

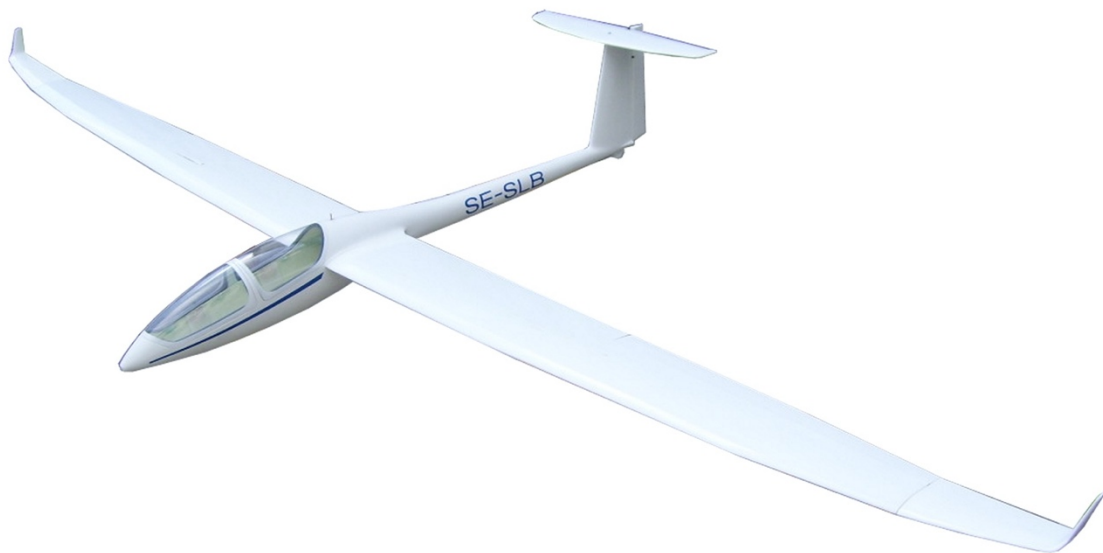
All fiberglass 1/8 scale sailplane

DG-1001

Building instructions

Thank you for your purchase this up-to-date sport semi-scale glider model, designed for slope soaring, where you will appreciate it's maneuverability and nice flying characteristics.

This is an absolute gorgeous reproduction of the famous DG-1001 from DG Flugzeugbau GmbH from Germany. You have here an accurate 1:8 scale version, in all molded technology. At 1:8 scale this should be a small scale glider, but the high aspect ratio of the wing makes it still a comfortable sized plane of 2.5 m span. Original forward swept wing plan-form, double taper elevator, installed airbrakes. Designated for the intermediate pilot this is not the easiest plane to fly. It can be pitch sensitive at high speed. But heck what a great look in the air. The wing does not have flaps. It can be histarted, winched or aero towed. Also nice on the slope. Radio requirements are four micro servos for the ailerons and airbrakes, one micro for the elevator, one for the rudder. An additional servo might be installed for aerotow.



2500 mm

1090 mm

29 dm²



700 g (empty)

S 3021

A, E, R, B

Kit includes:

- * fiberglass fuselage,
- * fiberglass wing, double-high airbrakes installed,
- * winglets
- * horizontal stabilizer,
- * rudder,
- * canopy,
- * canopy frame,
- * wing connecting rod,
- * bag with accessories
- * stickers,
- * building instructions



To finish the model you need:

- * cyanoacrylate glue,
- * 5-min epoxy glue,
- * common modeller's tools (sharp knife, drilling machine, screwdriver, fine round file, sandpaper)

To fly you need:

- * 4 channel RC set and 6 servos (at least 5 of them micro size)

Attention! Thank you to us immediately, if you note a missing part or a damaged part. We cannot control the dexterity of the modeler and cannot influence the builder during the assembly or the use of this radiocontrolled model, thus we will in no way accept or assume responsibility or liability for damages resulting from the use of this user assembled product.

You are responsible for running this model. A damage to property or health might arise by improper use of this product. This is why you have to keep a safe distance from the buildings and other developed areas when flying. Make sure that you are the only one who is flying on the same waveband.

The product may only be used by the children over 14, supervised by adults.

The purchaser/user accepts all the responsibilities in the event of structural or mechanical problems.

Warning, this is not a toy!

FINISHING THE MODEL

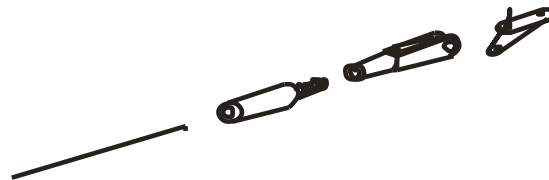
The glider is ready to fly right after the installation of the RC set.

1. How to install the rudder servos

Glue the servo holder plate into the fuselage. The best position is in the rear cockpit. Insert the 0.8 mm steel wire with inner tubes into the outer bowdens. Cut the bowden tube to the proper length, insert it into the fuselage. Check if all bends are smooth and glue the bowden in several points. Push in the steel wire of 0.8mm diameter, cut to the proper length. Remove the wire again, solder the brass metal ending and screw in the link, which will be later connected to the rudder horn.

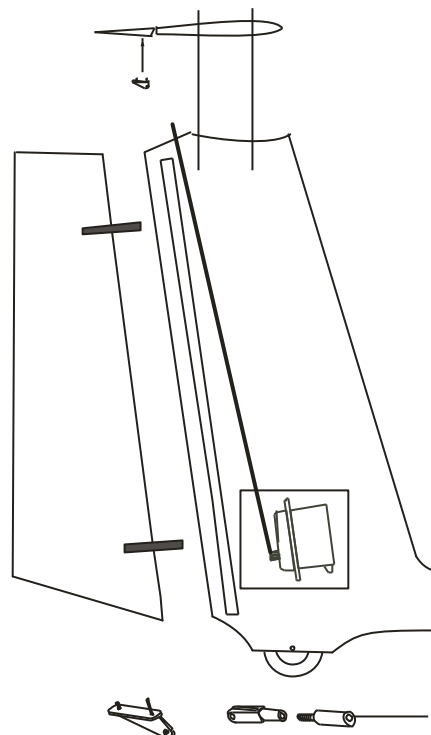
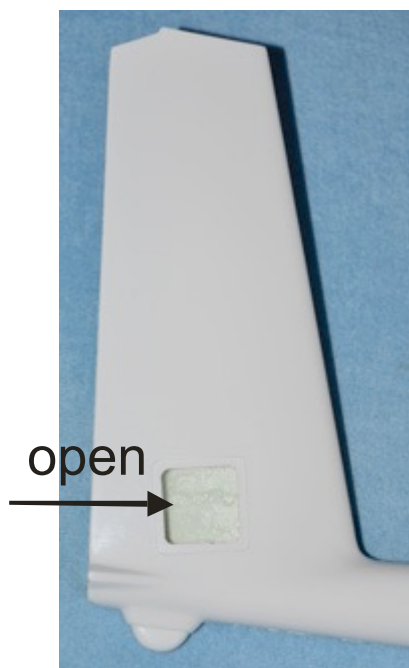
2. Rudder installation

The rudder is mounted on hinges. Make slots for hinges in both the stabilizer and the rudder - the rudder must fit to the stabilizer. Glue the hinges into the stabilizer and then glue the rudder to the hinges - mounting the rudder to the stabilizer this way. Find the position of the rudder control horn so that the straight line connecting the holes in the horn and the axis of rotation of the control surface is perpendicular to the surface of the stabilizer and the horn itself is in the same level as the control wire coming from the fuselage. Drill two holes and fix the horn. Insert the previously prepared wire into the bowden and connect it to the horn.



3. How to install the elevator servo

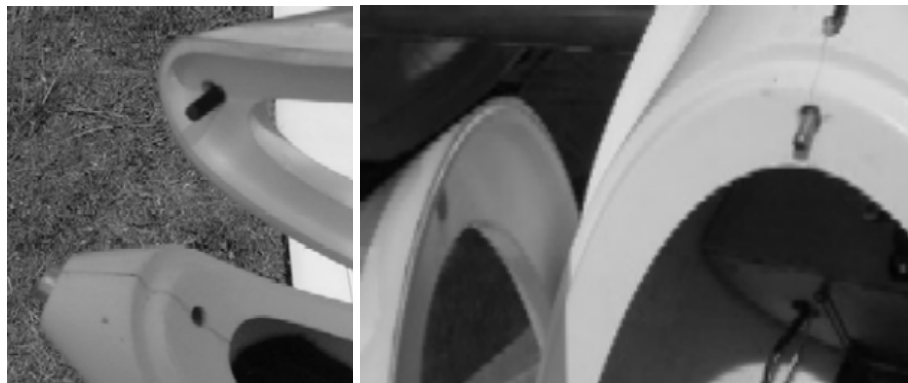
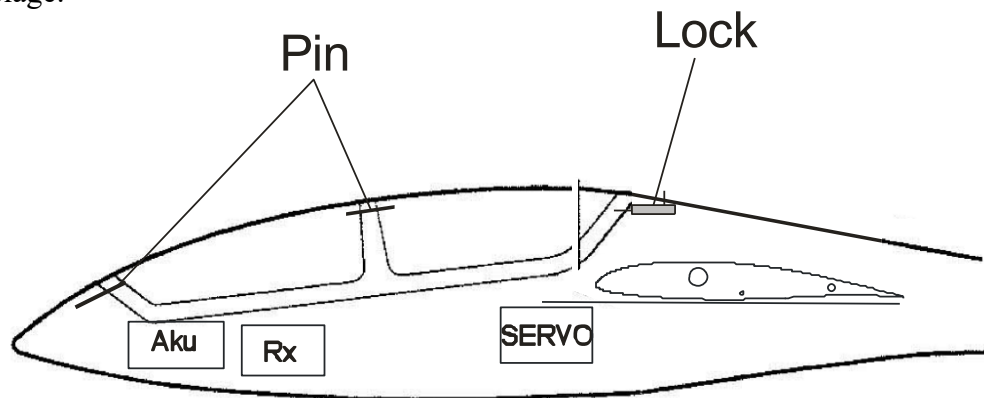
Drill the holes in the elevator with a diameter of 3mm for the screws. You must open the hole for the servo in the vertical fin. It is advisable to use a small milling cutter. Glue up the servo in the fin. Glue up the control lever on the elevator flap and join it using a draw rod with the servo. Attach the cover.



4. Fitting the cockpit

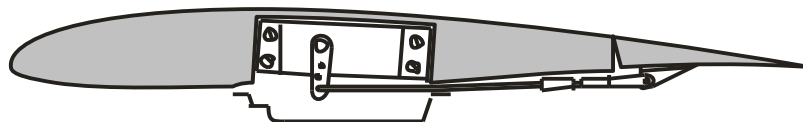
Cut out the canopy transparent section using the mark line, glue it onto the epoxy frame, trim it then and grind a bit off to a desirable shape.

The canopy is held in place with a pin and canopy lock. Bore then the matching holes in the fuselage and in the canopy frame. Glue the pin in the front canopy frame. Glue the canopy lock in the fuselage.



5. How to install the aileron servos

Install the extension servo cables into the wing. Connect the extension cables to the servos (connectors or soldering -in this case isolate the wires using the heat shrinking tube). Attach the control horns to the ailerons. Fix the ailerons in the neutral position using pieces of a self-adhesive tape. Install single levers to the servos, adjust them to the neutral position and insert the servos into the holders - without fixing them now. Prepare 2 rods made of 1mm diameter wire with „Z“- bend on one end ,measure and cut the wires to the proper lengths and solder the brass endings. Screw in the clevises. Remove the servos, insert the „Z“-bend into the servo lever, and fix the servos in the holders using a quality double-side self adhesive tape or 5-min. epoxy. Connect the pushrods to the control horns. Attach the servo covers using a double-sided self adhesive tape.



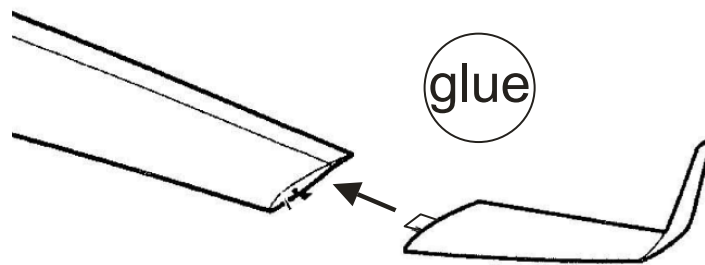
6. How to install the servos to the brakes

Attach the servos with two-sided Scotch tape to the channel and join them with the dive flap using a draw rod. You will need extension cables and a Y-cable.

Shade your spoiler by pushing slightly with a small flat screwdriver on the arms of the bar (black parts). Pull the Z of the manoeuvring on the gilded part and insert it into the interlocking hole connected with the bottom of the servo. Shade again your spoiler and screw down your clevis at the end of the manoeuvring. Demonstrate your servo heading that the manoeuvring arm of the servo is in the position of closed spoilers of your radion manoeuvring. (Example full gas on the way of the engine manoeuvring of your radio) Adjust your manoeuvring and glue your servo after having checked that both spoilers servos are moving in the right direction. Cover the servos with the sheet.

7. Assembly of winglets

The winglet shall be glued to the wing ends. If it is necessary, change the size of the gap in order to insert winglet. Apply epoxy resin, insert winglet into the rib and leave it to get dry.



8. How to install the radio and batteries

Insert the batteries, power switch and receiver in the fuselage. Connect all the servos in the fuselage with the radio. Use a Y-cable to connect the aileron servos to one channel only or use two channels, if available, for ailerons. Use a Y-cable to flaps servos and brakes servos.

Use foam to protect them from vibrations and impacts. Connect all components as necessary.

9. Assembling and finishing the model

Glue the brass pipe for the wing coupling into the fuselage. The wing halves can be secured in the right position either by self-adhesive tape or using a rubber ring. In this case make 1.8 mm holes in the first wing ribs and screw in the hooks for the fixing rubber ring. Drill the holes in the proper position in the fuselage for the rubber ring.

Applying the decorative stickers is the last step to finish your model.

Balance: Check the centre of gravity position. This is a very important relationship between the CG location and the stall characteristics of an airplane or knife-edge performance. CG location determines the stall characteristics.

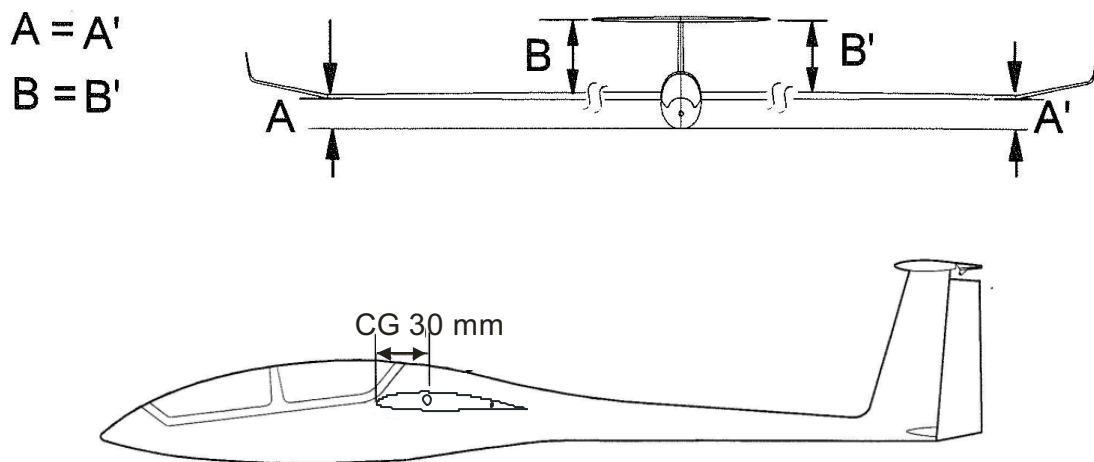
CG range from 27-30 mm measured from the leading edge at the root of the wing.

In workshop, ready to fly, carry the model on the fingers on each side of the fuselage at the wing root, after having drawn the balance marks.

If the model leans forwards (nose heavy), move the battery backwards.

If the model leans backwards (tail heavy), move the battery forwards, add some lead if necessary.

The plane is correctly balanced when it leans very slightly forwards with the index on the reference marks.



FLYING

Insert the wing joiner into one wing, then into the fuse and add the other wing. The dowels ensure the correct incidence of the wings. You can use a white or clear tape to attach the wings to the fuse, only at upper side.

Don't forget to check the symmetry of the whole model. Once on the field, first check the function of your RC set and check the range, too. Calm weather is the best for the first flights. Try hand launching, trim if required for optimal gliding. Provided that everything is in order, you can go for the maiden flight, with a charged battery of course.

Besides the slope soaring it is possible to install a tow hook and use a set for high-altitude launches for thermal soaring.

Set up:

Rudder function: +/- 30 mm

Elevator function: +/- 6 mm

Aileron function: +8/-5 mm, term flight -1mm

Centre of Gravity - usually 27-30 mm from wing leading edge

Have a lot of fun and many happy landings with your DG-1001