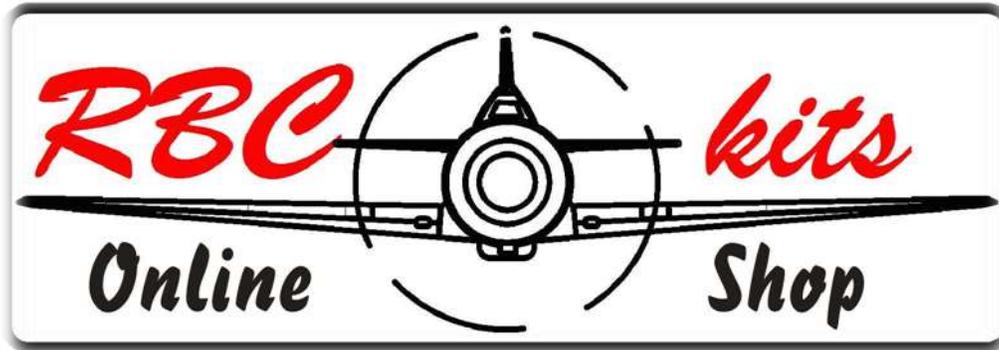


L39“Albatros“ 90mm edf



Thank you for purchasing L39 Albatros from www.rbckits.com

For the first time, R/C enthusiasts we have a choice in scale and fun flyer aircraft designs.

Our goal, through computer technology and state-of-the-art production techniques, is to offer aircraft which in the past have not been modelled simply because they weren't popular enough to justify mass production. Our production techniques allow us to produce aircraft which, though not as popular and well known as P-51s and P-47s, still offer historical significance (good or bad!), Good looks and flying characteristics, and a uniqueness that is sure to turn heads wherever you take your airplane!

Your airplane has many unique features in its design:

CAD Design

CAD design allows strength to be built into the airplane without sacrificing weight. Accurate parts design and placement ensures a perfect fit.

CAD Drawn Plans

The plans in this kit are not copied from a master set! They are originals drawn directly from the CAD program where the airplane was designed. We do this because it allows us to use colour, which helps you better visualize the various components of the airplane, and we can use better quality paper, which greatly reduces the possibility of shrinkage.

Since you're going to build directly on the plans, they ought to be the proper size! Also, parts placement is guaranteed to be accurate, so you can build a better, straighter model.

Small and hard-to-produce parts are simply a computer file away, so you get a more accurate airplane.

Lightening Holes

Lightening holes are cut into all ribs and formers where possible and justified. This allows us to keep

L39“Albatros“ 90mm edf

the weight on each plane to a minimum without sacrificing strength.

The same program that generates the design and plans also drives the cnc cutter, so every part is reproduced exactly as it was designed. Cnc cutting also allows us to fit more parts on each sheet of wood, reducing the waste, and lowering the cost to you.

Plastics

Several parts are accurately reproduced high quality Polystyrene, the canopy is made from PETG or Lexan

General Building Information

The L39 ALBATROS can be built by a person with experienced building skills. It is not designed for someone who has built a trainer or low wing sport plane. No unusual building techniques are required, although more difficult areas are explained in detail where necessary. Certain steps in the building process must be followed as depicted, or you might find yourself digging back into the structure to redo something. These areas are outlined when necessary. Occasionally hints will be included at certain building steps. These are not required for completion, rather they are tips intended to ease a particular process. The cnc router does cut through the wood, as a result of this, occasionally there will be fraying on the surface of the wood. This is normal, and is only a surface problem and does not affect the wood in any other way. Similarly, the cnc settings are optimized for wood thickness averages, so occasionally, due to variations even in individual sheets, some areas might not cut through completely. Simply use care in cutting the parts from the sheets; most of the time, the parts will break out of the sheets!

Note that due the differences in wood thickness per sheet it is advisable to sand the tabs a bit so they slide in easy , also sand the openings so parts slide in easy , hard pushing parts have a high risk of breaking, it is not necessary the rework the corners of the cut-outs , this is done by the cnc machining

Hardware and an edf unit are not included in the kit. There are so many choices for quality hardware that these choices are left to the individual preferences of the builder, rather than include something in the kit that you'll probably throw away anyway.

This aircraft is not a toy. It must be flown in a responsible manner according to the rules set forth by Law. The builder assumes the responsibility for the proper assembly and operation of this product. Rbckits shall have no liability whatsoever, implied or expressed, arising out of the intentional or unintentional neglect, misuse, abuse, or abnormal usage of this product. Rbckits shall have no liability whatsoever arising from the improper or wrongful assembly of the product nor shall it have any liability due to the improper or wrongful use of the assembled product. Rbckits shall have no liability for any and all additions, alterations, and modifications of this product.

Having said that, turn the page and start building the best airplane kits on the market!

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Material you might need:

Balsa knife, Stanley knife, straightedge, building board 1700mm, ca glue medium, thin, thick you need approx. for wing and vertical stabilizer sheeting 4 bottles thick and 2 bottles medium for rib gluing,, fuselage 1 medium for formers ... thick for sheeting building nails, tape

*Also use white glue, and canopy glue, epoxy for the canopy and cowls
Some drilling and bending tools, wire cutter, safety goggles etc. etc.*

For finishing you need:

Glass 25 gram 3mtr and filler dope or PS100 or epoxy 1 litre, brushes sanding paper 60,120,180, paint of your choice

Wheels as on the drawing, controls, motor, battery etc.

All vacuumformings should be roughened up before gluing and primed before painting

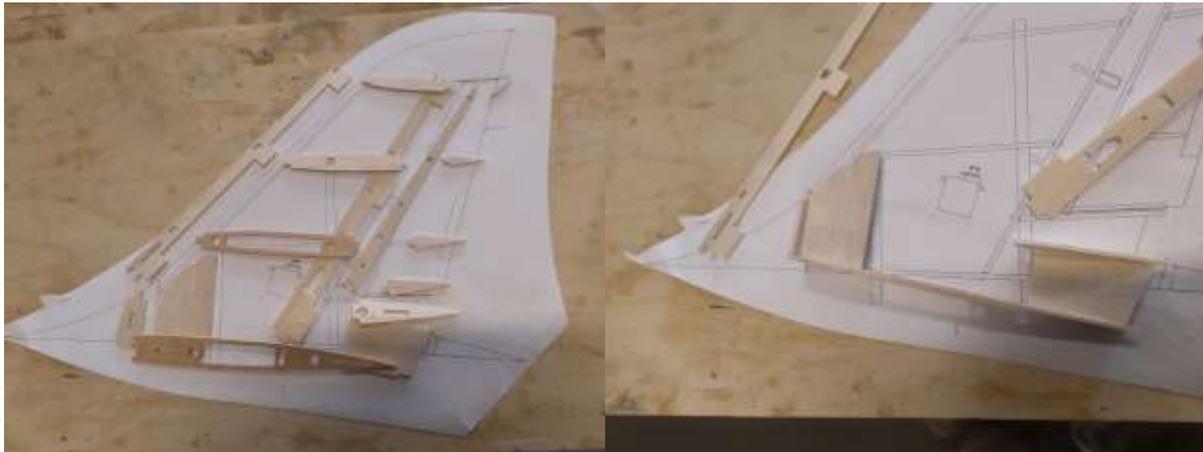
Check the pictures for additional information; a picture says more as a 1000 words so do look at the pictures on the cd

STUDY THE DRAWING AND PICTURES TO UNDERSTAND HOW THE L39 ALBATROSS BUILD

IMPORTANT! DO MARK ALL PARTS ON THE CNC SHEETS AS PER DRAWING THERE ARE A LOT OF PARTS THAT ARE LOOKING SIMILAR, SO MARK THEM CLEAR AS TO THE DRAWING

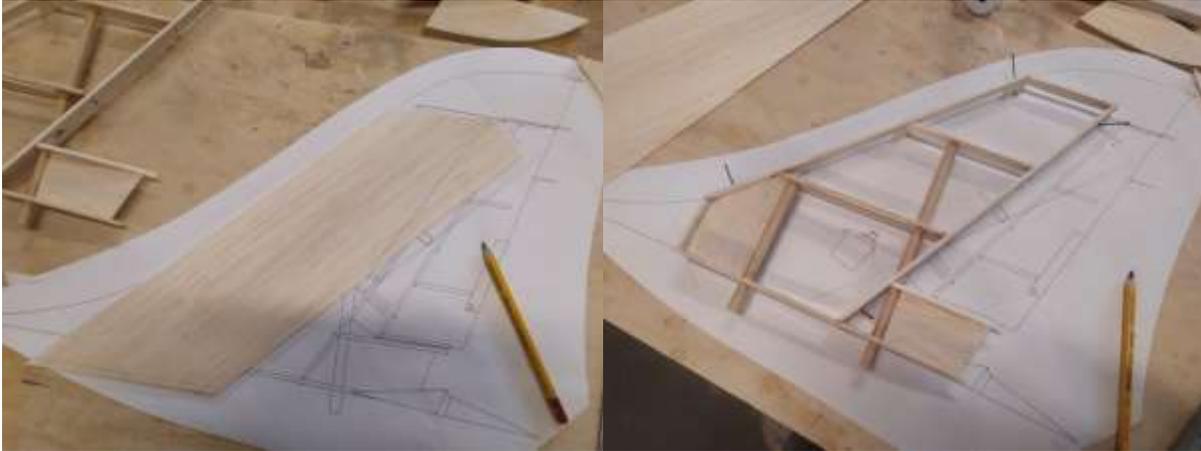
Vertical stabilizer

Layouts parts and assemble step by step the stab and rudder. Use the feet on the ribs



Make up the sheeting as per plan see the drawing

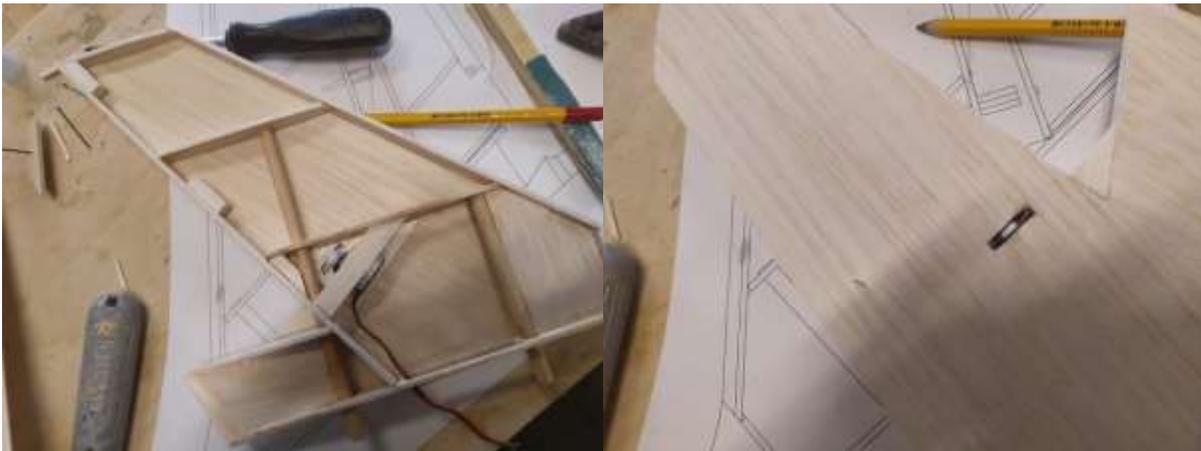
L39 "Albatros" 90mm edf



Use the 8mm dowels, you can glue them, but take care of the length. Sheet



Place your steering servo inside rudder and route the wiring



Sheet other side and make rudder also. Place leading edge and pre sand fairings, sand rudder and tip,

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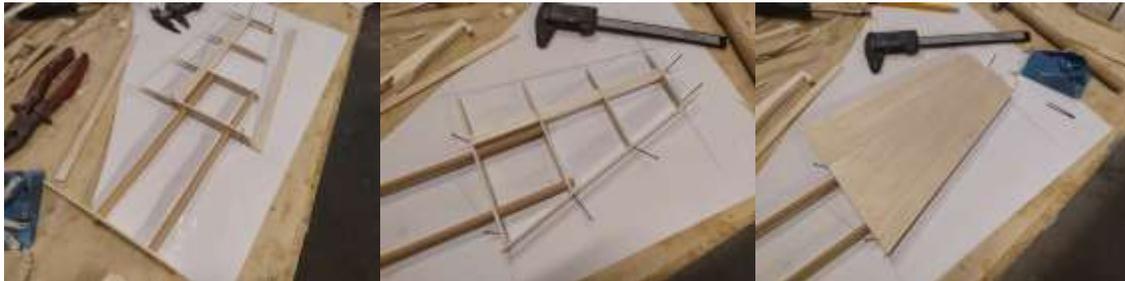
Place leading edge at rudder and sand to shape, place rudder tip and sand to shape place fairings and sand to shape



L39“Albatros“ 90mm edf

Horizontal Stabilizer:

Make the parts as per plan and take out all parts from their sheets, sand of all small holding tabs Cut the sheeting from 1,5mm balsa to the plan and sheet assembly do not glue the dowels yet just place them in to help for straightness



Turn over stabilizer clean edges and sheet other side. Pin down the help formers at their positions and Place sheeting to assembly. Place leading edges and tips and sand all to shape



Take out elevators and sand to shape making sure for enough deflection

L39“Albatros“ 90mm edf



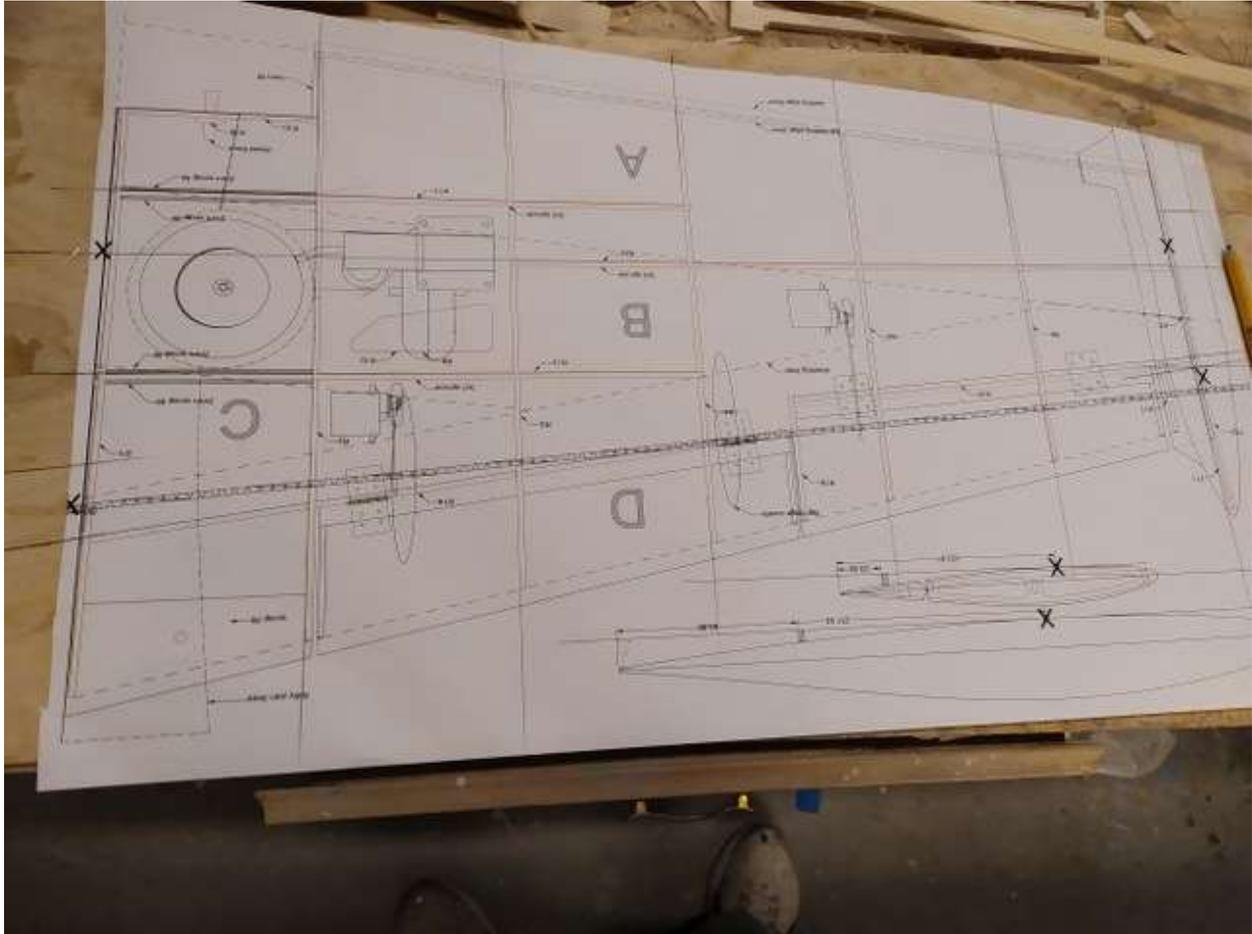
Place stabilizer fuselage with the dowels taking care for straightness in accordance with rudder the elevators have each a separate steering wire the rudder has a servo inside.

You can make dummy trim tabs, looks nicer.

Wing:

Place wing drawing under a sheet of clear plastic.

L39 "Albatros" 90mm edf



Start by making the wing sheeting from 1,5mm balsa as per plan, see the templates for cutting the sheets and the wing top view for the glue and cut template, and do make oversize! And join with tape and ca

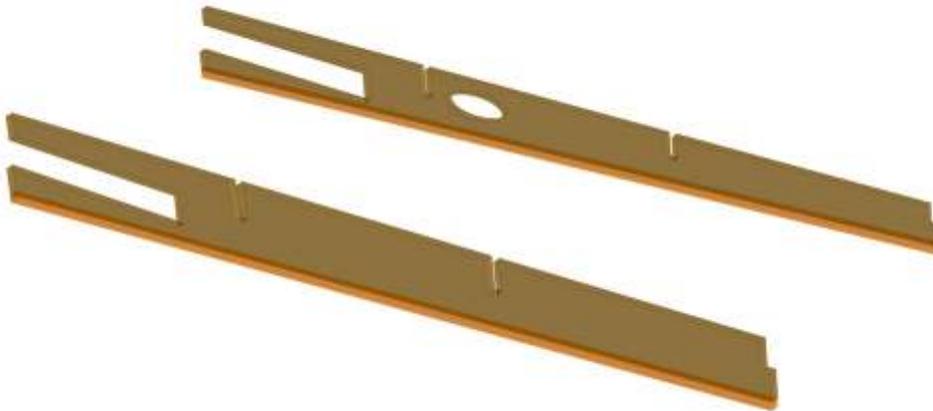


Take out all parts that are needed for the wings and clean them up with a sanding block from the small holding tabs. , make up the retract formers with a layer of glass 160-200gr and join with white glue

L39“Albatros“ 90mm edf



Make the main formers from cnc parts and the 3x3 spruce along a straightedge



Place the capping to the mainformers to take the joiners; do not glue the joiners in yet

L39 "Albatros" 90mm edf



Place the Retract former R8/9 into R2 and R3, gluing is ok these parts



Make up the wing framing with ribs and formers, , place retract formers ribs combo step by step place ribs and formers, a drop of glue may help holding but do not glue all yet

L39“Albatros“ 90mm edf



Place flap and aileron formers



Draw up rib and former lines on sheeting, place some scrap fill under retract formers to take the space between formers and sheet, sand to shape first, then place assembly to sheet

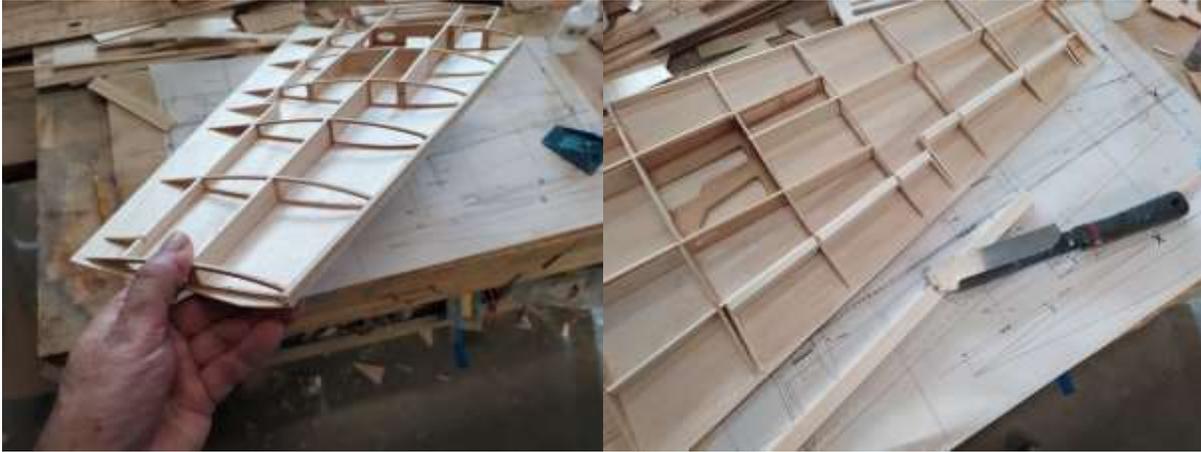


Set up the frame work with ribs and main formers and place in position on bottom sheeting.

Start gluing Main formers to bottom sheeting start at the root and work your way to the tip along the main formers, glue bottom front to ribs as last.

L39“Albatros“ 90mm edf

Place sub leading edge and flap and aileron edges, mark edges through sheet, easier for later



Place servo doublers and scrap fills for hinges and horns, place ribs from scrap for flaps, cut ribs for taking flap and aileron leading edges,

Place servos ,make openings at bottom and mark hinge lines flap and aileron. Note for the flap servo they should be orienting the horn to the left or right for both wings both the same, do not forget to place scrap balsa in the mid trailing edge for the wing fasteners



Place wing assembly on work plate and fasten at the X marked spots with the 3x6 help former under the wing see the position on the drawing for this.

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Sheet top of wing, we joined the trailing edge with tape and then flipped over the sheet to the top.



Now mark trailing edge as per plan and cut clear the trailing edge and sand, take out ailerons and flaps,.check disk for pictures.

Place leading edge sand all as per drawing

L39“Albatros“ 90mm edf



Join wings with the spruce joiner, make sure for a good fit do try and test do make it slide easy in and out , Do glue with epoxy do not use white glue (it will seize direct and you spoiling your wing)

Use strip of glass (160gr) to join the wing



Make flap and aileron hinges as per plan. Make tip tanks do test fit before gluing , tip tanks are 2 halves joined with balsa joiner test fit inner sides and glue test fit outer sides and glue then join.

L39“Albatros“ 90mm edf



Make z-bends for aileron and you need a kwiklinks for the flap steering for adjusting (see pictures)

Clean up retract space and place retracts, we used electrics.do try fit and working

We make the retract covers from 0,5mm aluminium sheet and flattened 5mm brass tube

When your retract is stalled when retracted, most of the time it is because of too tight closing fit, a little push will open the set it is binding in closed position, we solved this by adding a small piece of wood between leg and housing, this keeps the retract open enough to not bind, just try with some different thickens of wood sheet, until in and out is working ok.

L39“Albatros“ 90mm edf



After fuselage is finished.

Mounting the wing to the fuselage... drill the 5mm for the fasteners place fastener rings line out wing and glue rings to wing.

Place belly formers and sheeting sand to fit fuselage



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Fuselage:

Take out all parts and clean up the small tabs on the parts.



Make the front retract parts , join the retract 12x3 ply with glass and white glue or epoxy, step by step join front retract strip 3x12 with some glass between them

Place all formers as per drawing in the sequence as shown Note that F13 is in 1 piece no need for joining, we have basically a front part a mid-part and a back part of the fuselage, and front part formers are placed

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Now place retract formers in front, place canopy framing F22 place F11 and place F12



Midpart.

Make former F19 with doubler place F20 to F19; place F29, F31, and F32



Place F25, F26, F27 and place F28, note that all is done without gluing, or maybe a small drop to hold parts.

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Now place the temp build moulds F47to, F46, F45, and F44 the formers with a small drop of glue just to hold them



Draw a straight line onto your building board, and place the fuselage to the board with the help formers lined out and glue the help formers with a drop of glue to the building board, start in the front step by step

Join the front and the midpart of the fuselage

L39“Albatros“ 90mm edf



Place the formers for the back part of the fuselage step by step until you are at the tail end, place the



Build helpformers F43, F44 to the building board

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Carefully line out the fuselage, do not glue yet (maybe only a drop of help glue here and there).

Now place the Horizontal and Vertical stabilizer temp in the openings (do not glue)



Line out the fuselage make sure all is straight rudder in line with the fuselage etc., maybe you have to loosen a helpformers and push or pull here and there.

If that is ok then glue in the intake duct sides from 1,5 balsa and duct cut from paper



Now the fuselage starts to get stiff and ridged

Place some 3x6 anti collapse stringers to the intake duct.

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Now make the outlet duct from paper , first the outlet cone , glue it to the formers , make the large tube from paper , roll it up and place into fuselage mark and cut the surplus, place it and when you are sure all is straight glue to formers , now the fuselage is stiff and rigid



You can carefully glue the remaining formers with medium ca or thin white glue

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There are some small parts to glue to the formers to take the sheeting F39, F40, F21



Start sheeting the top of the fuselage with 2mm balsa sheet 800mm long you also can place the steering cables



Cut carefully the openings for the rudder dowels

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Now start sheeting with 2x12x950 balsa strips, do not throw away small leftovers do not cut unnecessary

We started with the nose. you might want to support the fuselage in the cockpit area.



Sheet sides as far as you can.

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Place side fills to F20 and sand to follow the fuselage lines. And sheet



Make the small pieces for the front and back from leftovers also the steering wire openings



Now loosen the fuselage from the building board, turn it over, we used our medium model stand for this, this is really a great help, for building and later for assembling and maintenance all models

You can place the wing mounts also now with a M5 nut glued in

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Sheet the bottom of the fuselage.



Make the nose cone and former F1 with the 4mm dowels carefully cut the edge of the nosecone for a good fit to the fuselage.



The tail outlet end is cut to shape as per plan , you might fill it up with a piece of paper and the wing fairing formers F16 and F17 are placed also the 0,6mm ply fairing sheet cut to fit

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Place the wing and place fairing and place fairing supports form 6x6 balsa and sand to shape to take the 1,5mm sheet, fill the front fairing with balsa scrap and sand to shape.



Place canopy back from F23 and F24 and 2x12 strip sheet place intake lips and sand to shape.



Place wing to fuselage, place horizontal stabilizer and line out with wing when satisfied glue, place fairing from scrap



Place Vertical stabilizer and servo wire, pre sand the fairings.

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Cut the wheel wells, retract openings in the wing and belly. And line with balsa



Make the rudder and elevators and flaps and ailerons as per plan.



Canopy.

Place canopy formers to CF3 and try fit to fuselage with a canopy latch and the 4mm dowels.

L39 "Albatros" 90mm edf



When fitting is ok place seats and instrument panels.



Paint and place pilot figures.



Cut the canopy to size and clean with window cleaner do not touch it with bare hands , or it will Fogg when gluing the canopy to the frame with ca or use canopy glue

Place the elevator servos use a zigzag bend for sub trim 1 elevator.we used a Y-cable

L39 "Albatros" 90mm edf



Place flap hinge covers from the vacuum formed parts



Place steering arms etc. we used as much z bends as we can only for flaps we used quick links to trim.



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Place aluminium retract covers, we did not place inner hatch covers, you can do this easy, open up front retract hatch



Make the retract steering arm from polycarbonate .bend the front shaft leg from 4mm steel



Make the hatch from 0,5 alu sheet hammer it in shape with wood dowel or cupping hammer.

Hinges are screwed to hatch and fuselage, Place some ply here ,We close and open the hatch with a 3,5mm spring from a big O-ring, alternative method work great is a bit more work and better as shown on the plan



L39 "Albatros" 90mm edf



Make some air intake openings on top of the fuselage



The outlet is the opening at the fuselage where the wing is mounted

EDF mounting

Use the wemotec midi fan evo or schuberle fan (that fans do work do not use a fms fan or something this will not work in a rbc kit edf jet), slide the between duct in the outlet duct fasten with tape , fit fan and fasten with 2,9x13 fasteners

Place speed controller and receiver also there, place battery's in front of fuselage , fastened with Velcro and foam for good control of your CG We had a separate receiver battery (Nihm 4cell 1500) in the front the cg was no problem that way

Finish:

Fill all dents with lightweight filler and sand

Finish wing and stabilizers with 25gr glass fuselage with 50gr glass and use Pu or epoxy or eze kote,

Now finish with... Vallejo, humbrol or we used cheap spray cans... take care for the vacuumformings as some paints will not hold as good, or worse will dissolve or make it brittle, use a primer for this

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Place wing, place canopy, check CG, Go Fly.

Have you found an error in the drawing or parts or instructions, just mail us at info@rbckits.com
I am sure we can find a solution for your build.

Some tips:

Do not make it tail heavy, and Do not make it nose heavy

Flying:

The L39 Albatros easy lifts off with a bit of flap (10mm) and is easy to fly and is fast, landing: plan it in with some speed up and land it as usual little flap a bit of throttle is ok, The L39 Albatros glides very well with wheels in in case of

An 8S 5000 battery is powerful enough, Make Centre of gravity as on the drawing this worked out very well, in reversed flight it need a bit down elevator so you might want to get back a little , also you need to adjust your elevator throws with a more rearward CG

Throws of the rudders etc., we like them big, we steer just around the centre of the sticks but it might be too much for you so always, make them large and have a dual rate button in your fingers, to small throws is most of the time problems, to large... it is in your fingers

If you need additional pictures, check the disk or just ask.

Have a good build and flight with the L39 ALBATROS

Materials you might need:

M5x30 nylon wing fastener 2x
M5 nut 2x wing fastener
steering cable outer 1x
Steering cable 1,5mm
Horns for flaps aileron rudder elevator
canopy lock
hinges 4x ca type aileron
hinges pinned 4x flaps
hinges 4x ca type elevator
hinges 3x pin hinges rudder
hinges pinned 2x front retract hatch
fasteners for retracts 2,9x13 12x
small parts and screws for retracts etc

Aileron, flap and rudder and steering servo Corona CS939

https://hobbyking.com/en_us/catalogsearch/result/?cat=&q=cs939
stabilizer Servo Corona DS339

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https://hobbyking.com/en_us/corona-ds339mg-digital-metal-gear-servo-4-4kg-0-15sec-32g.html

Main landing gear legs used

4mm steel wire with 1 curl bend in see drawing

[https://hobbyking.com/nl_nl/servoless-retract-with-metal-trunnion-](https://hobbyking.com/nl_nl/servoless-retract-with-metal-trunnion-33mm-x-35mm-mount-2pc.html?queryID)

[33mm-x-35mm-mount-2pc.html?queryID](https://hobbyking.com/nl_nl/servoless-retract-with-metal-trunnion-33mm-x-35mm-mount-2pc.html?queryID)

[=8de21d83961973eaec5e38a475ef6f4c&objectID=3814](https://hobbyking.com/nl_nl/servoless-retract-with-metal-trunnion-33mm-x-35mm-mount-2pc.html?queryID)

We used a midi fan evo with hetrc edf 650-68-1500 and 8 cells 5000

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