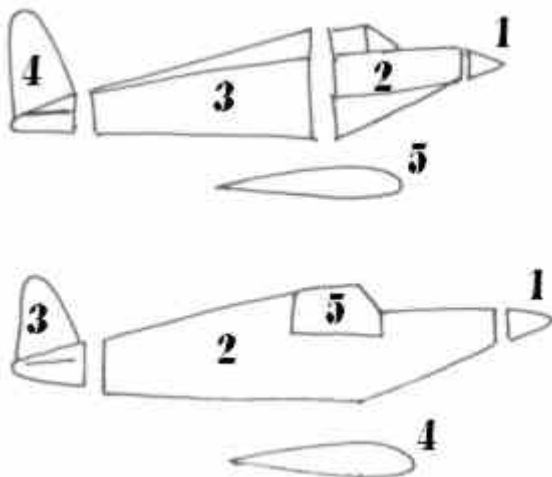


WHAT IS THE BEST ASSEMBLY ORDER FOR AN ALTERNATIVE MODEL?

The assembly order of an alternative model will depend on its structure type; however, it is possible to suggest a suitable assembly order to almost any model.

The figure below shows two different ways to structure a model. Each number corresponds to a different section that represents the parts to be mounted separately.

The scheme on the top of the picture (first scheme) corresponds to the oldest form I used to assembly my models: It is the 'primitive solid structure'. The bottom scheme corresponds to the most actual way to do the same thing: The 'blades method'. Currently, I consider that both of those assembly methods produces structures that can reach good results, and therefore, the combination of these methods can be a viable alternative of models construction. Consequently, an alternative order of assembly could be planned, on the basis of a mixing structure, respecting, otherwise, that proposed logic of ordinance.



In the top scheme:

1. is the 'propulsion helix section' - normally it was a wooden piece. This part of the model must be separated from the remaining parts because this can be a mobile part of your model.
2. is the 'cockpit and engine section' - a horizontal cardboard cylinder (basis), enclosed among a series of other cardboard parts (finishing) that compound the final geometric shape of this section of the fuselage. See that using this solid primitives approach, it was possible to construct the cockpit separately in two of my models.
3. is the 'aircraft's tail long section' - composed normally of an inclined cardboard cone (basis), surrounded by other cardboard parts (finishing) that compose the final shape of this section of the fuselage. The motif to separate this portion of the model from the 'cockpit and engine section' is the different inclinations of the

main cardboard primitives (basis) at the nose and the tail of the aircraft.

4. is the 'rudder section' - It is necessary to separate this part of the airplane in order to allow the correct alignment of the aircraft's tail avionics with the wings of the airplane.
5. the wings - It seems logical to separate the wings from the aircraft's fuselage because they extends in a different direction than the other parts, making almost impossible to assembly the entire set in only one part.

In the bottom scheme:

1. is the 'propulsion helix section' - the assembly of the helix uses, now, some specific techniques, being necessary to separate it of the remaining parts of the airplane. Moreover, this is a mobile part of the airplane.
2. is the 'fuselage section' - The use of a multi planar cross structure eliminated the necessity of to divide the fuselage in different solid primitives. Thus, it was not necessary to create an 'aircraft's tail long section' anymore, since the different inclinations required for the solid primitives ca be easily take into room by the cross structure.
3. is the 'rudder section' - the reason to separate this section of the airplane from the others is the same of the first scheme: The final alignment of the model.
4. the wings - the reason to separate this section of the airplane from the others is the same of the first scheme.
5. is the 'cockpit section' - It is necessary to separate the remaining airplane's parts due to complexity of its assembly. Moreover, it is necessary to paint the cockpit's components before you finish your airplane, since it will be very difficult to paint these small components with no risk, after they are settled in their definitive places.

In a more general scheme, we can use the following order:

1. Mount the fuselage
2. Mount the wings
3. Fix the wings in the fuselage (not definitive fix)
4. Coat the wings with paper
5. Coat the fuselage with paper, excepting the cockpit's and wing's to fuselage's joints.
6. Mount the rudder section
7. Construct the cockpit's components and paints each of them, separately
8. Assembly the cockpit in one single pieces set. Fix it on the fuselage
9. Make and fix the canopy on the fuselage, whiting the cockpit.
10. Coat the cockpit's to fuselage's joint

11. Find the correct alignment between the wings and fuselage / cockpit
12. Align and fix the rudder section. At this moment you will understand why the rudder section must be made separately from the remaining aircraft sections. See that the model will never be completely aligned, but this final adjustment will compensate some visual miss alignment.
13. Mount the avionics in its final positions. See that these parts of the model may be articulated.
14. Make room to collect in the landing gears under the wings, or on the fuselage of the airplane. Making this at now will guarantee that you will have these holes (landing gears compartments) in their correct positions. See that to make adjustments in a misplaced landing gear compartment is a difficult task. Due to particularities on working with cardboard, it is possible you will need to adjust some alignment and objects positions to get them correctly placed on the airplanes surfaces. Doing so, you can mount the landing gears themselves and fixes them into their respective places.
15. Mount the propulsion helix and spinner.
16. Remove the mobile parts of the model, apply some acrylic mass or other coating, and sand the surfaces. It gives finishing to the airplane.
17. Make the other aircraft details like air entrances and machine guns, working in only one at a time, and finishing each of them, separately. You must decide on what of these details must be made before the surfaces finishing step (pass 16), and on what you need to make now. You may decide on this, based on the size and resistance of each piece. If a piece is sufficiently big to be finished whitening the remaining parts of the airplane, and you know their structure can resist to sand, you probably can make it before the aircraft's finishing process. Otherwise, you must make it now.
18. Now, you must protect the glasswork of the airplane with masks
19. Apply a waterproof resin or some painting base to the entire model
20. Now, you must returns the mobile parts of the airplane to the model
21. Start to paint the airplane using masks or any method you like
22. You may now varnishes the model
23. After painting and varnishing the model, unmask the airplane's glasswork
24. Now, you must clean the glasses, to remove excessive ink that flow to the hinges joints and to enjoy your model!