



Technical data

Wing Span	1.080 mm
Length	890 mm
Wing Area	36 dm ²
Weight	1.000 g
Wing Loading	30 g/dm ²
Radio	4 ch
Electric motor/Cells "400"	(7/8 Cells)

Introduction

Biplanes possess a special charm due to their low wing loading and thus low flying speeds, which allow them to perform unusual manoeuvres that are beyond many model's "normal" flight limits. Your new **Miss Bipe** is an updated version of the popular Miss Chief model that has gained an excellent reputation for its easy flight characteristics.

To improve performance still further ailerons have been added to give greater manoeuvrability and total control. This extra control will be highly appreciated by those who prefer to use the new small brushless motors capable of supplying the extra power required for more aerobatic flight.

Before starting construction

Each construction stage is numbered in the correct sequence and is illustrated by a building sketch with the same number. Check off each construction step as you complete it so that if work is interrupted you'll be able to resume where you left off. A bracket [] is placed next to each building stage for this purpose.

Where glue is to be applied, the type of glue needed is indicated. We do not recommend the use of normal cyanoacrylate! Recommended glue:

5-Minute Epoxy (5')

Checking the kit

[] Check that nothing is missing or damaged, if any parts are missing or damaged please contact the shop where the model was bought.

Marking the parts

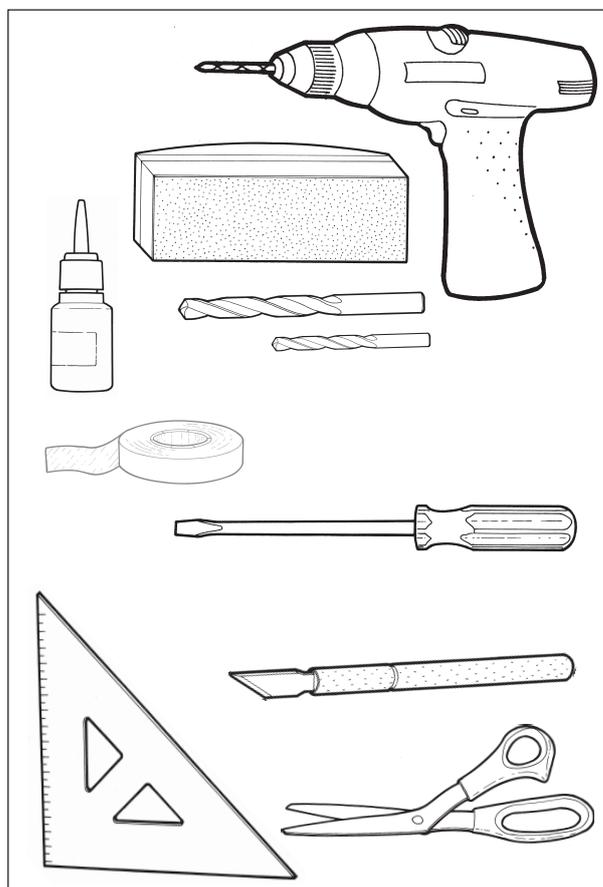
After checking the kit, in order to avoid confusion and speed up and simplify construction, it is suggested that you mark the wooden parts with their part numbers using a pencil. The part numbers can be found on page 14

[] Remove each die cut part and sand accurately. Store safely.

Equipment needed

Here is the list of tools you will need to complete **Miss Bipe**:

- [] - Modelling knife
- [] - Scissors
- [] - Screwdriver
- [] - Sanding block and paper
- [] - Set Square
- [] - Drill with 1.5mm and 5mm bits
- [] - Transparent scotch tape 20 mm wide
- [] - Pins
- [] - 5-Minute Epoxy (5')
- [] - Contact glue for polystyrene
- [] - Double sided Tape
- [] - Soldering iron and solder/flux



Assembly

1. With a sharp knife trim the covering film away from the inboard ends of the four wing panels leaving approximately 1mm of film overlap around the edge. It is necessary to trim the excess covering away to ensure a good wood to wood bond for the glue.
2. Carefully cut the hole for the aileron servo in the lower left wing panel [5]. Repeat the operation on the lower right wing panel [6].
3. Join and glue the smaller lower wing panels, right [6] and left [5], together using dowels [B2-4]. If necessary reduce the diameter of the dowels or increase the size of the holes in the ribs to fit. Check that the wings sections are correctly aligned.
4. Using a sharp knife cut through the covering film along the front edge of the dihedral brace slot. Peeling the film back will allow the dihedral braces [DC1-1] to be fitted.
5. Glue together the dihedral braces [DC1-1]. Check that the assembled brace fits the wing slot. Sand carefully if required to obtain a perfect fit. Glue brace into position and smooth down the film flap to cover the brace.
6. Join and glue the upper wing panels, right [4] and left [3], together using the dowels [B2-3]. If necessary reduce the diameter of the dowels or increase the size of the holes in the ribs to fit. Check that the wings sections are correctly aligned.
7. Before the glue has hardened check the wing dihedral angles: 90mm measured at one tip for the upper wing and 70mm for the lower. If necessary, use a little glue to fill any gaps left when the correct dihedral is set.
8. With a pencil mark the position of the upper and lower wing ply edge doublers [DC3-1]. The doublers are positioned 20 mm from the centre of the wings on top of the upper wing and on the underside of the lower.
9. Using the doubler [DC3-1] draw around its profile onto the wing surface with a pencil. Cut through and remove the film 1mm inside the drawn line.
10. Glue the doublers [DC3-1] into place. As the doublers are fitted to protect the edge of the wings from damage caused by the elastic wing fixing bands, they are positioned on top of the upper wing and on the underside of the lower.
11. Using a drill fitted with a 3mm bit, drill 2 holes through the corners in the fuselage bottom [7] in front of the first ply former and as close to the fuselage side as possible.
12. With a sharp knife cut out a slot between the two holes for the installation of the undercarriage [9].
13. Glue into place the undercarriage doublers [DC4-2] and [DC4-8]. Sand carefully as necessary to give a good fit. Allow to dry.
14. Insert the wire undercarriage [9] through the slot in the bottom of the fuselage and then lock in place by gluing the undercarriage securing plate [DC4-7] into the slot.
15. Before the glue hardens, check that the fuselage and undercarriage line up squarely. If not, adjust the undercarriage as required.
16. Slide a wheel lock washer [B2-2] onto the undercarriage leg [9], then the wheel [B2-1], followed by another wheel lock washer [B2-2]. Glue the outer wheel lock washer in place, ensuring no glue is allowed to come into contact with the wheel. Ensure that when the glue is dry the wheel can rotate freely.
17. With a sharp knife cut a groove in the top and rear spine of the fuselage to accept the tail skid [B2-5].
18. Glue the tailskid [B2-5] into place in the groove, using epoxy.
19. Using a drill with a 2 mm bit drill the two holes for the control rod tubes in the rear former [DC4-4].
20. Glue the rear former [DC4-4] into the fuselage
21. Glue the longerons [8] in position on each side of the fuselage using supports [DC2-5] to set the accurate position.
22. Glue the radio plate mounts [DC2-1] in place over the longerons [8].
23. File a slot in the rudder [1] to give clearance for the wire elevator joiner [B1-6].
24. Glue the elevator joiner [B1-6] into place linking the two elevator halves [2]. Check that the two halves line up correctly.
25. With a sharp knife carefully cut away the film from the upper surface of the tailplane [2] to match the width of the fin. Ensure that only the film is cut away, and that the tailplane is not cut into.

26. Holding the tailplane 10mm behind the rear of the fuselage as shown, mark the shape of the fuselage onto the underside of the tailplane with a pencil. Carefully cut away the film inside this marked line. The removal of the film allows wood-to-wood contact for effective gluing.
27. Glue the fin to the tailplane checking that it is perpendicular, 90° to the tailplane.
28. Glue the completed tail assembly to the fuselage.
29. Check that the tail plane is both horizontal and perpendicular to the fuselage.
30. With a sharp knife cut away the film to allow the wing dowels [B2-8] to be inserted. Fit the dowels, position centrally across the fuselage, and glue into place with a drop of glue inside the fuselage.
31. Position the two fuselage servos (not supplied) in the radio plate [DC2-4]. Once in position mark the fixing holes with a pencil. The servo fixing accessories are not included. Remove the servos and drill the servo fixing screw holes – these are normally 2mm.
32. Glue the radio plate [DC2-4] onto the plate support [DC2-1] inside the fuselage.
33. Install and glue into position former [DC2-6].
34. Glue in place the main wing strut doublers [DC2-2] to each of the upper wing struts [DC4-1]. Ensure you make a right and left strut. Using a 6mm bit, drill the holes for the upper wing dowels.
35. Install the two upper wing struts. These are positioned with the vertical strut against the rear of the compartment. Trim the front strut so it fits tightly up against the front former, with both the strut bases firmly on the radio support. See diagram. Glue firmly in place against the fuselage sides.
36. Insert the upper wing fixing dowels [B2-7] into the upper wing struts. Check that the struts are vertical and that the dowels are centred then glue in place.
37. Remove the film from the slots in the rear of the fuselage for the pushrods [B1-2]. Insert the pushrod tubes into the fuselage slots leaving the tubes sticking out about 10mm. Glue the tubes into position.
38. Locate the holes in the rudder and perforate the film. Install the control horn [B1-9] from the correct side and fix with the nuts [B1-5]
39. Repeat the operation for the elevator.
40. Install the servos into the radio plate [DC2-4] and fix in places with screws (not supplied)
41. Insert the wire pushrod [B1-2] into the pushrod tube on the rudder side. Remove the rudder servo arm and insert the "Z" part of the wire into the outer hole on the arm. Re-install the arm. Repeat for the elevator pushrod except that for the elevator the wire goes into the central hole in the servo arm.
- 42-43. Remove the servo arms from your servos. Switch on your R/C equipment, connect the servos and centralise the sticks and trims. Screw the clevis [B1-4] halfway onto the brass adapter [B1-4]. Attach the clevis to the control horn with the pin [B1-3]. Refit the servo arm to the servo at 90° to the pushrod. Insert the pushrod into the adapter and check that the control surface is correctly centred. If the rod is too long trim it to fit. When the surface is correctly centred glue or solder the pushrod to the adapter.
Note – If soldering the pushrod to the adapter remove the clevis from the adapter before applying heat otherwise it will melt. Refit when the soldering is completed.
44. Use a sharp knife and remove the film above the slots for the aileron torque rods [B1-11] on both the wing and the aileron.
45. Insert the aileron torque rods [B1-11] into the wing slot and glue the plastic tube in position. Ensure that no glue is allowed to get into the plastic torque tube to ensure that the torque rod can move freely.
46. Assemble the aileron servo tray.
47. Position the aileron servo on the tray and mark for the servo screws. Remove the servo and drill 2mm holes for the servo screws.
48. Glue the aileron servo tray into place.
49. Screw the aileron servo into place on the tray.
50. Screw the torque rod horns [B1-8] on to the aileron torque rods [B1-11] fitting them so that 2mm of thread appears above the horns. Screw the clevis [B1-3] on to the pushrod [B1-7] and insert the Z" end into the servo arm. With the servo centred ensure that the aileron is correctly aligned with the wing section. Adjust the clevis [B1-3] as required.

51. Carefully cut out the vac formed ABS fuselage top deck [10] with a pair of scissors. Cut to the moulded line. Retain the strips of left over material, as they will be used in the next phase. With a very sharp knife carefully score and cut the top deck into two halves 160mm from the front, the front half will become the hatch.

52. Glue in place around the inside edge of the top hatch [10] a strip of the left over ABS. This should be glued so it overhangs the hatch by about half its width. See diagram. This will act as a support for the deck section that is glued to the fuselage.

53. Before starting the next section look at diagram 56 to see how the hatch works. Glue in place the hatch mounting plate [DC2-3]. Also glue in place the hatch and deck formers [DC4-9]. Make sure the rear deck former is placed back enough not to touch the support lip. See diagram.

54. Glue the mounting plate [DC4-3] for the hatch retaining screw [B2-6] to the fuselage. Insert the screw. The screw allows height adjustment for the hatch fitting.

55. Glue the rear deck moulding in position between the upper wing support struts.

56. It is now possible to install the deck hatch. The hatch is placed over the screw and slid back so the support lip passes under the rear decking. Adjust the screw until the fit is tight/firm.

57. There are many options in motor choice. The diagrams show the installation of a Horak type reduction gearbox. For this installation use parts [DC5-1], [DC5-2], [DC6-1] and [DC6-2].

58. Glue the parts together to form a motor mount and adjust it as necessary to suit the motor.

59. With the motor/gearbox assembly installed check for position and that it lines up correctly. Attach the motor to the mount using a plastic tie-wrap. Ensure the tie-wrap is tight and the motor/gearbox unit cannot slip.

60-61. Install the receiver, speed controller and batteries as per the diagram.

62. Check the control movements. The rudder should have approximately 30° of movement left and right, the elevator and the ailerons 20° up and down.

63. Add decals.

64. With all equipment installed check the centre of gravity (C of G). The C of G should be 55–60mm from the leading edge (front) of the upper wing. To adjust the C of G move the battery forward or back.

Warning!

Your Miss Bipe is relatively small R/C model, which can be flown in limited spaces. Do not forget however, that it is not a toy but a potentially dangerous flying object.

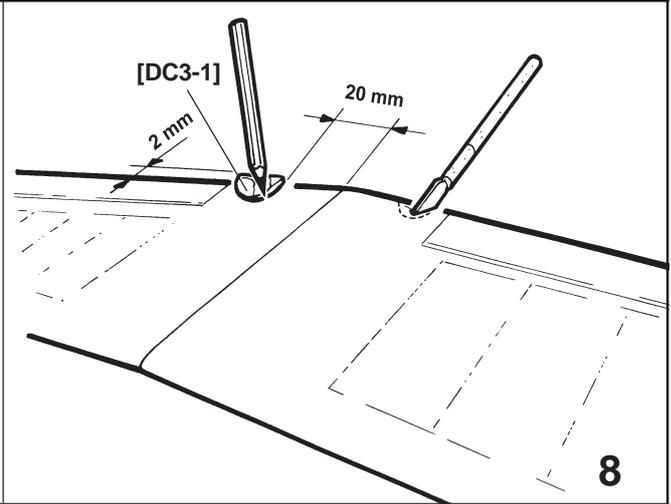
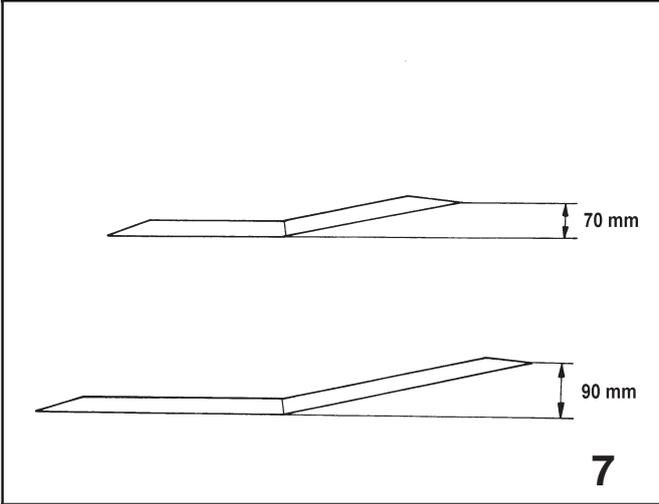
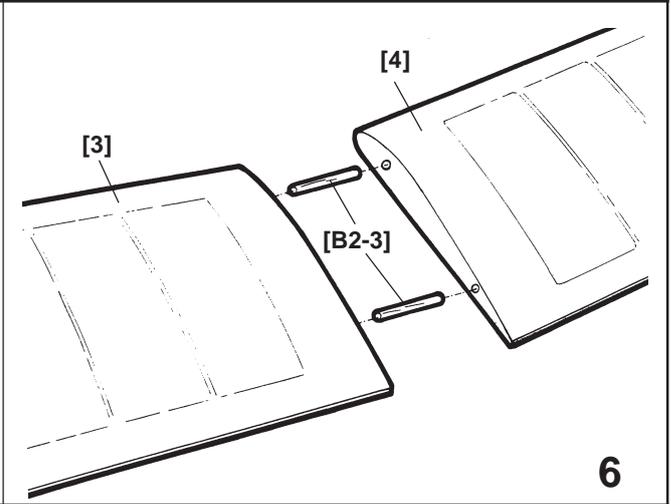
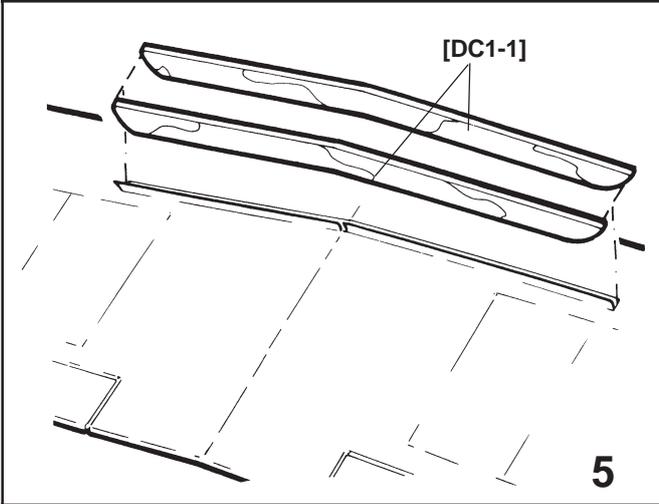
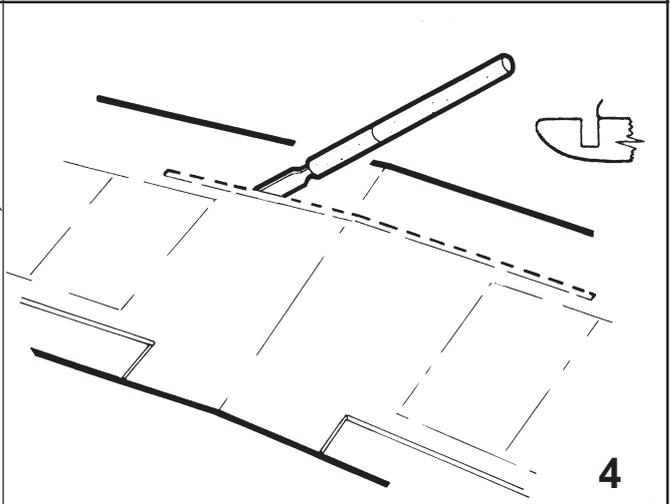
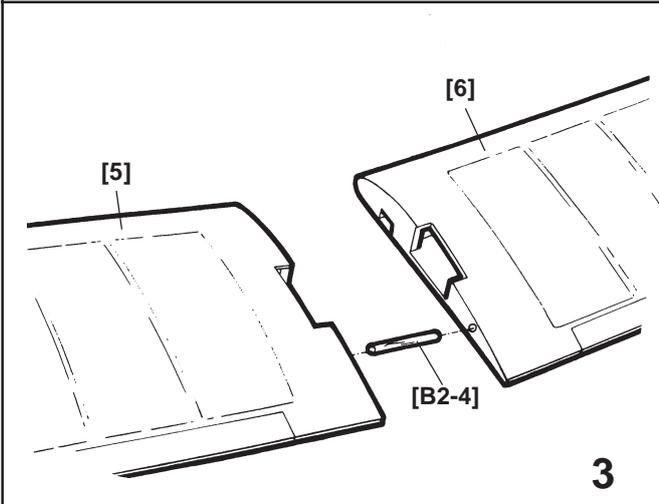
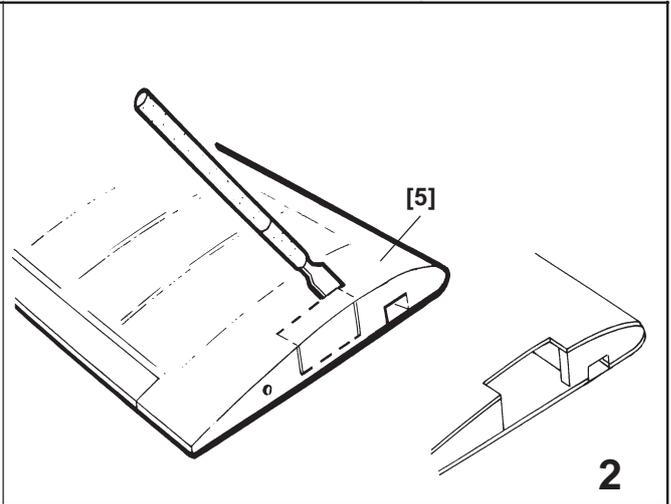
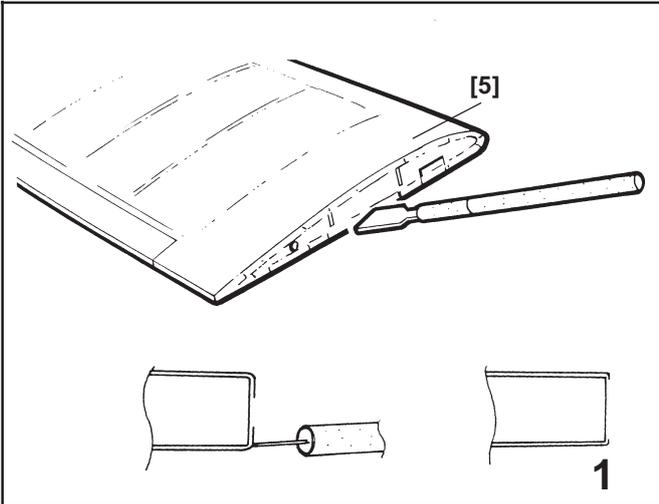
Never fly in crowded places, close to children, next to buildings, roads, airports or any other potentially dangerous area.

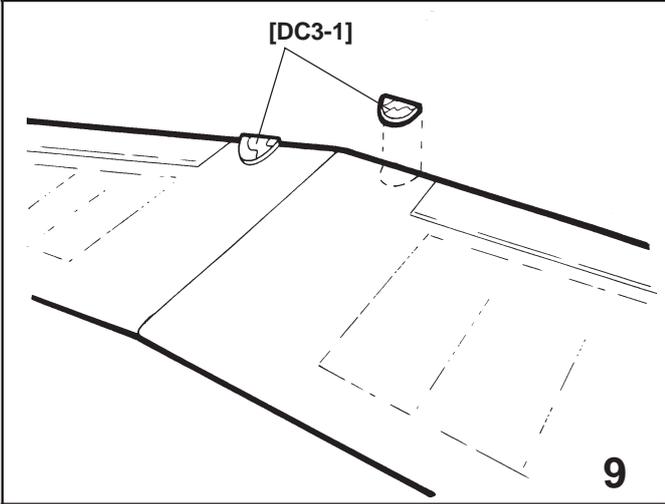
As owner and pilot of this model it is your responsibility, and yours alone, to ensure that it is operated safely. Others cannot judge its capabilities and so its safe use is entirely your responsibility. The above said, flown safely you will have many hours of enjoyment from your Miss Bipe.

Happy Flying!

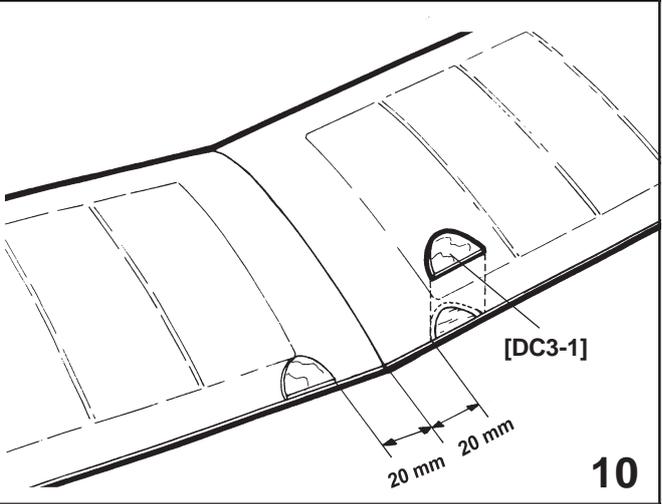
Box contents

No.	Qty.	Description
1	1	Fin/rudder assembly
2	1	Tailplane
3	1	Left upper wing panel
4	1	Right upper wing panel
5	1	Left lower wing panel
6	1	Right lower wing panel
7	1	Complete fuselage
8	2	Fuselage longerons
9	1	Undercarriage
10	1	Vac formed fuselage top deck
	1	Bag B1
	1	Bag B2
	1	Die-cut sheet DC-1
	1	Die-cut sheet DC-2
	1	Die-cut sheet DC-3
	1	Die-cut sheet DC-4
	1	Die-cut sheet DC-5
	1	Die-cut sheet DC-6
	1	Decals
	1	Instructions

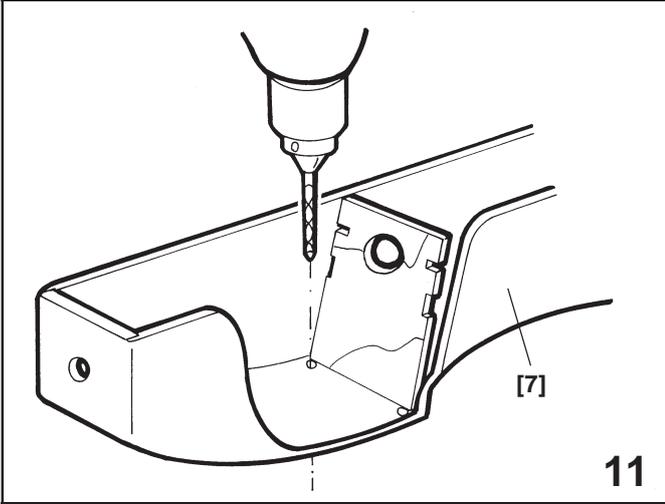




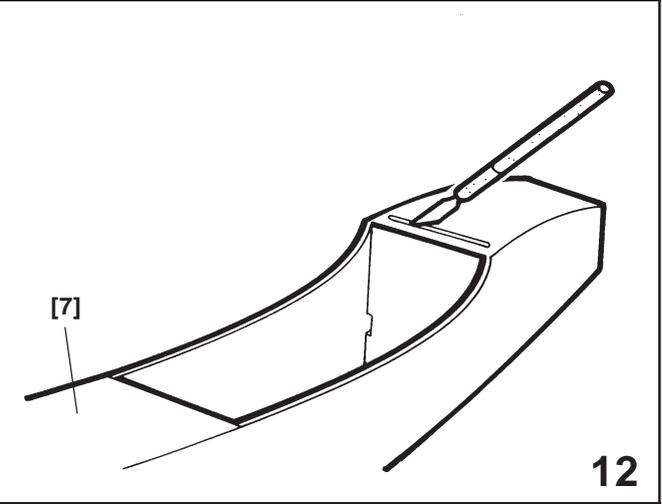
9



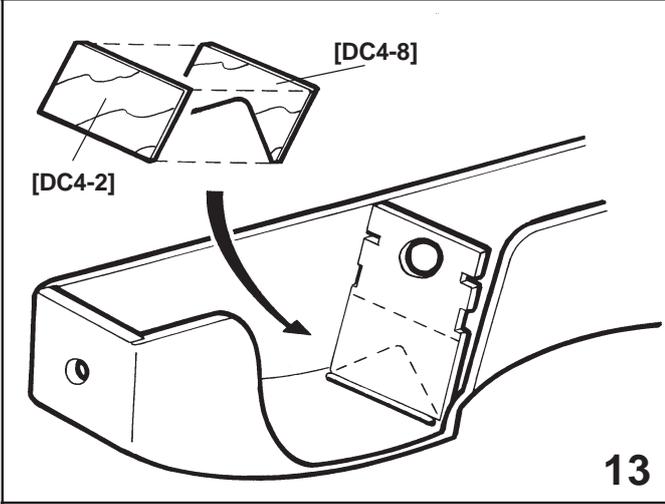
10



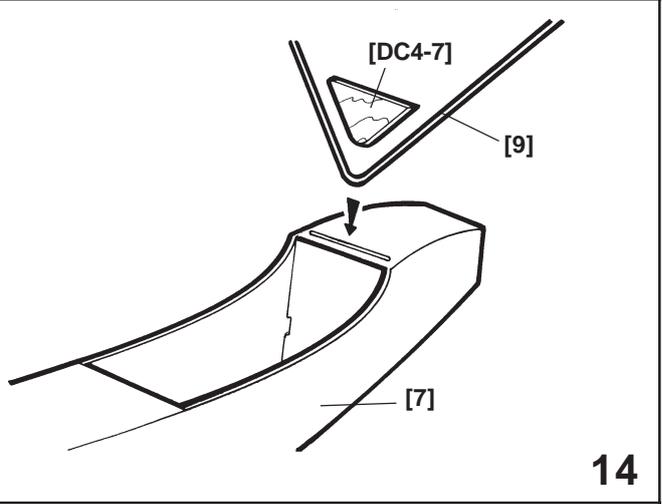
11



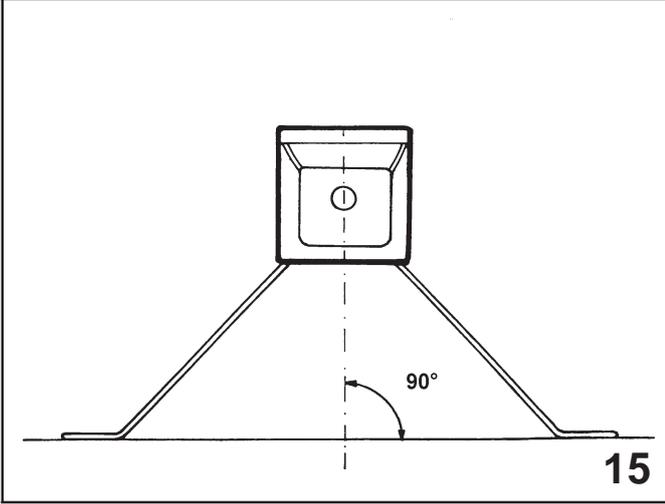
12



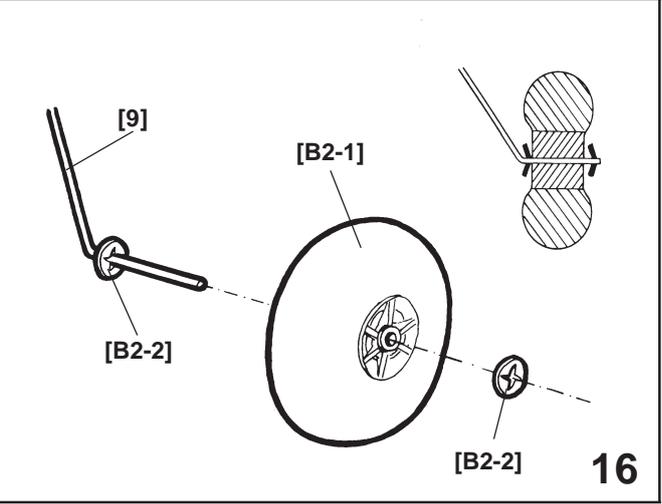
13



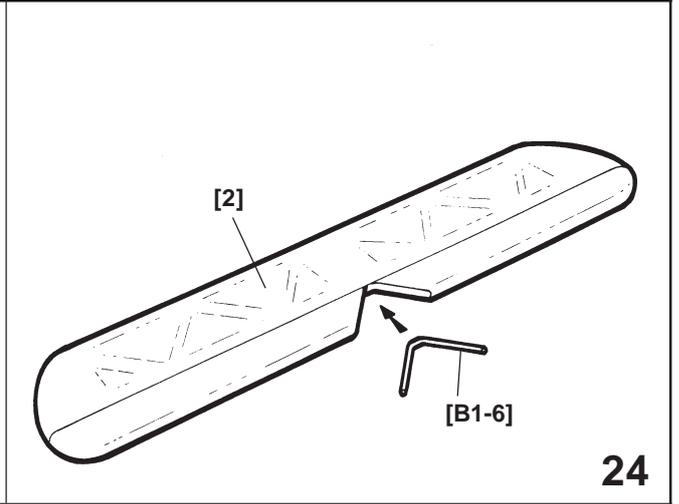
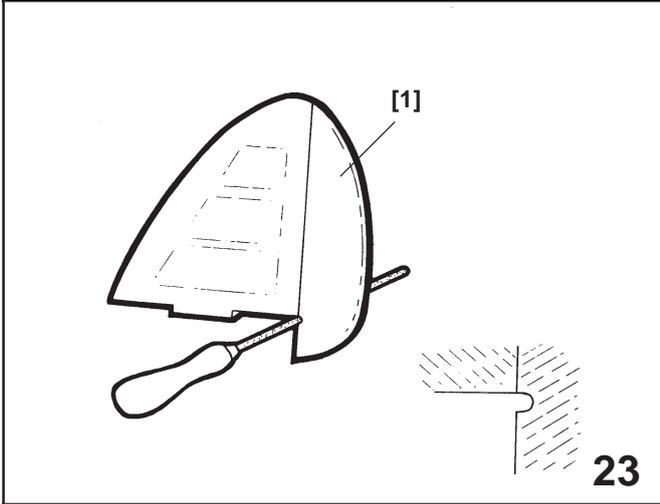
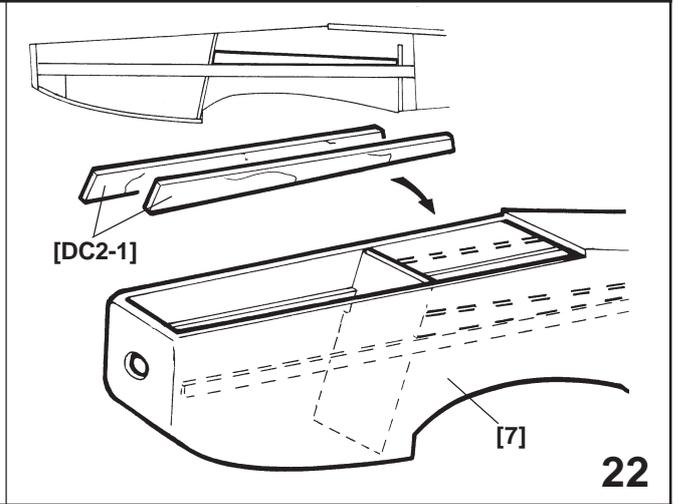
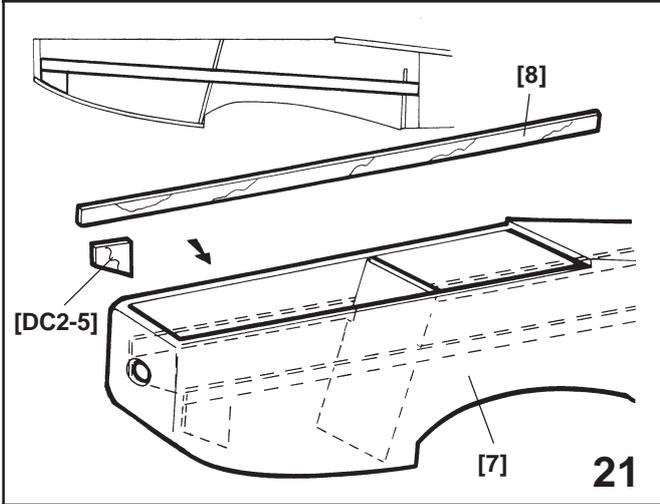
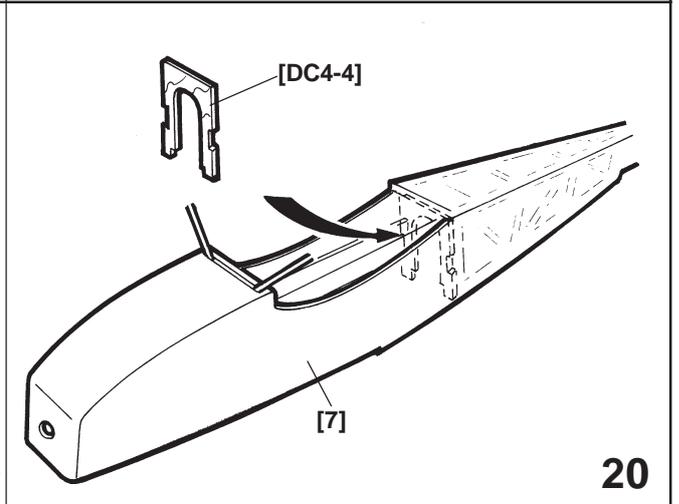
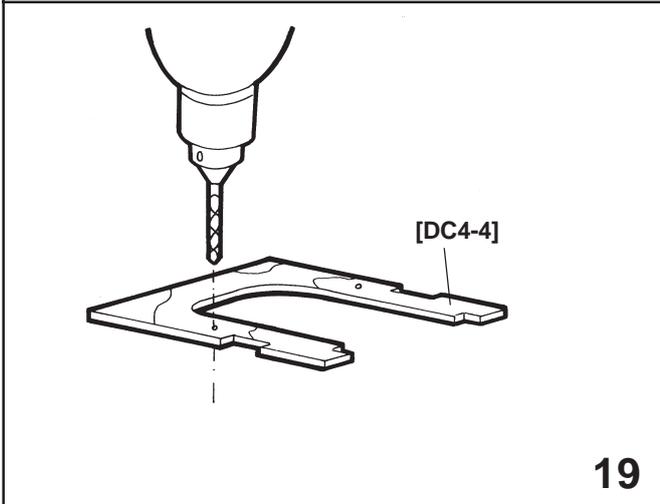
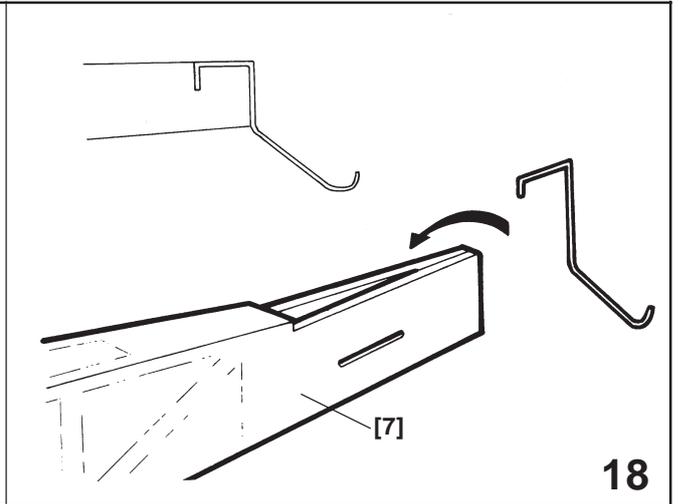
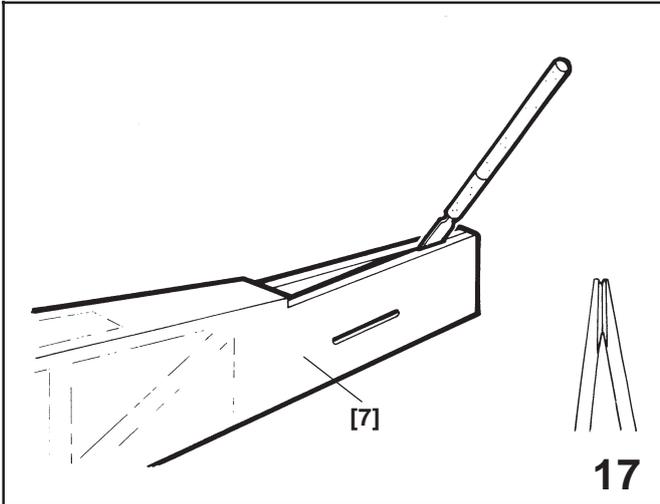
14

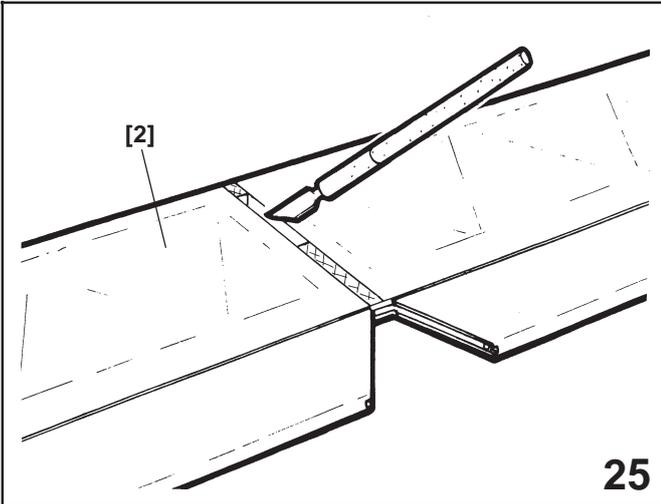


15

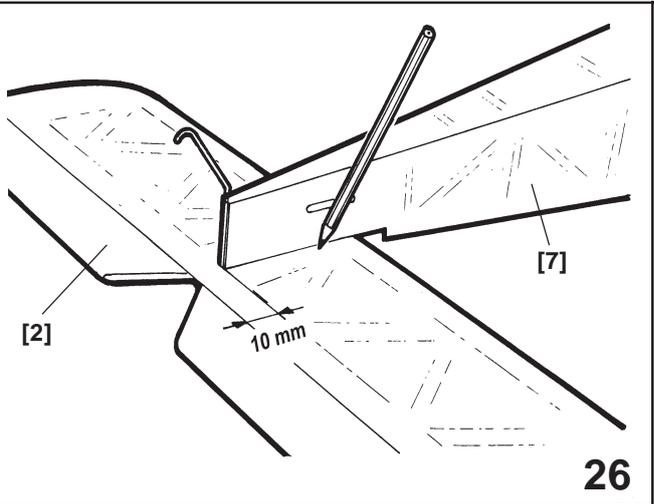


16

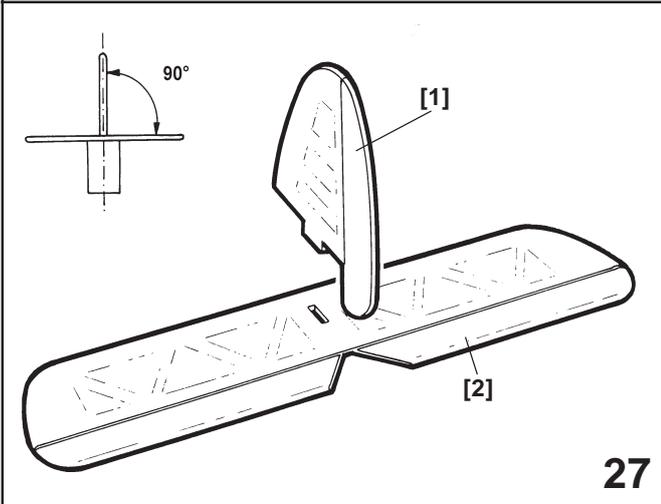




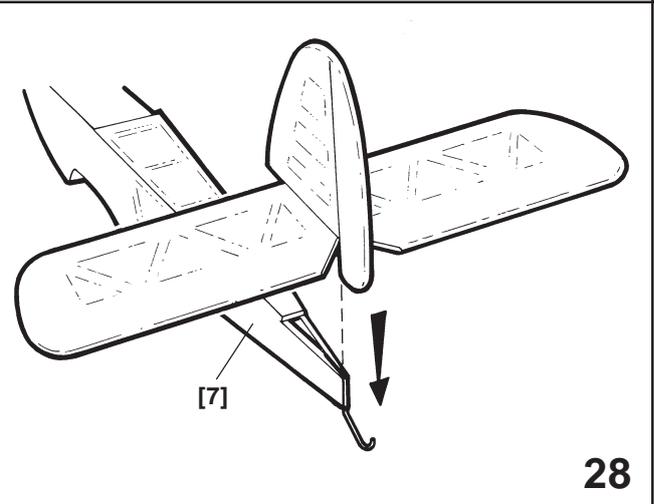
25



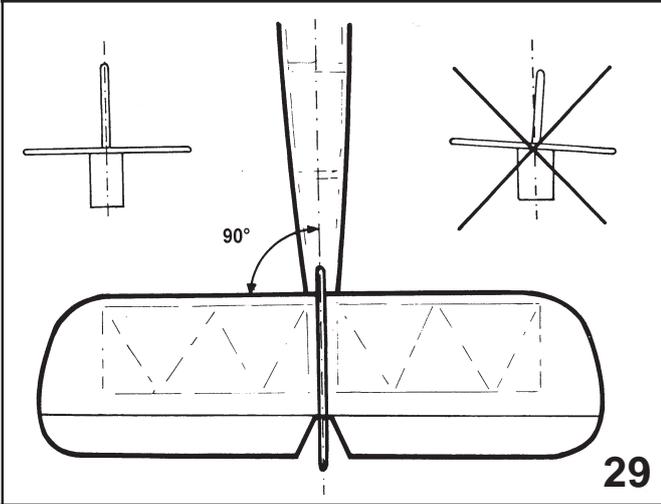
26



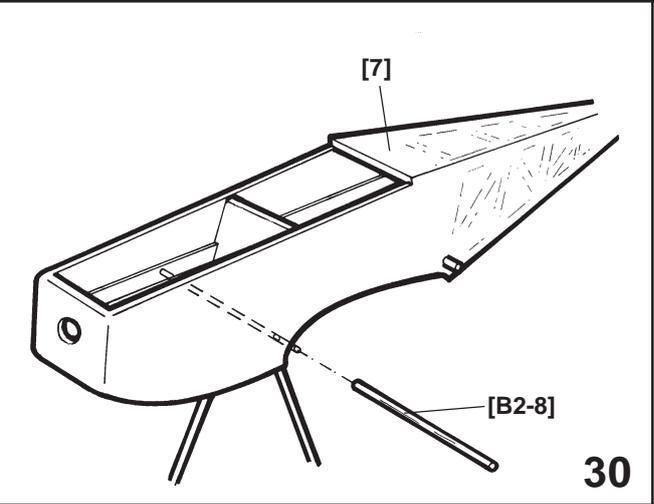
27



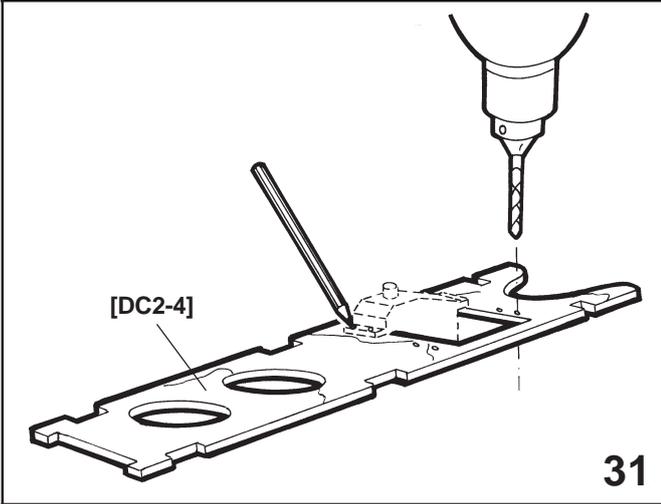
28



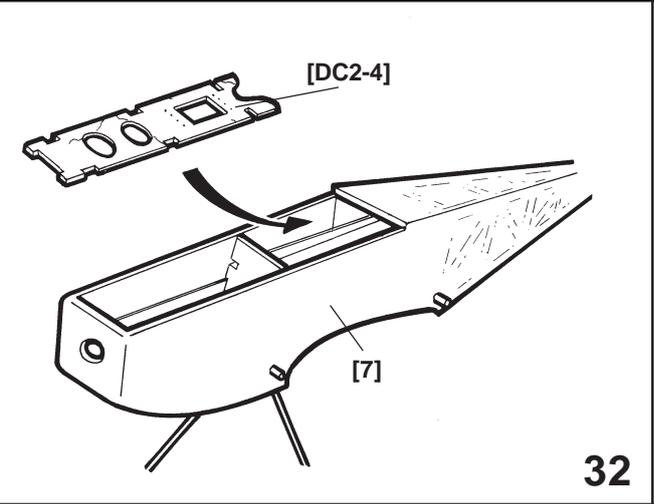
29



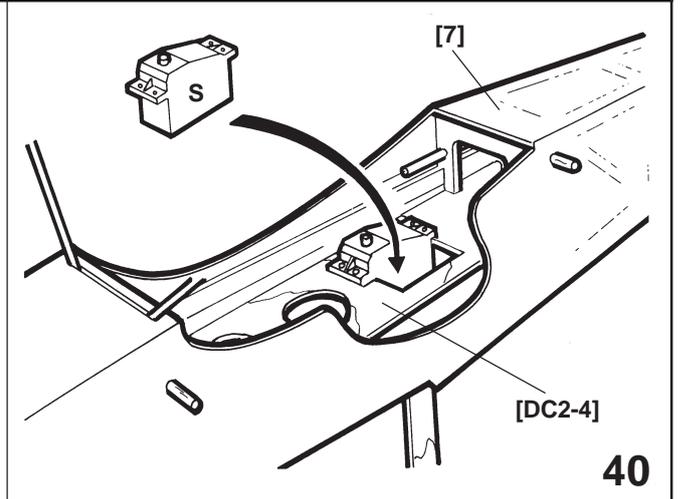
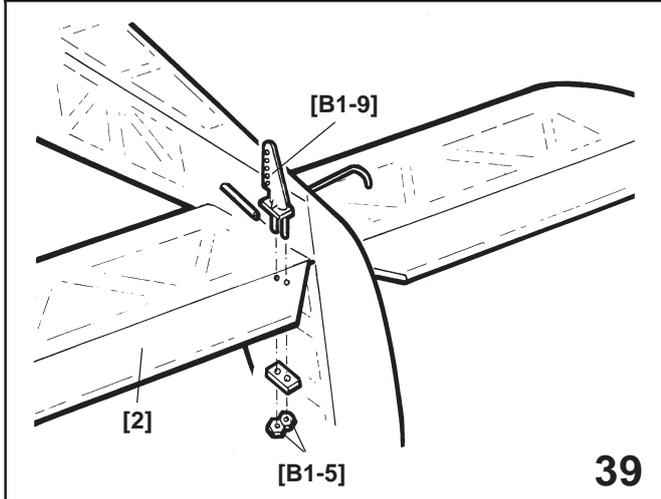
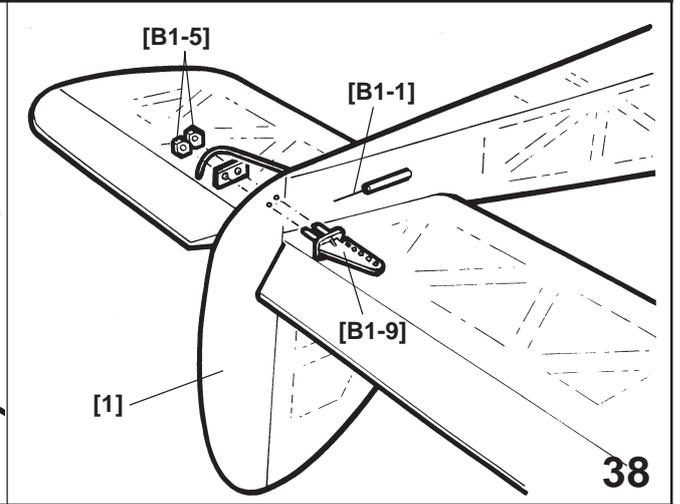
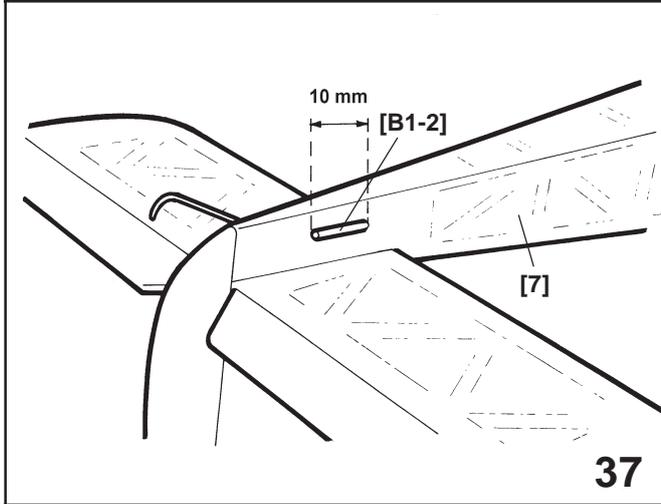
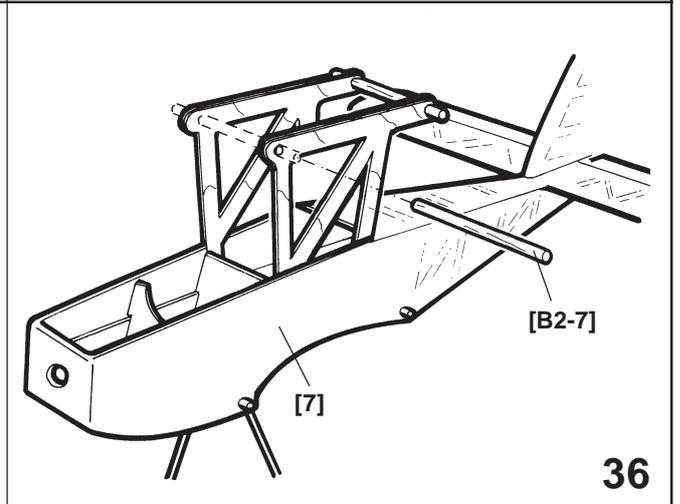
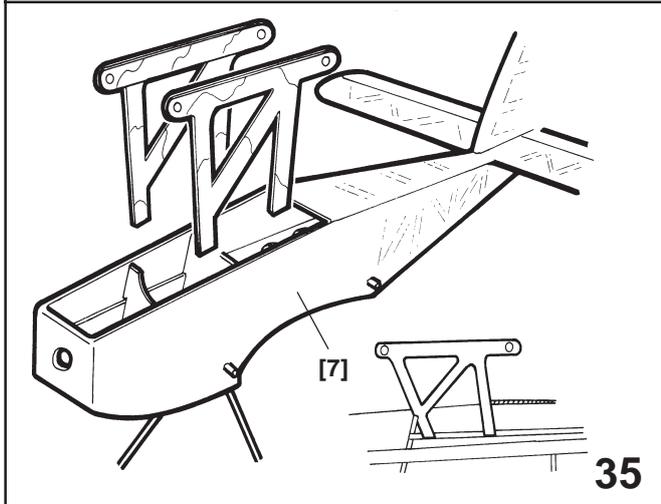
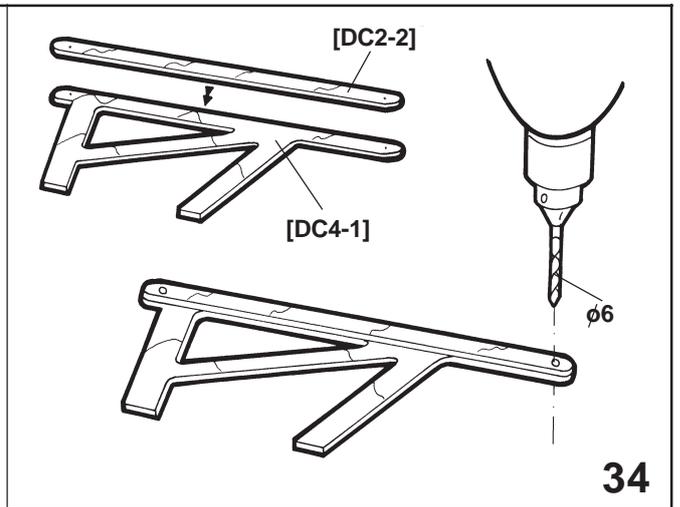
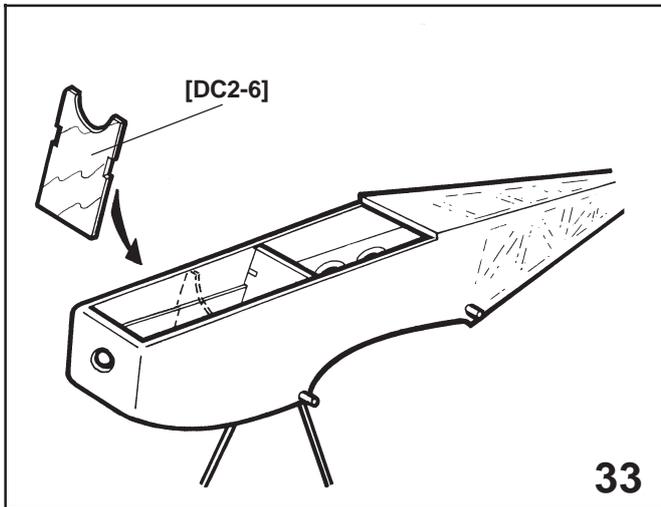
30

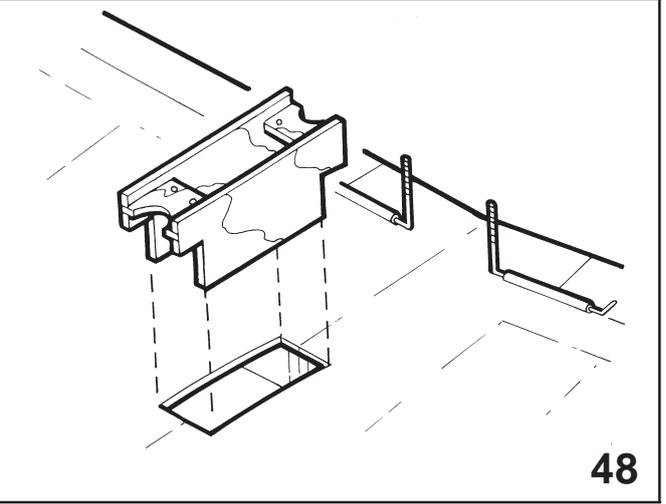
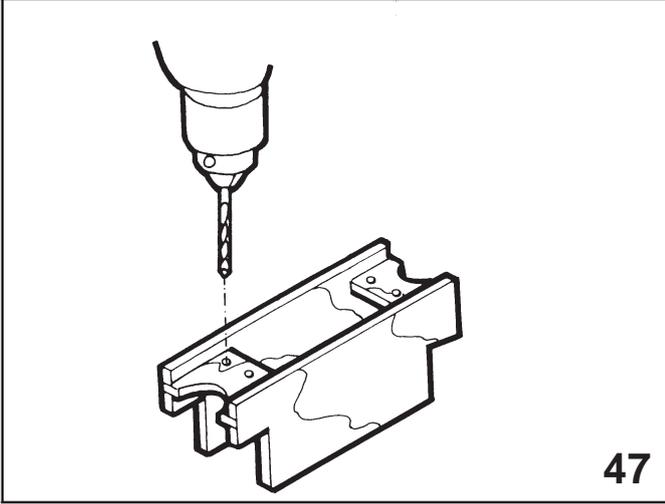
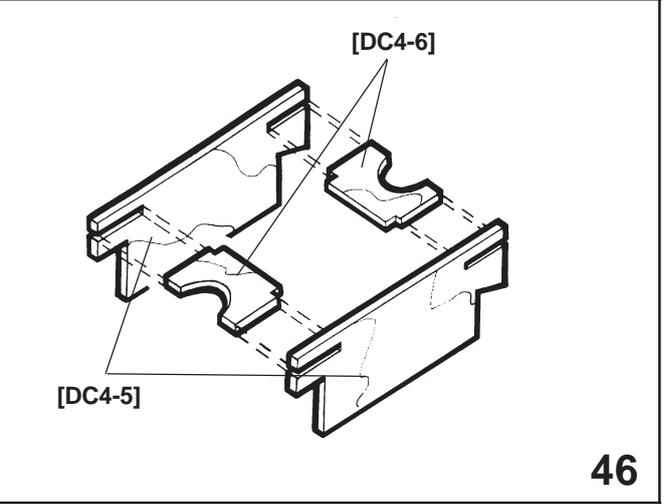
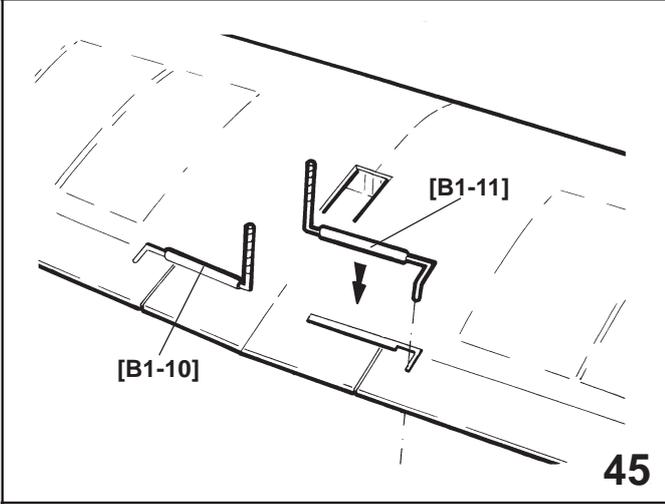
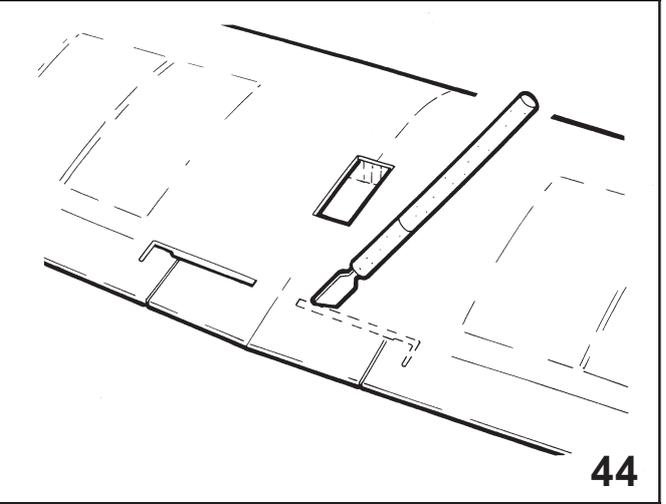
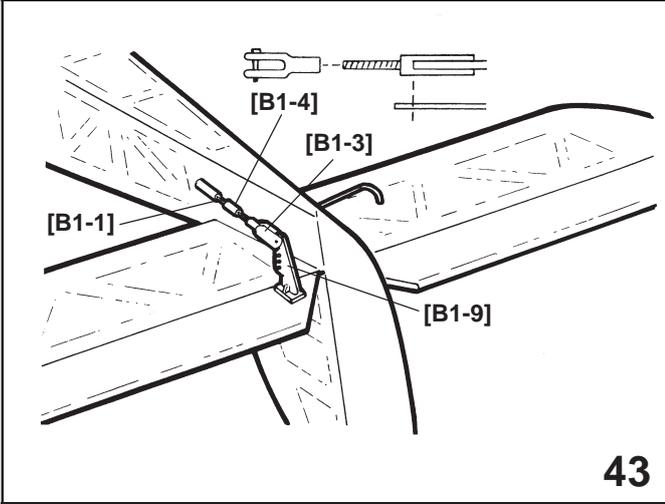
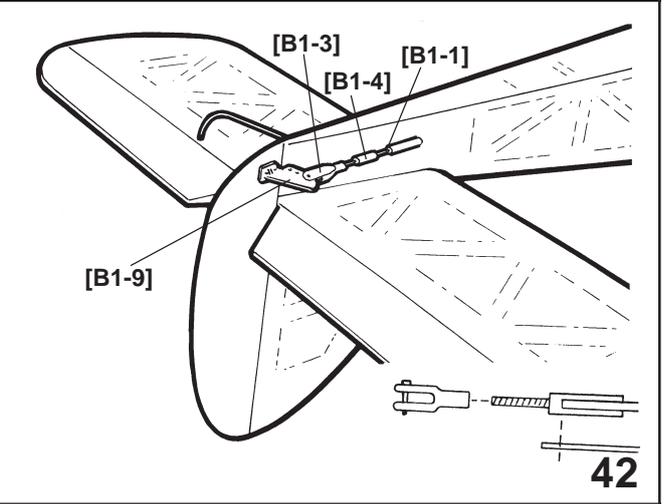
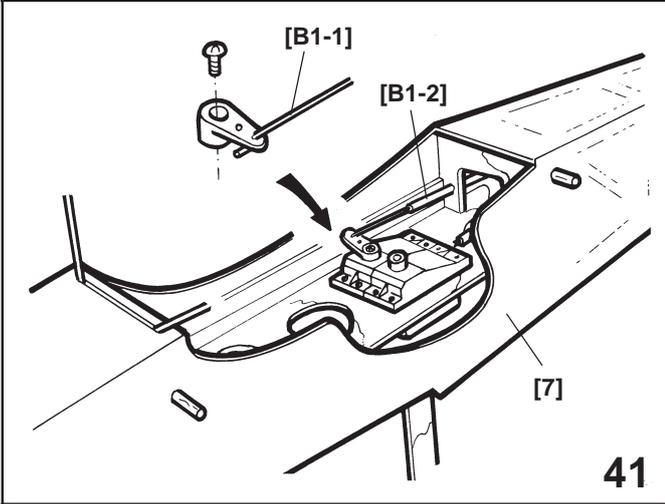


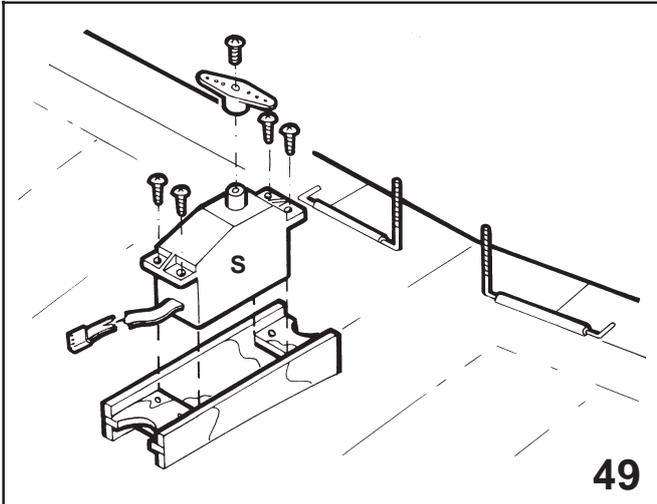
31



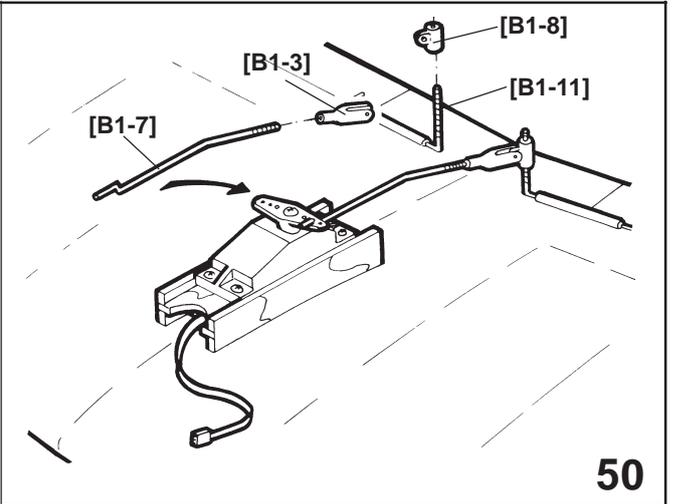
32



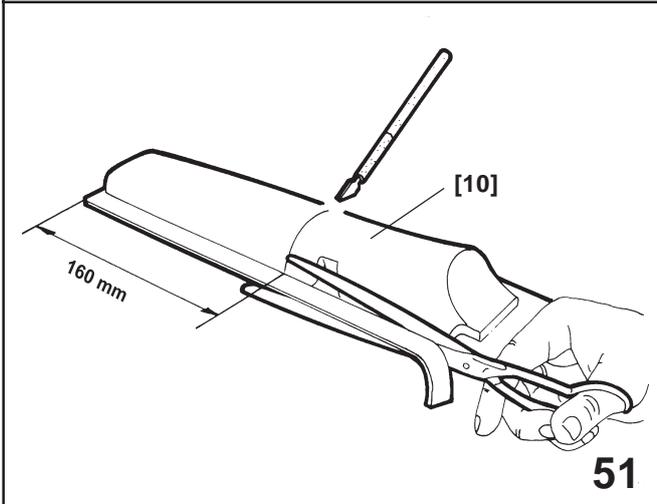




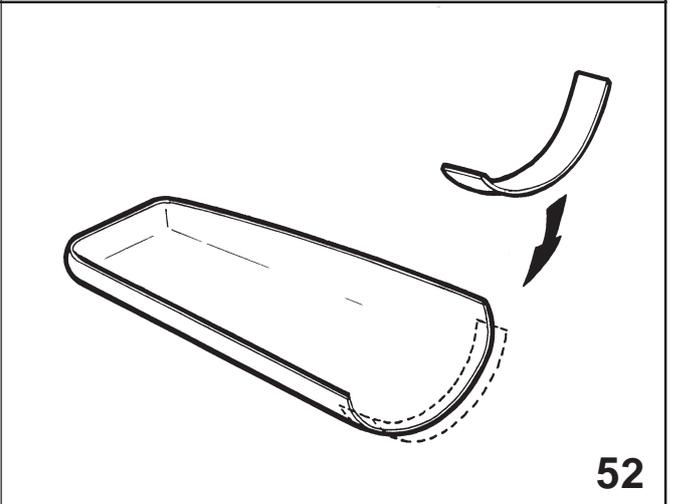
49



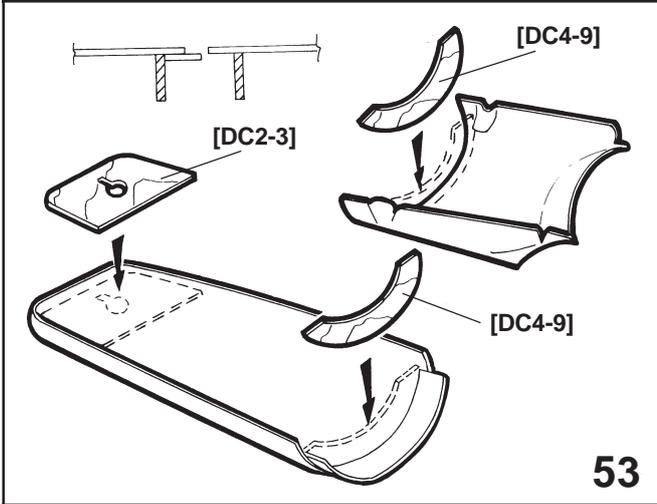
50



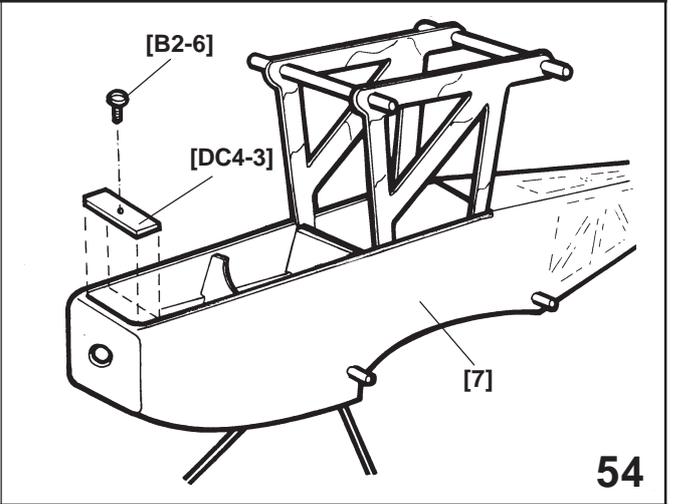
51



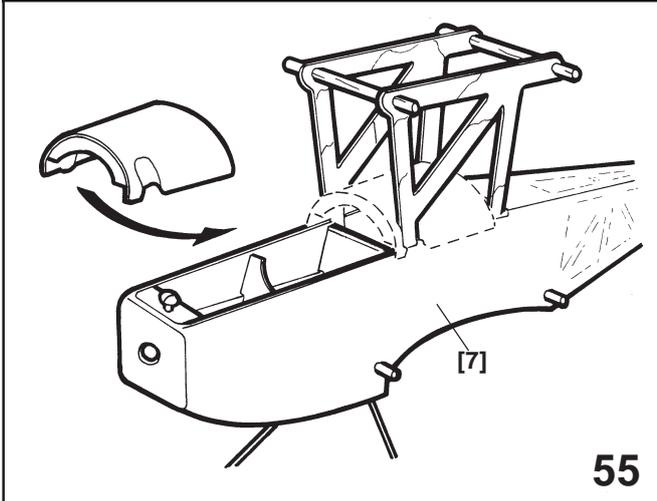
52



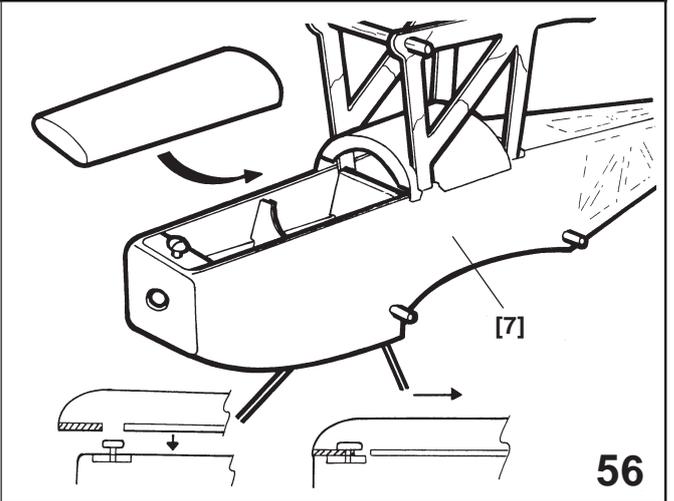
53



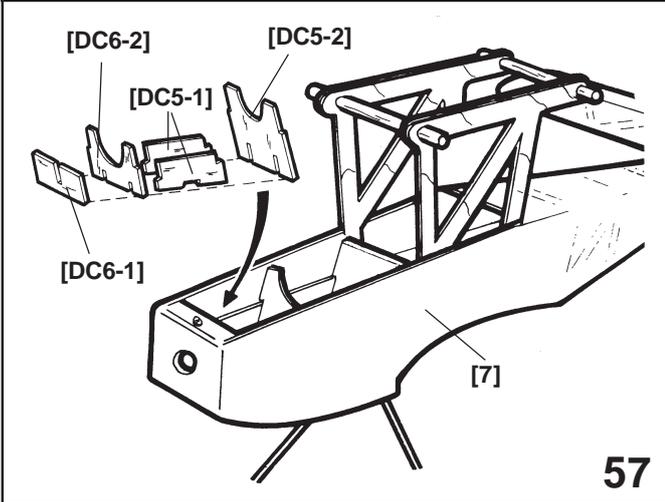
54



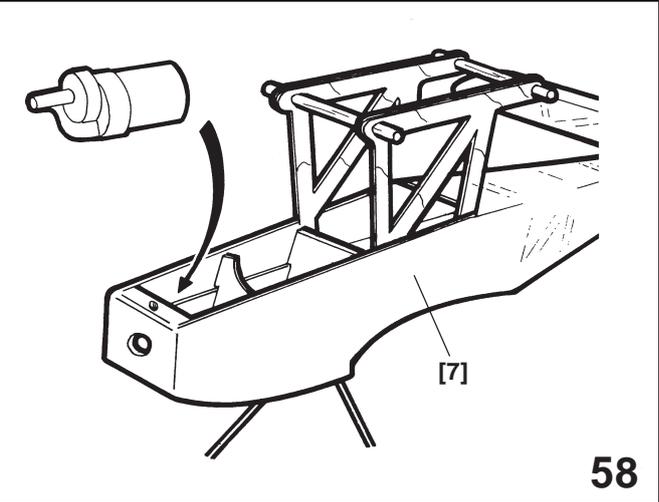
55



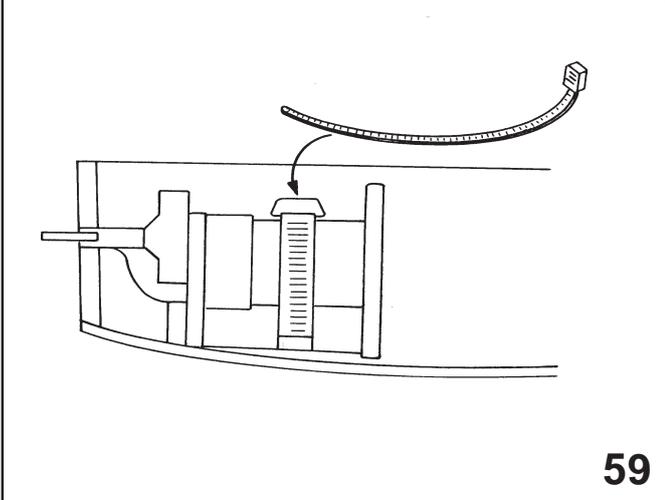
56



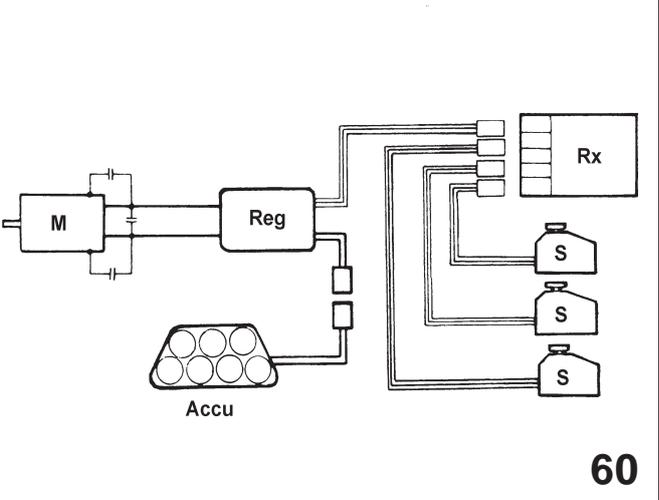
57



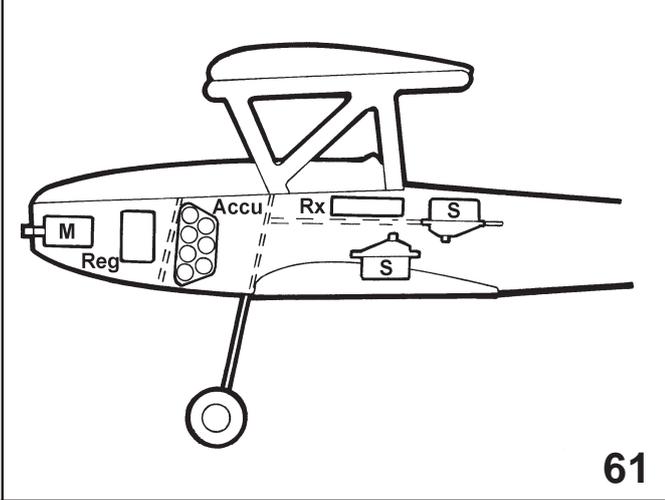
58



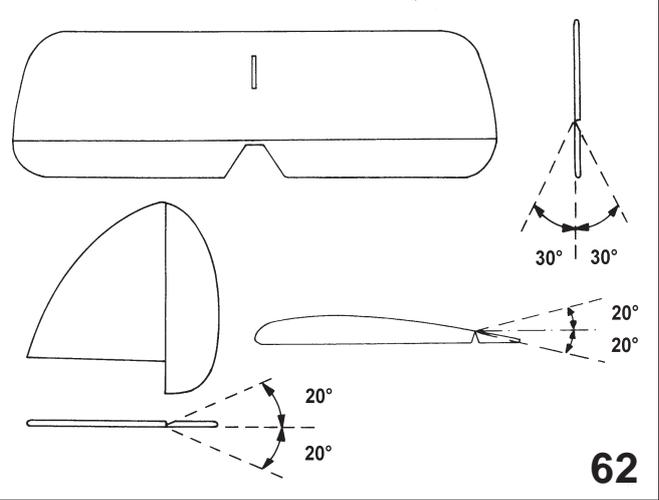
59



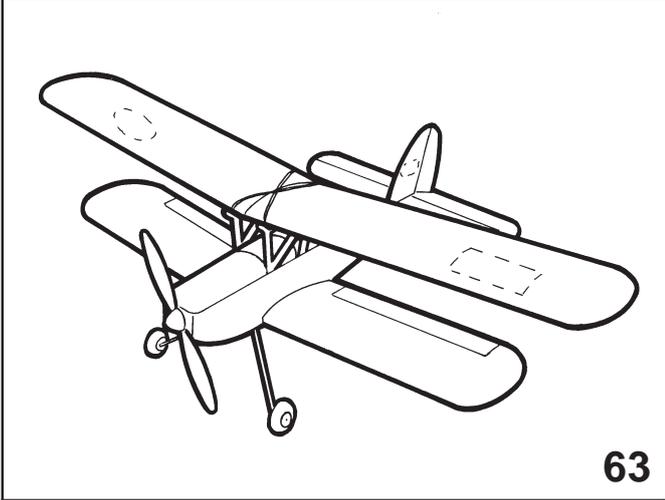
60



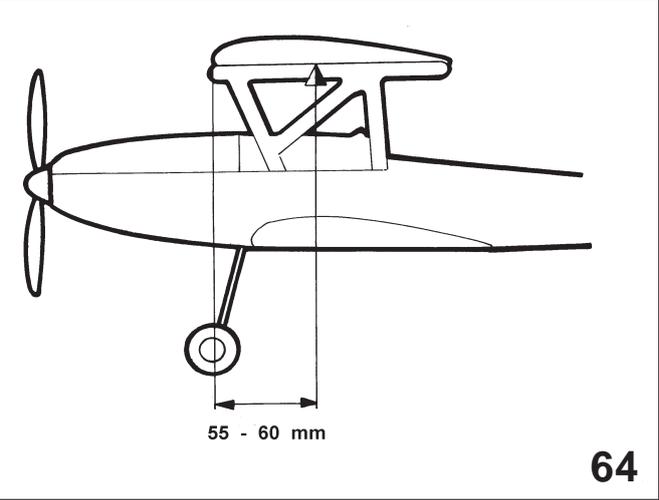
61



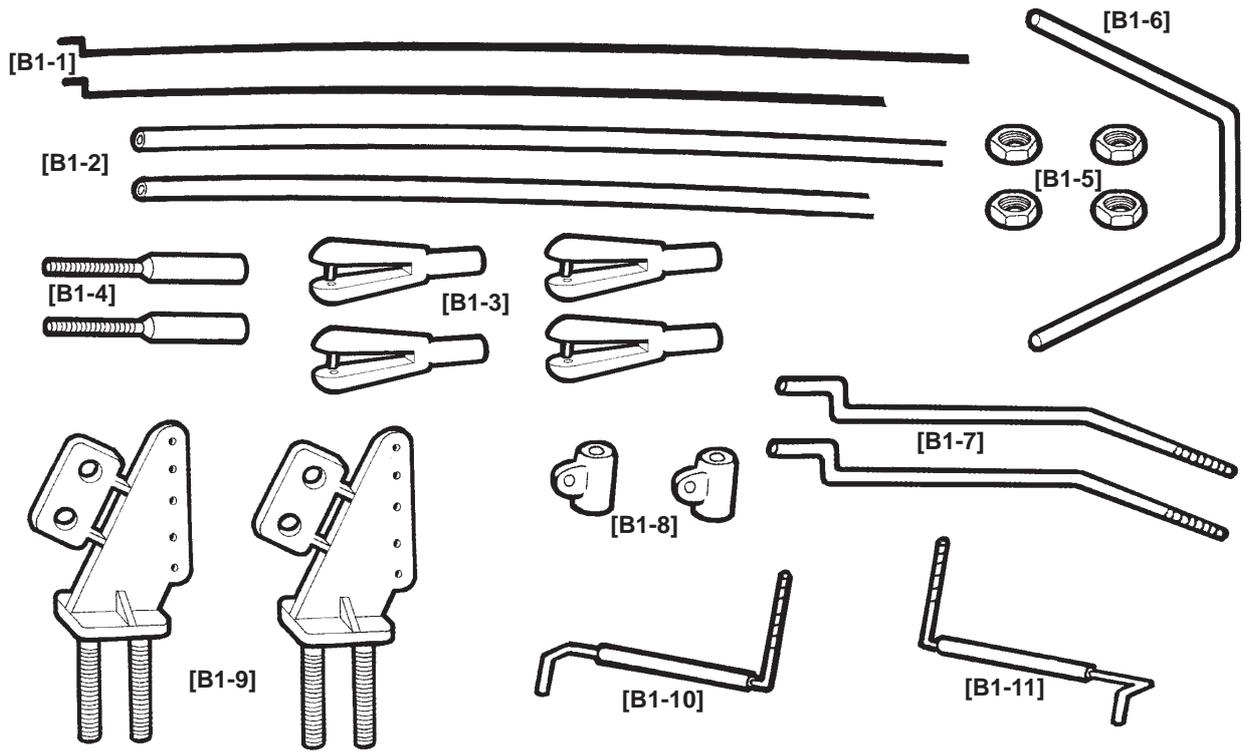
62



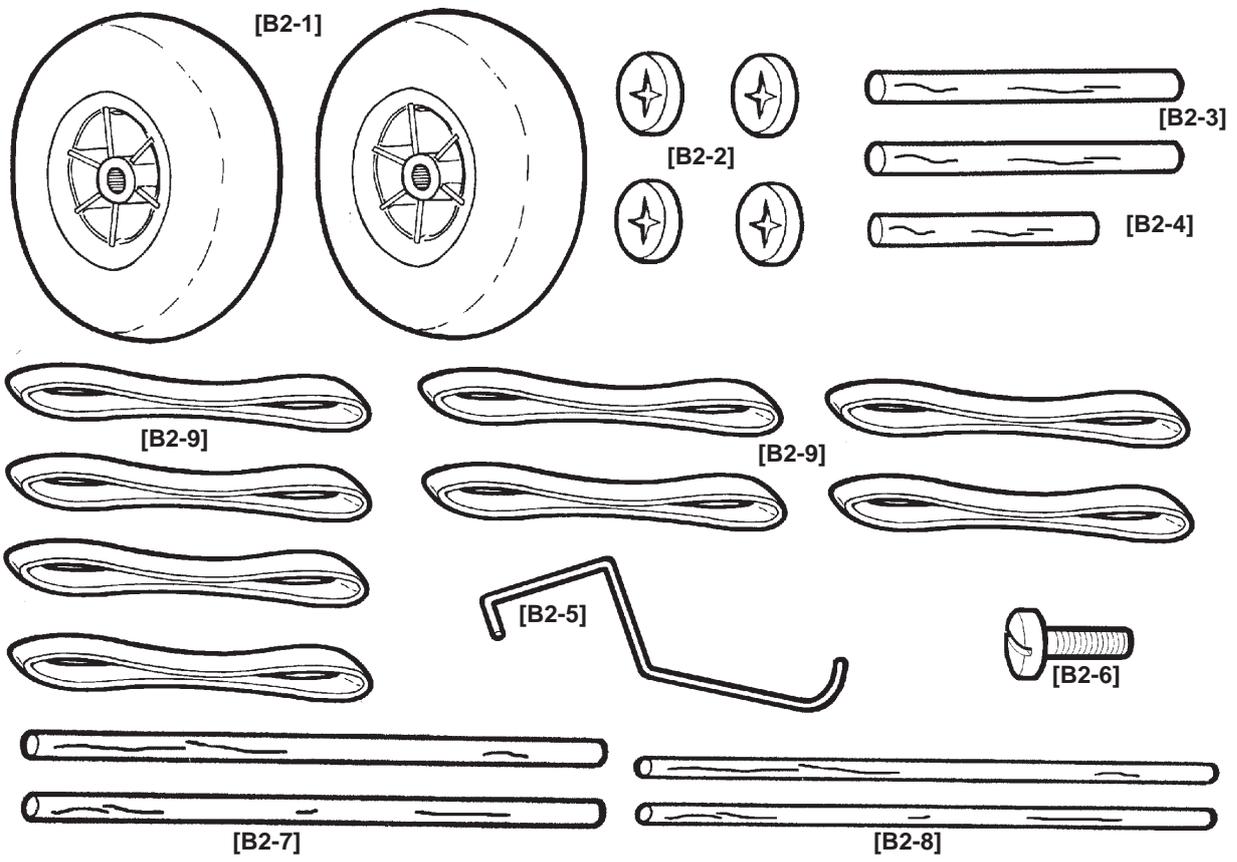
63



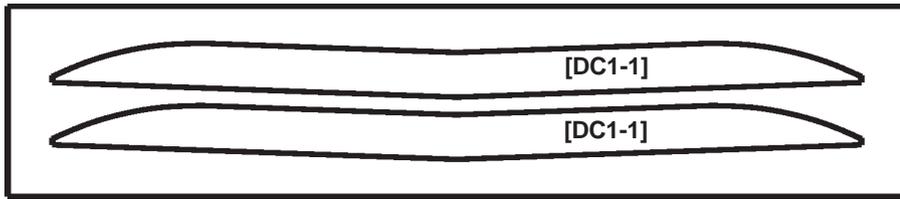
64



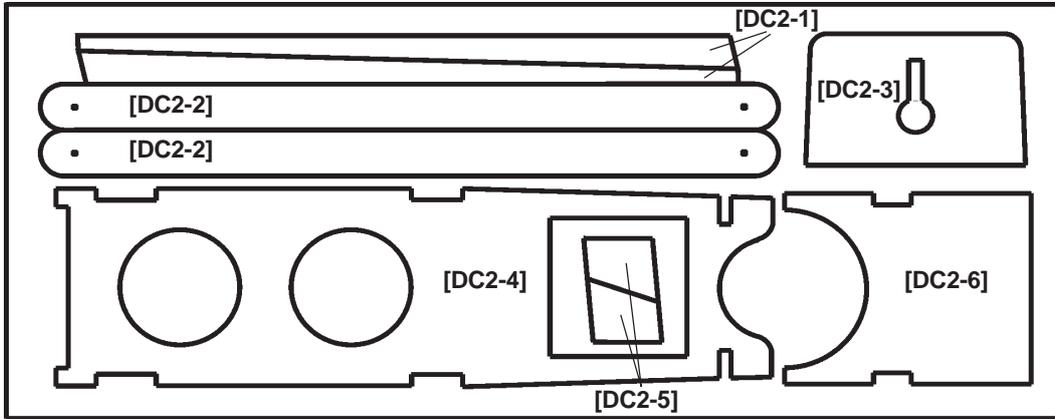
B1



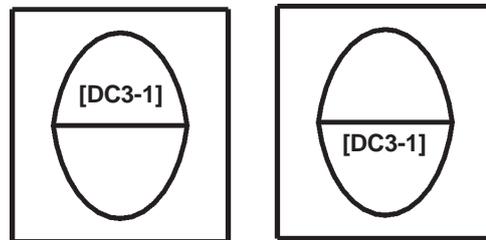
B2



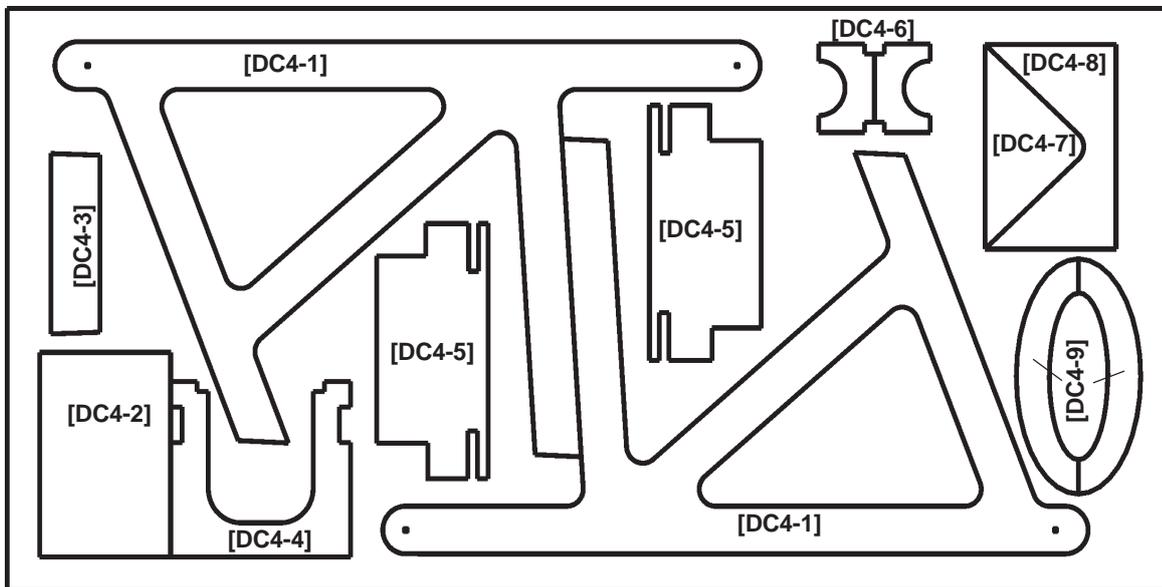
DC1



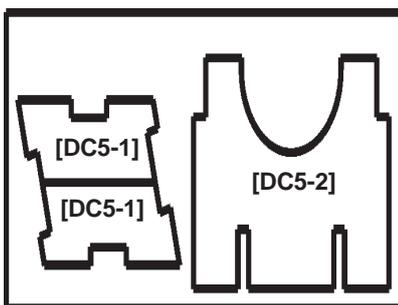
DC2



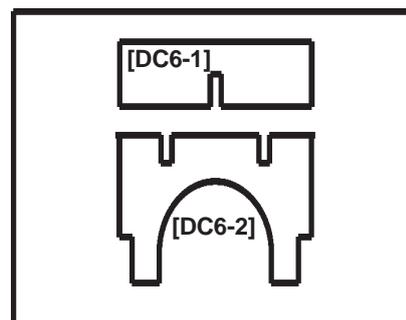
DC3



DC4



DC5



DC6

Bag [B1]

No.	Qty.	Description
[B1-2]	2	Pushrod tubes
[B1-1]	2	Wire rods with "Z" bends
[B1-4]	2	Threaded adapter
[B1-5]	4	Nut
[B1-3]	4	Clevis
[B1-6]	1	Elevator joiner
[B1-7]	2	Aileron pushrod
[B1-8]	2	Torque rod horn
[B1-9]	2	Control horn
[B1-10]	1	Right torque rod
[B1-11]	1	Left torque rod

Bag [B2]

No.	Qty.	Description
[B2-1]	2	Wheel
[B2-2]	4	Wheel lock washer
[B2-3]	2	Upper wing joining dowel
[B2-4]	1	Lower wing joining dowel
[B2-5]	1	Tailskid
[B2-6]	1	Hatch retaining screw
[B2-7]	2	Upper wing dowels
[B2-8]	2	Lower wing dowels
[B2-9]	8	Rubber bands

Die-cut sheet [DC1]

No.	Qty.	Description
[DC1-1]	2	Dihedral Brace

Die-cut sheet [DC2]

No.	Qty.	Description
[DC2-1]	2	Radio plate mounts
[DC2-2]	2	Main wing strut doubler
[DC2-3]	1	Deck mounting plate
[DC2-4]	1	Radio plate
[DC2-5]	2	Longeron supports
[DC2-6]	1	Former

Die-cut sheet [DC3]

No.	Qty.	Description
[DC3-1]	4	Main wing strut doubler

Die-cut sheet [DC4]

No.	Qty.	Description
[DC4-1]	2	Upper wing strut
[DC4-2]	1	Undercarriage doubler
[DC4-3]	1	Mounting plate
[DC4-4]	1	Rear former
[DC4-5]	1	Wing servo tray side
[DC4-6]	1	Wing servo tray plate
[DC4-7]	1	Undercarriage securing plate
[DC4-8]	1	Undercart doubler
[DC4-9]	2	Hatch/deck former

Die-cut sheet [DC5]

No.	Qty.	Description
[DC5-1]	2	Motor cradle side
[DC5-1]	1	Motor cradle rear former

Die-cut sheet [DC6]

No.	Qty.	Description
[DC6-1]	1	Motor front former doubler
[DC6-1]	1	Motor cradle front former



Scorpio s.r.l.
C.P. 750 - 38100 Trento
ITALY
Tel. +39 0461-823099
e-mail: sales@scorpio.it