BD-5 Build Guide

Designed and Drawn by:
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Suggested build specs:
Material: 6mm Depron or MPF (approx one and a half full sheets) 1000 x 700 sheet
Servo's: 3 x HXT900 9g (or similar)
Motor: D2826-6 2200kv Outrunner Motor (or similar)
ESC: TURNIGY Plush 40amp Speed Controller (or similar)
Prop: GS Sport 6x4E Precision propeller (or similar)

These are the formers shown in the position they need to go

The Fuselage Skeleton

First glue F8 and F9 in place on the “vertical former”

Glue the “horizontal former” to the “vertical former” and into F8

Glue the ’’top formers” in place … as shown

Please note: The side panels and hatch panels are slightly oversize and any excess can be trimmed off after gluing in place

Glue in place the rest of the formers as shown

After gluing, I use a sanding block to sand the formers to follow the shape of the fuselage and make it nice and smooth for the side panels to be glued on.

Cut 2 x 10mm x 6 mm doublers from some scrap foam and glue onto the fuselage sides as shown.

This is for sanding and rounding a little

Horizontal Stab and Elevator

Prepare the stab by gluing in the carbon fibre tube.

Chamfer the edge of the elevator and hinge with your favourite method.

Glue the control horn in place

Tail Fin and Rudder

Hinge the rudder to the tail fin (Vertical Stab) with your favourite hinging method.

Attach the control horn to the rudder and fir the servo into the fin … Connect the and test

Alternative Rudder and Elevator control

This shows the use of snakes for the control of elevator and rudder.

This method has the added advantage of moving the servos up front to help with the balancing of the plane.

The Side Panels

If using Depron … Stick clear packaging tape on the outside of the panels before rolling.
(If using MPF, there s no need to use packaging tape)

I use a piece or 20mm (3/4“)plastic reticulation pipe to roll the Depron around

Tail Pipe

Again (if using Depron) stick clear packaging tape on the outside of the panels before rolling.

IMPORTANT:
If using Depron …. Before bending-rolling, stick clear packaging tape to the outside of the panels to stop them cracking … (If using MPF, there s no need to use packaging tape)

The horizontal stab can be glued in place and the control rods / snakes can be fitted and tested

After test fitting, the LEFT side panels can now be fitted to the fuselage skeleton

Now fit the tail fin

Connect up the servo horns and rods

Rout the cables from the motor and servos and test that everything is working OK.

Once you are happy that everything is working OK you can fit the right hand side panel in place

You can now fit the motor And glue in place the tail cone.

The Hatch

Glue the formers together and then glue on the top panels.

IMPORTANT:
If using Depron … Before rolling the top panels, stick clear packaging tape to the outside of the panels to stop them cracking (If using MPF, there s no need to use packaging tape)

Before gluing on the top panels, sand the formers and base to follow the contours.

Showing tail cone and motor in place

After routing the servo wires, you can now attach the wing

The Wing

Glue the carbon fibre tube in place

Hinge the ailerons to the wing with your favourite hinging method.

Dihedral Brace

Once you have prepared both halves of the wing you can glue them together with the Dihedral as shown … glue the dihedral brace in place (I like to use epoxy glue for this)

Place one wing flat on the bench and block the end of the other up by 75mm (2.95 inches)

I have used the “Torque Rod” method for operating the ailerons, but you could use other methods if you wish.

Shape / sand the belly pan to shape and glue into place

Laminate the nose pack, glue into place and sand to shape

I use magnets to hold the hatch in place

Start with the C of G on the spar, turn upside down to make balancing easy