



SWIFT MAXI

Stavební návod

Assembly Instructions

Technical data

Wingspan:	1380 mm
Total weight:	900-1200 g
Wing surface:	56 dm²
Motor:	EM 400/ EM 540
Power source:	3S Li-Pol 2400 / 3S2P Li-Pol 2400
Controlled functions:	Elevator, Aileron, Throttle, Elevon mix needed

Accessories

RC equipment

Transmitter – three channels transmitter needed (at least). The transmitter must provide the delta mixing function for elevons.

Recommended servo – 15-20 g, for example MS9380, Hitec HS81

Receiver – choose one of the small ones, for example MS-002 or MS-003.

Power source – recommended are for motor EM 400 – 3x Li-pol 2400 mAh, for motor EM 540 – 3S2P Li-pol 2400 mAh

Speed controller – brushless speedcontroller for recommended motor (EM 400 or EM 540).

Materials and tools needed for SWIFT assembly:

Epoxy or Standard CA bond medium thickness, and corresponding CA activator

Self adhesive tape with glass fiber reinforcement (manufactured for example by 3M), 25mm width.

Terms used

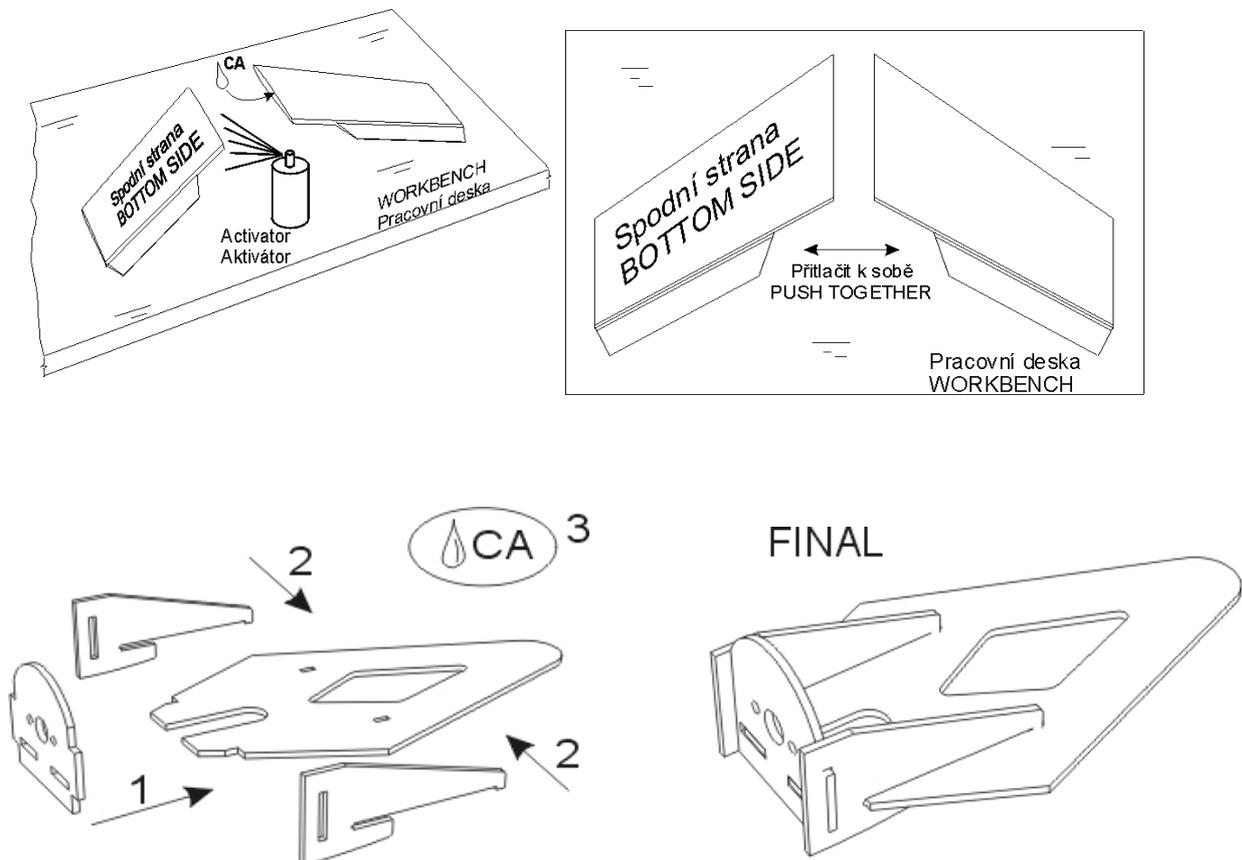
Negative dihedral. Upside down V dihedral.

Elevon. Steering element fulfills aileron and elevator function. Used on delta planes.

Assembly steps

RC set up. Switch on the transmitter, set up the proper mix for delta planes, set trims to neutral position. Put simple horns on the servos, the horns are perpendicular to the lower wing surface. Make a cut in the wing to place antenna in, if the antenna is longer, than the half of the wing, make the cut in zigzag manner.

Wing assembly. Apply medium thick CA bond on one wing root section, and spray some CA activator on the other one. (You can use epoxy instead of CA as well.) Put the wing halves on a flat surface, and press the trailing edges towards the surface (see Pic. 1) Press the both wings roots together and wait until the glue hardens. If you follow the described process, the wing will have the proper negative dihedral. Advice: put a plastic foil between the wing and the surface to prevent the wing sticking to it.

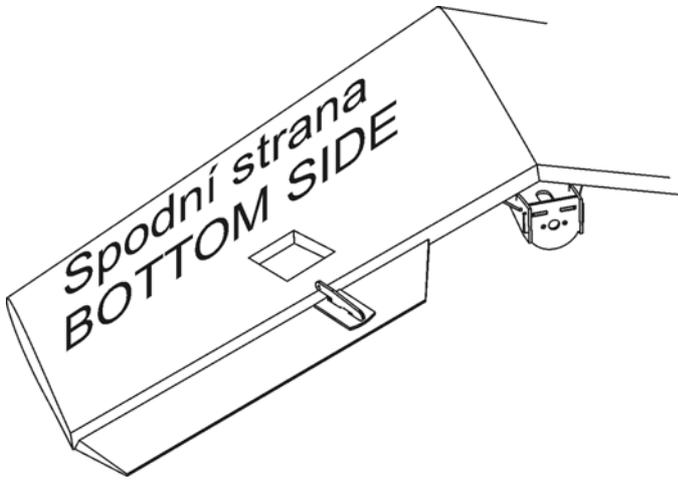
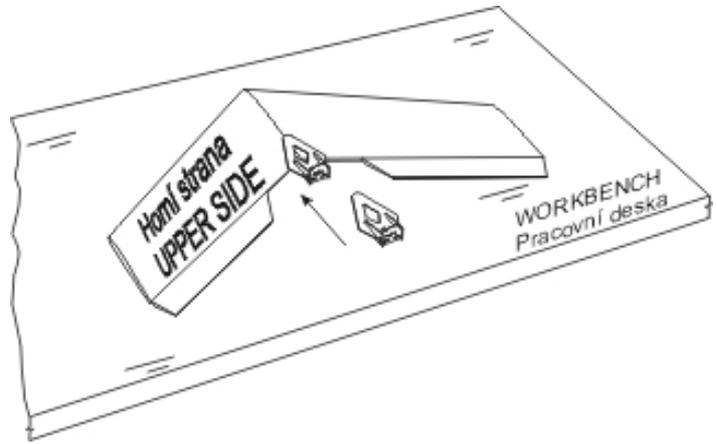


Power unit instalation:

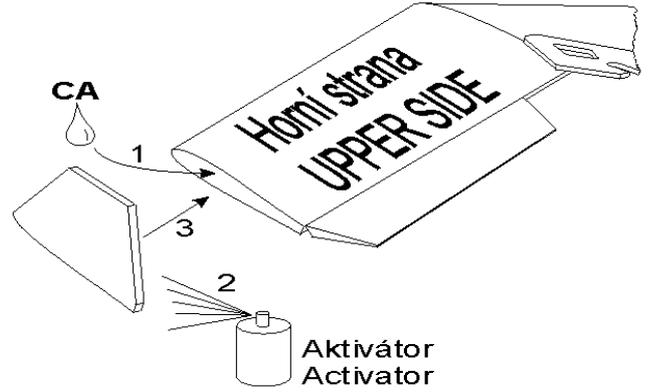
Power unit is delivered separately with two follow options:

1. EM 400 – recommended with 3xLi-pol 2400 mAh , propeller 9x4.7, max load current around 17A
2. EM 540 – recomended with 3S2P Li-pol 2400 mAh, propeller 10x4.7, max load current around 28 A

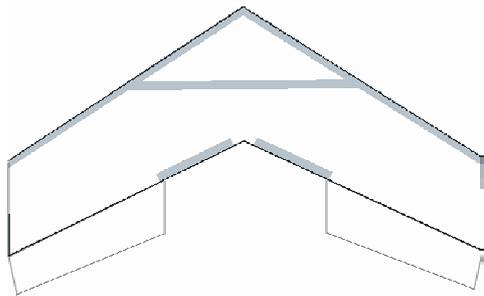
Before gluing of the motor bed, check correct placement on the wing by putting the motor in it's position - the tips of the prop have to pass the edges of the wing in distance 3mm. Mark the position of the reducer, take it off and using CA glue, fix the motor bed onto the top center side of the wing. Before gluing, coarsen the surface of the motor bed.



Steering elevon horn. Put the horn on the elevons in such a manner, see picture on right side, and the hole for the pushrod is in perpendicular position over the elevon axis of rotation. Cut holes for servos as see picture on right side.



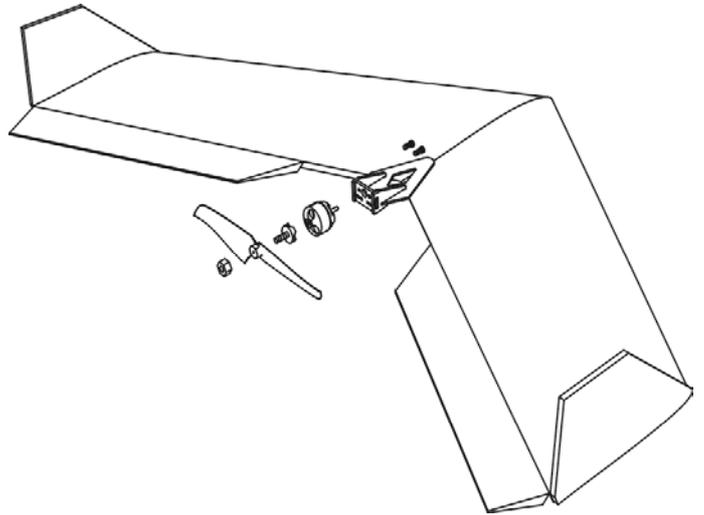
Rudder assembly. Glue the rudders to the end of the wing using the CA bond, similarly as you fixed the wing halves together.



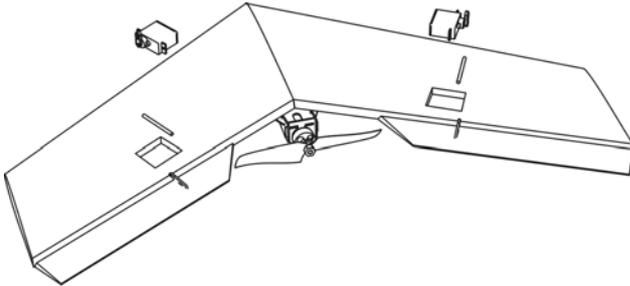
Stiffening by glass fiber tape. The best is to use 25 mm tape, on places where you need slimmer, simply tear it parallel to the fiber. At first reinforce the leading and trailing edges, and put on the “main beam”

Reducer Assembly:

Put the motor on the motor bed, and screw it with two M3 screws – motor is mounted in opposite position. For mount of prop use set for push prop - opposite mount.



Pushrods. Use the enclosed string to make the pushrods. Set up the pushrod length so the elevon is elevated for 3-5 mm in neutral servo position! This is measured from the bottom wing surface to the trailing elevon edge. Use Z joints to attach the pushrod to the horns. The ratio of servo and elevon horn length is 1:1 (recommended). Attention – the elevon rotates on upper wing surface! It might be needed to cut a dent



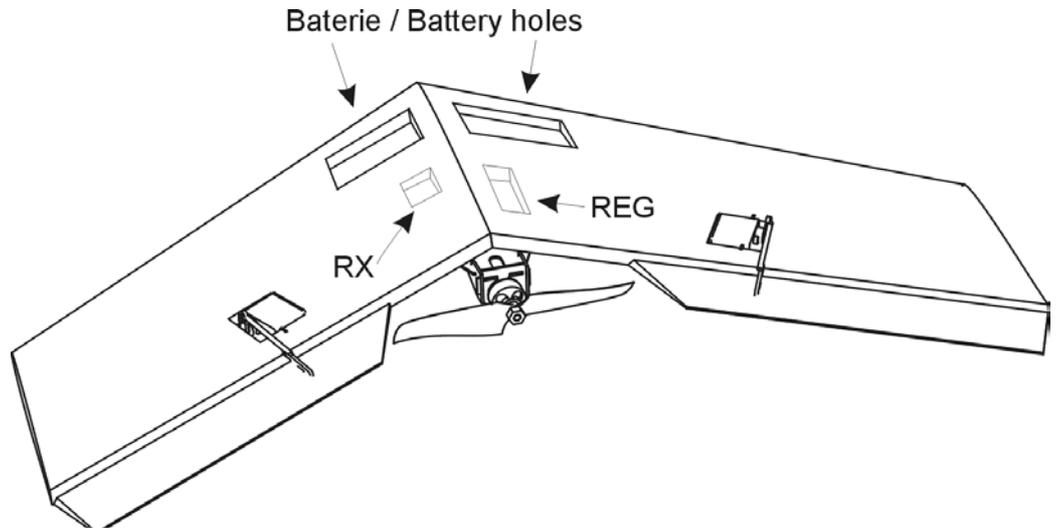
in the wing to allow free horns movement in maximal negative deflection.

Put the servos into the proper holes - see picture and fix it by the fiber tape.

Cut holes for receiver , regulator and for bateries – depend on power motor – if you want to use EM400, with one baterie 3xLi-Pol 2400 mAh, cut only one hole. For EM 540 with two bateries 3x Li-pol 2400 mAh (combination 3S2P Li-pol), cut two holes.

Before cutting of holes for bateries controll balancing - center of gravity (COG) must be 300-320 mm from the model head – see pic. 7.

Put the receiver and regulator into the proper holes - see picture and fix it by the fiber tape .



Final product...

