

Thank you for purchasing F9F-6 Cougar 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 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

The cowl and wing fairing are accurately reproduced high quality Polystyrene, the canopy is made from PETG

General Building Information

The F9F-6 Cougar can be built by a person with building skills. It is designed for someone who has built a low wing warbird. 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!

Hardware and a fan 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!

Material you might need:

Balsa knife, Stanley knife, straightedge, building board 1500mm
ca glue medium, thin, thick you need approx. 6 bottles, building nails, tape
Or 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 1 litre, brushes sanding paper, paint of your choice
Wheels as on the drawing, controls, motor,edf unit, battery etc.

All vacuumformings should be roughened up before gluing

Check the 3d pdf (you need adobe x10) and pictures for additional information, a picture says more as a 1000 words so do look at the pictures on the cd

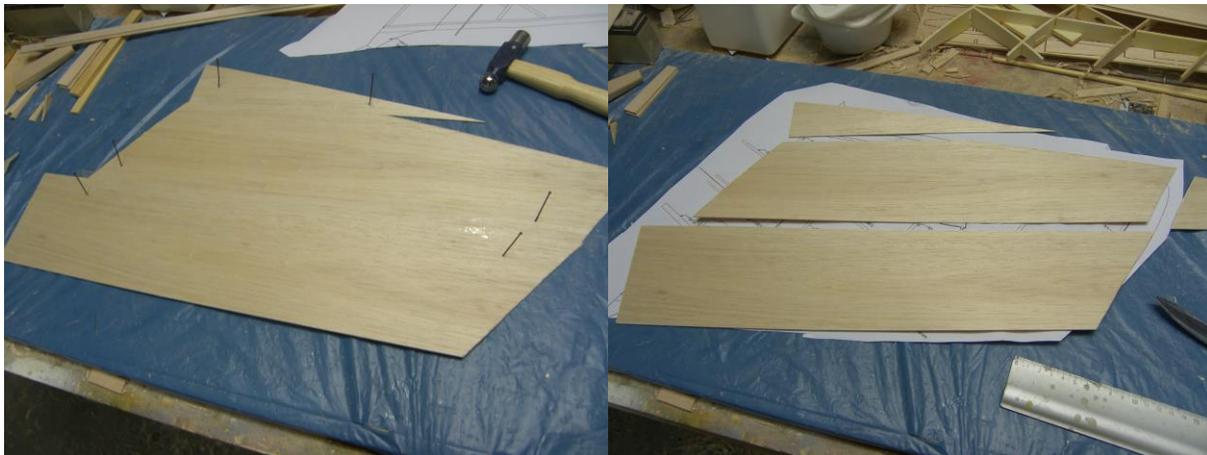
Note that there is a extra directory with pictures of the build with the fan forward, the build does not differes from this

Wings:

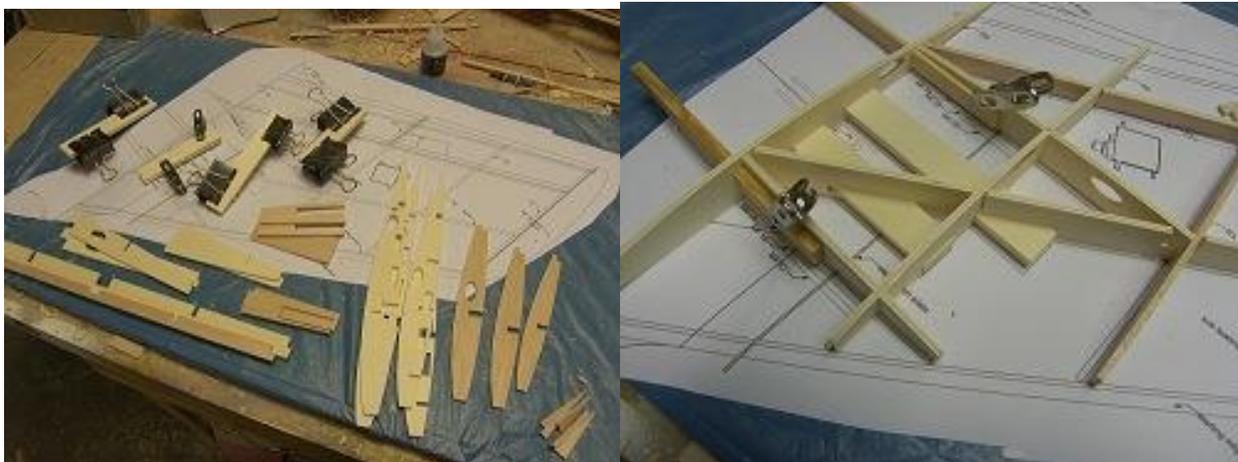
Start with a flat building board with the size for the wing and fuselage

Place the drawing of the wing on the building board and protect it with plastic.

Start by making the bottom sheeting from the supplied balsa sheet, place the sheets on the work plate and nail them down, use cello-tape to connect the edges, take them of and glue the edges with thick ca, place on the work plate and sand down the glued edge, turn the sheet over and take of the tape and sand the edges, now there will be one smooth side and a lesser smooth side, this is because of the thickness of the balsa is not even, the non smooth side will be the inside of the sheeting.



take out all ribs and formers out of their sheets, you can mark the formers with a soft pencil if you like, sand of all holding tabs.



Join main formers and place rib doublers , check the drawing for the correct position of the doublers and or retract formers.

Mark the main-formers ribs on the bottom sheeting, place main-formers on sheeting place ribs , do not glue yet , make sure for straightness .

if all seems ok then pin down the main former and start glueing the ribs with thin ca one by one to the bottom sheeting, note roll the ribs over the sheeting and apply ca



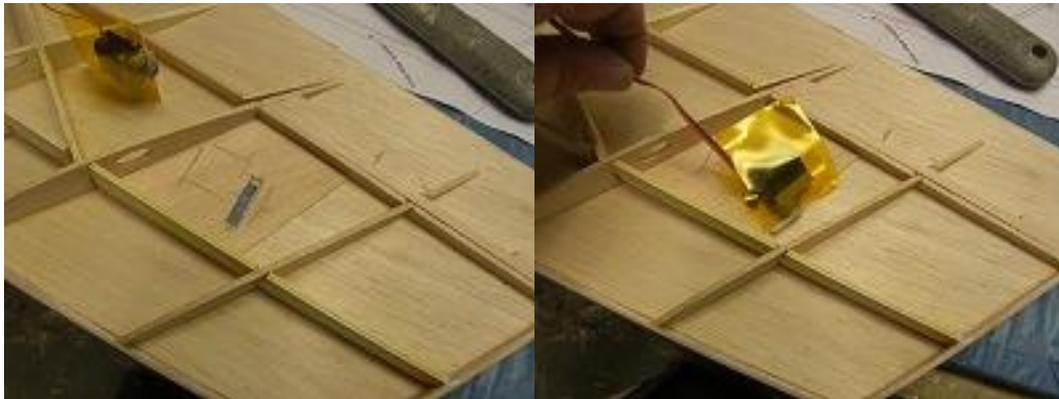
Glue wing assembly to bottom sheeting.place scrap fills, aileron leading edges



Place sub leading edge to the bottom sheeting and to the ribs.

Do this the same for the other side of the wing., sand the sub leading edge to the ribs .

**Make the top sheeting from the supplied balsa ,
place also some scrap balsa for hinges and horns**



Place servo and wires into the wing , place servos on extra 1,5mm balsa , we shrank the servo in shrinking foil and ca them to the bottom sheeting, with a fill on top, make also a opening for the servo arm in the bottom sheeting.cut the top sheeting as per plan.



Now pin down the wing panel on the X marked spots , Place the small help-former as displayed on the drawing , make them from 3x6x500 balsa , important is that they all have the same height, this will give the correct washout, place then under the trailing edge as per drawing and pin down the trailing edge .



**Clean up the edges of the wing and place leading edge
sand leading edge to shape as per plan , place wing-tips and take out ailerons and sand edges as per
plan.**



Place wing tips and sand to shape



**Make the ailerons with the cnc cut parts and do place them in the wing with the hinges (do not
glue)and sand tot the shape of the wing and wing tips, after that shape the leading edge of the aileron
to form**



use the supplied hinges for the ailerons they are easy and do perform very well, but do pin them with needles and ca



Place the wing to the fuselage with the supplied spruce wing joiners, use slow glue, you can do a bit of aligning here

Choose your retracts and open up the bottom sheeting for taking the retracts and wheels. Use the drawing as reference, you can use the cutout of the wing for retract doors, also the small opening, strengthen them with extra glass, make the retract door holder from the flattened brass tube and fasten with the 2,2x6 sheet metal screws



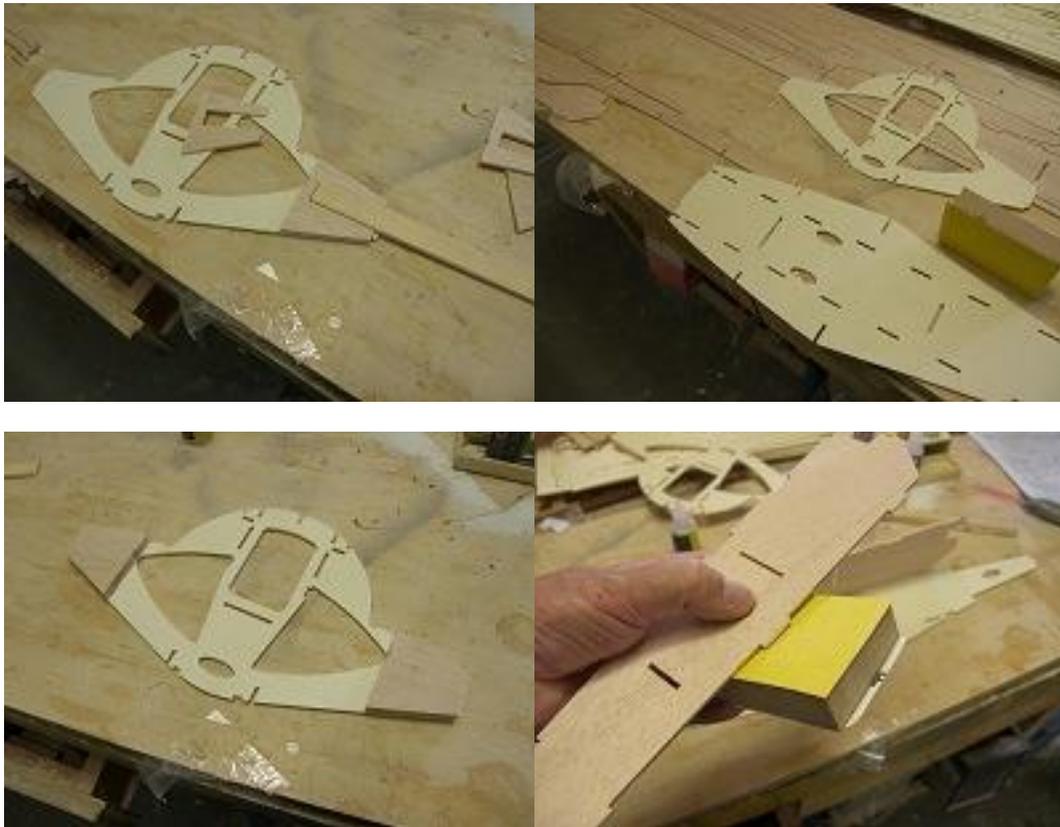
place hinges, place servo arms and make opening in aileron for the horns, center servo and aileron and glue in horns we used very secure Z-Bends



Fuselage :

Join formers as per drawing , join main crutch and pin down on a straight building board, place a straight construction line on the board.

Place wing joiners tabs with the supplied joiners as reference, do not glue them yet, only the tabs



place formers as per drawing, make sure for straightness , it is easy if you sharpen up the little tabs a bit , it will slide in easier in the openings



Construct front part of fuselage , no glue used yet.



Line out fuselage assembly with some small blocks of wood



Note that the position of the edf unit is 1 former more forward as in this pictures



**Line out assembly on the workplate make sure both sides are level before glueing
better support both main ribs with blocks from equal size**



If you are sure now you can use ca to fasten all formers





**Place intake tube sheeting from the back of the fuselage
Cut paper intake as per plan make oversize on fan side and intake side**



Use ca to fasten paper duct and cut duct to size



Place 3x6 duct strengteners for preventing to collapse the duct



Place intake sheet fills to paper and former F7A, place 3x6 stringers

Cut the fairing sheet oversize a bit and cut fit to the frame



Place top fairing also



Sand edges , the trailing edge of the fairing to the Former F16

Make up rudder from formers as per plan



Join formers



Start sheeting rudder with the 1,5mmx50 sheet make cuts in the sheet as per plan the concave formers make sheeting a bit difficult , use water to soften balsa.



Make opening for Stabilizer also.Place fairings do test foit the stabilizer

Make opening for elevator servo,and glue in servo



Make opening for servo steering arm and wires as per plan

The stabilizer is joined in the rudder



Use a wire to measure the alignment of the stabilizer to the fuselage

**Before this we have to sheet the fuselage with the 2,5x12x1000 (24pcs) strip balsa
Start in the center and work your way to the top**



The hatch cutout should be made soon as it is likely to have it glued to the forms so carefully use glue there and cut out hatch asap, note that the hatch shown here is not in the kit , the kit has a larger further forward 2 formers long hatch



Sand intake side to take the sheeting



Sand edge of MC4 to take the sheeting



Sand complete fuselage assembly



Make nose cone place former after scribing of a line parallel to the bottom of the nose cone for correct alignment to the fuselage



Cut locating dowel in 2 small pieces



Place to fuselage and sand to shape



Canopy frame:

Make frame from formers as per plan , cut two small corner pieces to glue in the front corners.



Do test fit the frame , the canopy should fit over the frame and flush with the fuselage sand for good fit.



Place cockpit parts and canopy closing



**Front retract, your choice but we have used a HK part
the retract door closing is a difficult part on the drawing is a better solution we think.**



Outlet duct:

Cut from supplied pvc sheet as per plan, tape the duct sheet on the lines and it should fit to the fan unit and into the fuselage. Use a small piece of tape to fasten the tube to the fan unit



Place vacuumformed fairings to fuselage wing , sand to flush fit



Place flow separation plate to wing as per plan



Finishing:

The whole airframe is covered in 25gr glass and doped with filler dope, **DO NOT USE SHRINKING DOPE EVER.**

Filler dope is not too hard to sand, and filled with some extra talcum powder sands great and smooth, when ready a thinned layer of sanding dope is OK

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

Canopy:

Cut oversize.. And test fit to fuselage, glue with canopy glue, or CA and make it lively with pilot, radios, etc. The canopy framing can be painted on

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:

We used electric retracts for the Cougar, and we used a separate battery for the retracts this makes it safer, air set is also possible, the weight difference is none

We used Hetr EDF 600-33 and 8 cells 3700

Wheels, we used Kavan treaded lightweight wheels, and we used 4mm wheel legs, with a curl in it. Keep tail as light as possible, CG measure with wheels in.

Retracts used HK retract HK-107000136 Turnigy

Servo : Cs393 for all

Flying :

The Cougar easy lifts of and is easy to fly you do not need flaps, but if you like you can always make them in, landing: plan it in and land it as usual low speed as possible but do not make it too slow.

A 6S battery is also more powerful with 100 amps and a good drive,

Throws of the rudders etc , we like them big , but it might be to much 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, just ask.

Have Fun with the F9F-6 Cougar

Additional HQ pictures are on the disk , also a 3d pdf , where you can see all parts of the Cougar in 3d , you need adobe 10X to view, it will not work in your browser

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