



## ALBATROS DV

by Belair Kits

Belair Small Electric Scale Range

The Albatros line of fighters needs no introduction to fans of WW1 aircraft. The DV/DVa was the last in the line of highly successful single seat, vee strutted types and offers a wide range of potentially dazzling colour schemes to tempt the modeller.

### 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 can be added while the frames are still secured to the building board, thereby eliminating the risk of distorting either shell. That's why both upper and lower shells are shown on the plan.

Do not fit the c/s strut tubes or the front u/c tube to the formers until after the formers are installed into FST/FSB. Otherwise it will not be possible to slide the formers into their slots.

The model features scale type aileron linkages using closed loop systems on each aileron and two servos mounted in the fuselage. This system works well, and allows for differential aileron control. However, it is a relatively simple job to use a more conventional system with servos mounted in the top wing

### 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 doublers. Now glue that assembly into the side keel slots. Add the remaining formers, followed by the upper/lower keel parts.

Allow to dry completely before sheeting the shells. Please note that you will need to fit the laminated parts WS, before sheeting the lower shell. You can either sheet around them and trim them flush with the sheeting, or trim them flush with the formers and sheet over them. If your chosen prototype has a varnished ply fuselage the latter will give the best results.

If you have trouble sheeting compound curves I would suggest you plank the shells with 3/32 balsa and sand that back to slightly under 1/16 after the shells are joined.

Once the sheeting 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 elevator cable exit tubes and the rudder hinge rod/horn and pushrod. The aileron servos are also a good thing to install while you can easily get to them for accurate location (they must align with the exit tube positions for the aileron cables).

Join the shells, fit M and N, tack glue in place the hatch blocks, add the tail fairing blocks and trim and sand the whole thing to shape. Again, for those requiring a varnished ply finish, the smoother you get this stage, the better your finish will be.

Fit and fair the c/s struts and u/c legs, noting how the axle is sprung and faired.

### BOTTOM WINGS

Building the bottom wings really is very easy. Pin down the l.e., spars and laser cut t.e. and tip parts, notching, tapering and gluing as required. Now glue in the wing ribs except R1B and allow to dry. Remove from board, pack for dihedral and glue in R1B at 90 degrees to the building board. Glue in the joiner tubes. R1B and R2B will set them at the correct angle for dihedral when plugged onto the straight wire joiners. Fit the root bay sheeting.

Feed in the aileron cable tube and secure it at R4B. Ensure no kinks or sharp angle that might cause binding in operation. Add the scrap balsa to the opposite side of F4B to form the strut socket. Trim to shape and sand overall.

### TOP WING

There is no dihedral on the top wing. Build one half, then build the second panel onto it before adding parts CS and the c/s sheeting. Sheeting runs as a single length from R2 to R2. Parts A3H (the aileron horns) must be fitted after the ailerons are lifted from the board.

If anything, building the top wing is even easier than the lower wing panels. Pin down spars, leading edge laser cut trailing edge and tip parts, along with the false trailing edge and aileron leading edge, tapering, notching and gluing as required. Note that the aileron leading edge is not glued to the false trailing edge.

Laminate parts R6,SS & R7 to form both the aileron horn recess and the strut sockets. Glue in place parts DHB and

fit all wing ribs. Use scrap balsa blanks for the outer two and shape during final trimming and sanding. Allow to dry. Build the second panel onto the first, add laminated parts CS and the 1/16 balsa c/s sheet. Allow to dry and trim and sand overall. Fit ribs A3H.

### TAIL SURFACES

All tail surfaces (and the tailskid) are built in the same basic fashion. Build a core using the laser cut parts, strip of the indicated size and the laminated outlines. Once these are dry, remove from the board and build up both sides as shown before sanding to a streamline section. 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.

Begin by making up some thin brass P-clips to secure the top wing to the centre section struts and solder them onto the strut stubs. Now carefully mark plates SP with the positions of the small screws that will retain the wing. Drill these hole (pilot holes only) and screw the wing in place, ensuring it aligns correctly.

Trim parts WS to allow the lower wing panels to slide onto the joiners and butt snugly against FSB. Glue the panels in place and fit the interplane struts. Check that the wings align correctly and that the lower panels fit snugly against the fuselage sides before allowing the glue to set.

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

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, engine and guns. 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 the point indicated on the plan.

A 2S battery pack is more than enough for this model (unless you built it heavy), so don't be tempted to try more cells. All you will achieve is to make the model heavier and more difficult to control. It may be a fighter, but it isn't supposed to fly at the speed of an F-16.

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.

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  
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8 off 1/8 x 1/4 basswood spars  
3 off 1/16" x 4" med balsa - sheeting and outlines of fin  
1/2 sheet 1/32" x 4 balsa sheet - laminate outlines of tail  
1 off 1/8" sq med balsa  
4 off 3/16" sq med/hard balsa  
4 off 3/16" x 1/4" hard balsa  
small amount of block for scale details and cowl area  
6 inch length of 1/8 dia ramin dowel



*Designed by Peter Rake - Parts Set by Belair Kits*



**www.belairkits.com Tel: +44 (0)1953 885279**