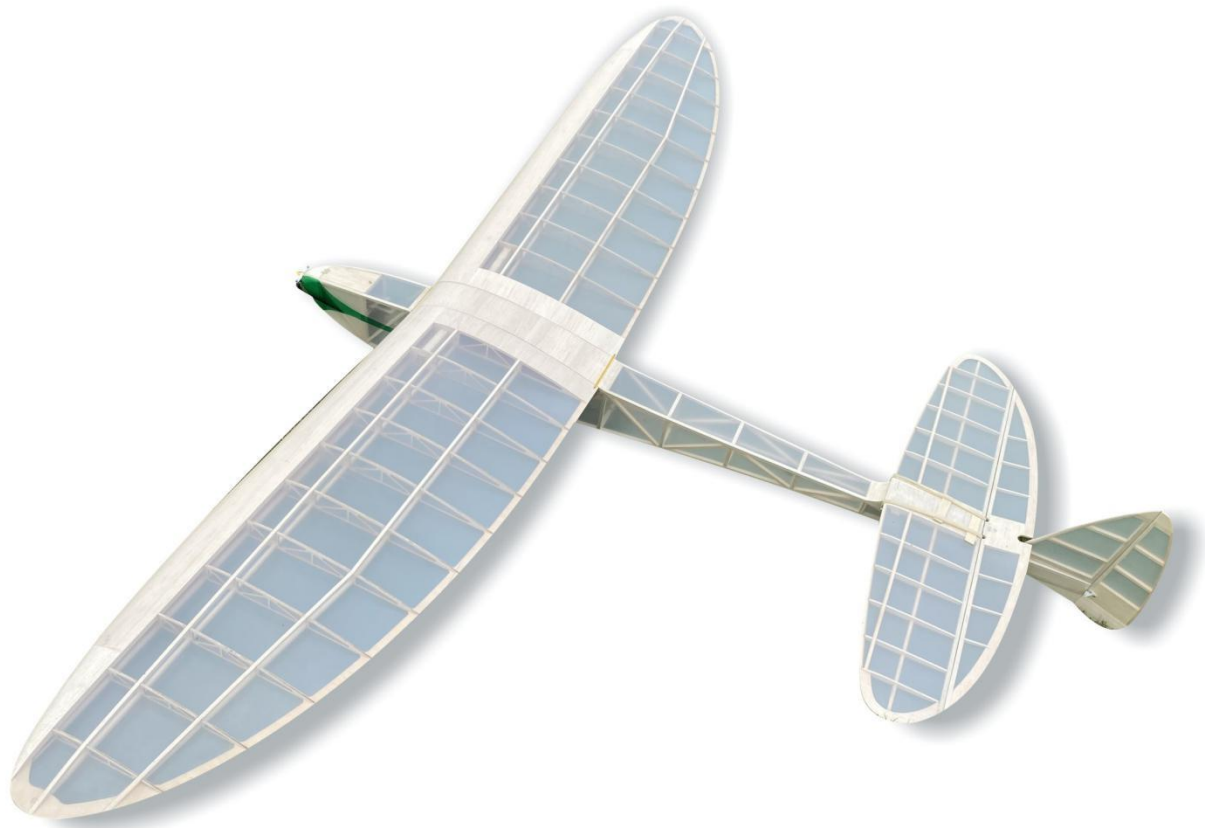


# Leprechaun Pro.



**Building Instruction**

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# INTRODUCTION

Leprechaun pro. was designed by Valueplanes in 2021. The design inspiration comes from classic high-performance gliders. In order to meet the requirements from the beginners and sport flyers who wanted to have a go at vintage flying, the special construction gives the glider very high gliding performance, which allows it to fly both with and without power.

Leprechaun pro. kit includes pre cut wing ribs, reed wood strips for the wing and tail tips, ply formers, balsa strip, sheet and block parts, hardwoods and dowel, a hardware pack and full size plans. Everything needed to build the basic airframe of the model. Customers just need cover, power system, servos, RX&TX.

It's very good choice for leisurely flying in the fast-pace life.





## PRODUCT LIST

1\* Un-assembled Leprechaun Pro.KIT

Wood sheet pack\*1    1:1 Plan\*1

Balsa stick one set for each size

(6\*6/8\*6/8\*8/10\*8mm)

Operation instruction\*1

Complete accessories bag\*1



## FEATURES

- Complete airframe KIT.
- The design is derived from the classics vintage gliders.
- Extremely lightweight, state-of-the-art almost-balsa construction.
- Everything needed to build the basic airframe of the model.
- Extensive clear full size planes and instructions.
- Only adhesives and coverings are required to complete the airframe.

## SPECIFICATION

- Wingspan : 2600mm
- Length : 2015mm
- Wing area: 1. 1m<sup>2</sup>
- Motor: 2814 1000kv
- ESC: 40A
- Batteries: 3S 2200mAh
- Prop. : 13"
- Servos : 2pcs of 17g



# BUILDING INSTRUCTION

## 1 Fuselage frame assembly

( 1 ) Extend the 8X8 balsa strips and fixed them according to the position on the full size plan.



( 2 ) Glue balsa strips of the fuselage, vertical (8X8mm), oblique(8X6mm).



( 3 ) Strengthen the nose part with 3mm balsa strip. Pay attention to the symmetrical adhesion on both sides of the fuselage.



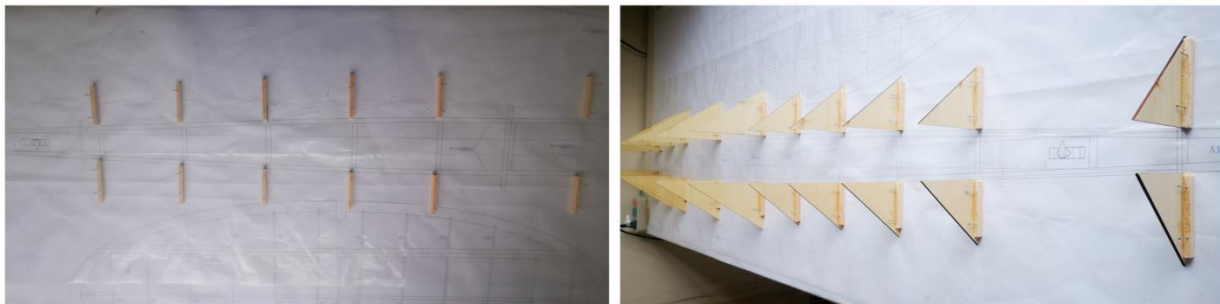
( 4 ) Glue A9 balsa sheet on the tail. Pay attention to the symmetrical adhesion.



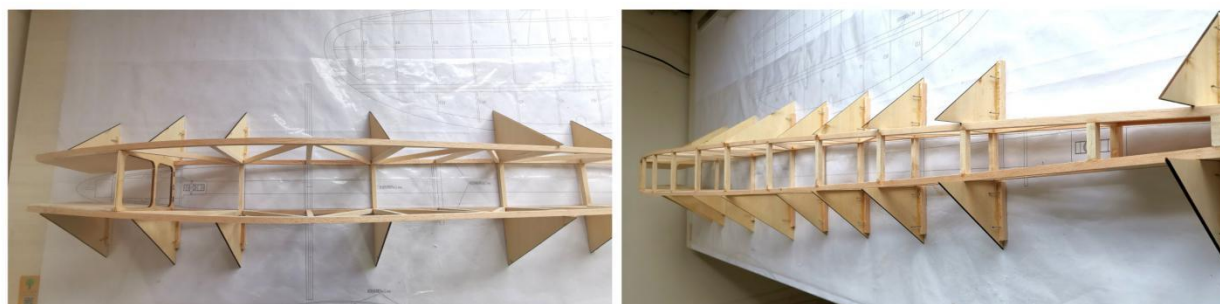
( 5 ) Polish the tail to make it have a larger adhesive surface.



( 6 ) Make the fuselage fixture with the laser-cut plywood and fix it in accordance with the position on the plan.



( 7 ) Fasten the fuselage to the fixture and glue A3 and the fuselage balsa strips.





( 8 ) Glue the balsa pieces numbered A10 on the tail.



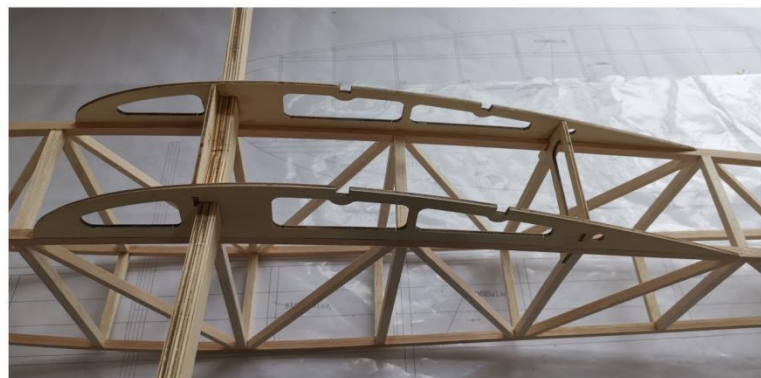
( 9 ) Glue the motor mount numbered A1 inside.



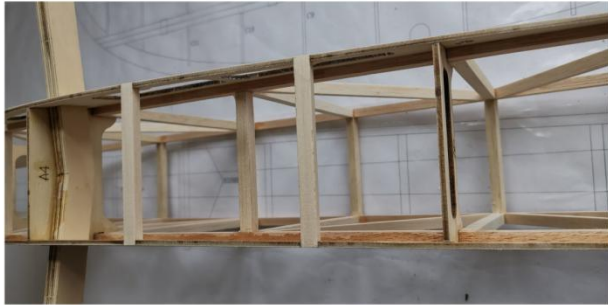
( 10 ) Glue A4 into the fuselage, and combine and glue the wing joint parts, then glue it on A4 according to the position marked on A4. Make sure the connecting line between the two vertices of the "V" wing joint be horizontal.



( 11 ) Glue bulkhead numbered A6 to the fuselage, and glue the two wing ribs numbered A5 as the wing supportor.



( 12 ) Glue two 8X6mm balsa wood strips as the stiffener.



( 13 ) 2mm balsa sheet covered on the wing supportor.



( 14 ) Glue the horizontal tail wing supportor and glue the stiffener ,then glue servo mount numbered A7 to the fuselage.



( 15 ) 2MM balsa sheet as the cover.



( 16 ) Combin and glue the nose and glue it to the fuselage.





( 17 ) Install magnets on the battery cover and mount, and stick the battery mount to the bulkhead of the fuselage.



( 18 ) Fasten the hinges to the fuselage, install a screw as the handle for hatch cover.



( 19 ) Glue wood strips inside the battery compartment, and fix the battery fixing plate with screws.

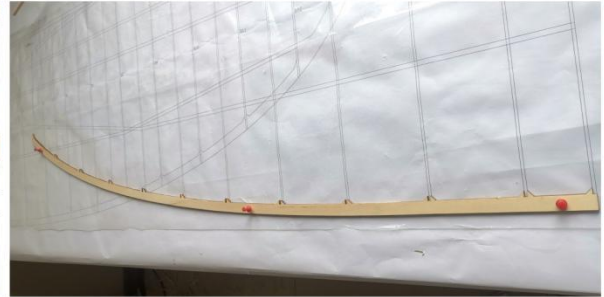
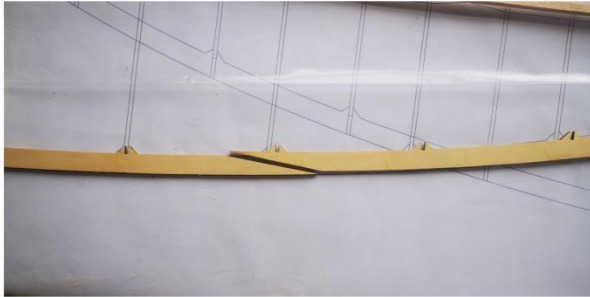


## 2 Wings

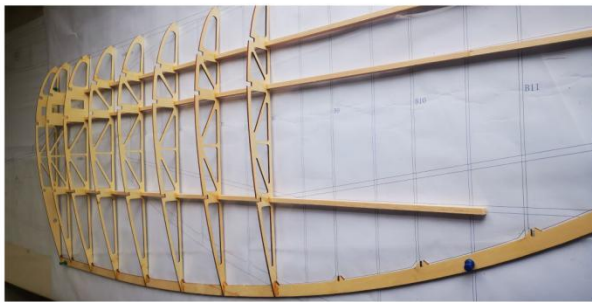
( 20 ) Glue the 8MM balsa sheets on the tail.



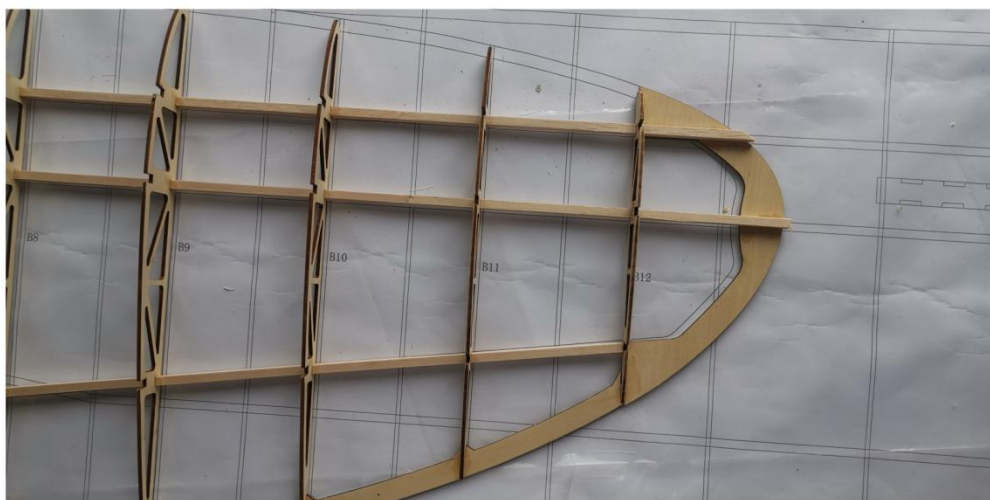
( 21 ) Joint the wing trailing edge.



( 22 ) Glue the wing ribs and balsa strips according to the plan.



( 23 ) Glue the wing tips (plywood).





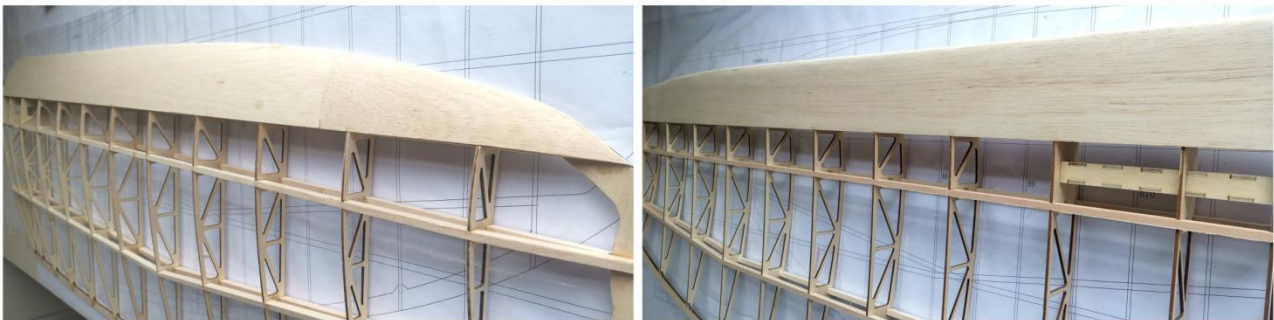
( 24 ) The leading edge of the wing (6X6mm balsa strips).



( 25 ) Combine the wing joint boxes and glue it to the wing ribs.



( 26 ) Glue 2mm balsa cover to the upper and lower of the wings and make sure the overall cross section of the wings are horizontal. (Be sure not to twist the ribs).



( 27 ) The balsa strips on the trailing end of the wings need to be remove 2mm, in order to balance the balsa cover for the upper and lower of the trailing end of the wings.



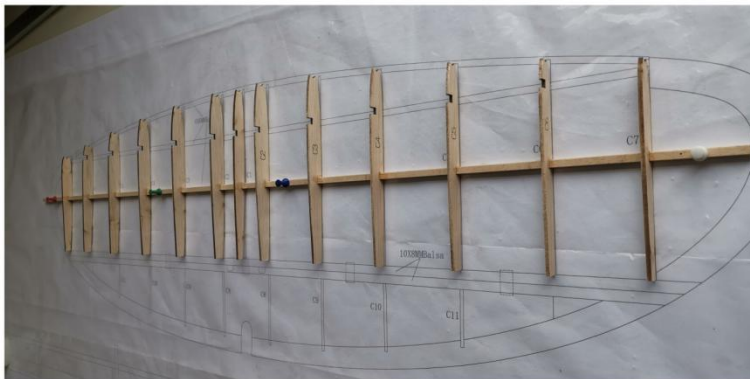


( 28 ) Glue the balsa cover for the trailing end of the wings, making sure the B1 ribs are flat (otherwise the wings will connect to cause large gaps).



### 3 Tail

( 29 ) Install the wing ribs of the tailplane according to the plan.



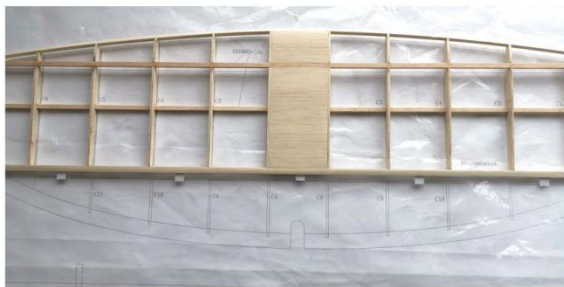
( 30 ) Glue the balsa steps for tail leading edge and trailing edge.



( 31 ) Combin wingtip balsa pieces, and glue to the tail.



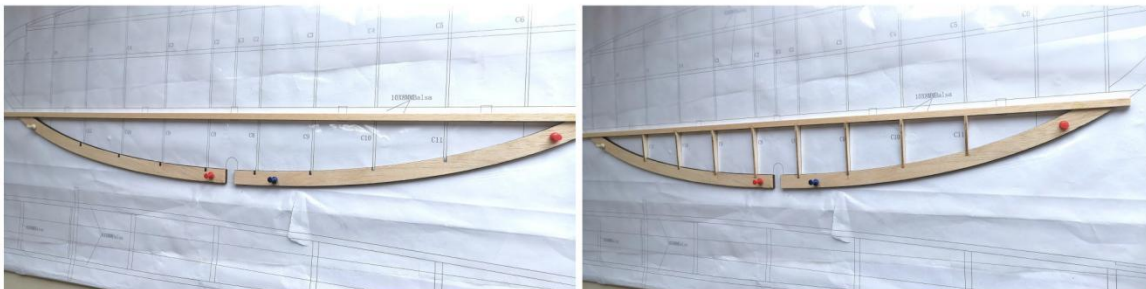
( 32 ) 2mm balsa cover.



( 33 ) Pin the 5mm balsa pieces of elevator trailing edge on the plan.



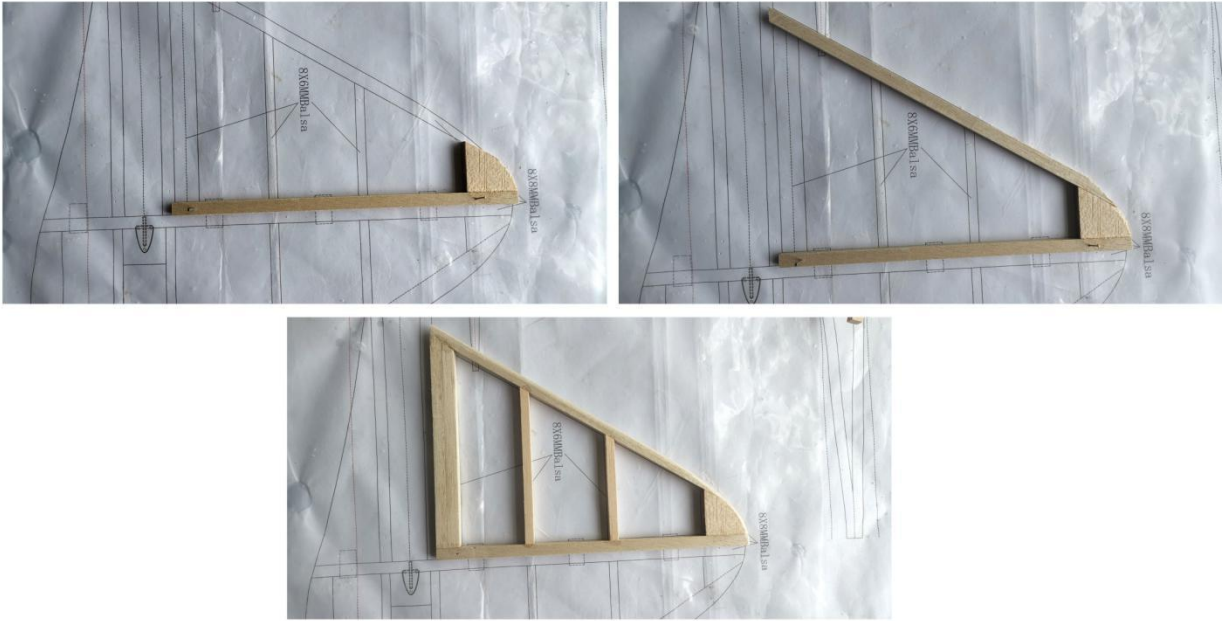
( 34 ) Glue 10X8mm balsa strips and wing ribs.



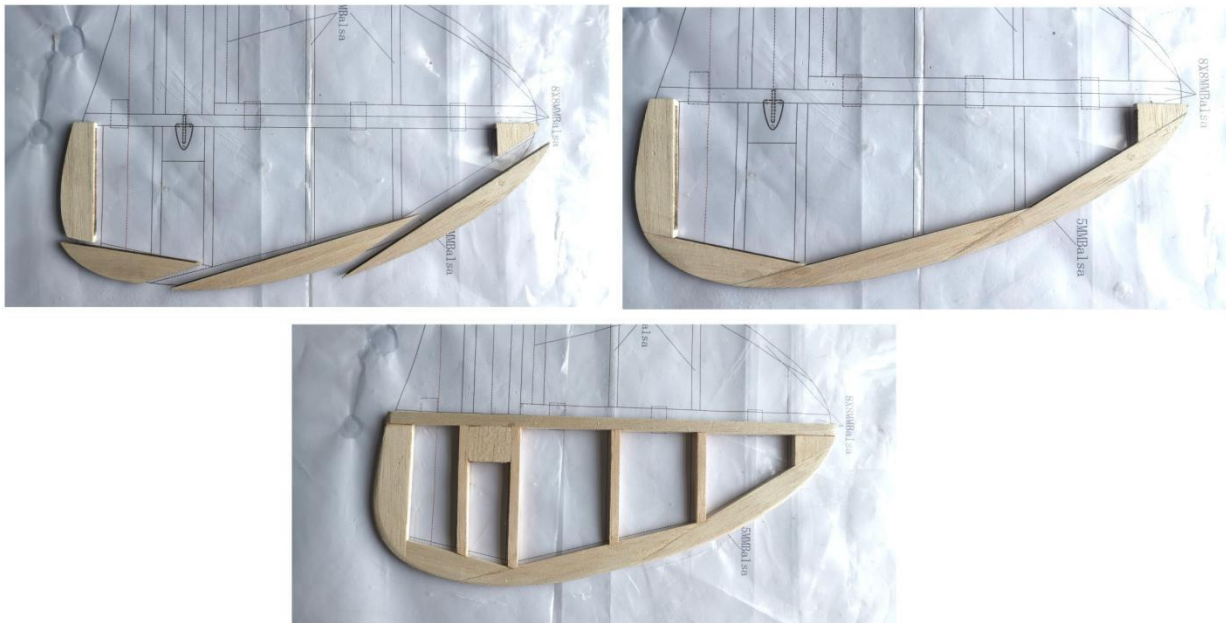
( 35 ) Glue 8mm balsa stiffener and polish it.



( 36 ) Glue the vertical tail . The lower part is joined by two 8X8mm balsa strips.



( 37 ) Combin and glue the rudder and polish the trailing edge.



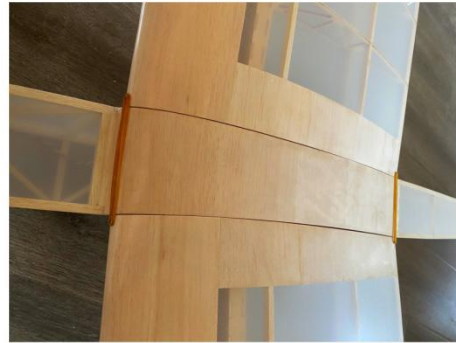


## 4 Others

( 38 ) Fix the tailplane with rubber bands.



( 39 ) Install self-tapping screws and fix with rubber bands.



( 40 ) The rudder is operated by a string.



( 41 ) Elevator controlled by steel pull-pull wire with ball joint, so that tailplanes and elevator can be fast-release .



## 5 Suggestions for angles and C of G settings

- 1). Center of gravity: about 50-55% of wing chord length from the leading edge.
- 2). Incidence of the wing: 0 degree.
- 3). 2 degrees down thrust angle.