

Jiskra

Category A school glider model

(NOTE: this is an automatic translation using Google Translate)

Dear friends,

JISKRA is a model of a school glider of category A3, intended for beginning modellers. We can take part in modeling with him competitions. To complete it, we will need basic modeling tools £ Modeling saw, modeling knife, grinding paper No. 180, hammer, modeling pins, clothes pegs, weak brush for applying glue, soft flat coating brush, board for construction with a floor plan of 250x900 mm with a thickness of at least 15 mm. It must be equal, Soft plywood, blockboard, or drawing board is suitable.

We will start the construction only after a proper acquaintance with the instructions and drawing. We clean all wooden parts with sandpaper.

DESCRIPTION OF THE CONSTRUCTION

1. BODY

We start the construction of the fuselage by gently grinding the head 1 and the fuselage beam 2. We fit the fuselage beam 2 into the cutout in the back of the head 1 and glue it. During the drying of the glue, store the parts on the work surface board with plastic foil preventing sticking. Glue the sides of the load chamber 4 and during the drying time of the glue we will provide them with clothes pegs. Glue pin 6. Glue parts 8 and 9 of the wing bed and parts 3, 20 and 22 to each other bed of horizontal tail surface. Glue the strips 7 of the bed of the horizontal tail surface to the vertical tail surface 6. About 5 mm before the center of gravity, drill 1 hole with a diameter of 2 mm and a depth of about 10 mm into the head. We'll stick it in towing hook 5. Prepare and fix the fixing pin to the underside of the tail part of the fuselage according to the plan horizontal tail surfaces 23.

2. HORIZONTAL OCA.SN (AREA

We glue it on the construction drawing in a scale of 1: 1. In order not to damage the drawing, we stretch it with a thin one polyethylene foil, for example from a large PE bag. The individual parts of the skeleton are pinned with model tools pins to the construction board. The inlet and outlet rail 10 may be longer than in the drawing, after completion we cut it with a skeleton. We cut the ribs and diagonals 11 with a small addition up to about 1 mm and fit them perfectly grinding. Attach them with pins while the glue dries. Apply the glue with a small brush. Especially for cross-sections, cuts over years of balsa, let them soak for a while, add glue and we glue the parts. This will achieve a firm connection. The balsa is very porous and absorbs glue. We will not forget glue the triangular reinforcements 7. Glue the fixing pin

exactly to the center of the horizontal tail surface 24. After the glue has dried, sand the horizontal tail surface with sandpaper glued to a wooden one prism and round the edges.

3. VERTICAL TIME SURFACE

It is similar in construction to the vertical tail surface. We glue it on the drawing from balsa strips 100 of cross-section 3x5 and balsa strips 11 of the same cross section. Also for this part of the model, we reinforce the triangles 7 with corners. Po after drying the glue, sand the surface and round the edges. Glue the finished vertical tail surface to the beam hull 2. We make sure that it is exactly in its axis.

4. WING

We lightly regrind all parts. We will glue again on the drawing in the actual size protected by transparent foils. We will start the construction by modifying the drain rail 140 with a triangular cross-section. According to the drawing you we will mark where the ribs will be embedded in it and in these places we will cut it to a depth of about 4 mm. Attention, the bar will be right and left! Pin the leading rails 12, the lower flange of the beam 13 and the drain rails to the drawing slats 14. We grind the ends of the slats, which will be in the place of the wing bend, at an angle according to the drawing, we cut the slats in length, also according to the drawing. Glue the notches in the drain rails with glue, glued places on the lower flange beam, leading bar and glue the ribs 15, 16, 17 and 18. Finally, glue the upper flange of the beam 13 and triangular plywood 19. This way we have roughly finished the skeleton of the wing. After the glue has dried, at the earliest in eight hours, the wing parts are pinned off the worktop and lightly sanded. We round the ends of the ribs 18 according to the drawing. We will now proceed to the most demanding and very important operation, grinding the contact ribs 17 in places breaking the wing at an angle so that we achieve the required wing lift. Both interfaces must be perfectly matched, otherwise the joint will have little strength. Apply a thin layer of glue to the glued surfaces, let them soak in, paint again with glue and glue the halves of the wing. Squeeze the joint with clothes pegs. Wipe off the overflowing glue with a cloth and let it dry for at least eight hours. Then we grind any excess glue.

5. MODEL COATING

We grind the skeleton of the model, pay attention to the balsa parts so that we do not damage them. Iron the paper with an iron set to blame temperature to remove stocks. We cut the necessary pieces of paper with an overlap of about 20 mm on each side. Paint the frame twice with adhesive or tension varnish. For gluing Celolesk varnish, which is sold in drugstores, is also suitable. We attach the paper to the skeleton and coat it a soft flat brush dipped in dilute tension varnish. He seeps through the paper, etches adhesive varnish on the skeleton and the paper is glued. At the wing, we first cover the bottom surface. On the ribs we do not stick the paper. Remove any coiling by tightening the paper during gluing. Residual carefully cut the paper with a razor blade. Glue the top cover, which should exceed the bottom about 2 mm. We switch off the glued paper cover and impregnate it with four to five coats of diluted tensioning agent. varnish. About an hour should elapse between coats. We work outdoors or in a well ventilated area rooms, paint fumes are harmful to health! Paint the hull with a vertical tail surface with three coats of glossy nitro lacquer or Celolesk. We must not use open flames, vapors from the thinner mixed with air form explosive mixture!

We follow the safety rules stated on the paint and nitro thinner. Dry horizontal tail surface pin it on the worktop with foil and leave it until at least the next day. We will prevent her twist. So is the wing.

6. PREPARATION FOR FLYING i

Attach the wing to the fuselage with the attached rubber; attach the horizontal tail surface with 2 loops - the first thread on the fuselage between the vertical tail surface and the bed of the horizontal tail surface from parts 3 and 22, its second hook the end behind pin 24. Fasten the horizontal tail surface to the flight position with the second loop rubber wrapped around pins 23 and 24. If we still add the thread tied to the hull and at the other end stitched through the center of the horizontal tail surface, limiting the tilt to about 30 degrees upwards, we can equip the horizontal tail surface with a cigar determiner. We pour shots 21 into the warhead to have reached the prescribed position of the center of gravity. The model supported at this point should be horizontal position or with the head slightly tilted to the ground.

7. FLYING OF THE MODEL

We choose calm weather with no wind or light wind. We drop the model from the hand slightly to the ground against the wind and we follow his flight. The symmetrical model glides smoothly without turning. If it turns, the wing is or twisted vertical tail surface. We can fix this by heating, for example with a hair dryer. It can only turn slightly.

If the flight is winding, insert a thin pad under the leading rail of the horizontal tail surface. If the model flies steeply to the ground, we underlay the drain bar horizontally tail area. We tow the model with a 25 m long cord with a wire eye at the end. A small key ring is suitable. Ring we catch it by the towing hook 5, the helper sets the model upside down at an angle of about 15 ° to 20 °, the lift operator even the helper will run - the cord must be taut - and the helper will release the model. He should rise upwards, at the top of the flight we slowly slow down the run, the model goes into a slip and the ring of the tow line falls off. If the model turns sharply during the lift, we will immediately reduce the running speed. If a slowdown comes in time, the model aligns itself in the right direction and we can continue to tow. If not, we let the model disengage. Otherwise there is a risk of accident. We can hook the towing hook into sideways to the side to which the model turns. Towing a model requires experience, so we are in no hurry.

We wish you many nice flights with your Spark.

1 Plywood head 1

2 spruce hull beam 1

3 beds horizontal tail, areas front plywood 30x15 mm 1

4 sides of the load chamber plywood 2

5 hook tow steel wire 1

6 pin beech 1

7 plywood triangular balsa 1

8 wing beds plywood 2x25x125 mm 1

9 reinforcement bed bed balsa triangle. 5x5x265 mm 1

10 tail balsa strip balsa 3x5x490 mm 2

11 rib strip of tail surfaces balsa 3x5x490 mm 2

12 wing sash balsa 5x6,5x420 mm + 5x6,5x215 mm pre - ground 1 + 2

13 flange beam spruce 3x5x500 mm 4

14 drain strip balsa wings 3x12x420 mm 2

15 balsa rib 16

16 rib of the central wing of the balsa 1

17 balsa wing breaking rib 4

18 end balsa rib 2

19 triangular balsa plywood 20

20 bed horizontal tail surface plywood 15x10 mm 1

21 shot load 40 g

22 spruce support rail 3x5x30 mm 1

23 fixing pin of the horizontal tail surface spruce 3x5x30 mm 1

24 fixing pin horizontal tail surface spruce 3x5x30 mm 1

25 coated paper 2 sheets

26 rubber strap 3x1x500 mm 1

27 glue 1

28 paper brushes 1

29 set of drawings and instructions 1