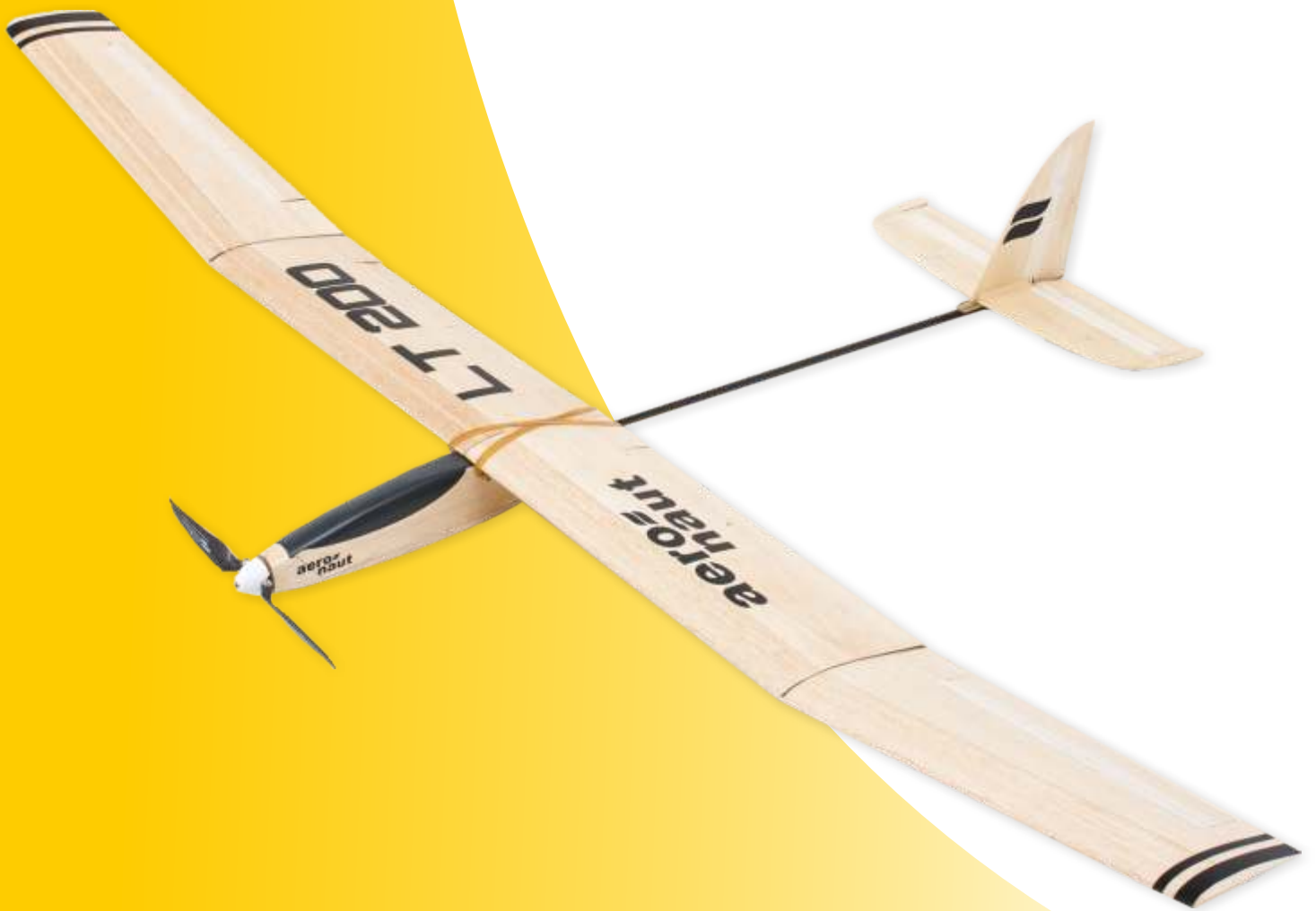




**aero  
naut**

# LT 200 Flex

Order No. 1328/00



# LT 200 FLEX

The **LT 200 Flex** is a sailplane of conventional wood construction and designed for light-wind conditions. The fuselage is built-up in a layer technique with laser-cut wood parts, the fully sheeted wing is of conventional design with ribs and spars. Building materials are mostly balsa and light-ply to achieve a light yet strong structure for maximum flying performance. The only exception is the carbon tube boom, which saves a lot of weight.

The wings of the LT 200 can be built in three different ways. The model can be flown with rudder and elevator control only, so that no additional servos are required in the wing. It can also be equipped with ailerons and/or flaps/spoilers. Construction is the same for all three options. Those, who want to add aileron and/or flap/spoiler control later, should install the required servo leads right at the beginning, because it is not possible to add them at a later stage.

Construction should be according to the step-by-step instructions provided in this manual. Use the parts list to identify the included stripwood and hardware. Always check that parts fit perfectly and correct, if necessary, before you glue. Give glue sufficient time to dry or cure, before you proceed to the next step.

We recommend white glue (if not otherwise noted) for gluing, which offers good strength and low weight. White glue retains a certain degree of elasticity after the glue has cured and will stand up to any loads which occur during flying.

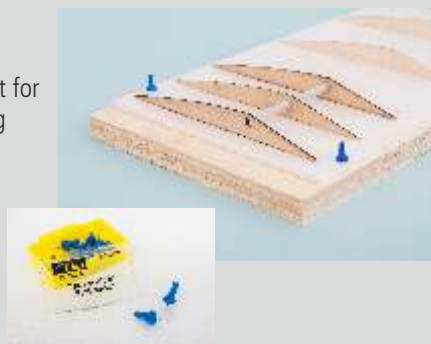
## For best results ...

... use our balsa-ply building boards to build up the wings. Aero-Pick pins (Order-No. 7855/02) are perfect for pinning down and positioning parts on these building boards.

Dimensions: ca. 400 x 1,500 mm

Thickness: 25 mm

**Order-No. 7506/77**



## Tipps & Hinweise



Attention! Make sure you follow instructions carefully.



Note! Additional information for current building step.



Use a sharp modelling knife to cut the tabs. Do not remove parts by hand to avoid damage!

We recommend our **modeller's knife** Order No. 8185/00



Sand off retaining tabs of laser-cut parts for best results.



**For building** we recommend our aero-pick modeller's pins Order No. 7855/02



Please see instructions for recommended glue.



## Electric power

Motor           outrunner, 28 mm, ca. 1,100 kV  
Speed Control   from 20 A  
Battery           2-3S LiPo, from 1,300 mAh  
Propeller        CAMcarbon folding prop 9x5" - 12x6"\*

## Recommended Equipment (electric power)

Precision spinner 42 mm\*\*  
Order.-No.: 7252/12 (3.00 mm shaft)  
Order.-No.: 7252/13 (3.17 mm shaft)  
Order.-No.: 7252/14 (4.00 mm shaft)  
Folding prop hub, 42 mm  
Order.-No.: 7242/22

\* compare recommendations with data sheet of your motor

\*\* Order-No. to suit shaft diameter



## Technical Data

Wingspan:       ca. 1,920 mm  
Length:         ca. 1,120 mm  
Weight:         from 850 g  
Wing area:      ca. 30.2 dm<sup>2</sup>  
Wing loading:   ab 28 g/dm<sup>2</sup>  
RC-functions:   rudder, elevator, motor control  
                    (ailerons, spoilers)



## RC equipment

Radio control to suit number of control functions  
2 servos ca. 22×11.5×25 mm for rudder/elevator<sup>1</sup>  
2 servos ca. 30×10×35 mm for ailerons (max. 10 mm thick)<sup>2</sup>  
2 servos ca. 22×11.5×25 mm for spoilers<sup>1</sup>

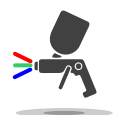
<sup>1</sup> e.g. D-Power AS-225BBMG

<sup>2</sup> e.g. D-Power AS-840BBMG



## Recommended glue

<b>Material</b>	<b>Glue (Order-Nr.)</b>
wood/wood	Ponal Express (7638/10)
wood/metal	UHU Plus sofortfest (7633/07)



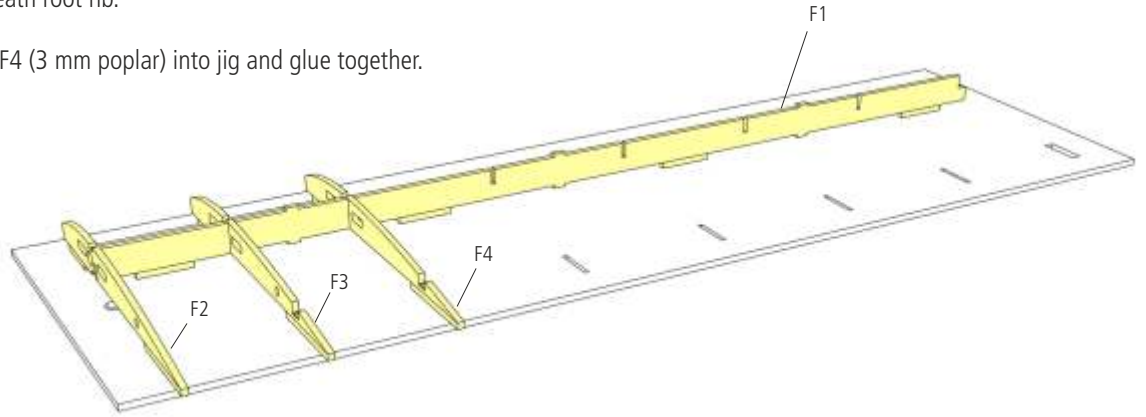
## Recommended primer

<b>Material</b>	<b>Item</b>	<b>Order-No.</b>
Wood	Porenfüller	7666/02

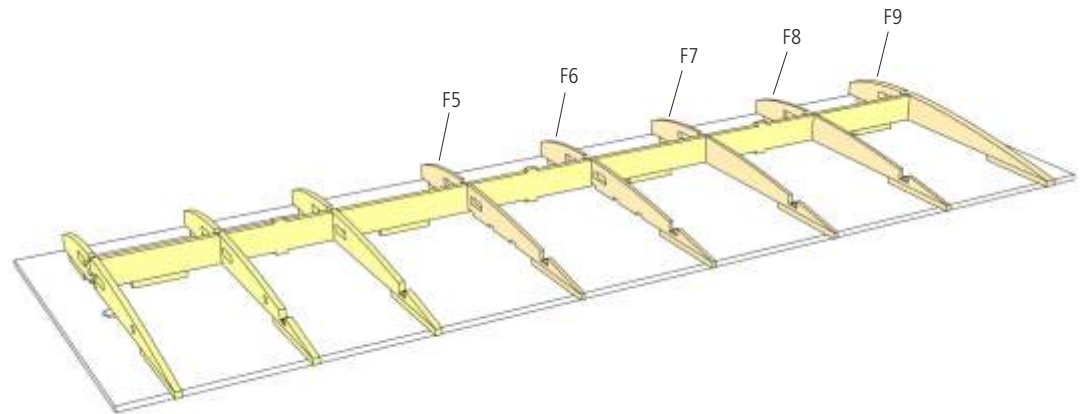
## Inner Wing Panel

- 1 Place wing jig for inner wing panel on a flat surface and secure with tape. Note that circular opening in wing jig is located beneath root rib.

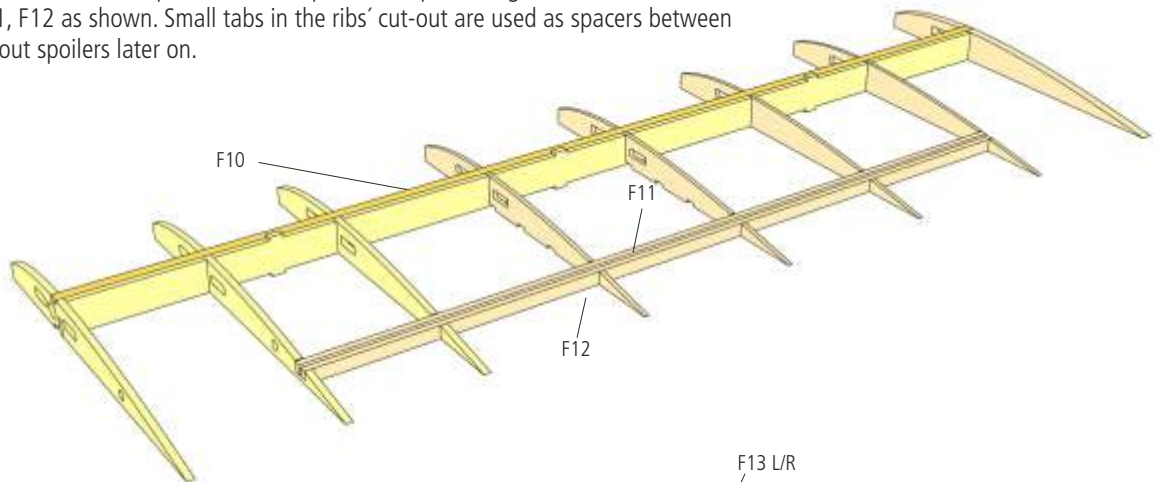
Insert main spar F1 and ribs F2 to F4 (3 mm poplar) into jig and glue together.



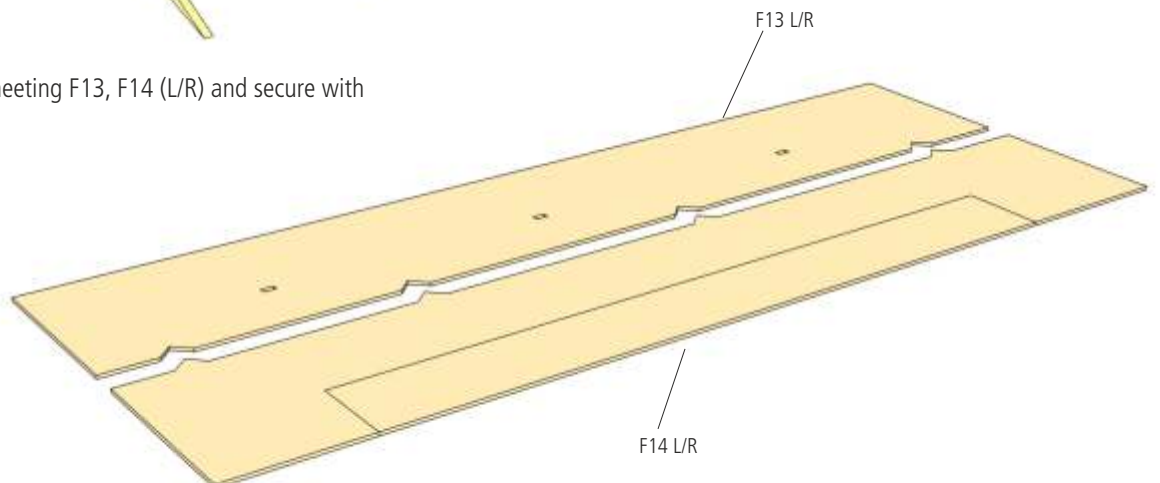
- 2 Insert and glue balsa ribs F5 to F8 (2 mm balsa) as well as rib F9 (5 mm balsa) into main spar.



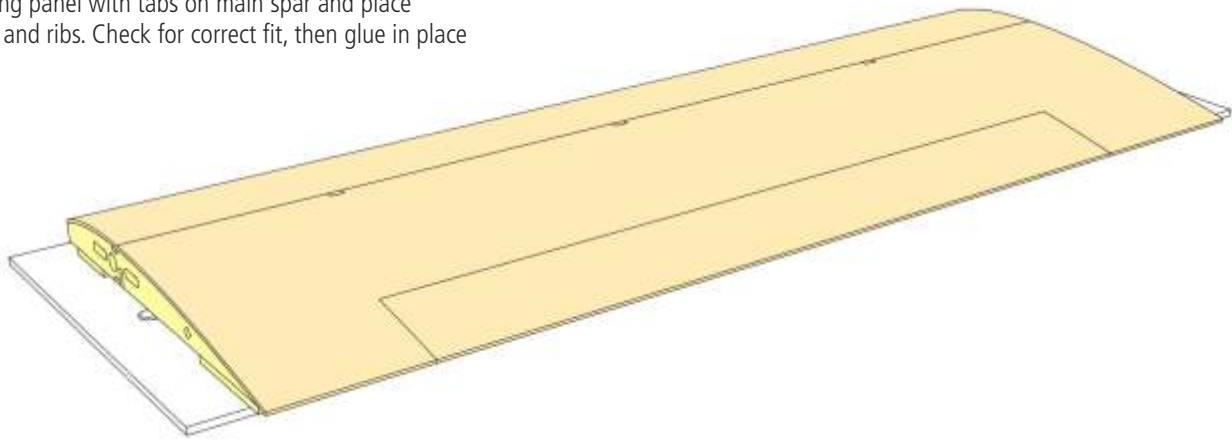
- 3 Glue in place upper wing spar F10 (5x2 mm spruce) and clamp to main spar until glue has dried. Glue in place spoiler spars F11, F12 as shown. Small tabs in the ribs' cut-out are used as spacers between spars and make it easy to cut out spoilers later on.



- 4 Glue together upper wing sheeting F13, F14 (L/R) and secure with tape until dry.

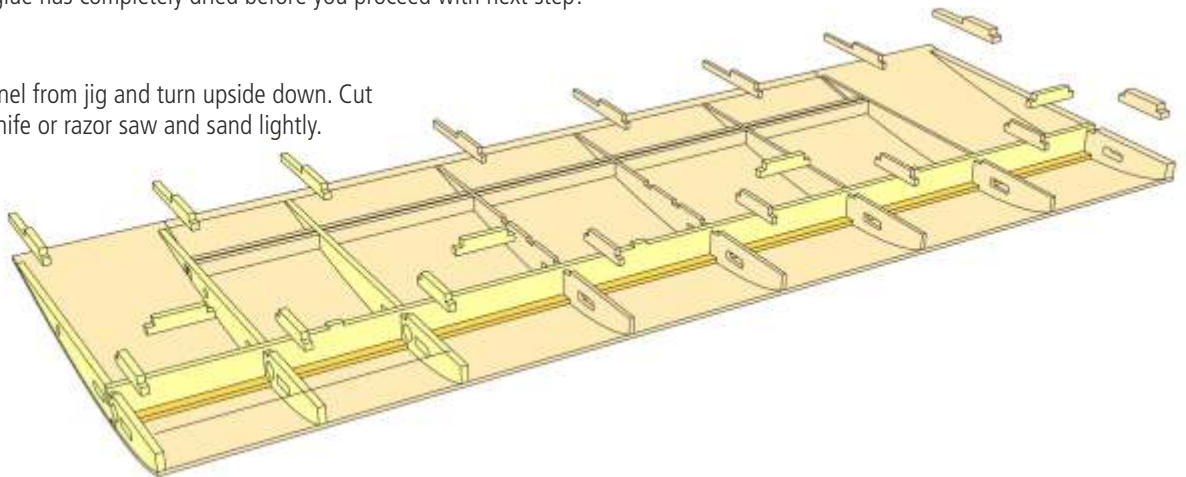


- 5** Carefully smooth upper contour of spars and ribs with sanding block. Align upper wing sheeting panel with tabs on main spar and place sheeting panel on spars and ribs. Check for correct fit, then glue in place and secure with pins.



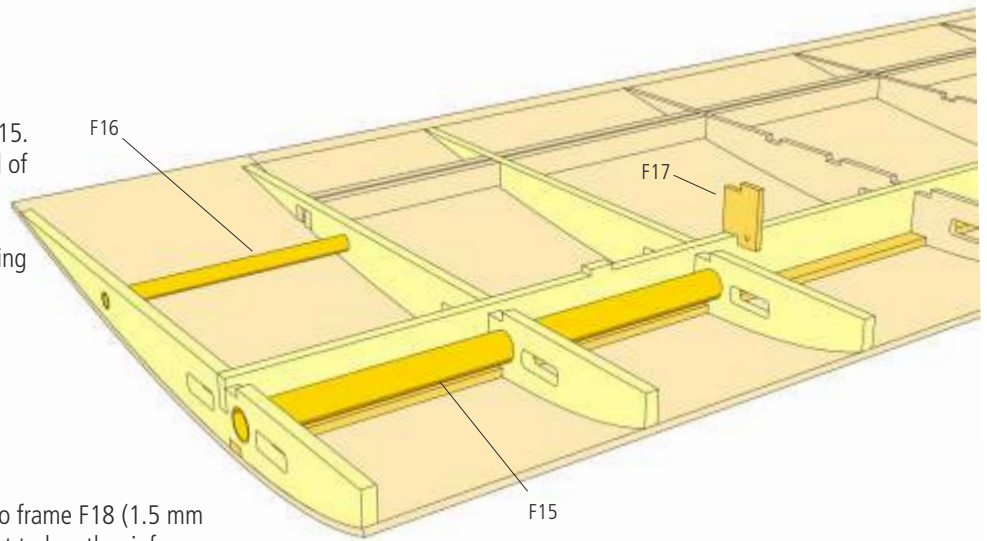
**! Attention:** Make sure glue has completely dried before you proceed with next step!

- 6** Carefully remove wing panel from jig and turn upside down. Cut off tabs with modeller's knife or razor saw and sand lightly.



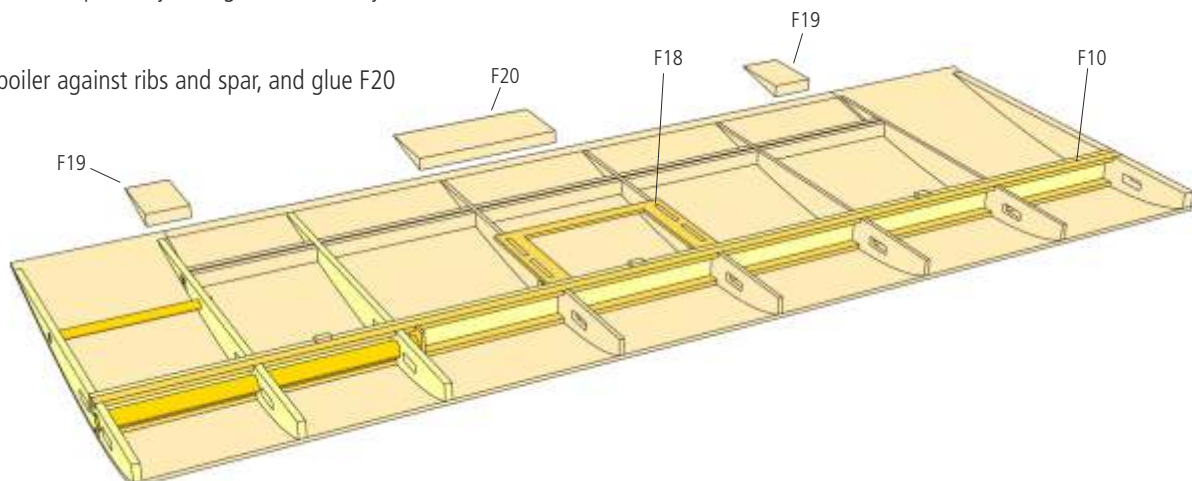
- 7** Insert wing joiner sleeves F15, F16 into root ribs and glue in place with epoxy. Glue end stop F17 (1.5-mm-birchply) to inner end of F15. Use a piece of scrap wood to block inner end of F16.

**i Note:** Arrow on F17 indicates top side of wing panel.



- 8** Glue in place lower spruce spar F10 and servo frame F18 (1.5 mm birch ply). From 30x6-mm-triangular stock cut to length reinforcements F19, F20 (20 and 70 mm, respectively) and glue into rib bays of spoiler.

Glue F19 at either end of spoiler against ribs and spar, and glue F20 into centre rib bay.

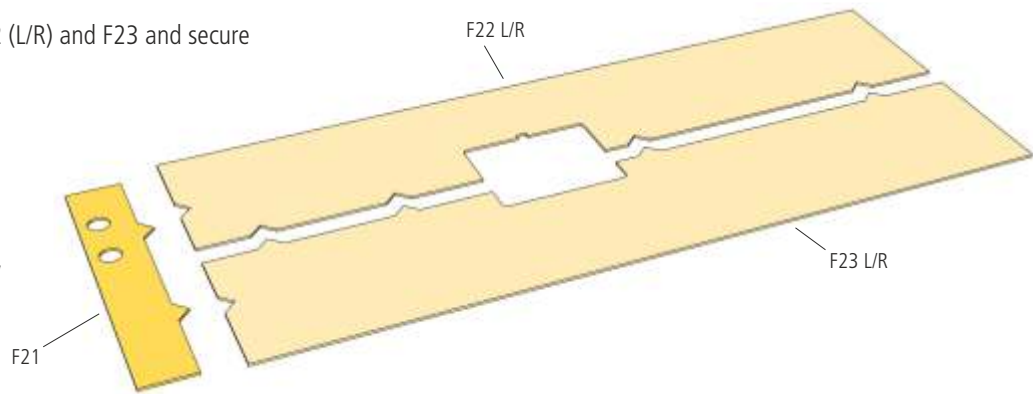




- 9** Glue together lower wing sheeting F21, F22 (L/R) and F23 and secure with tape until dry.

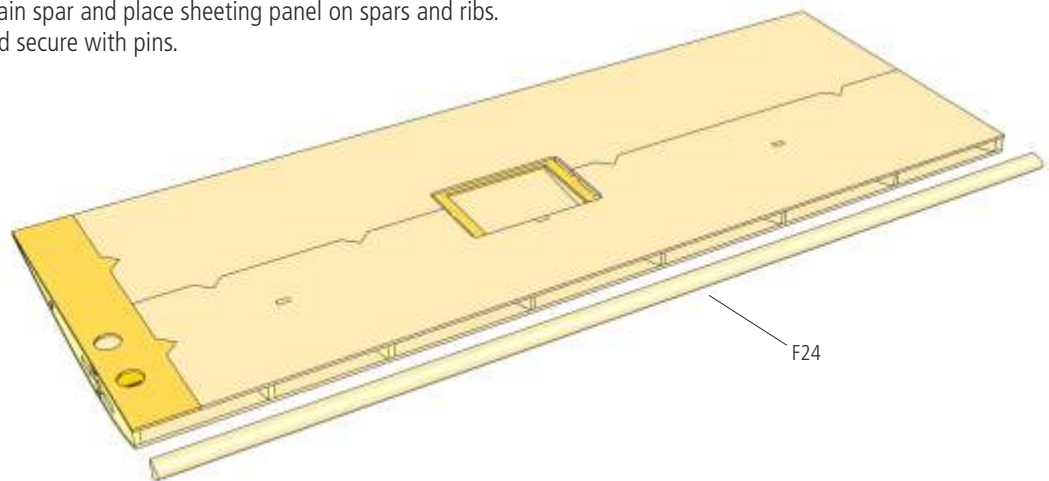
**Optional:** If the model is to be equipped with spoilers, insert spoiler servo lead now and secure in servo bay with tape.

If the model is to be equipped with ailerons, route aileron servo lead now through cable channel in ribs and let project from end rib by 50 mm. Note that both servo leads exit through openings in F21 when lower wing sheeting is glued in place.

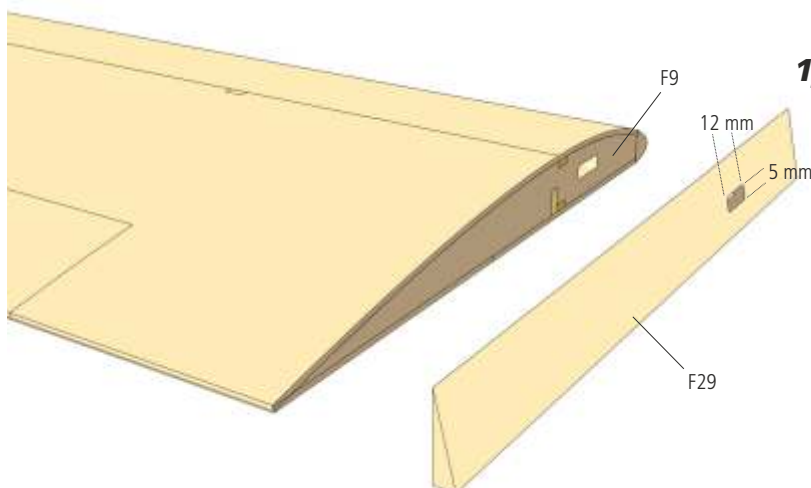
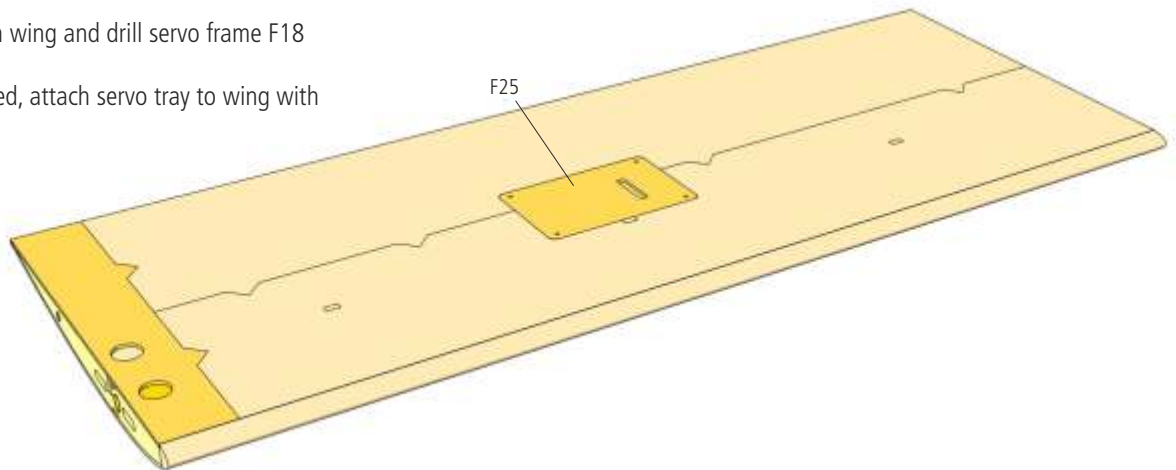


- 10** Slightly bevel rear edge of upper wing sheeting to establish a good contact surface for gluing. Align lower wing sheeting with tabs on main spar and place sheeting panel on spars and ribs. Check for correct fit, then glue in place and secure with pins.

- 11** Sand sheeting material flush with front end of ribs. Glue in place leading edge F24 and secure to wing with tape.



- 12** Install servo tray F25 in wing and drill servo frame F18 with 1.5 mm. When wing is completed, attach servo tray to wing with screws F27.



- 13** Mark opening for aileron servo lead on triangular stock F29 and use drill and/or file to create an opening of ca. 12x5 mm in F29.

Route servo lead through F29, then glue F29 to end rib F9.

When dry, sand F29 flush with wing contour, then carefully sand over complete wing.

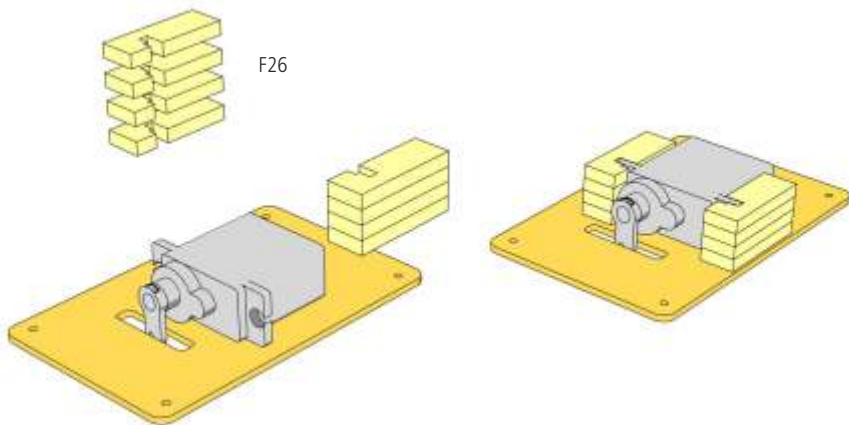
Construct opposite wing half accordingly.

## Optional: Installing Spoilers

- 14** For spoiler control use servos with a maximum thickness of 12 mm.

Glue together servo mounts from up to 4 pieces F26 (depending on thickness of servo).

Align servo with servo arm centred in slot of servo tray F25, hold in place and glue servo mounts to tray with a drop of white glue or medium CA.

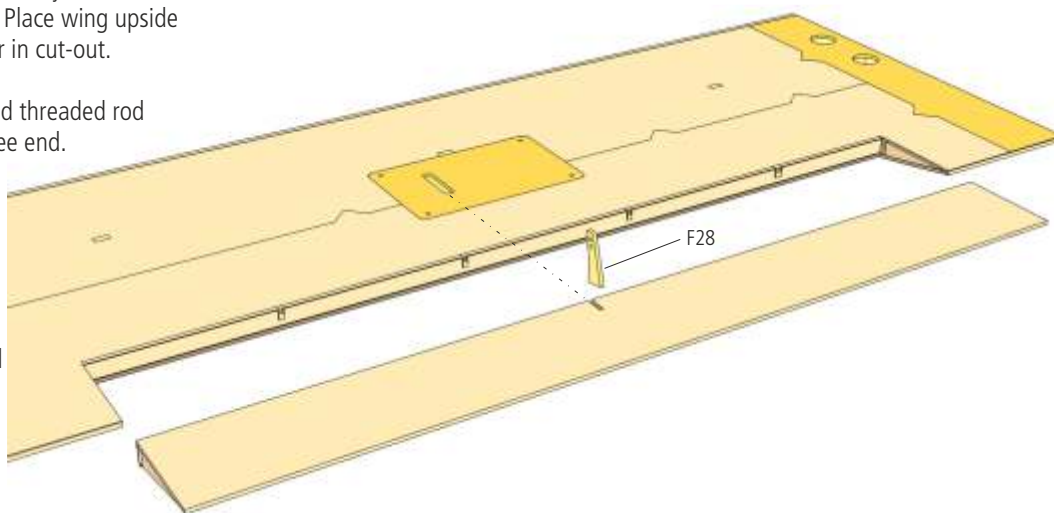


- 15** Cut out spoiler along engraved lines and carefully sand sheeting material and ribs flush with spars. Place wing upside down on building board and replace spoiler in cut-out.

Make up control linkage from clevis F57 and threaded rod F56, cut to length and make a Z-bend at free end. Attach control linkage to servo arm.

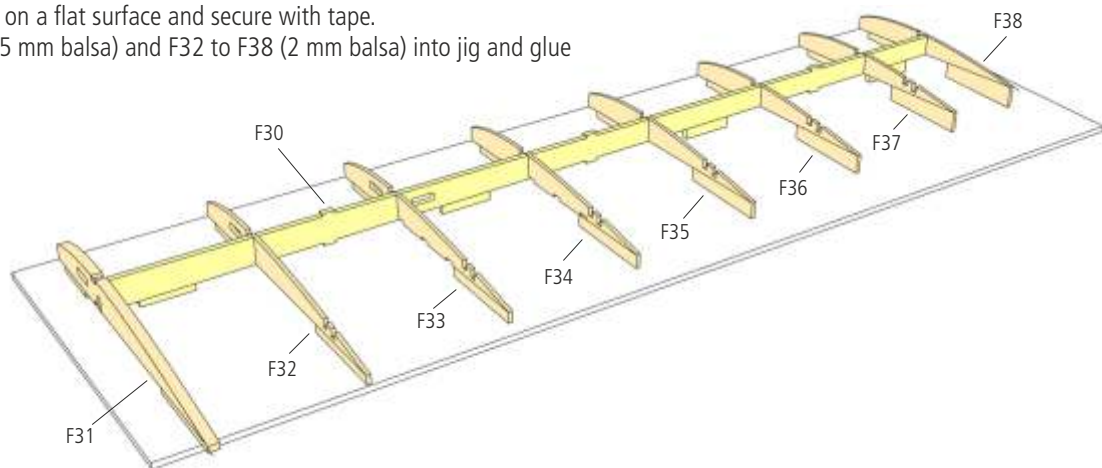
Use control linkage to mark position of control horn on spoiler.

Use file or razor saw to create slot for control horn F28 in spoiler and glue control horn in place.

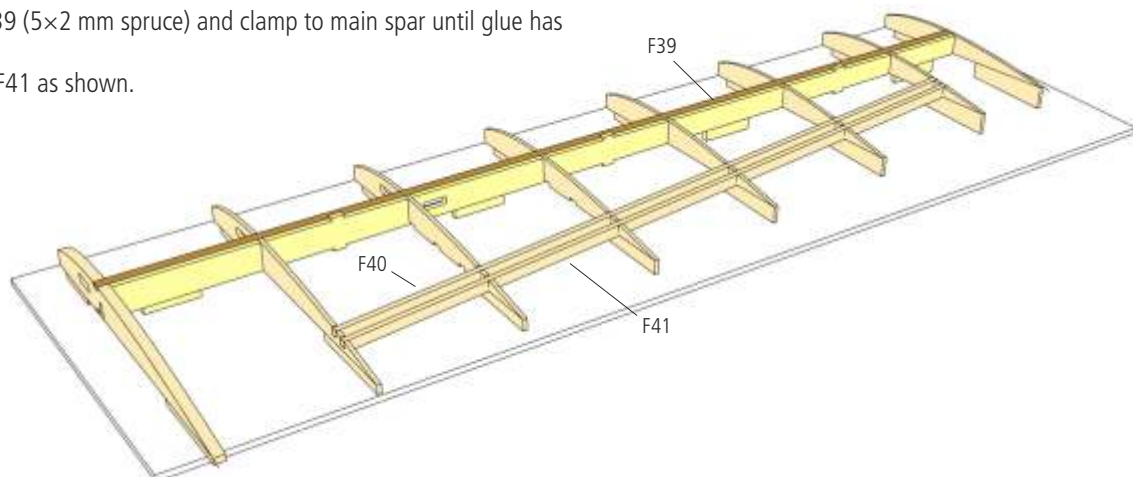


## Outer Wing Panel

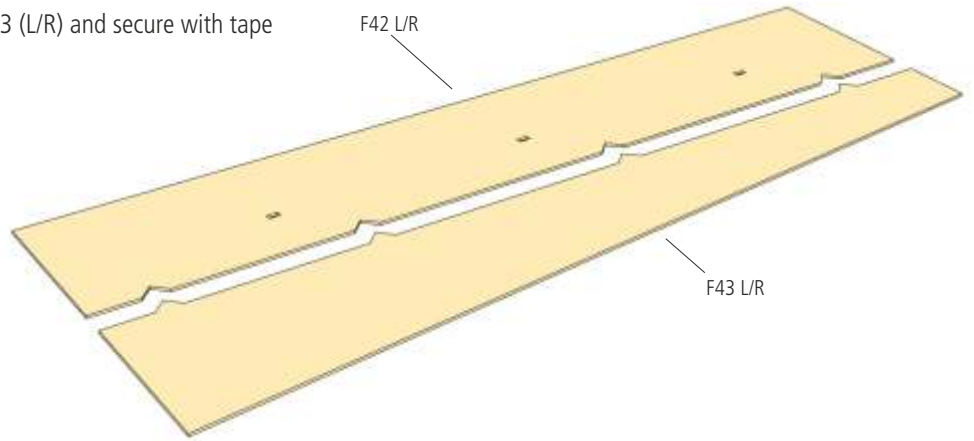
- 16** Place wing jig for outer wing panel on a flat surface and secure with tape. Insert main spar F30 and ribs F31 (5 mm balsa) and F32 to F38 (2 mm balsa) into jig and glue together.



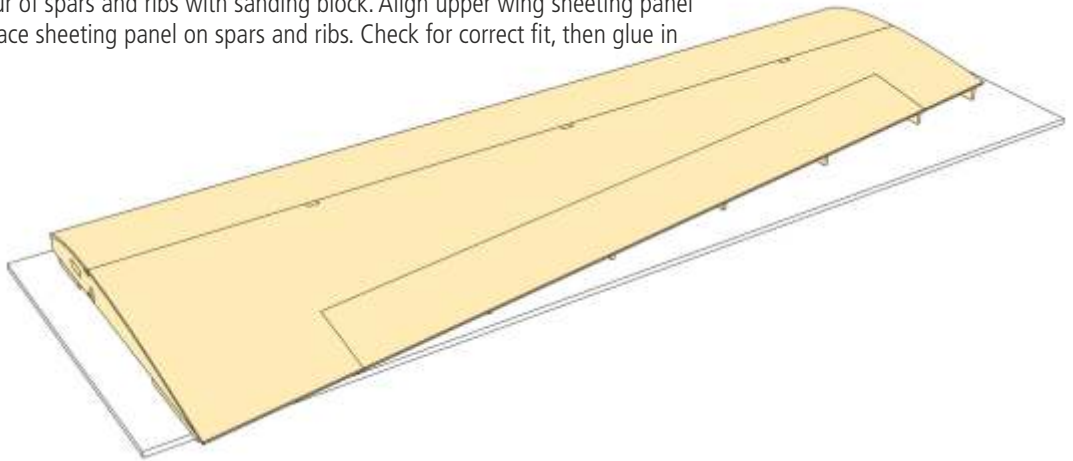
- 17** Glue in place upper wing spar F39 (5x2 mm spruce) and clamp to main spar until glue has dried. Glue in place aileron spars F40, F41 as shown.



- 18** Glue together upper wing sheeting F42, F43 (L/R) and secure with tape until dry.

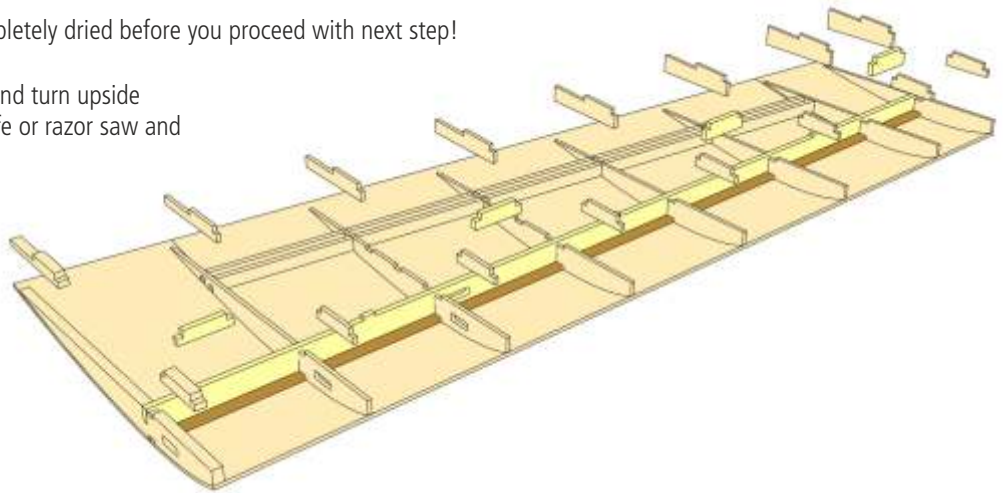


- 19** Carefully smooth upper contour of spars and ribs with sanding block. Align upper wing sheeting panel with tabs on main spar and place sheeting panel on spars and ribs. Check for correct fit, then glue in place and secure with pins.



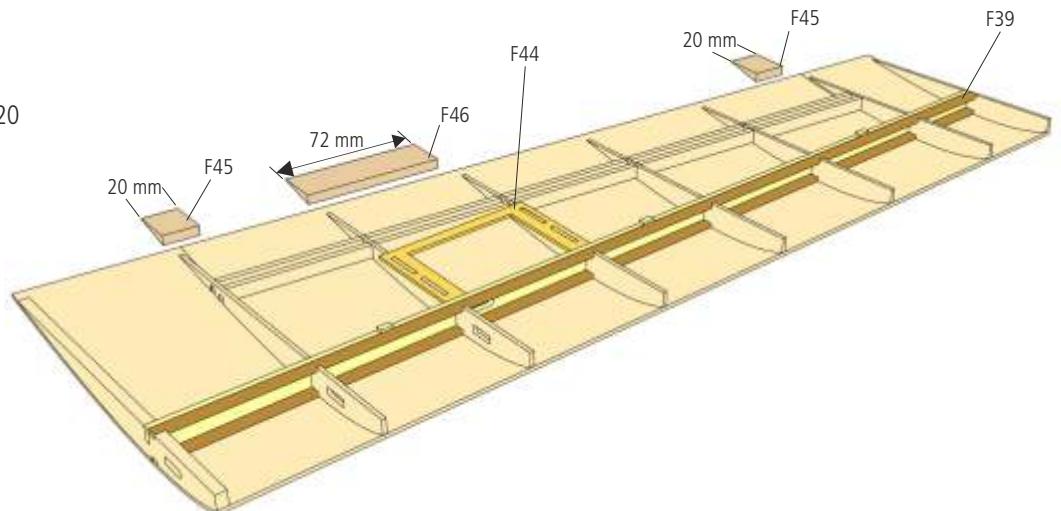
**! Attention:** Make sure glue has completely dried before you proceed with next step!

- 20** Carefully remove wing panel from jig and turn upside down. Cut off tabs with modeller's knife or razor saw and sand lightly.



- 21** Glue in place lower spruce spar F39 and servo frame F44 (1.5 mm birchply).

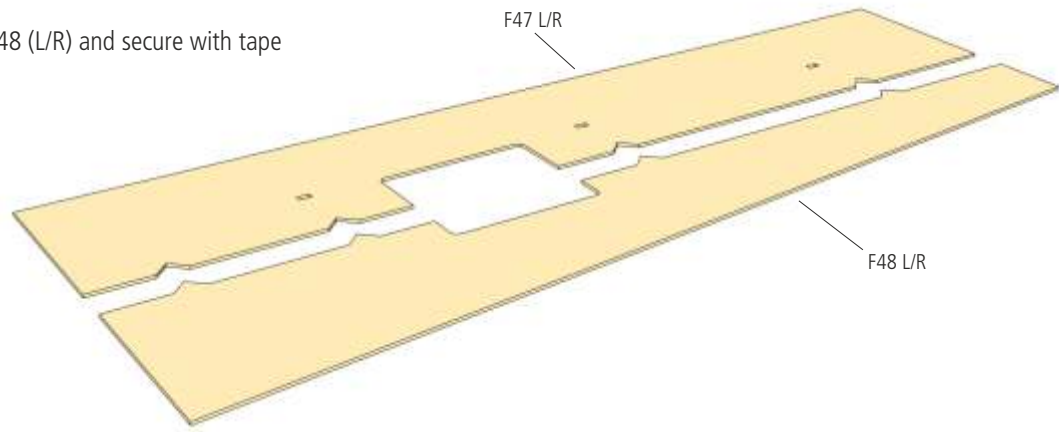
From 15×4 mm triangular stock cut to length reinforcements F45, F46 (20 and 72 mm, respectively) and glue into rib bays of aileron. Glue F45 at either end of aileron against ribs and spar, and glue F46 into rib bay opposite of servo frame.





- 22** Glue together lower wing sheeting F47, F48 (L/R) and secure with tape until dry.

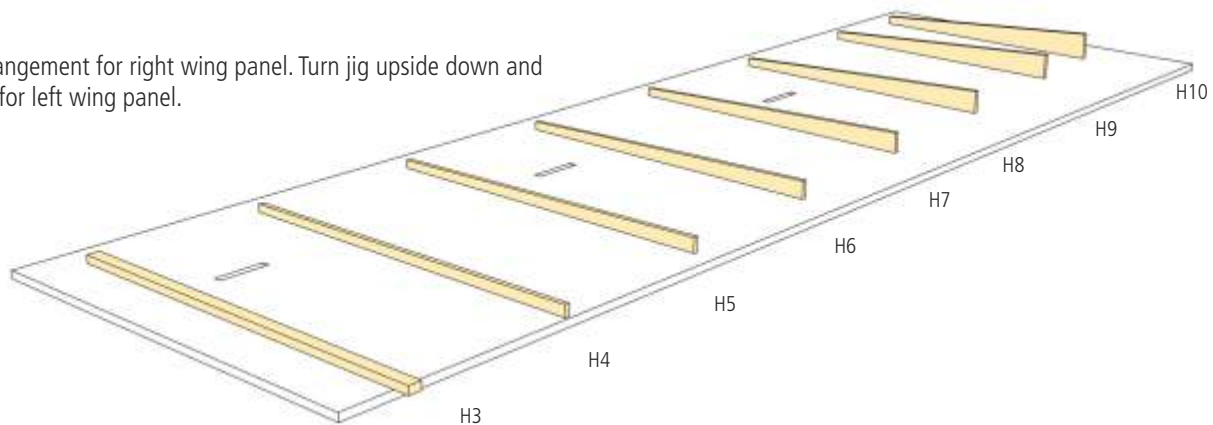
**i** **Optional:** If the model is to be equipped with ailerons, insert aileron servo lead now and secure in servo bay with tape.



- 23** Insert supports H3 to H10 into jig at rib positions.

The use of supports H3 to H10 guarantees correct amount of washout in outer wing panel.

**i** **Note:** Picture shows arrangement for right wing panel. Turn jig upside down and reverse order of supports for left wing panel.

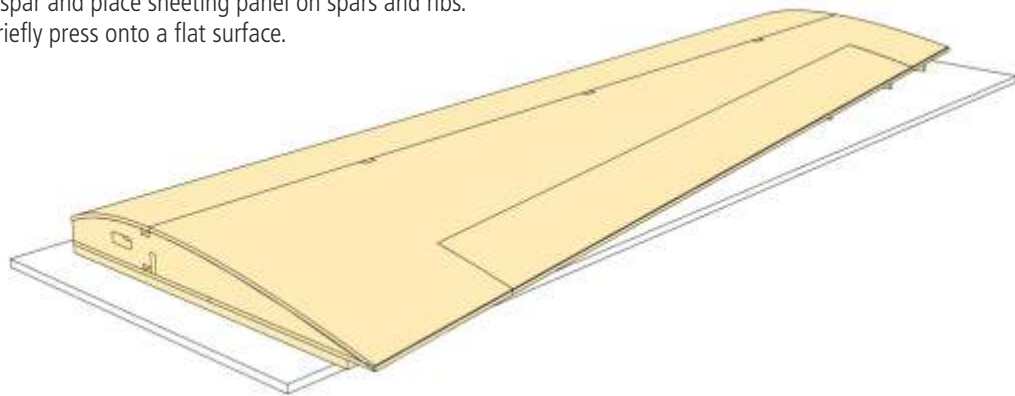


- 24** Slightly bevel rear edge of upper wing sheeting to establish a good contact surface for gluing. Align lower wing sheeting with tabs on main spar and place sheeting panel on spars and ribs. Check for correct fit, then glue in place and briefly press onto a flat surface.

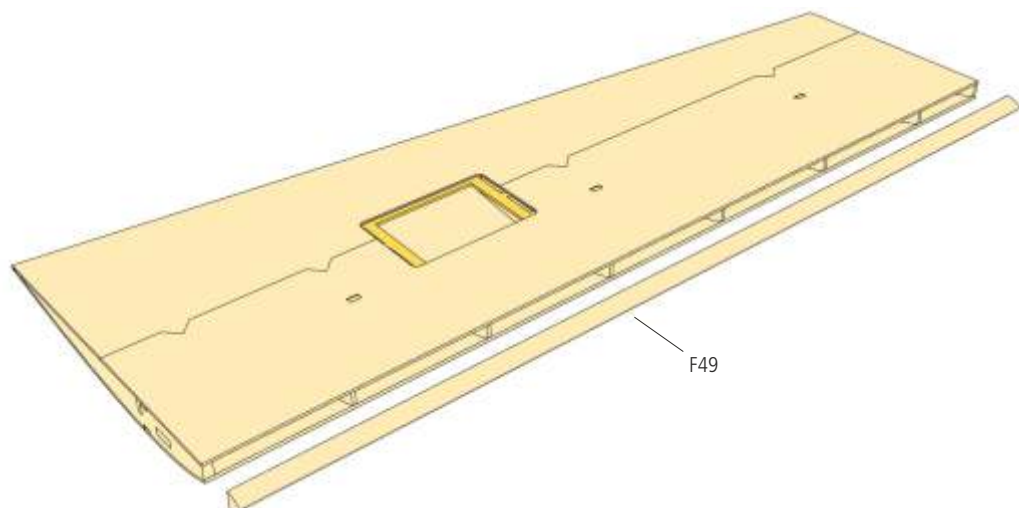
Remove any residual glue from inner edge of servo frame.

At rear edge of wing secure upper and lower wing sheeting with two strips F11 and clamps, then place outer wing panel on supports. Make sure front edge of wing sheeting is flush with front end of supports.

Weigh down wing panel evenly on supports and let dry.

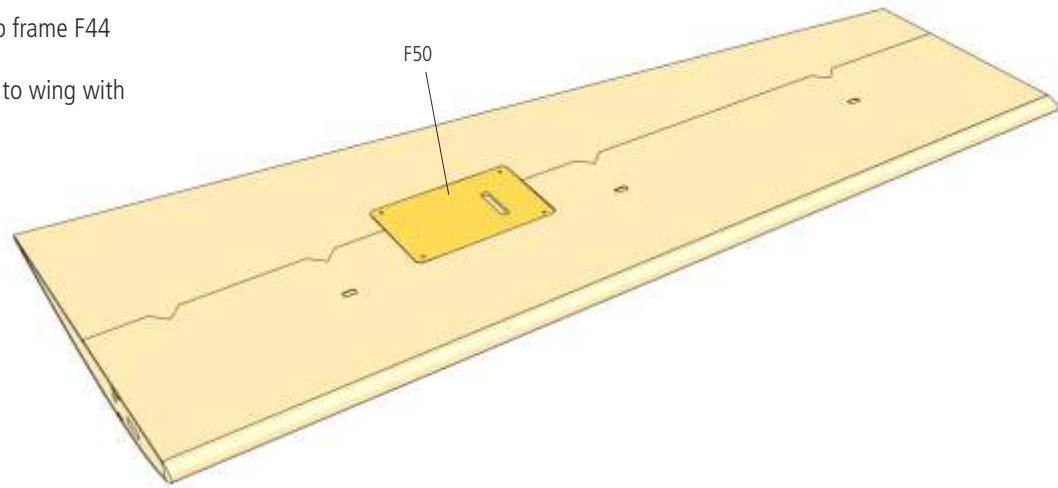


- 25** Sand sheeting material flush with front end of ribs. Glue in place leading edge F49 flush with upper sheeting and secure to wing with tape.





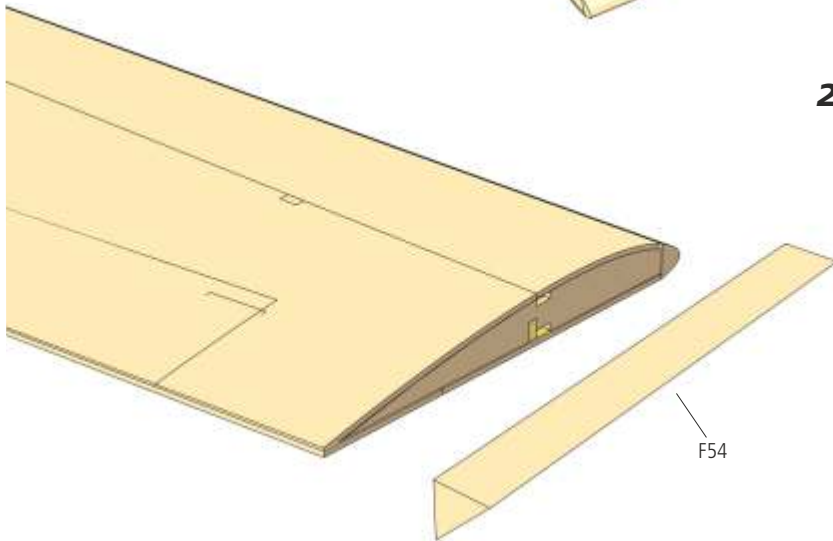
- 26** Install servo tray F50 in wing and drill servo frame F44 with 1.5 mm. When wing is completed, attach servo tray to wing with screws F52.



- 27** Glue wing tip F54 to end rib and secure with pins.

Carefully sand completed outer wing panel and sand contour of wing tip flush with upper and lower sheeting. Then chamfer edge of wing tip.

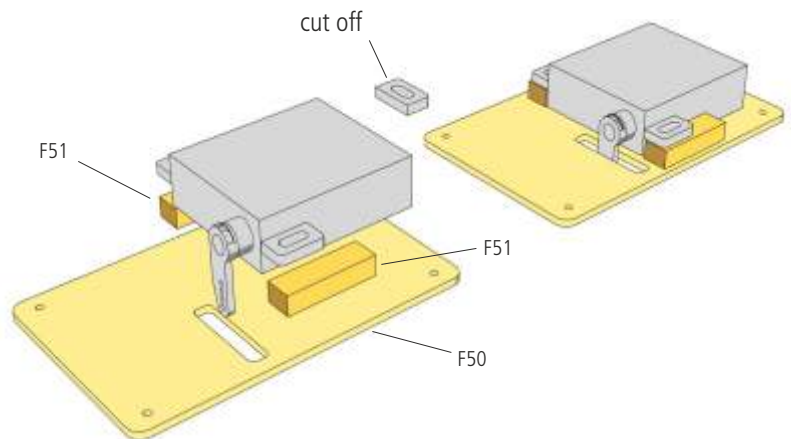
Build up opposite wing panel accordingly.



## Optional: Installing Ailerons

- 28** For aileron control use servos with a maximum thickness of 8 to 10 mm.

For standard 10 mm wing servos cut to length four 20 mm servo mounts F51 (5x3 mm spruce). Cut off bottom servo mounting flange, align servo with servo arm centred in slot of servo tray F50, hold in place and glue servo mounts to tray with a drop of white glue or medium CA.



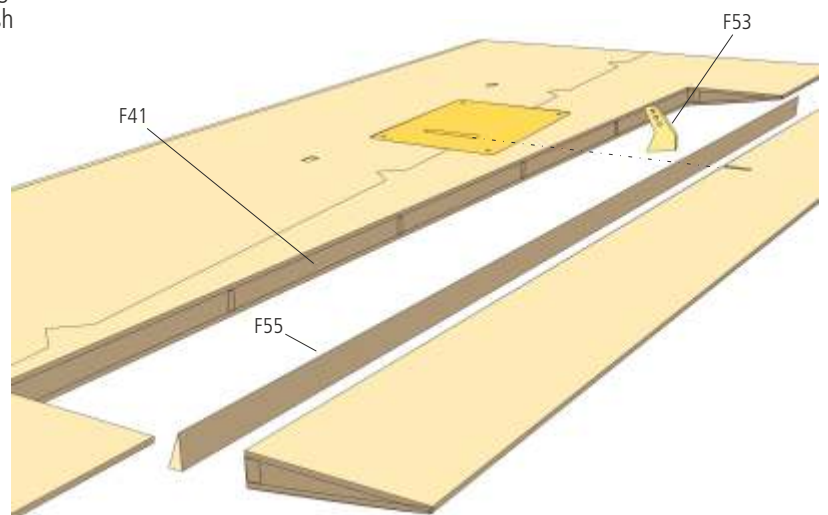
- 29** Cut out aileron along engraved lines and carefully sand sheeting material and ribs flush with spars. Sand front end of aileron flush with F41, glue aileron leading edge F55 (3 mm balsa) to F41 and bevel for sufficient control throw.

Place wing upside down on building board and replace aileron in cut-out.

Make up control linkage from clevis F57 and threaded rod F56, cut to length and make a Z-bend at free end. Attach control linkage to servo arm.

Use control linkage to mark position of control horn on aileron.

Use file or razor saw to create slot for control horn F53 in aileron and glue control horn in place.



## Completing the Wing

- 30** For version with aileron control connect servo leads of outer wing panel to servo leads of inner wing panel (solder, with or without connectors).

Use tape to protect sheeting material against glue near contact surfaces of inner and outer wing panels, then glue together wing panels with 5-minute-epoxy and secure with pins. For best results place inner wing panel on flat building surface and support outer wing panel with S3 at end rib position.

The wings without aileron and/or spoiler control are now complete.

- 31** Apply wood primer to wings and sand carefully with 400 grid sandpaper.

**Note:** The wing surfaces will benefit from a finish with Japanese tissue. Use wood primer to apply Japanese tissue.

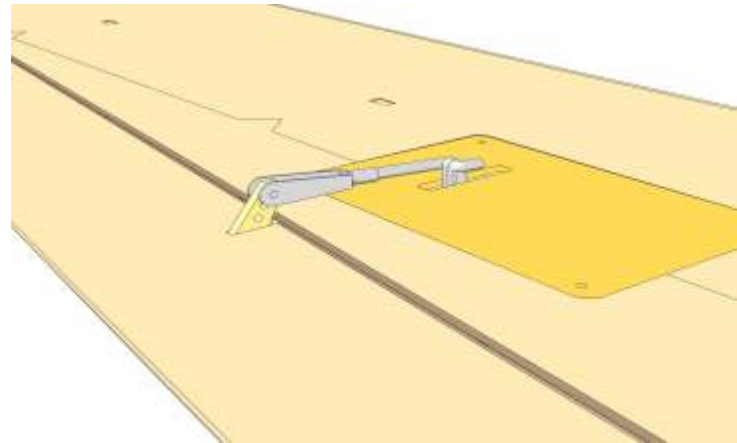
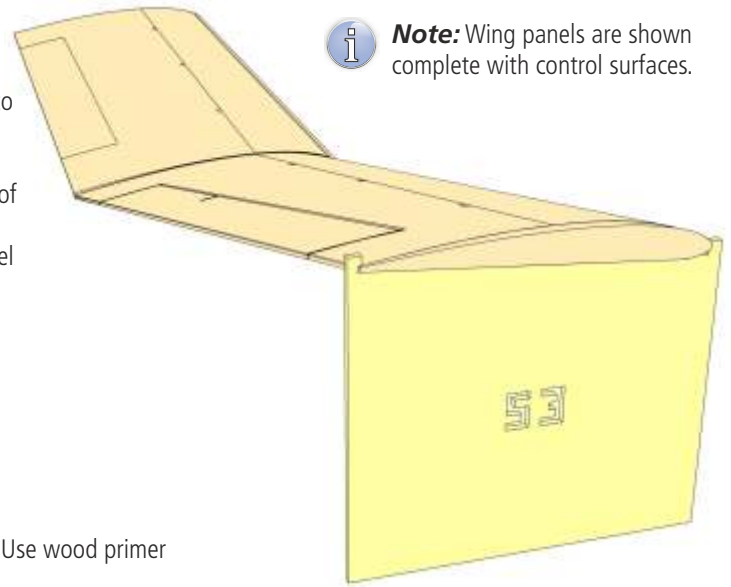
- 32** If applicable, attach control surfaces with hinge tape F58, F59 to wing panels and let cure overnight. The tape's adhesive will reach full strength after a period of 12 hours.

**Attention:** Attach spoilers with tape to lower wing sheeting!

Adjust servos to neutral position and connect control linkages to control surfaces.

Please note, that spoilers travel up to 90° downward and make sure servo arms are positioned accordingly.

**Note:** Wing panels are shown complete with control surfaces.

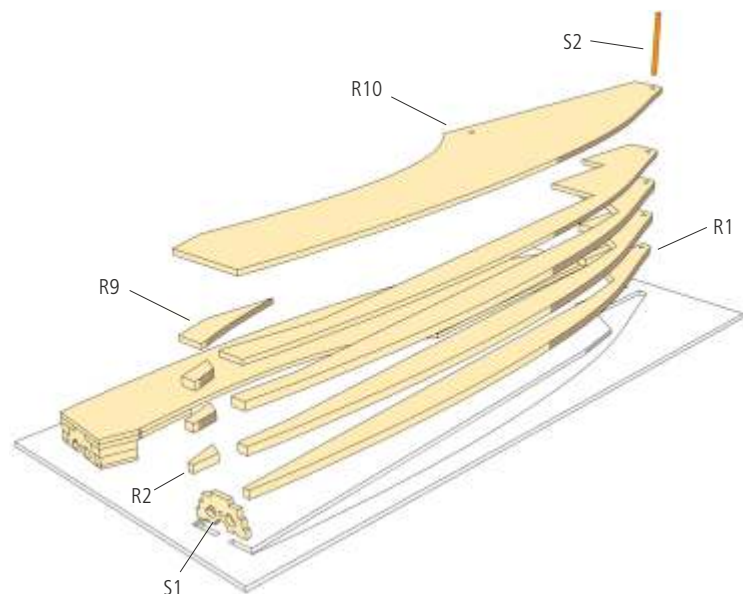


## Fuselage

- 33** The fuselage is constructed in two halves, each consisting of several layers of balsa wood. Both halves can be built up simultaneously in the same jig.

Place the fuselage jig on a flat building board and secure with tape. Insert Template S1 and fuselage parts R1, R2, R3 into jig. The jig is used to position these parts correctly, which form the basis for each fuselage half.

These parts will stand out a bit from the jig and allow the following parts to be glued on top of them.

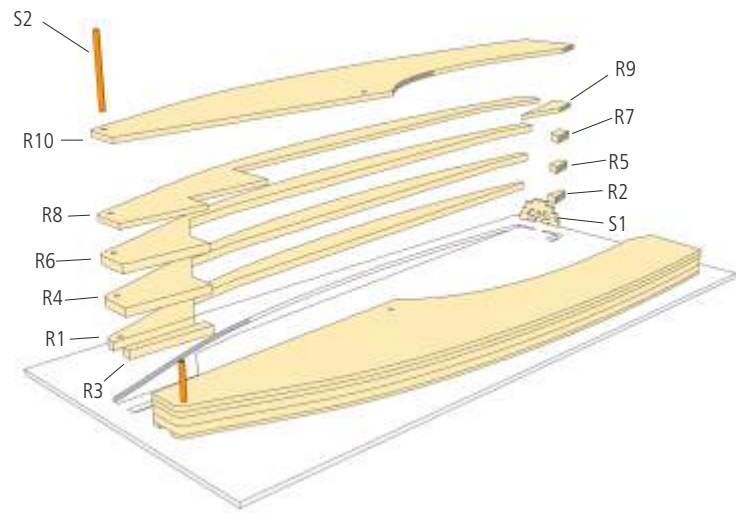


### 34

Glue parts on top of each other in the order shown. Make sure to position parts in the nose section exactly on motor mount template S1; at the rear end of the fuselage R1, R4, R6, R8 and R10 are held in position by snake outs S2. R5, R7 and R9 are positioned by template S1 as well, top side is flush.

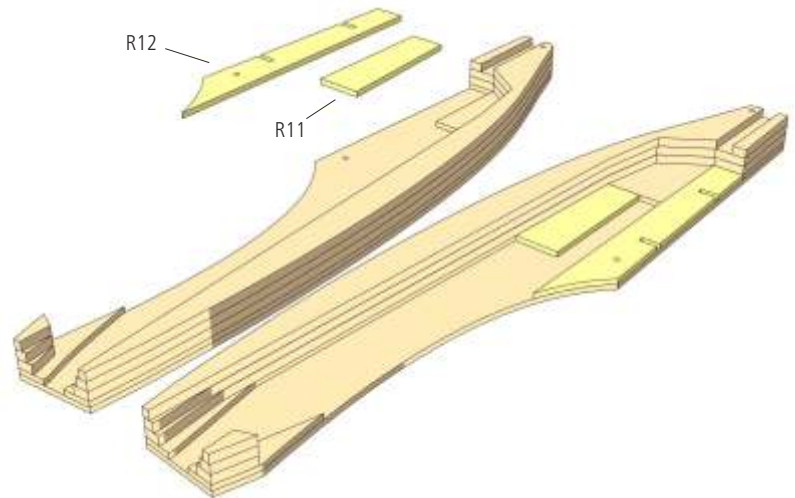


**Attention:** Do not glue any parts to S1! Remove S2 from fuselage half after glue has dried.



### 35

Remove fuselage halves from jig and place on building board as shown. Glue reinforcement R11 and wing saddle R12 to inside of fuselage halves.



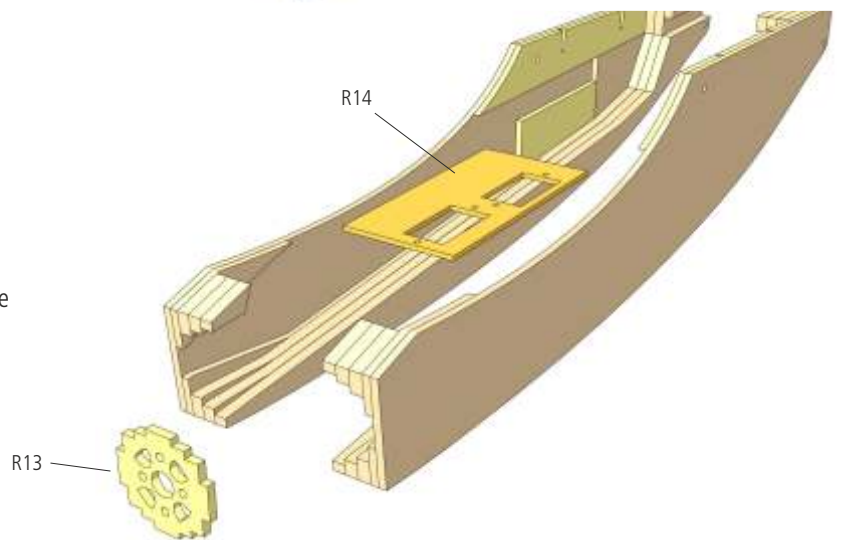
### 36

Glue together fuselage halves and secure with small screw clamps at both ends. Use scrap wood to protect surface of fuselage halves. Glue in place motor mount R13, slide servo tray R14 into fuselage and glue on top of R11.

**Note:** To compensate for tolerances servo tray R14 is a bit wider than necessary and may need to be fitted in place.

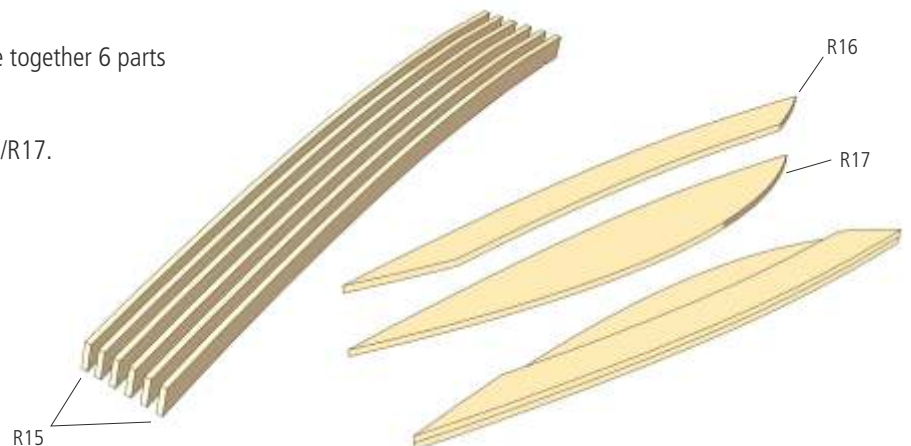


**Note:** Glue motor mount R13 in place even if you build the LT 200 without motor.



### 37

To build up the centre section of the canopy glue together 6 parts R15 and secure with pins. Make up a left and a right canopy side from R16/R17.

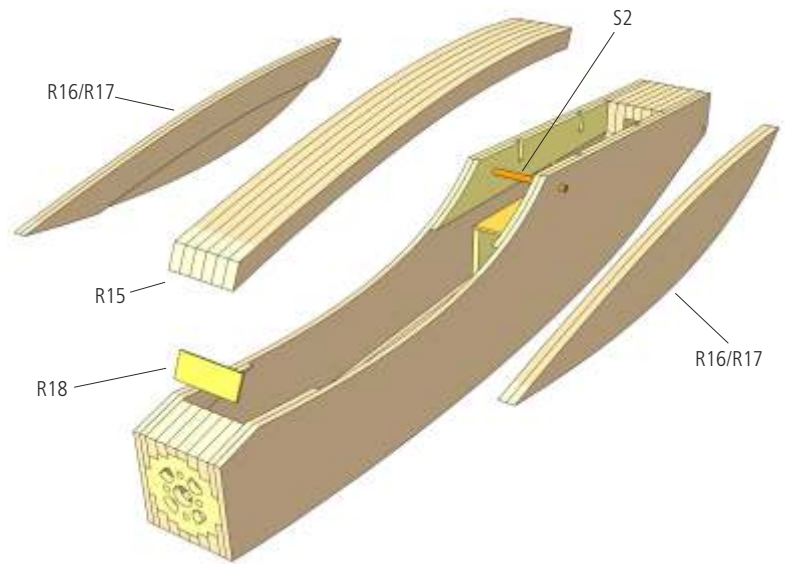




**38** Glue reinforcement R18 to the inside of the canopy opening as shown. It will protect the front edge of the canopy opening against wear.

Slide snake outer S2 through front wing dowel bore. Do not glue! Place centre section of canopy R15 in fuselage (slot at rear end resting on S2) and secure at front end with pins.

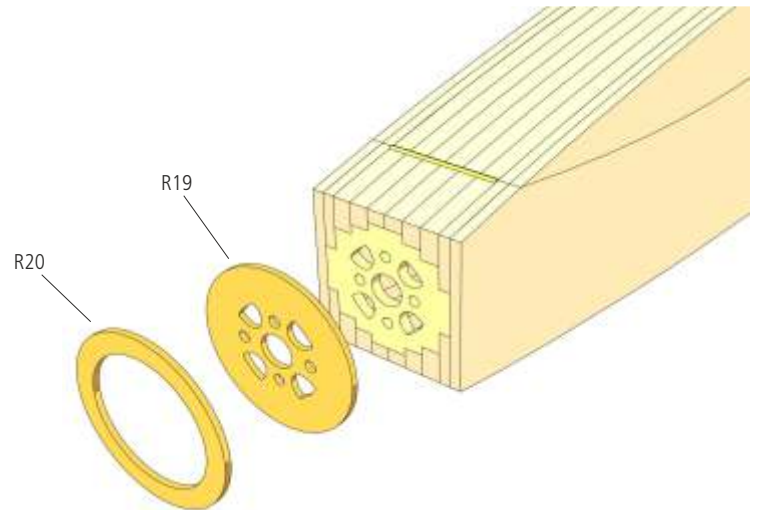
Glue side panels R16/R17 to centre section and secure with pins. Remove canopy from fuselage and leave to dry.



### **39** Electric power only:

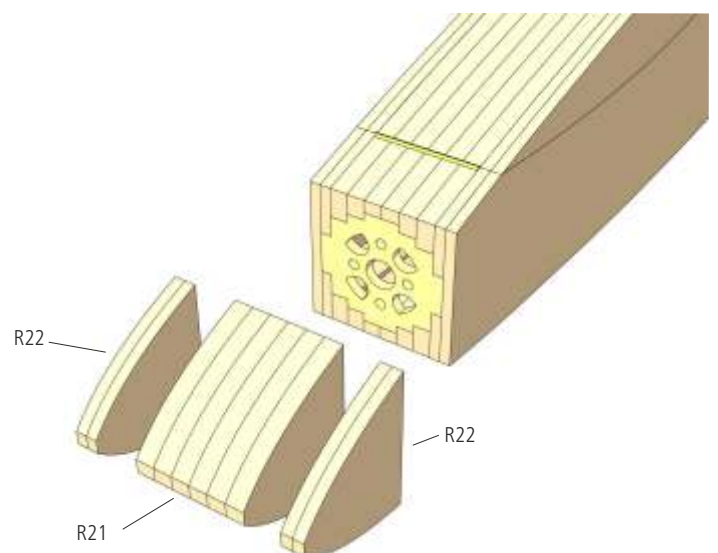
If your LT 200 is to be equipped with electric power, glue motor mount cover R19 to front of motor mount and secure with tape. Make sure to match motor mounting bores in R19 with bores in R13.

Then glue in place spacer R20 flush with R19.



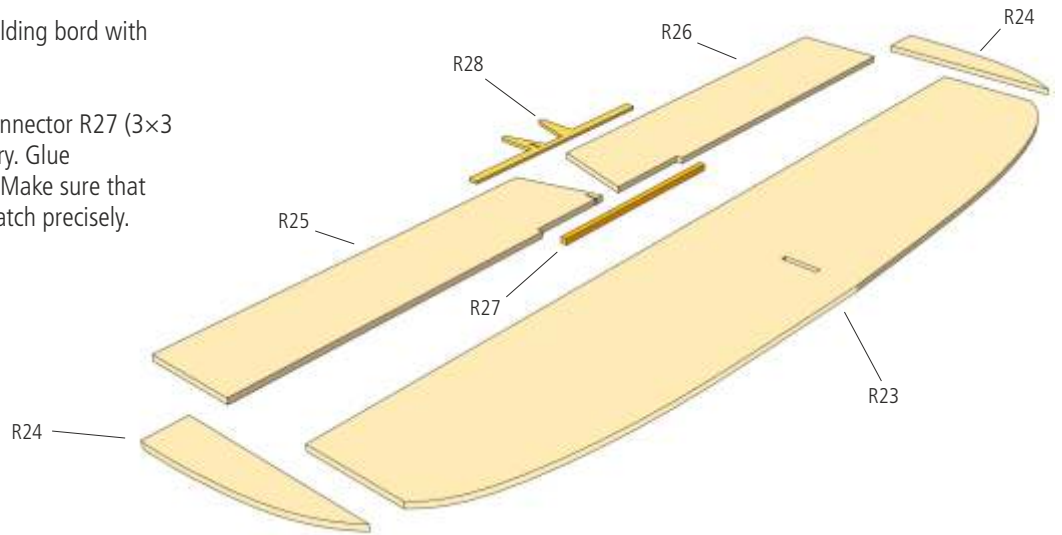
### **40** Sailplane version only:

If your LT 200 is built as a sailplane glue together parts R21 (6x) and R22 (4x) as shown, then glue to front end of fuselage.



**41** Secure tailplane R23 (3 mm balsa) to building board with pins and glue in place tips R24.

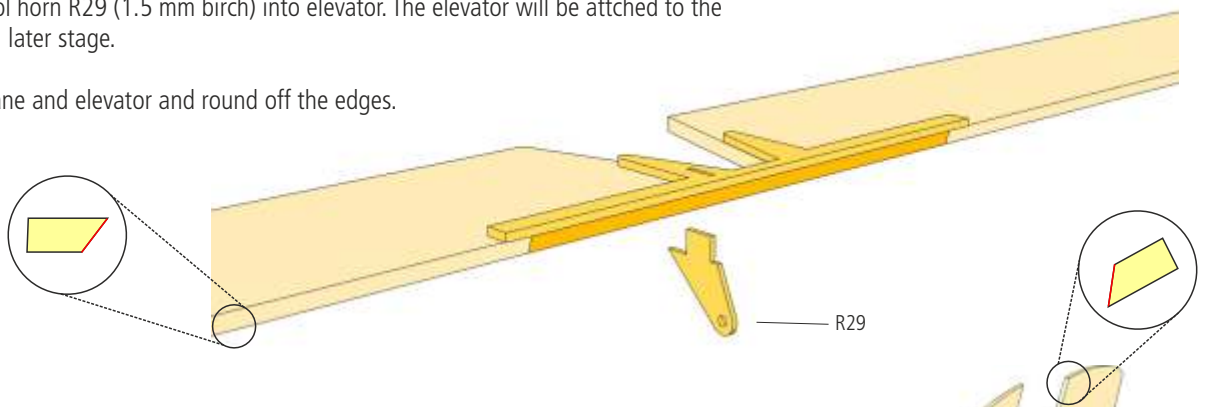
Glue together elevators R25/R26 and connector R27 (3×3 mm spruce) and secure with pins until dry. Glue reinforcement R28 (1 mm birch) on top. Make sure that slots for control horn in R25 and R28 match precisely.



**42** Bevel off front edge of elevator for sufficient control throw.

From below glue control horn R29 (1.5 mm birch) into elevator. The elevator will be attached to the tailplane with tape at a later stage.

Thoroughly sand tailplane and elevator and round off the edges.



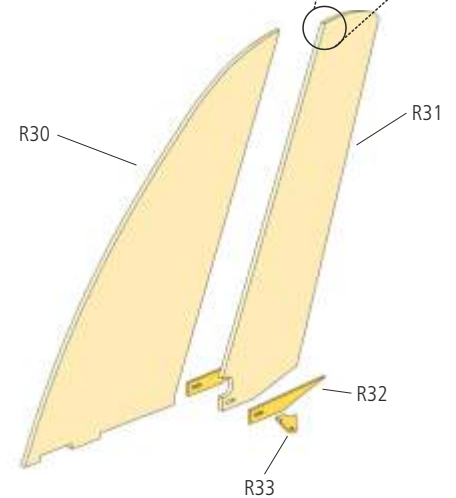
**43** The vertical stabilizer consists of fin R30, rudder R31 (both 3 mm balsa) as well as reinforcements R32 and control horn R33 (1 mm and 1.5 mm birch, respectively).

Glue reinforcements R32 to either side of rudder and secure with clamps. Make sure that slots for control horn match precisely.

Bevel off front edge of rudder (to the right side in direction of flight) for sufficient control throw. Then glue in place control horn R33.

**⚠ Attention:** Control horns for elevator and rudder must not be located on the same side!

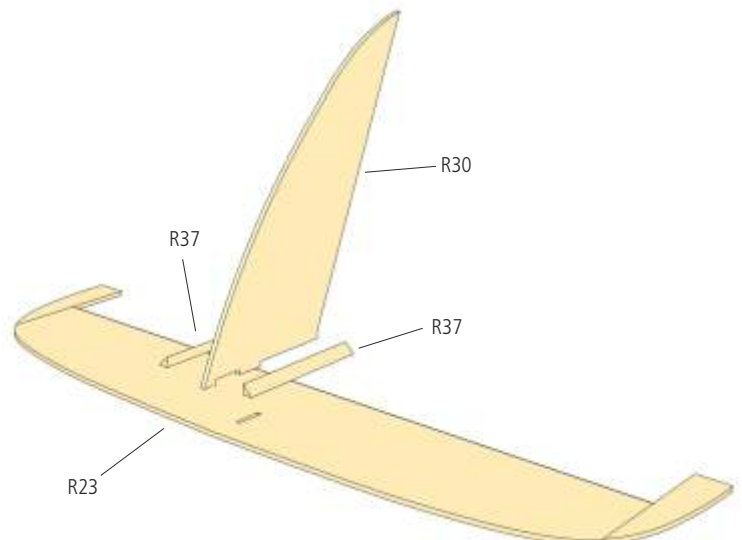
Carefully sand vertical stabilizer and round off the edges.



**44** Glue fin R30 to tailplane R23. Use a set square or other suitable aid to make sure that fin is at right angles in relation to tailplane.

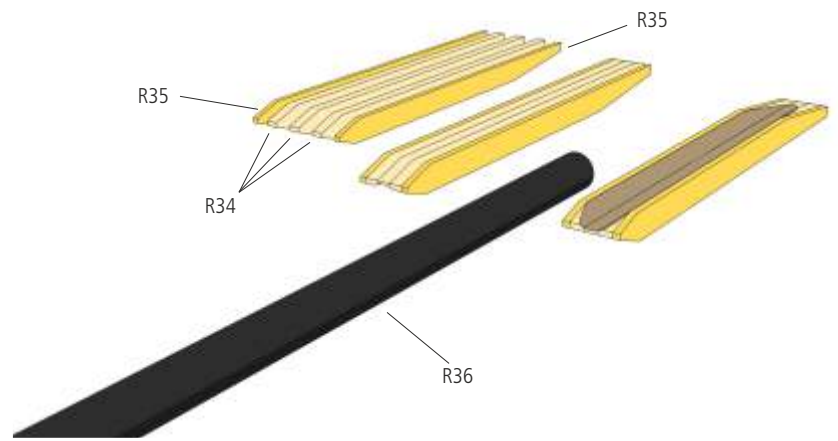
Glue reinforcements R37 to base of fin.

The rudder will be attached to the fin with tape at a later stage.

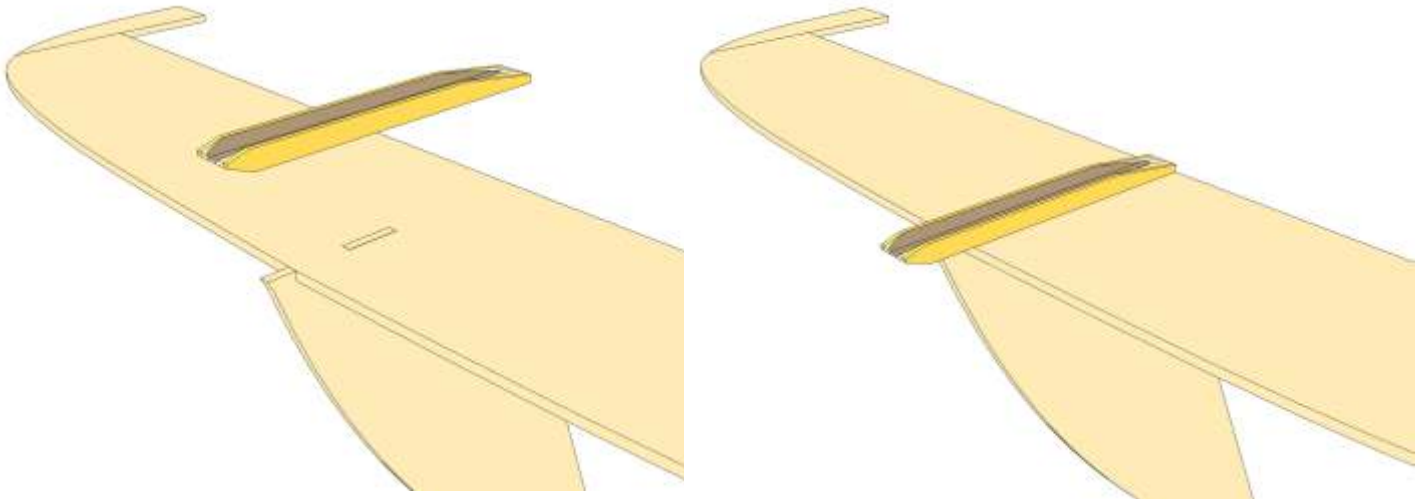


**45** Glue together parts R34 (3×) and R35 (2×) as shown to make up the tailplane support.

Wrap 180 grit sandpaper around fuselage carbon tube R36 and sand tailplane support to fit carbon tube. Sand until birch ply side panels touch the carbon tube.



**46** Glue in place tailplane support to underside of tailplane flush with rear edge.

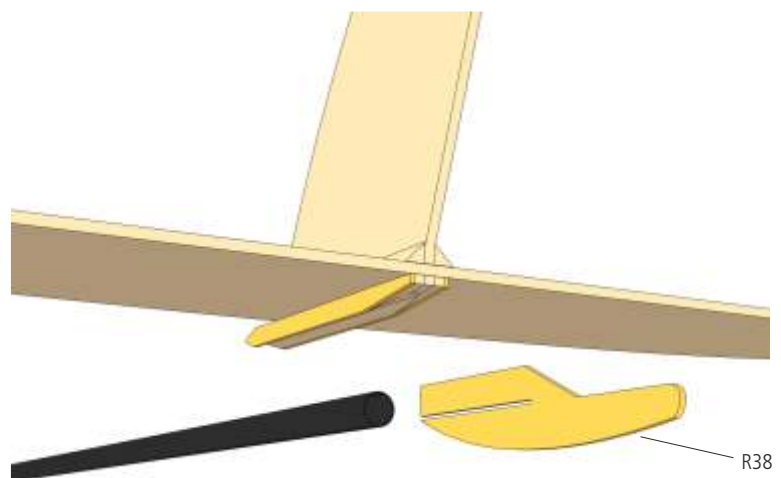


**47** Glue tail unit with 5 minute epoxy to one end of carbon tube.



**Attention:** Make sure that carbon tube ends precisely at rear end of lower horizontal edge of tailplane support! (see also side elevation of model at end of building instructions)

Glue tail skid R38 into end of fuselage tube with 5 minute epoxy.





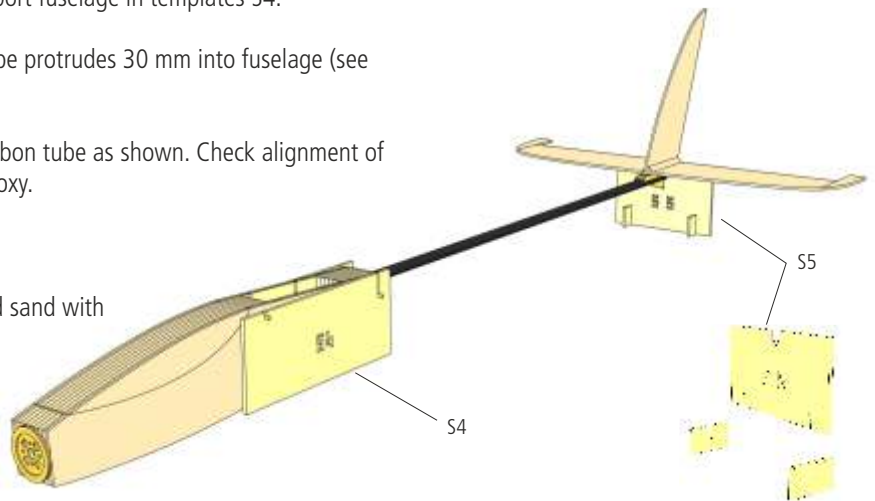
**48** Slide wing dowels R39 into bores in fuselage and support fuselage in templates S4.

Slide carbon tube into fuselage and make sure that tube protrudes 30 mm into fuselage (see also step 50).

Put together template S5 and support tail unit and carbon tube as shown. Check alignment of carbon tube, then glue into fuselage with 5 minute epoxy.

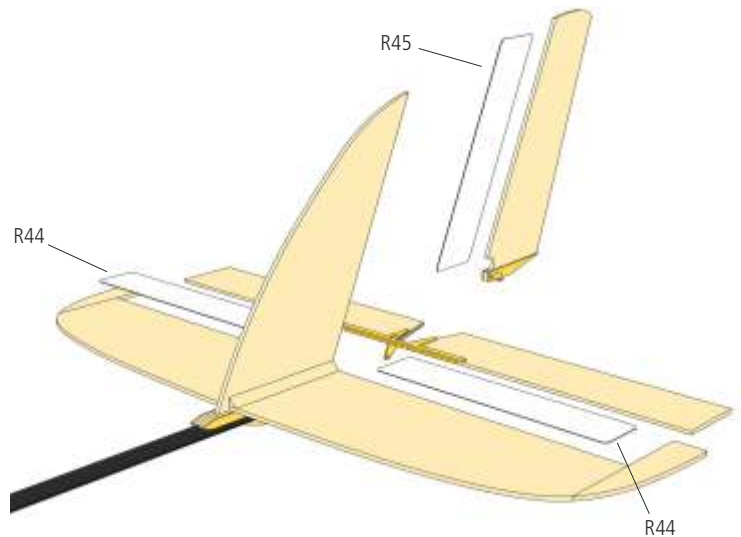
Sand fuselage to shape with canopy installed.

Finally apply wood primer to fuselage and tail unit and sand with 400 grit sandpaper.



**49** Attach elevator and rudder to tail unit with hinge tape R44 and R45, respectively.

**Note:** The tape's adhesive will reach full strength after a period of 12 hours.

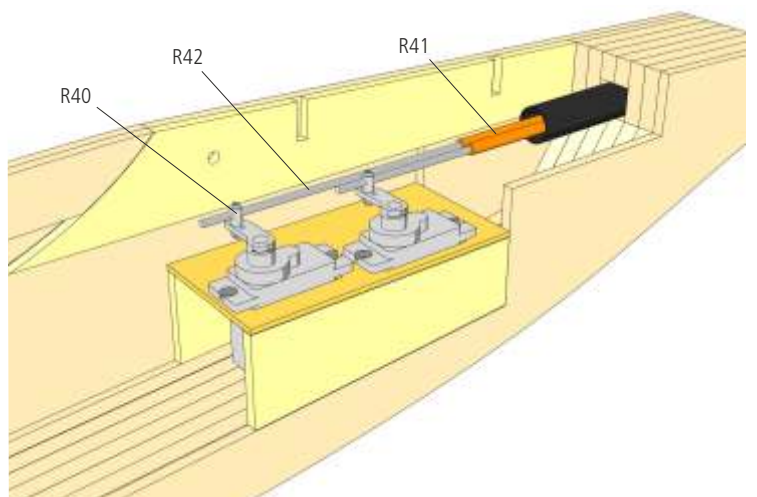
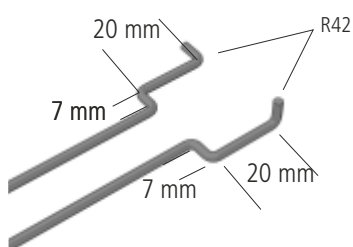


**50** Install servos in fuselage.

Bend piano wires R42 for elevator and rudder control as shown.

From the rear slide piano wires with snake outers R41 through carbon tube (either side of tail skid) and into connectors R40 on servo arms. Attach wires to control horns and secure with keepers R43.

Finally, secure snake outers R41 with a drop of 5 minute epoxy at both ends.



## 51 Completing the Model

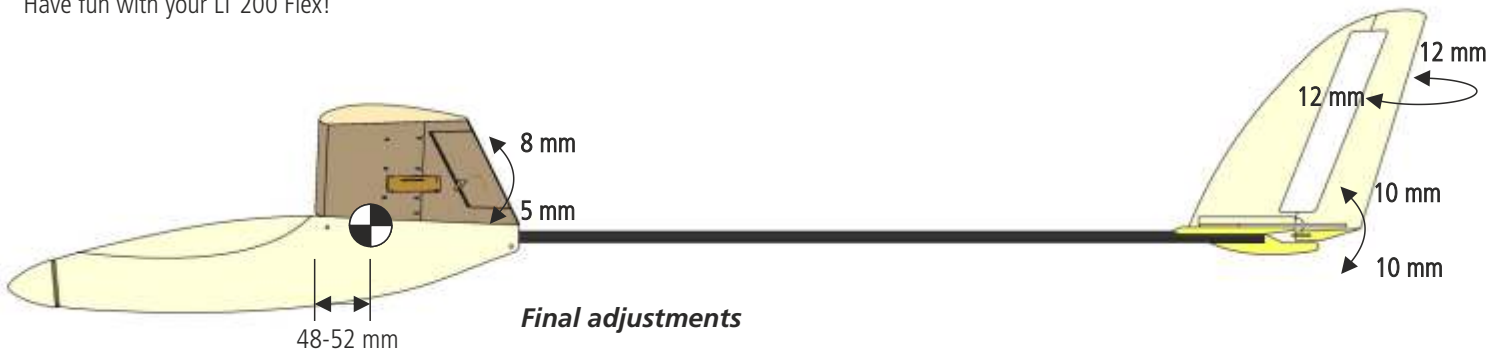
Install RC equipment into fuselage and connect battery. Attention: On electric powered model do not install prop at this time!

Make sure that control surfaces move in the right direction, then adjust control throws according to values below.

For electric power make sure motor turns in right direction. Disconnect battery, install folding prop and spinner, and secure wings on fuselage with included rubber bands.

Adjust centre of gravity by moving the battery back and forth (secure with hook and loop tape) or by adding the required amount of ballast. The exact centre of gravity location can be determined after the first couple of flights.




Have fun with your LT 200 Flex!



### Final adjustments

Centre of gravity:	48 - 52 mm ab Vorderkante Nasenleiste
Elevator:	10/10 mm
Rudder:	12/12 mm
Spoilers:	90° down
Aileron:	8 mm up, 5 mm down

### Tips & Tricks

-  To remove the canopy, slide the wing backward with both thumbs until rear end of canopy is free. You can put the canopy back in place in the same way. This will make it very easy to change the battery without removing the wing.
-  To protect the wood against moisture, apply wood primer to all wood parts and let dry thoroughly. Then sand with 400 grit sandpaper. Additional application of clear varnish is not required.
-  Covering the wings and tail unit with Japanese tissue will add strength and provide a perfect finish for your model. Use wood primer to cover your model with Japanese tissue, then carefully sand with 400 grit sandpaper.



## Use these instructions for a successful maiden flight

### Maiden flight

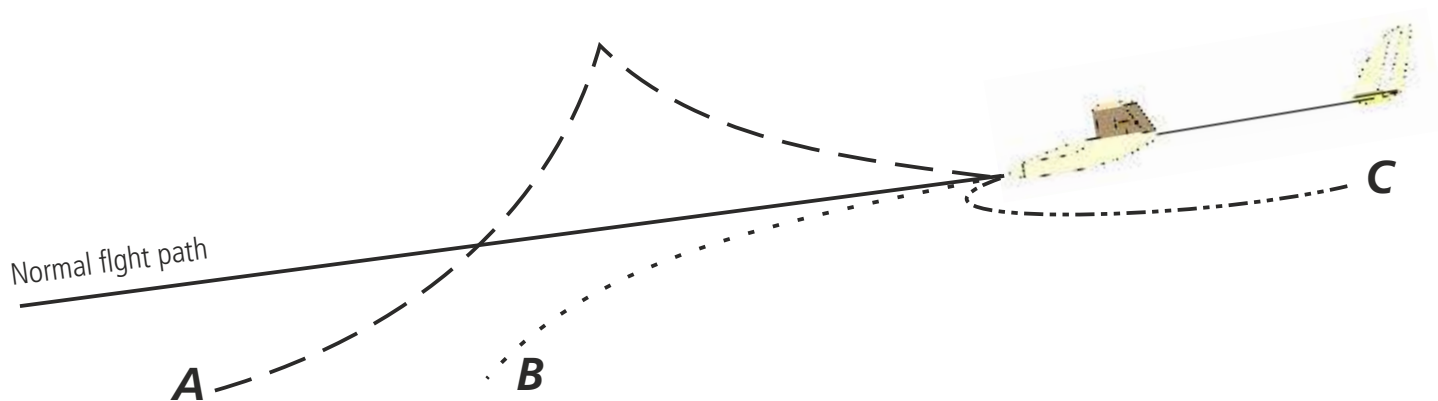
Choose a calm day with little or no wind. Hand-start the model into the wind with moderate thrust and a slight nose-down attitude. A small slope or an unobstructed meadow are ideal flying fields.

If model does not execute a flat glide, please follow instructions in table.



### Safety Warning

Always observe local regulations applicable for model aeroplanes. Also do not fly near airports, roads, motor ways, houses, high-tension lines or groups of people. We recommend to contact a local flying club for additional advice.



Flight path	Cause	Corrective action
<b>A</b> model stalls	powerful hand start	toss less powerful
	model tail heavy	add nose ballast
	too much wing incidence	insert cardboard shim under rear end of wing
<b>B</b> model dives	weak hand start	toss more powerful
	model nose heavy	reduce nose ballast
	wing incidence too small	insert cardboard shim under front end of wing
<b>C</b> model turns  Small corrections may be made by means of trimming rudder or elevator.	wing unbalanced	balance wing
	tail unit warped	lightly moisten tail unit and secure until dry
	wing dislocated in relation to tail unit	relocate wing parallel to tail unit
	aileron or rudder not correctly centred	adjust ailerons or rudder for straight flight path




correct



incorrect



# Stückliste

P q0	Description	Pieces	Material	Sheet	Type	Dimensions
<b>Dsqc_j_ec</b>						
R1	fuselage intermediate layer	2	balsa	7	laser-cut	5 mm
R2	fuse. intermediate layer, front	2	balsa	7	laser-cut	5 mm
R3	fuselage intermediate layer	2	balsa	7	laser-cut	5 mm
R4	fuselage intermediate layer	2	balsa	7	laser-cut	5 mm
R5	fuse. intermediate layer front	2	balsa	7	laser-cut	5 mm
R6	fuselage intermediate layer	2	balsa	7	laser-cut	5 mm
R7	fuse. intermediate layer front	2	balsa	7	laser-cut	5 mm
R8	fuselage intermediate layer	2	balsa	6	laser-cut	3 mm
R9	fuse. intermediate layer front	2	balsa	6	laser-cut	3 mm
R10	fuselage side	2	balsa	1, 2	laser-cut	3 mm
R11	servo tray support	2	lightply	27	laser-cut	3 mm
R12	wing saddle		lightply	27	laser-cut	3 mm
R13	motor mount	1	lightply	27	laser-cut	3 mm
R14	servo tray	1	birch ply	26	laser-cut	1.5 mm
R15	canopy intermediate layer	6	balsa	7, 8	laser-cut	5 mm
R16	canopy side panel	2	balsa	6	laser-cut	3 mm
R17	canopy side panel	2	balsa	1, 2	laser-cut	3 mm
R18	reinforcement	1	birch ply	28	laser-cut	1 mm
R19	motor mount cover	1	birch ply	26	laser-cut	1.5 mm
R20	spacer	1	birch ply	26	laser-cut	1.5 mm
R21	nose block intermediate layer	6	balsa	8	laser-cut	∅ 3 mm
R22	nose block side panel	4	balsa	1, 2	laser-cut	3 mm
R23	tailplane	1	balsa	4	laser-cut	3 mm
R24	tailplane tip	2	balsa	4	laser-cut	3 mm
R25	right elevator	1	balsa	3	laser-cut	3 mm
R26	left elevator	1	balsa	3	laser-cut	3 mm
R27	elevator joiner	1	spruce		cut part	3×3×100 mm
R28	elevator reinforcement	1	birch ply	28	laser-cut	1 mm
R29	elevator control horn	1	birch ply	26	laser-cut	1.5 mm
R30	fin	1	balsa	5	laser-cut	3 mm
R31	rudder	1	balsa	5	laser-cut	3 mm
R32	rudder reinforcement	2	birch ply	28	laser-cut	1 mm
R33	rudder control horn	1	birch ply	26	laser-cut	1.5 mm
R34	tailplane support	3	balsa	5	laser-cut	3 mm
R35	tailplane support	2	birch ply	28	laser-cut	1 mm
R36	fuselage tube	1	CFK		cut part	c ü 
R37	fin base reinforcement	2	balsa triangular stock		cut part	6×6×85 mm
R38	tail skid	1	birch ply	26	laser-cut	∅ 3 mm
R39	wing dowel	2	beech		cut part	∅ 3×80 mm
R40	connector	2	metal		ready made	
R41	snake outer	2	plastic		cut part	∅ 3/2×750 mm
R42	push rod	2	metal		cut part	∅ 1.2×880 mm
R43	keeper	2	plastic		ready made	
R44	elevator hinge tape	2	textile tape		laser-cut	
R45	rudder hinge tape	1	textile tape		laser-cut	
<b>Inner wing panel</b>						
F1	main spar	2	lightply	27	laser-cut	3 mm
F2 - F4	root rib	je 2	lightply	27	laser-cut	3 mm
F5 - F8	rib	je 2	balsa	9	laser-cut	2 mm
F9	rib	2	balsa	8	laser-cut	5 mm
F10	spar	4	spruce		cut part	5×2×490 mm
F11	spoiler spar	2	balsa	6	laser-cut	3 mm
F12	spoiler spar	2	balsa	6	laser-cut	3 mm

P q0	Description	Pieces	Material	Sheet	Type	Dimensions
F13	upper wing sheeting	2	balsa	14, 15	laser-cut	1.5 mm
F14	upper wing sheeting	2	balsa	16, 17	laser-cut	1.5 mm
F15	joiner sleeve	2	brass		cut part	Ø 7/6×125
F16	joiner sleeve	2	brass		cut part	c ĆĆŮĎĎ
F17	joiner sleeve end stop	2	birch ply	26	laser-cut	1.5 mm
F18	servo frame	2	birch ply	26	laser-cut	1.5 mm
F19	reinforcement	4	balsa triangular stock		cut part	6×30×20 mm
F20	reinforcement	2	balsa triangular stock		cut part	6×30×70 mm
F21	lower wing sheeting	2	birch ply	26	laser-cut	1.5 mm
F22	lower wing sheeting	2	balsa	10, 11	laser-cut	1.5 mm
F23	lower wing sheeting	2	balsa	12, 13	laser-cut	1.5 mm
F24	leading edge	2	balsa		cut part	8×10×490 mm
F25	servo tray	2	birch ply	26	laser-cut	1.5 mm
F26	servo mount	16	lightply	27	laser-cut	3 mm
F27	screw	8	steel		ready made	2.2×6.5
F28	control horn	2	birch ply	26	laser-cut	1.5 mm
F29	dihedral rib	2	balsa triangular stock		cut part	5×25×190 mm
<b>Outer wing panel</b>						
F30	main spar	2	lightply	27	laser-cut	3 mm
F31	rib	2	balsa	8	laser-cut	5 mm
F32 - F38	rib	je 2	balsa	9	laser-cut	Ć Ů Ů
F39	spar	4	spruce		cut part	5×2×490 mm
F40	aileron spar	2	balsa	6	laser-cut	3 mm
F41	aileron spar	2	balsa	6	laser-cut	3 mm
F42	upper wing sheeting	2	balsa	22, 23	laser-cut	1.5 mm
F43	upper wing sheeting	2	balsa	24, 25	laser-cut	1.5 mm
F44	servo frame	2	birch ply	26	laser-cut	1.5 mm
F45	reinforcement	4	balsa triangular stock		cut part	4×15×20 mm
F46	reinforcement	2	balsa triangular stock		cut part	4×15×72 mm
F47	lower wing sheeting	2	balsa	18, 19	laser-cut	1.5 mm
F48	lower wing sheeting	2	balsa	20, 21	laser-cut	1.5 mm
F49	leading edge	2	balsa		cut part	8×10×490 mm
F50	servo tray	2	birch ply	26	laser-cut	1.5 mm
F51	servo mount	4	spruce		cut part	3×5×20 mm
F52	screw	8	steel		ready made	2.2×6.5
F53	control horn	2	birch ply	26	laser-cut	1.5 mm
F54	wing tip	2	balsa triangular stock		cut part	15×15×140 mm
F55	aileron leading edge	2	balsa		laser-cut	3 mm
F56	threaded rod	4	metal		ready made	M2
F57	clevis	4	metal		ready made	M2
F58	spoiler hinge tape	2	textile tape		laser-cut	
F59	aileron hinge tape	2	textile tape		laser-cut	
F60	wing joiner	1	composite		ready made	Ø 6×250 mm
F61	wing joiner	1	composite		ready made	Ø 3×100 mm
F62	rubber band	4			ready made	
H1	wing jig, inner wing panel	1	cardboard		laser-cut	
H2	wing jig, outer wing panel	1	cardboard		laser-cut	
H3	support	1	balsa	8	laser-cut	5 mm
H4-H10	support	je 1	balsa	9	laser-cut	2 mm
S1	fuselage jig	1	Depron			
S2	snake outer	2	plastic		cut part	Ø 3/2×50 mm
S3	dihedral template	1	cardboard		laser-cut	
S4	fuselage support	2	cardboard		laser-cut	
S5	three-piece tailplane support	1	cardboard		laser-cut	

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