

RBCkits Yak 23

Instructions Yak 23

Wings:

Start by making the wingsheeting from the 1,5mm balsa sheet, cut out the sheeting as the wing planform and join the sheeting with ca.

Draw up all formers and ribs onto the sheeting with a soft pencil.

Place the formers and ribs onto the sheeting and pin down MF1, now glue FM1 onto the sheeting with thin ca.

Glue MF2 onto MF1

Line up the ribs with the lines on the sheeting and FM1 and glue one rib at the time onto FM1, now carefully glue the ribs onto the sheeting, you may roll the ribs to the sheeting, and add glue.

Now glue the nose underside of the ribs onto the sheeting, the same way as the back part.

Place the false leading edge.

Place the trailing edge and place the 6mm Aileron leading edge.

Make up the other wing side at the same way also place R0

Sand the false leading edge and the aileron leading edge to match the curve of the ribs.

Place scrap balsa for servo and control horn, servo wire, servo.

It is now easy to cut small openings at the ailerons circumferentials, when sheeting is applied it is easier to cut out the ailerons.

Make carefully the small openings in the wing underside for taking formers DF2 and DF3

Make up the "WING WASHOUT HELPFORMER" from 7x5 balsa.

Place the helpformer under position X1 and X2 as per plan and pin down

Also pin down MF1 at the outer positions, so the wing sheeting can be applied.

Sheet the wing with the pre fabricated sheeting, makes sure not to warp it.

Place leading edge from 6x12 balsa.

Sand leading and trailing edge to shape as per plan.

The centre of the wing is open at the underside approx as per plan, this is necessary for taking the fan unit and exhaust ducting

Cut out the aileron and sand to shape as per plan, we use tape as hinges.

The servo wire is Z-bended at the servo and going straight to the aileron, there the wire is bended 90 degree into the control horn, use a small piece of white inner cable to secure the wire.

The other wing half is prepared on the same way.

Sand of the middle part of the wing centre for taking DF0

Fuselage.

Pin down the main crutch FMC at flat building board. FMC is in 2 parts joined.

Place formers F1-F9, TF1 one by one, Place F16, place F4D, place WF1, WS1, place F17.

Check alignment of the formers,

Place the 2x6 balsa stringer at the tailbottom

Sand flush all stringers with the formers.

Place 1 layer of 3x50 balsa bottom sheeting and sand into the contour of the formers F7-F9, TF1

Paint and cut out the inlet duct and carefully place into fuselage, Glue the paper duct to the formers.

Make the battery compartment from 3x57x200 balsa and 2x 2x33x200 balsa and the 10x10 triangle stock.

Now start sheeting the fuselage with the 2x12mm balsa strip, start at the top of the fuselage, and work your way to the bottom, one at the time, all strip should be tapered from tip to tip, try every time will give best fit and most strength.

When bottom is sheeted, sand flush the fuselage tail bottom layer of 3mm balsa and sheet with a next layer of 3mm balsa. Sanding can be done in a later stadium

Take of fuselage and sand FMC to the contour of the formers.

Place top formers as per plan place 2x6 balsa stringers on top and sand flush with the formers

Place rudder assembly on fuselage, make sure for straightness

Place steering cables and place 3x50mm balsa on top and sand flush.

Now start sheeting the fuselage top with the 2x12mm balsa, start at the fuselage at FMC and work your way to the top of the fuselage.

Sand flush sheeting with the 3mm balsa top sheeting, and place last layer of 3mm balsa top sheeting, Place 2x F0 and sand to shape Sand the inside of the paper duct flush with the airintake the fuselage top can be sanded now.

Assembling the wings at the fuselage, and check alignment with rudder.

Place DF0, DF1, DF2 and place the 4mm wing dowels, the fan unit should be placed also for alignment. Make a 4mm opening for the wing fastener and drill and tap WF1.

When alignment is ok glue the formers to the wing.

Sheet the bottom cowl with 2x12mm balsa and sand flush with the forward part of the fuselage.

The complete fuselage can be sanded now.

Cut out a small (2mm) opening for taking the bungee launch hook and glue in the launch hook.

Construct the elevator from the cnc cut parts and formers EJ1 chamfer the elevator parts a bit for better joining. Check for alignment and glue to rudder.

Place servo horns in elevator and ailerons etc.

The elevator servo is glued to MFC at some scrap balsa; the 2 steering cables are soldered into 1 at the servo location.

Cut out canopy and glue to fuselage; do not forget the pilot.

Finish:

Advice is to use lightweight glass 25gr/dm² for the fuselage; the wings can be finished with Japan paper Flying:

Use the throws as given on the drawing or a bit less, I like big throws.

Use a bungee as recommended hand launch will fail.

The Yak 23 is an easy flyer but fast, landings need a lot of room to bleed of the airspeed.

Good hunting