dry. All ribs are at 90 degrees to the building board because any allowance for dihedral will be introduced as the R1 parts are shaped to fit the fuselage.

Glue in the joiner tubes. R2 and R3 will set them at the correct angle for dihedral when plugged onto the straight wire joiners. Add the scrap balsa around the view ports - making sure to leave room for the servo

leads.

Fit the rigging blocks, servo plate rails and parts HP and allow to dry. Remove from board and sand to shape before cutting free the ailerons. Build up the spar at the aileron position, as indicated on the plan.

TAIL SURFACES

Pin down the outlines, either laminated or made up from strip and laser cut parts, gluing as required. Glue in the strip balsa ribs and remaining laser cut parts and allow to dry. Sand to shape and join the elevators with the wire joiner. That's it, job done.

ASSEMBLY

I would suggest you cover and finish the individual components before assembling the model, but some people are able to cover a fully assembled model.

Plug the wings onto the wire joiners and run the rigging cables from the upper rigging point, through the blocks in the wings and terminate them at the lower rigging points. Check that you haven't induced any warps and use CA to lock the cables into the rigging blocks. Although the model is intended to be one piece, simple hooks and eyes at the fuselage end of the cables will make the wings removable. Also check that you haven't pulled the wings out of alignment.

Now glue in place the tail surfaces, once again checking for accurate alignment.

Make up and fit the wheels and glue in place the tail skid.

Make up the 1/32 ply access hatch and retain it in your favourite fashion.

How much, or how little detail you add is up to you. However, I would suggest at least pilot, strut/u/c fairings and gun. That said, versions of this model have been built, and successfully flown, with far more detail than that. Just don't make it too heavy.

FLYING

As designed, the model is not difficult to fly, but it is not a trainer by any means.

Ensure the model balances slightly nose down (very slightly) when supported at 65mm from the straight part of the leading edge.

When taking off, don't be tempted to rush the model into the air. Deliberately hold it on the ground until plenty of speed has built up and the, once you stop holding it down, it should lift off of its' own accord.

If using the spinner, you may find a larger motor, big prop and 2S pack might give the best results. Which ever way you go, aim for around 60 watts per pound of model.

Loops, lazy rolls and stall-turns are all well within the scope of this model, but once airborne beware the Hun in the sun.

Bill of Materials

2 lengths of music wire 14 swg
4 off 1/8 x 3/8 basswood spars
2 off 1/8 x 1/4 balsa
5 off 1/8" sq balsa - med/hard
1 off 3/16" sq med balsa
2 off 3/16 x 1/4" med balsa
2 off 3/16 x 1/4" med balsa
10 off 1/8 x 1/16 hard balsa
small amount of block for scale details and cowl area
6 inch length of 1/8 dia ramin dowel

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