Building instructions RBCkits F20

First Introduction
This kit is not intended for newcomers to model building, i.e. the builder of a certain skill and experience is required with wood kits.
At the same time, all time consuming parts are manufactured from balsa and plywood and machined precisely to fit
On a well thought out connector system together, so that build failures are largely excluded.

1th Numbering
The machined parts of the body and the wing and the tail are numbered in the drawing parts identifying sheets
Bars, logs, deep drawn components, planking and fittings do not have numbers.

2th Relative position in building
It is possible and useful to work in parallel on different sections of the model,
Possible limitations arising from the available space in the workshop.

3th Preparation of the components
The milled wood parts are cut out only when they are needed; Cut with a sharp knife from the sheets the connecting bridges.
All tolerances should be tested before final assembly.
Due to slight variations in the thickness or if parts are not assembled at right angles, it may be necessary here and there,
To broaden slots; this using a file or a balsa knife with new blade as possible.

4th Work
Because of the carefully planned plug-in system at any point it is not necessary to build on the plan.
Larger, flat subassemblies (fuselage wing, tail) are assembled on a flat surface,
Into which you can push pins into it. To avoid the sticking of the assembly to the building board place, plastic film.

5th Adhesive
For most of the bonding medium-thick glue is most appropriate. Thin ca is also used
For all other cases, white glue or "Uhu Hart" ideal.

6th Motorization
The F20 offers the best for 1 Brushless inrunner with about 700W, e.g. 2w20 4 lipo cells.
These engines are supplied with a matching bracket, which facilitates the installation considerably.

8th Motor and cowl
Is made from polystyrene and can be glued and painted with normal paints and glues, be carefully when drilling and cutting
Polystyrene is tending to crack when cut to rough, use a sanding block or dremel tool

9th Tail
The tail is not removable, the rudder also not,

10th Additional accessories needed
A dummy pilot looks really nice in this model

11th Tool
Stanley knife , model knife ,sanding blocks, razor plane, tape, dremel machine , building needles, small hammer,2mm flat file, flat worktable, right angle, rope.
Fuselage:

Make the fuselage nose section by gluing the 15x15 triangle stock to the bottom part F2
Place the sides and formers , place top triangle stock and place F4 place 2x2,5mm nose sheeting
Sand nose section roughly to shape.
Fuselage tail section:
Start by laying out the bottom sheeting from 1,5mm balsa sheets 200mm long
Draw a center line
Place mid stringer from 2,5x6 balsa.
Place formers as per drawing also the F11 duct formers and F20 fan holders do not glue yet, place sides F18 , place 2,5x6 stringers to sides and bottom sheeting, now line out all parts and pin down all formers and use thin ca to fasten all.
Place intake duct from 1,5mm balsa it is advised to wet the balsa to curve easier
Place all remaining stringers.
Place top formers and sheet with 3mm balsa and sand to shape
Start sheeting the fuselage with the 2x50x650 balsa sheet on the sides
Use the 2x12mm balsa strip taking care not to warp the fuselage for the rest of the fuselage
Do not complete close the fuselage, as we need to fasten the wings with the wing joiners to the former F15.
Sheet top of f18/fuselage with 1,5mm left over from bottom sheeting.
Take the fuselage from the building board and roughly sand to shape.

Wings:

Start the wing with cutting out the 1,5mm sheeting and gluing them together.
Pin down the helpformer from 2,5x6 balsa
Place F1 on the drawing and place the top sheeting, the wing is build upside down.
Draw up all lines you need for placing ribs and formers.
Place ribs and Mainformer .glue sheeting to ribs with ca
Place sub leading edge, sand to shape to take the bottom sheeting
Place the 10x4 wing joiner, shape the former to match the wing and the fuselage.
Place 4mm locating dowel

Now when fuselage is partly ready ,place fuselage on flat building board
We place one wing to the fuselage, checking the incidences as given on the drawing, if this is fitting ok, glue the wing to the fuselage with epoxy, also the joiner to former F13.
Place the other wing also to the fuselage checking and checking the wings to each other for equal incidences, glue wing to fuselage with epoxy..

Place stabilizer left and right checking against the wings. And glue with slow glue so you can adjust some.
When assembly dry take off from building board
Place the nose section to F8, checking for straightness lengthwise, adjust if necessary sand F7 nose section to fit. Glue some leftover triangle stock to F7 F2a
Now you can sand the nose section to fit smooth to the fuselage .be careful with the top section in relation with the canopy
Place battery power wires.
Close the fuselage, sanding all smooth. use some lightweight filler to close all small gaps
Place F6 and sand to streamline the ducts
Place F5 and make canopy fit to F5 and fuselage there are some scored lines into the vacuum formed part so cut a little oversize
Make a tongue slide part from scrap onto F5 that fits under F4
Place Canopy lock.
Place Lex top and bottom and close with FF1
Make rudder from rudder parts
Check alignment with fuselage and glue rudder to fuselage with epoxy (we placed the rudder last)
Open up F22.
Make a fan opening in the bottom and line with 2,5x6 stringers to take the hatch (the hatch is tape closed)
Place tailerons with the 2mm angled wire, solder baljoints to the wire and solder 2mm Kwiklink
Wrap servos (2-2,5kg metal geared) in shrink foil or tape and glue to side in relation with your steering wires for the tailerons
Place F23 in the vacuum formed tail part, sand flat and place to F22 tail.
Place fan with power, make the outlet duct from 2x PVC sheet, roll and join with tape.
Place outlet duct.
Place controller to the fan side or behind the motor
Place receiver to fan side
Check CG you might need to open up former f3 to let in the battery.
Throws as per drawing we like them big , but you need the up anyway with this cg , slowly move the cg backwards until the f20 fly's upside down straight with a very little down on the stick.
Bungee launch with a normal bungee model on the ground m it does not work with a bungee launch from sticks as the f20 will nose down.
With a 2w20 and a 4 lipo set up the f20 is very fast so be careful, landing is easy just float it in

Have Fun with the RBC kits F20