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Gang

PRINT
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USER GUIDE

CREATED FOR 3D PRINTER

FULLY
PRINTABLE



PZL p.11c
Polish fighter

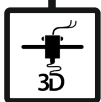
ASSEMBLY INSTRUCTION FOR RC MODEL PRINTED ON 3D PRINTER



Visit our website www.print-beat.com and purchase a product which you are interested in. Then you get an access for the file download in g-code or STL format.



Download the files onto SD card. We try to optimize the universal G-code output for the widest selection of printers and we test our products on several printer brands and configurations. In case you are owner of the Prusa 3D printer use for the print the files prusa G-code



Print all of the model parts on the 3D Printer
 - minimum supported size of the printed surface is 20x20x15 cm
 - the supported type of filament is PLA



Assemble the model according to the attached PDF manual
 - for bonding of the model parts we recommend to use Super Glue (medium thick) and Activator

PRODUCT CONTAINS

STL files of RC model PZL p 11.C in 1/10 scale
Universal G-code of RC model PZL p 11.C in 1/10 scale optimized for 3D printers
SimpliFy3D factory files of RC model PZL p 11.C in 1/10 scale
Assembly instructions in PDF format
Scale markings in PDF format

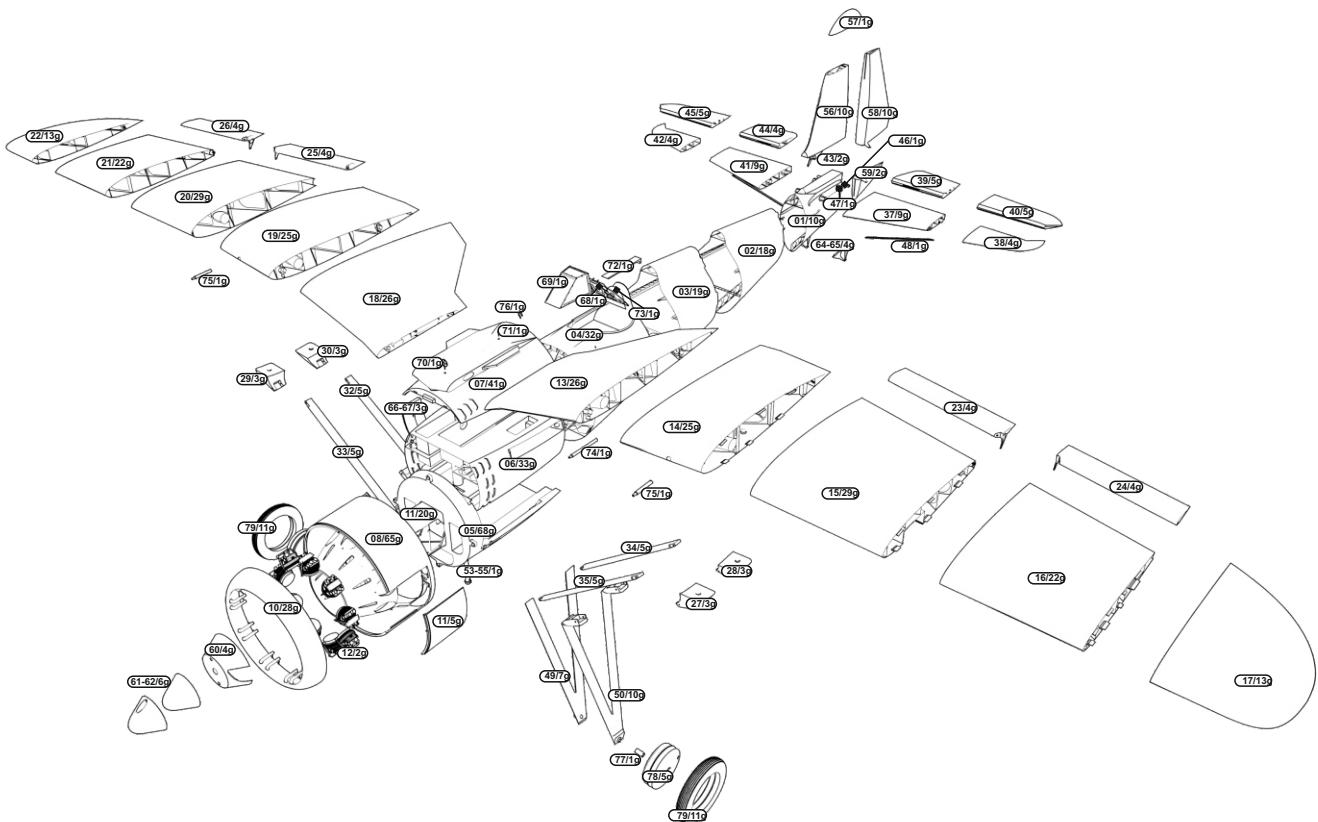
MODEL SPECIFICATION

Length	78,5 cm / 30,9 inch
Wingspan	110 cm / 43,3 inch
Weight of all printed parts	900 g
Takeoff weight	1250 g / (3s 2200mAh Li-Po, 4x servo, SC)

WHATEVER YOU NEED

PLA filament for print model parts
FLEX filament for print tire
Super glue and Activator
Spring diameter 7 mm
10x screws diameter 3mm
1x screws diameter 12mm
Bowden wire
6x hinge
Electric motor (recommended 3536 1300kv)
Regulator
Li-Po Battery 3s 2250mAh
RC receiver
Propeller 12x6 / 13x5

PRINTED PARTS LIST - No./ Weight



PRINTED PARTS LIST

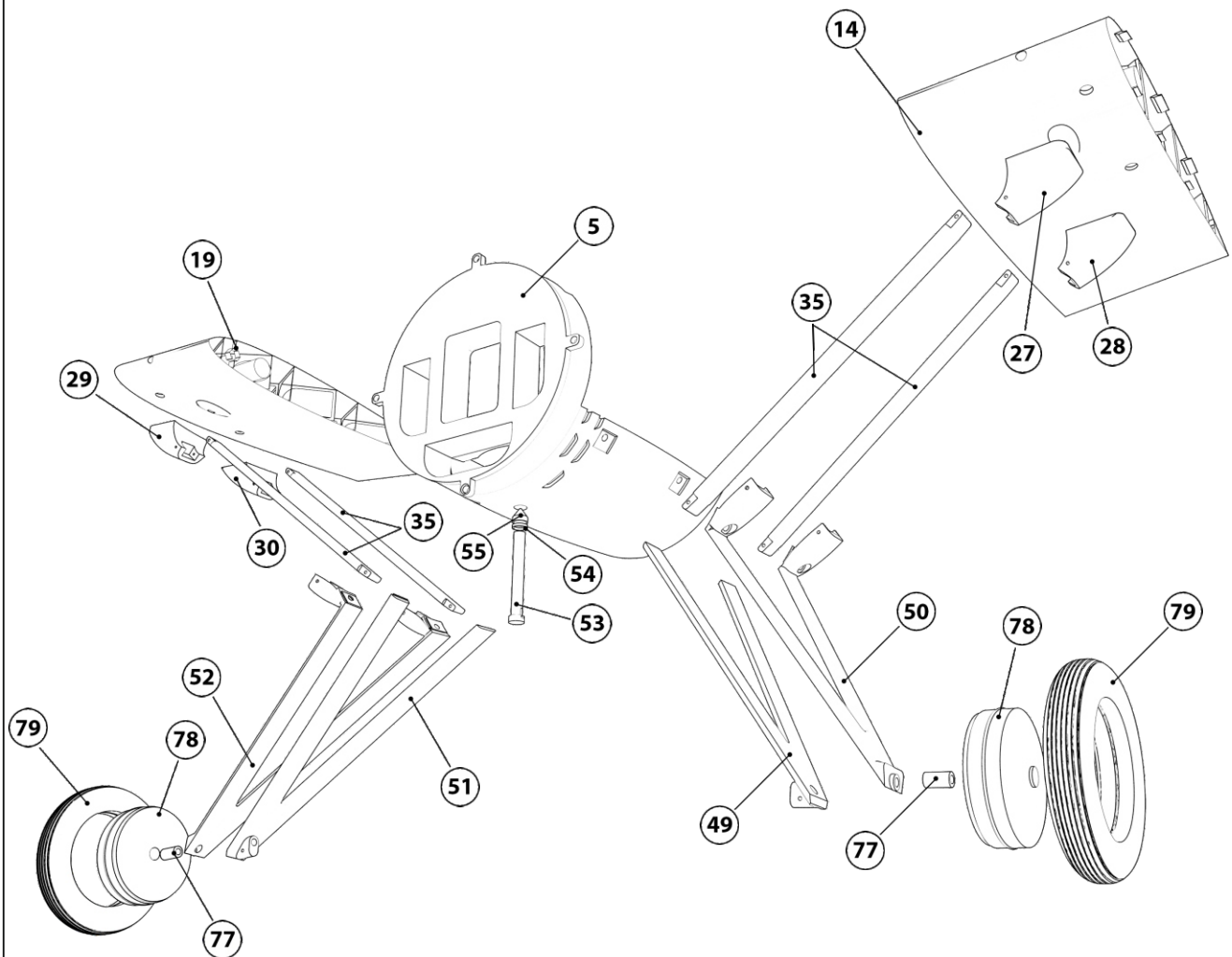
No.	Parts name	Colour	Weight	Infil	Suport	E. Multiplier	Perimeter	Main Location
1	Fuselage	Green	10g	0%	no	0,82	1	Fuselage_01_-_07
2	Fuselage	Green	18g	0%	no	0,82	1	Fuselage_01_-_07
3	Fuselage	Green	19g	0%	no	0,82	1	Fuselage_01_-_07
4	Fuselage	Green	32g	0%	no	0,82	1	Fuselage_01_-_07
5	Fuselage	Green	68g	9%	no	0,9	1	Fuselage_01_-_07
6	Fuselage	Green	33g	0%	no	0,82	1	Fuselage_01_-_07
7	Fuselage	Green	41g	17%	no	0,96	1	Fuselage_01_-_07
8	Body	Green	65g	10%	yes	0,91	1	Engine_08_-_12
9	Battery cover	Green	5g	50%	no	0,97	1	Engine_08_-_12
10	Ring	Copper	28g	12%	no	0,93	2	Engine_08_-_12
11	Engine Holder		20g	20%	no	0,99	3	Engine_08_-_12
12	Cylinder	Silver	2g	6%	no	0,97	2	Engine_08_-_12
13	Left Wing	Green	26g	0%	no	0,82	1	Wing_13_-_36
14	Left Wing	Green	25g	0%	no	0,82	1	Wing_13_-_36
15	Left Wing	Green	29g	0%	no	0,82	1	Wing_13_-_36
16	Left Wing	Green	22g	0%	no	0,82	1	Wing_13_-_36
17	Left Wing	Green	13g	0%	no	0,82	1	Wing_13_-_36
18	Right Wing	Green	26g	0%	no	0,82	1	Wing_13_-_36
19	Right Wing	Green	25g	0%	no	0,82	1	Wing_13_-_36
20	Right Wing	Green	29g	0%	no	0,82	1	Wing_13_-_36
21	Right Wing	Green	22g	0%	no	0,82	1	Wing_13_-_36
22	Right Wing	Green	13g	0%	no	0,82	1	Wing_13_-_36
23	Left Ailerons	Green	4g	0%	no	0,82	1	Wing_13_-_36
24	Left Ailerons	Green	4g	0%	no	0,82	1	Wing_13_-_36
25	Right Ailerons	Green	4g	0%	no	0,82	1	Wing_13_-_36
26	Right Ailerons	Green	4g	0%	no	0,82	1	Wing_13_-_36
27	Strut Holder	Green	3g	15%	no	0,95	1	Wing_13_-_36
28	Strut Holder	Green	3g	15%	no	0,95	1	Wing_13_-_36
29	Strut Holder	Green	3g	15%	no	0,95	1	Wing_13_-_36
30	Strut Holder	Green	3g	15%	no	0,95	1	Wing_13_-_36
31	RepairKit-Damper	Green	1g	10%		0,95	2	Wing_13_-_36
32	Wing Strut	Green	5g	10%	no	0,97	1	Wing_13_-_36
33	Wing Strut	Green	5g	10%	no	0,97	1	Wing_13_-_36
34	Wing Strut	Green	5g	10%	no	0,97	1	Wing_13_-_36
35	Wing Strut	Green	5g	10%	no	0,97	1	Wing_13_-_36
36	Wing Hex	Green	1g	0%	no	0,92	1	Wing_13_-_36

PRINTED PARTS LIST

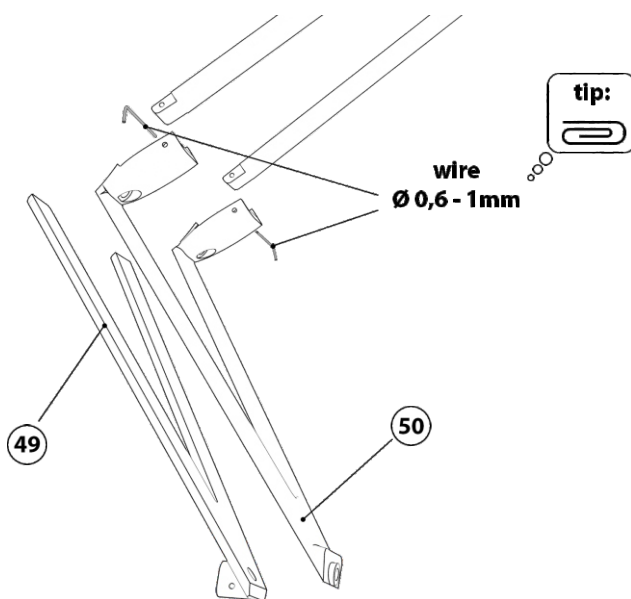
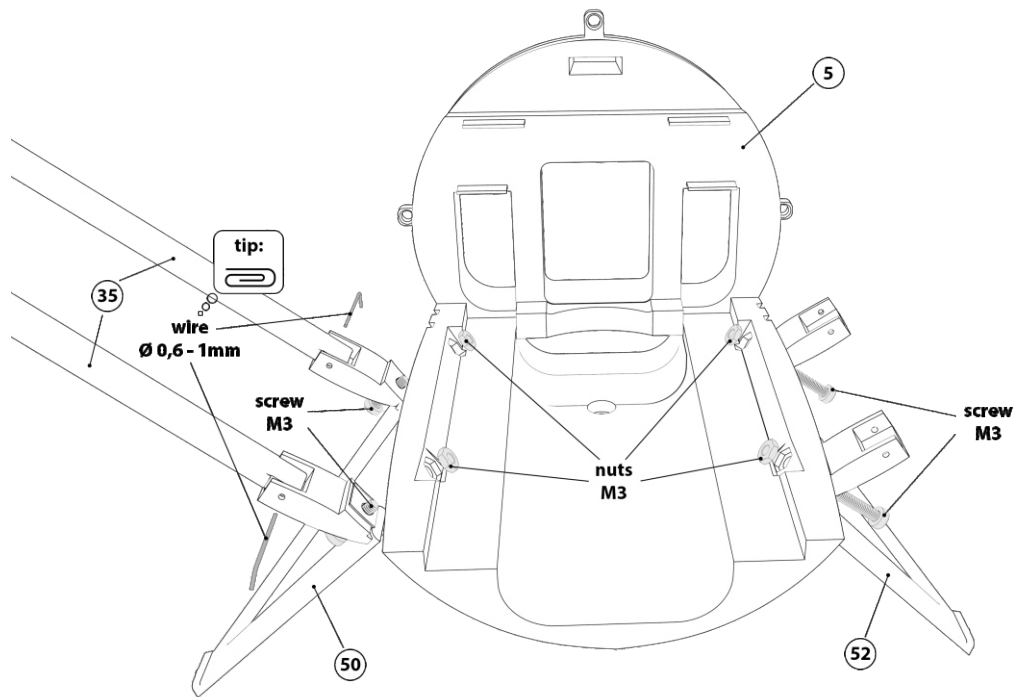
No.	Parts name	Colour	Weight	Infil	Suport	E. Multiplier	Perimeter	Main Location
37	Elevator	Green	9g	0%	no	0,82	1	Elevator_37_-48
38	Elevator	Green	4g	0%	no	0,82	1	Elevator_37_-48
39	Elevator	Green	5g	0%	no	0,82	1	Elevator_37_-48
40	Elevator	Green	5g	0%	no	0,82	1	Elevator_37_-48
41	Elevator	Green	9g	0%	no	0,82	1	Elevator_37_-48
42	Elevator	Green	4g	0%	no	0,82	1	Elevator_37_-48
43	Elevator	Green	2g	9%	no	0,9	1	Elevator_37_-48
44	Elevator	Green	4g	0%	no	0,82	1	Elevator_37_-48
45	Elevator	Green	5g	0%	no	0,82	1	Elevator_37_-48
46	Axe	Green	2g	9%	no	0,9	3	Elevator_37_-48
47	Hex	Green	1g	0%	no	0,82	2	Elevator_37_-48
48	Strut	Green	1g	9%	no	0,9	2	Elevator_37_-48
49	Landing gear	Green	7g	20%	no	0,9	3	Landing_gear_49_-55
50	Landing gear	Green	10g	20%	no	0,9	3	Landing_gear_49_-55
51	Landing gear	Green	7g	20%	no	0,9	3	Landing_gear_49_-55
52	Landing gear	Green	10g	20%	no	0,9	3	Landing_gear_49_-55
53	Damper	Green	1g	20%	no	0,9	5	Landing_gear_49_-55
54	Damper	Green	1g	20%	no	0,9	5	Landing_gear_49_-55
55	Damper	Green	1g	20%	no	0,9	5	Landing_gear_49_-55
56	Rudder	Green	10g	0%	no	0,82	1	Rudder_56_-59
57	Rudder	Green	1g	0%	no	0,82	1	Rudder_56_-59
58	Rudder	Green	10g	0%	no	0,82	1	Rudder_56_-59
59	Rudder	Green	2g	0%	no	0,82	1	Rudder_56_-59
60	Propeller	Green	4g	20%	no	0,92	3	Propeller_60_-63
61	Propeller	Green	6g	20%	no	0,92	3	Propeller_60_-63
62	Propeller	Green	6g	20%	no	0,92	3	Propeller_60_-63
63	Propeller	Green	6g	20%	no	0,92	3	Propeller_60_-63
64	Spur	Black	4g	15%	no	0,98	3	Accessories_64_-76
65	Spur	Black	4g	15%	no	0,98	3	Accessories_64_-76
66	Cooler	Black	3g	15%	no	0,92	3	Accessories_64_-76
67	Cooler	Black	3g	15%	no	0,92	3	Accessories_64_-76
68	Dashboard	Black	1g	0%	no	0,98	1	Accessories_64_-76
69	Glass	Transp.	1g	0%	no	0,92	1	Accessories_64_-76
70	Gunsight	Black	1g	0%	no	0,98	1	Accessories_64_-76
71	Gunsight	Black	1g	0%	no	0,98	1	Accessories_64_-76
72	Hasp	Black	1g	0%	no	0,98	3	Accessories_64_-76
73	Headrest	Brown	1g	10%	no	0,92	1	Accessories_64_-76
74	Mach.Gun	Black	1g	0%	no	0,95	1	Accessories_64_-76
75	Mach.Gun	Black	1g	0%	no	0,95	1	Accessories_64_-76
76	Grip	Green	1g	20%	no	0,92	3	Accessories_64_-76
77	Insert	Green	1g	5%	no	0,92	2	Wheel_77_-79
78	Disc	Green	5g	5%	no	0,92	2	Wheel_77_-79
79	Tire	Flex	11g	0%	no	1	2	Wheel_77_-79

LANDING GEAR AND SUSPENSION

The construction will start with the front lower part of the fuselage (5) to which the landing gear is attached.

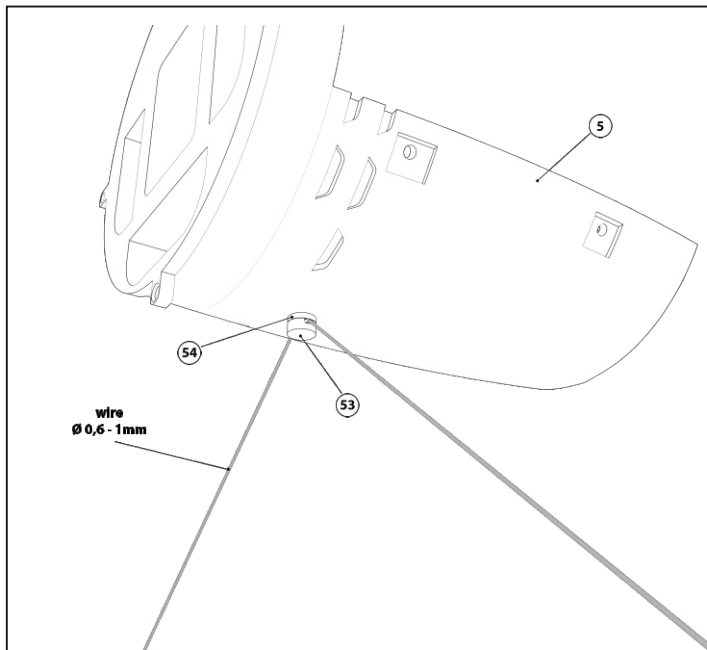


LANDING GEAR AND SUSPENSION



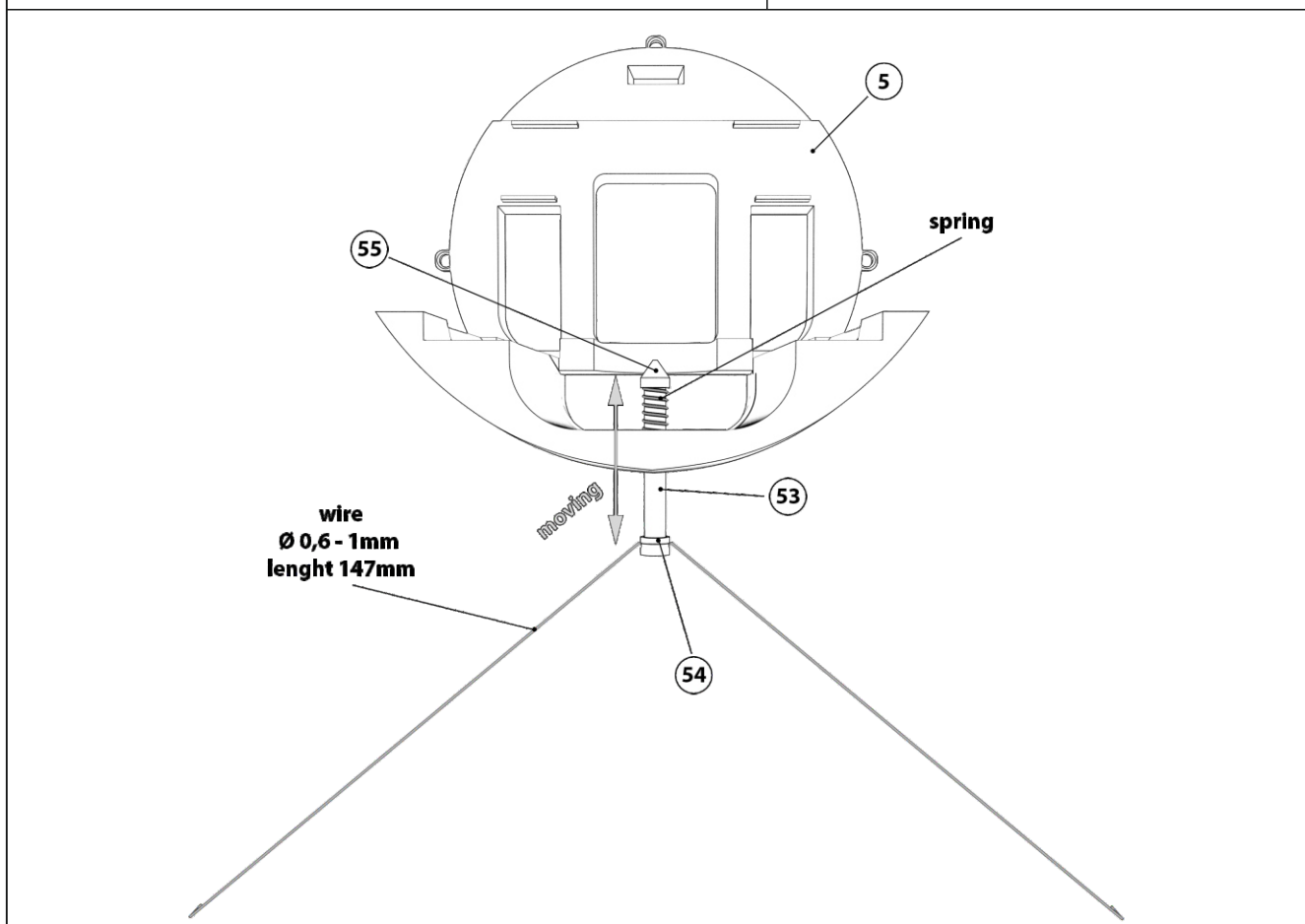
Glue the parts of the landing gear struts together (49-50) and then using M3 screw and M3 nut fix it to the bottom part of the fuselage (5). Note: It is advisable to carefully fasten the nuts with glue so that the adhesive does not get into the thread, letting you to dismantle the assembly in the future.

LANDING GEAR STRUTS - SUSPENSION

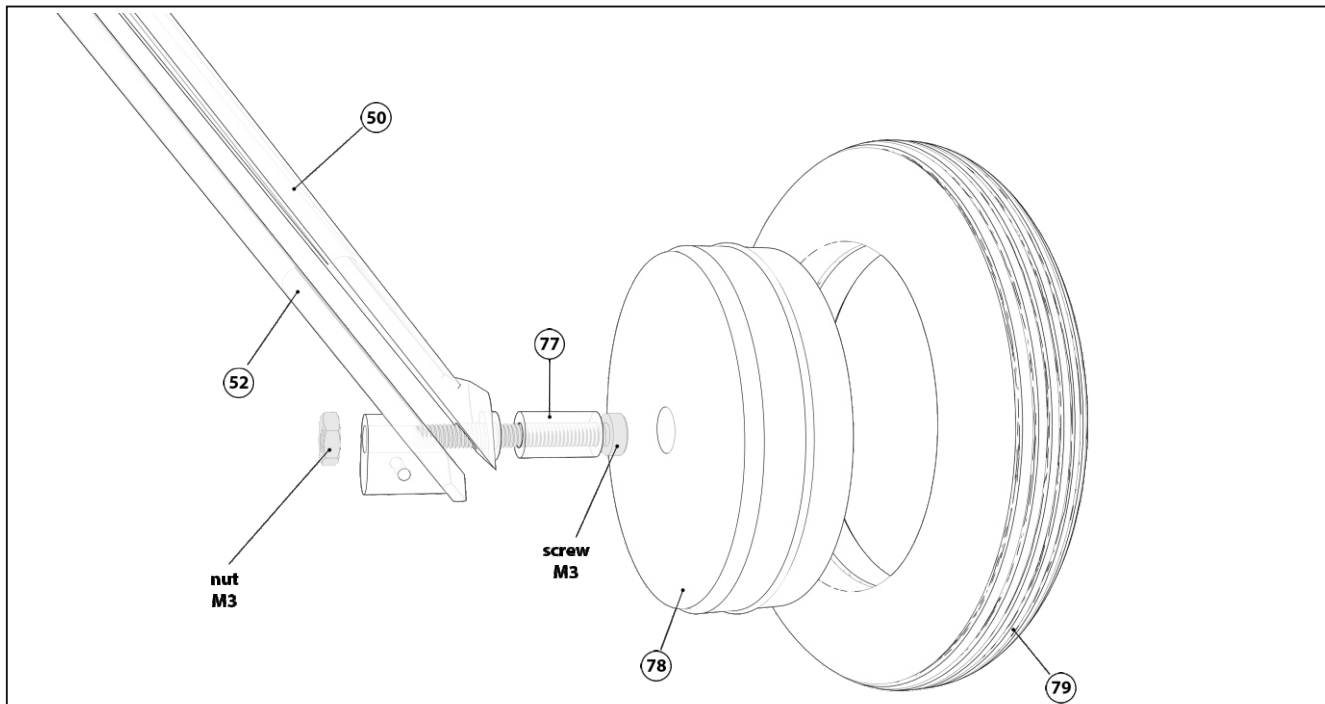


Landing Gear Suspension System:

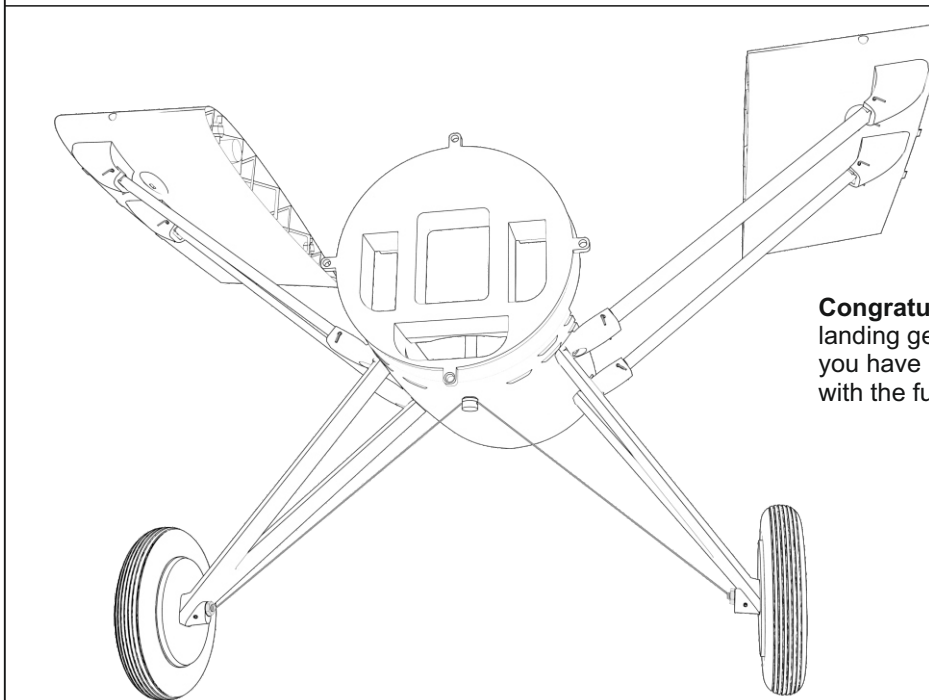
Insert the bowden cable (bent on the template) into the part (53) and secure it with a washer (54) and carefully glue it, then insert it into the opening at the bottom of the part (5). Then put on a spring of diameter 10mm and lenght 45mm from the inside. Now secure the assembly by gluing the part (55). Test if the suspension system is functional and then connect the bowden cable with the landing gear strut (49-50) – this assembled unit will be glued to the fuselage part (6) later.



LANDING WHEELS

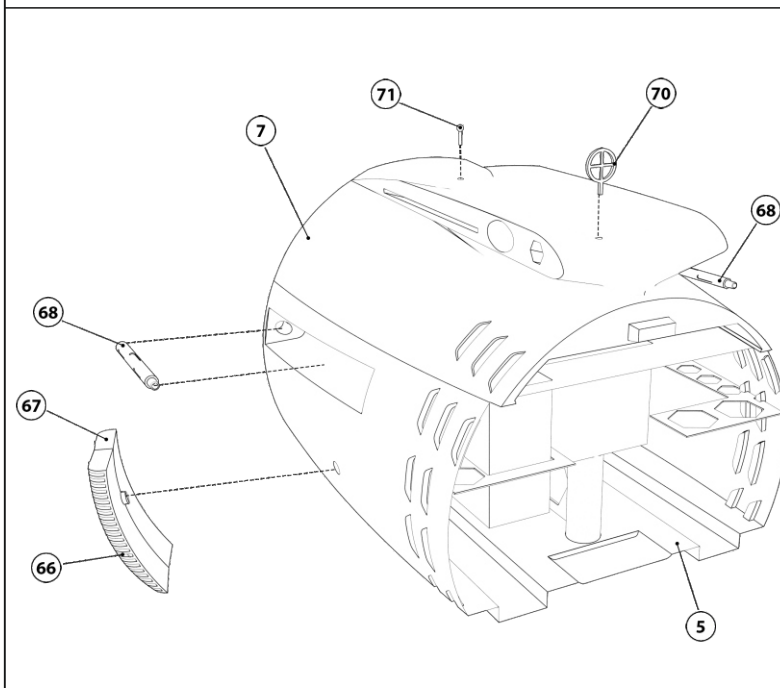
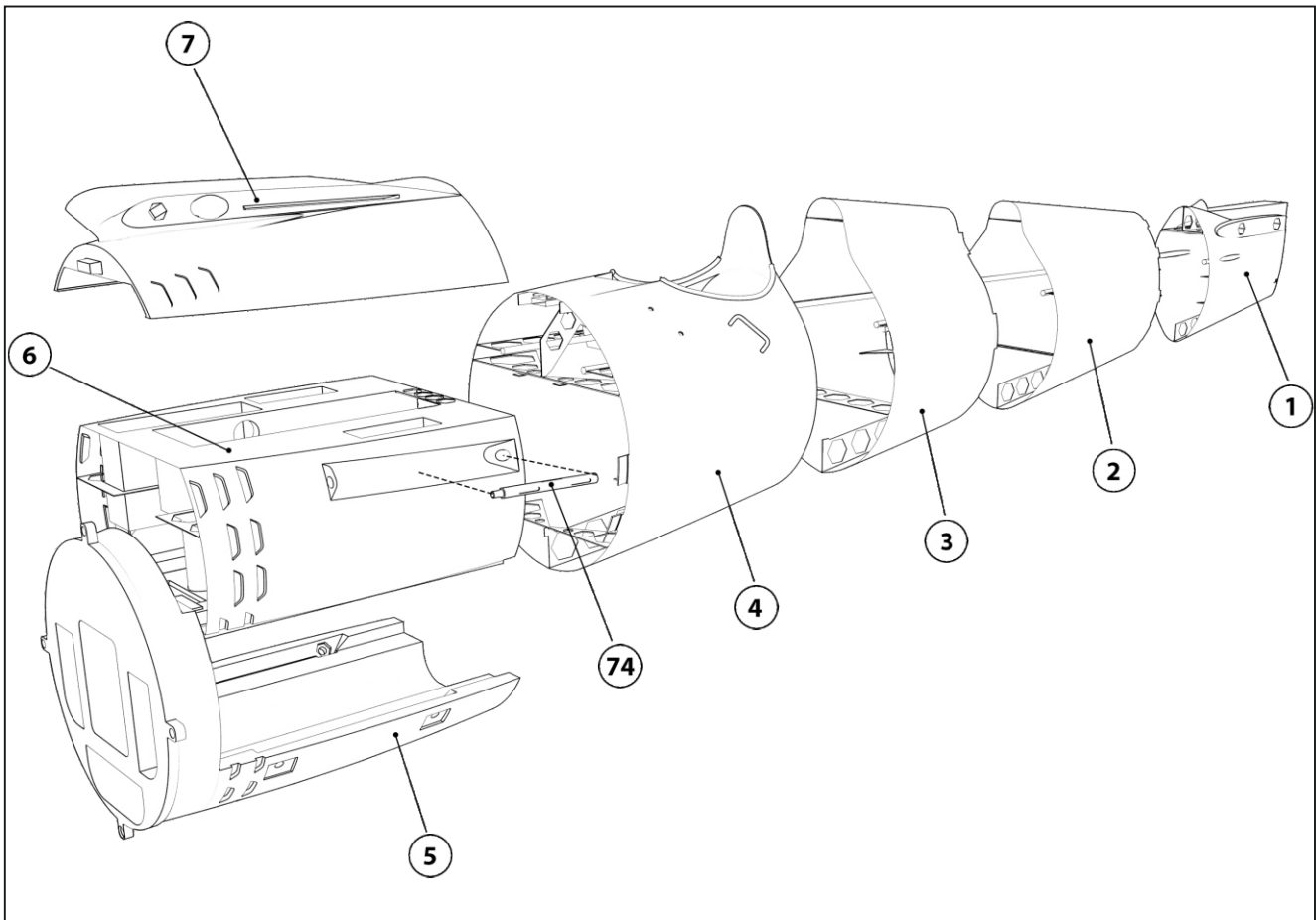


Landing Wheels and their parts : Insert a 25 mm long screw M3 into the housing (77) with the screw head towards the wheel disc (78) and put (part 77+screw) into the disk (78) and glue it. Then mount the tyre (79) onto the wheel disc (78) and attach the complete wheel to the chassis and secure the wheel with a nut M3 which you fix by Super Glue. Note: the wheel must remain free to rotate.



Congratulation! You just finished landing gear part of the fuselage and you have it ready for the connection with the fuselage and electric motor

FUSELAGE ASSEMBLY



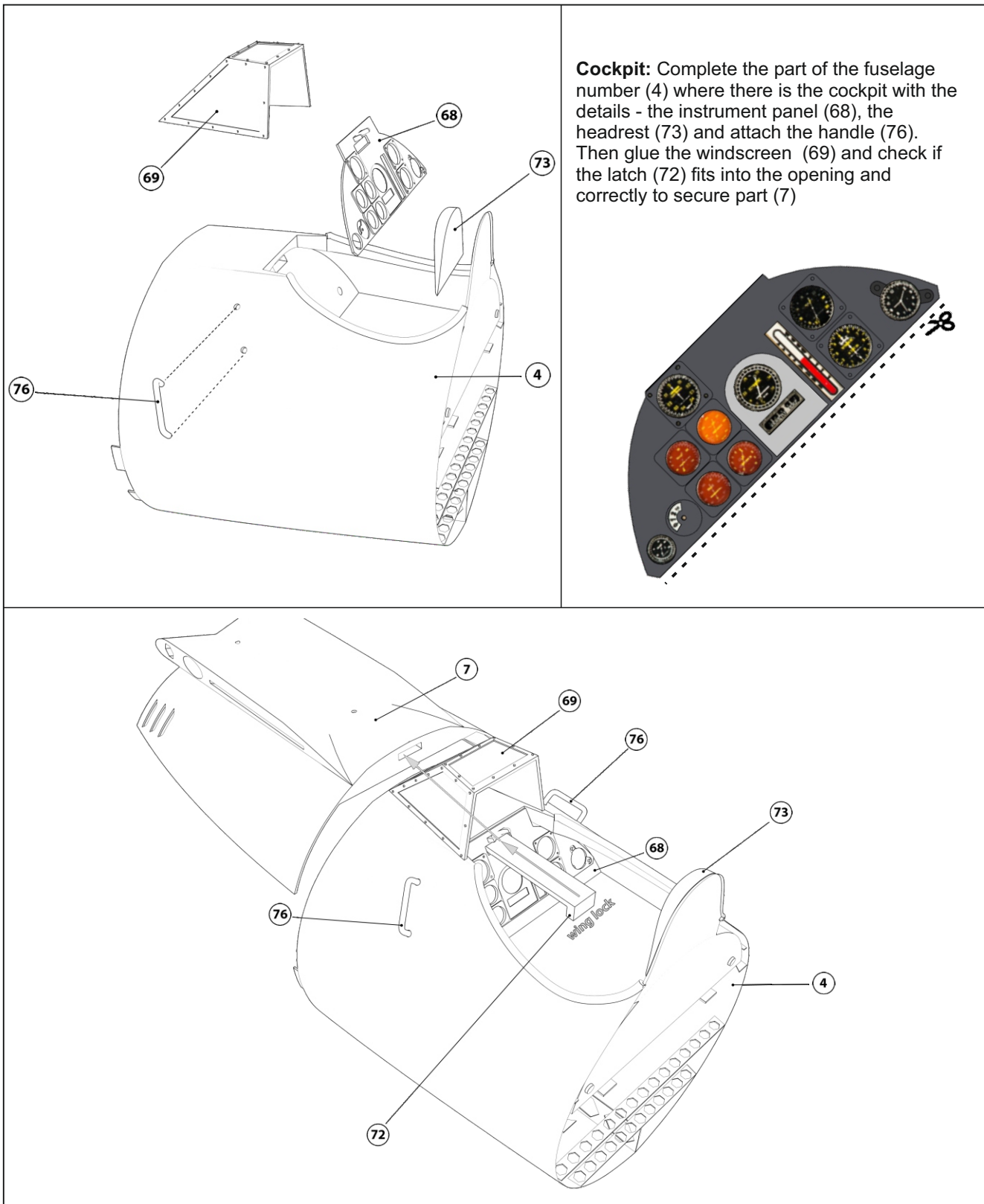
Assembly of the fuselage parts: by using the Super Glue cement together the fuselage parts (4-3-2-1). It is recommended to pull through the bowden cables for an increased accuracy.

Now attach the fuselage part (6) and glue it.

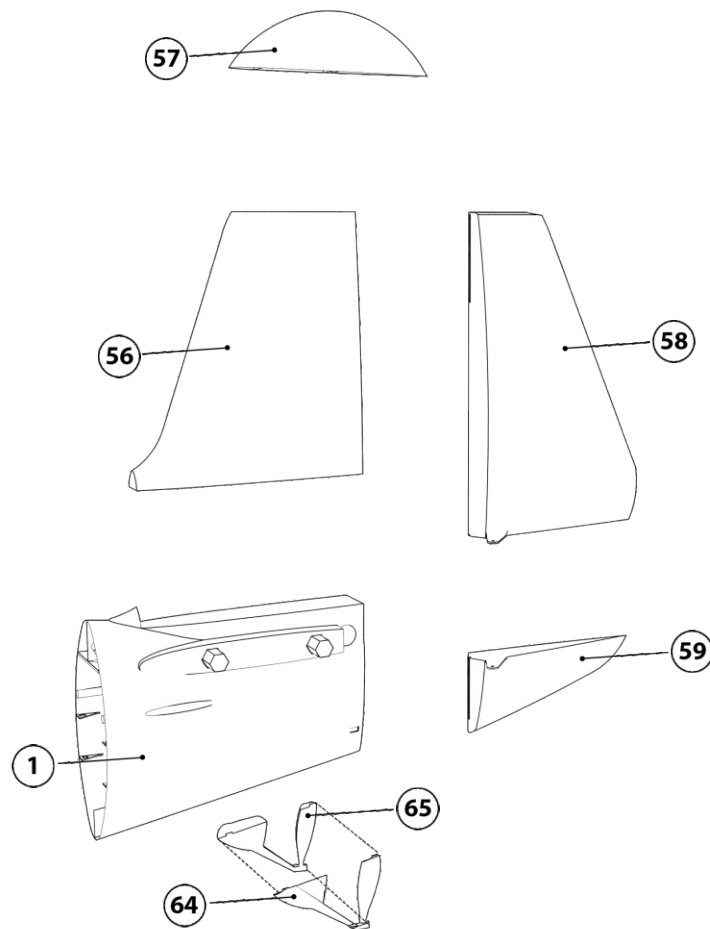
Landing gear fuselage part: Now attach the the pre-assembled landing gear unit (5) with the rest of the fuselage and do not forget to attach the machine gun (74) and side cooler parts (66-67).

Joining the wing and the fuselage: part number (7) serves as the centerpiece for connecting the wing to the fuselage and we will use it in the passage dedicated to the construction of the wing. Now we can attach the parts for the gunsight (70-71)

COCKPIT



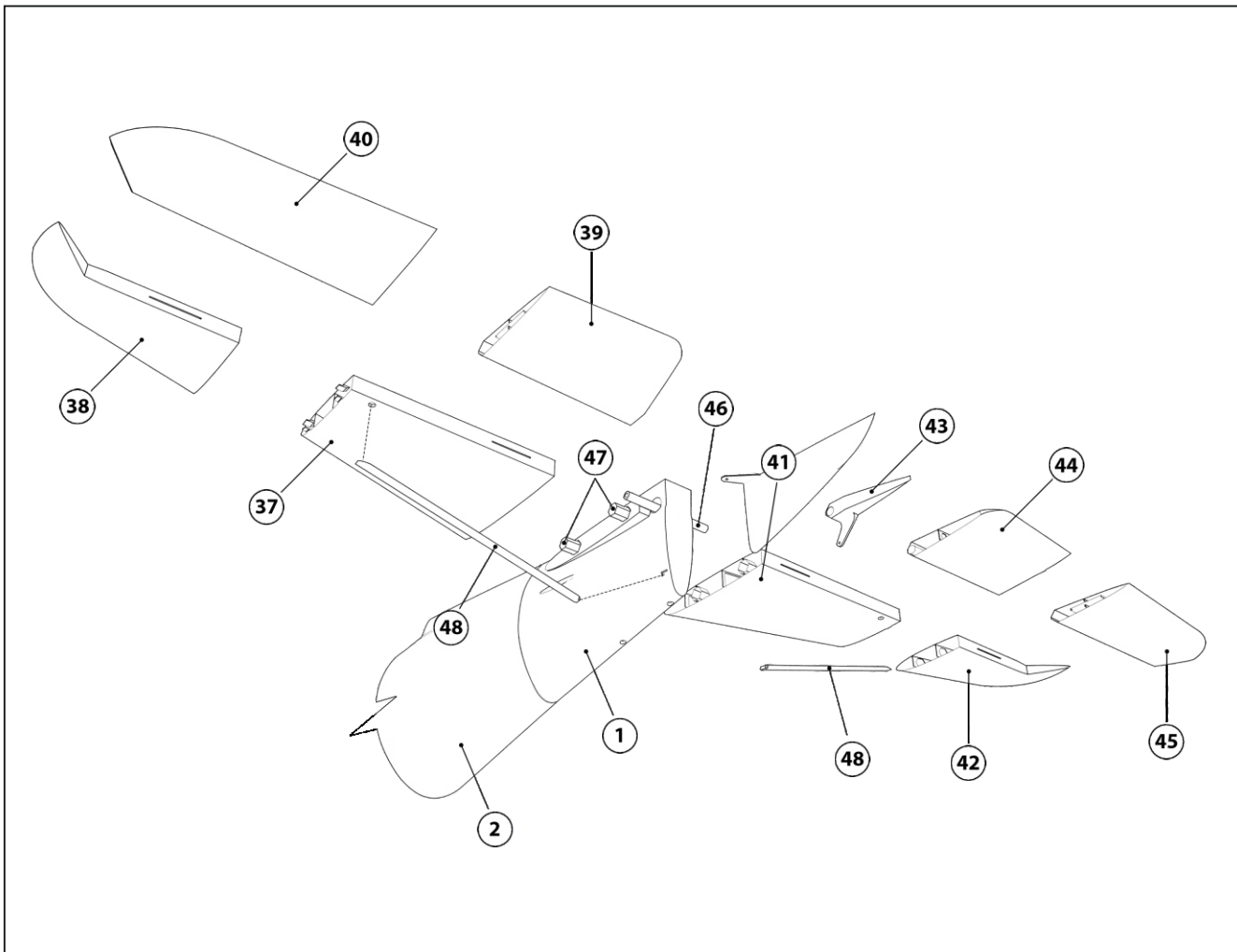
FIN



Fin: Glue parts (56-57) and then attach them to the fuselage part (1), join the rudder parts (58-59) and insert the hinges that join these two parts which must remain movable. Attach the tail skid parts (64-65) to the rear fuselage part (1)

Note: It is necessary to draw out the servo bowden wire and attach it to the rudder before you glue the parts of the rudder (59-58)

TAILPLANE

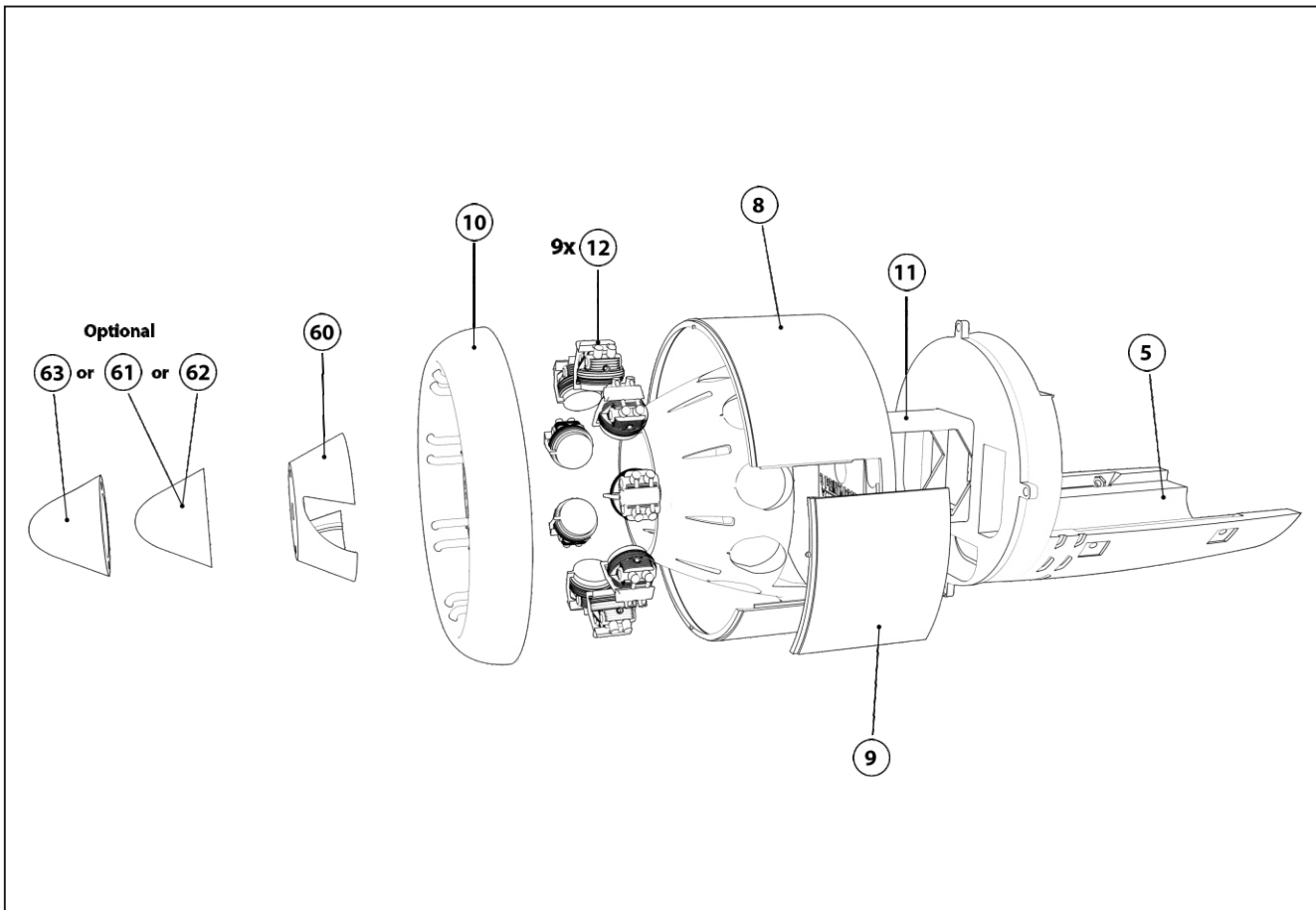


Horizontal tailplane: into the fuselage part (1) cement the hexagonal pins (47), then glue tailplane parts (37-38) and (41-42), which you attach to hexagonal pins and glue the whole together with the struts (48-49) to the fuselage (1)

Elevators: join port (left) elevator parts (39-40) then starboard (right) parts (43-44-45), connect both parts together with the axle(46), make sure that the pieces are in plane, install the hinges in place and stick them into the taiplane that you already have attached to the rear fuselage part (1)

Note: It is necessary to draw out the servo bowden wire and attach it to the elevator just before you join it with the horizontal tailplane.

ENGINE PART - ELECTRIC MOTOR ATTACHMENT



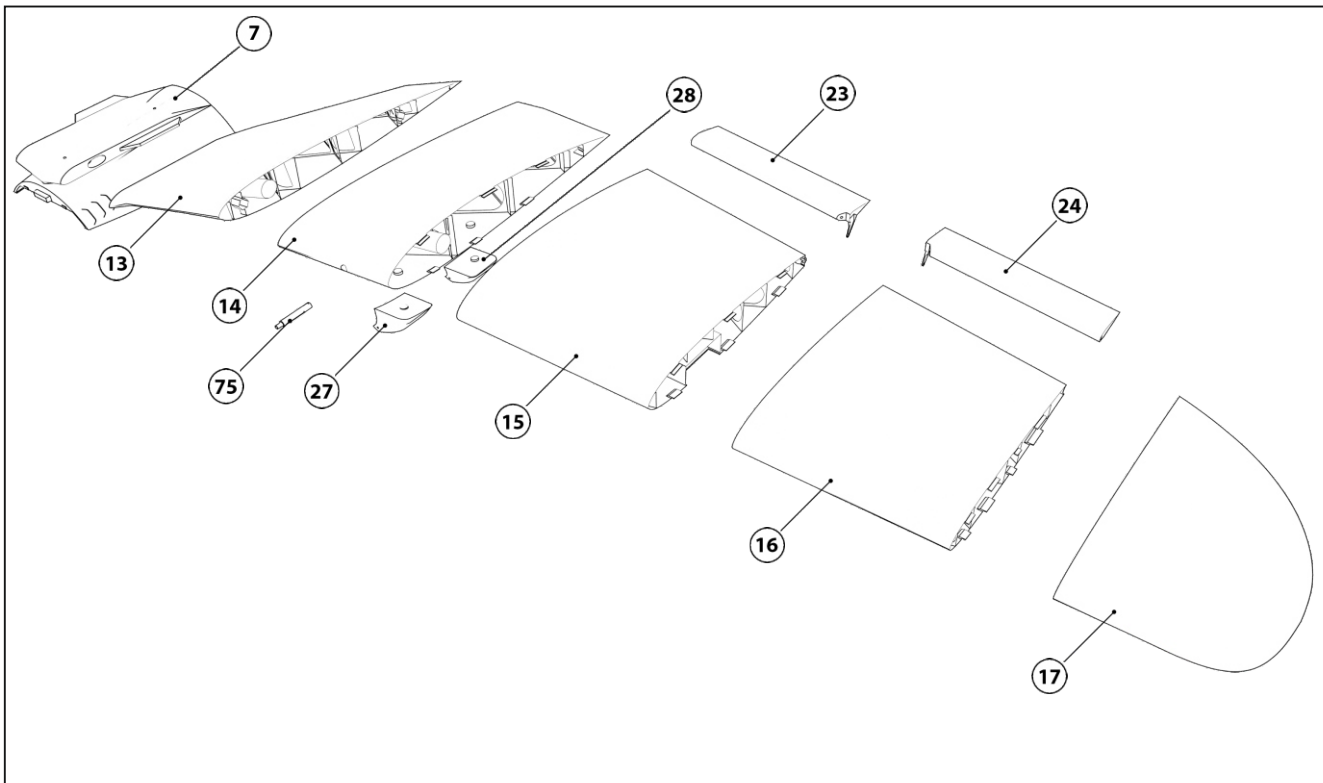
Engine part: Fit the electric motor holder (11) into the fuselage part (5) so that the Print Beat logo is properly legible, then adjust correct setting of the motor holder by insertion or removing according to the size of your electric motor (then fix it by Super Glue).

Engine model: Install 9x engine cylinder (12) to part (8), then insert the engine cooling ring (10) – now it is the right moment to install the electronic parts (regulator and electric motor). Then fix the assembly by the screw to the fuselage part (5) and it remains to cover battery opening by the cover (9).

Propeller spinner: Put the propeller onto the mounting disc and insert the spinner (60), then put a nut into the part (62) – the propeller unit is complete.

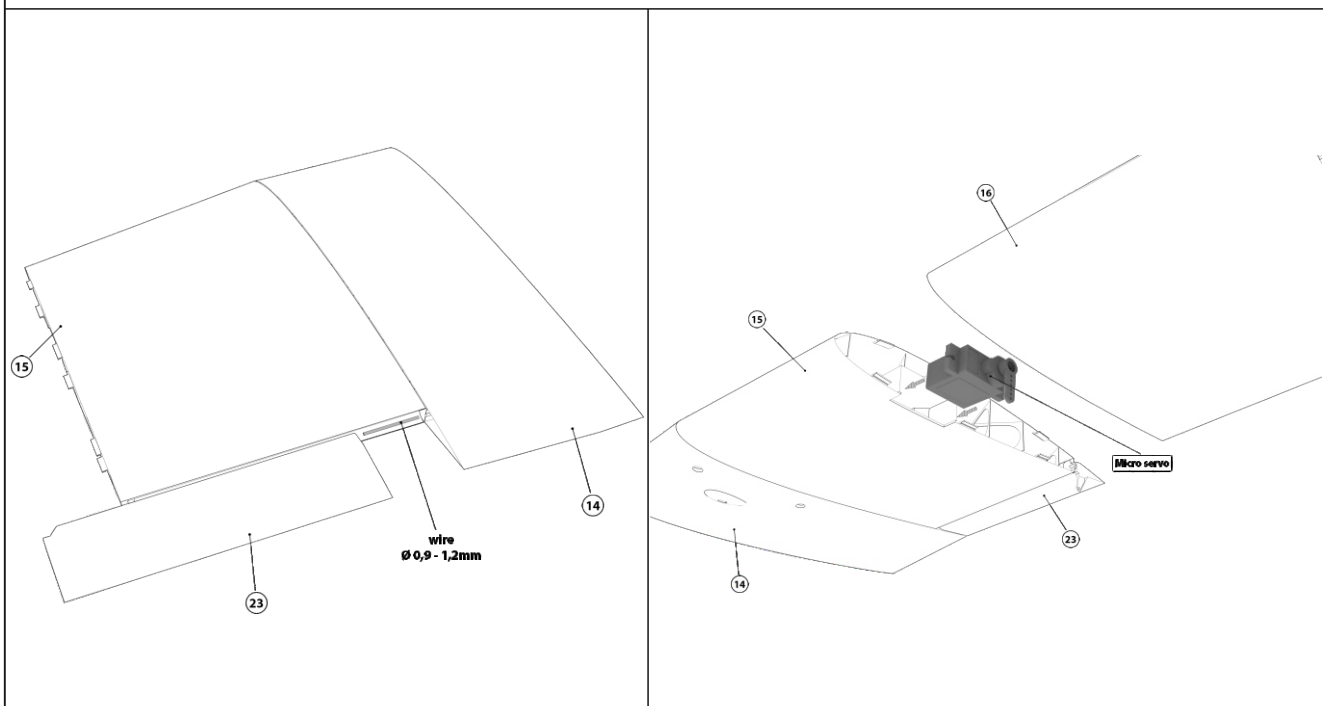
Note: You can make a choice of two used sizes of the mounting disc.
 Congratulations if you finished this part of the model assembly and you have the fuselage complete. Now you must still assemble the wing parts.

LEFT WING ASSEMBLY - SERVO

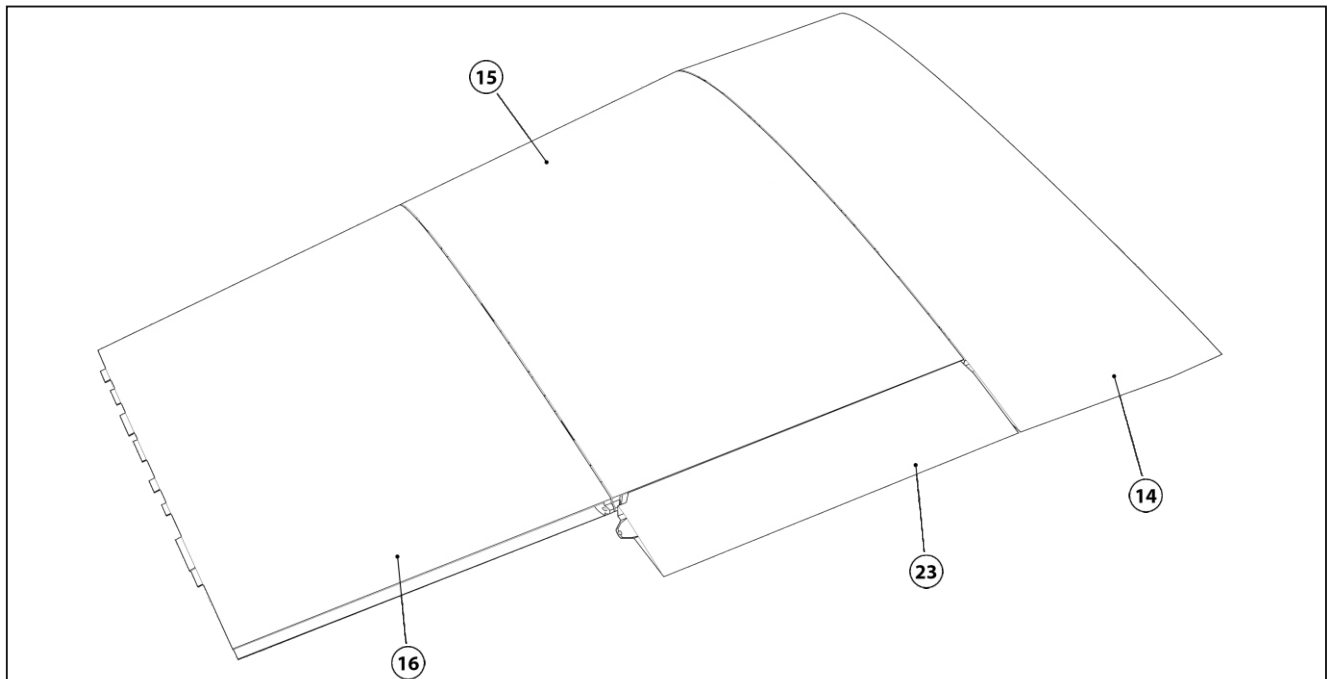


Left Wing Assembly: start by connecting the middle part (7) with the first wing part (13), then prepare the parts 14-15.

Note: Before connecting the part (15) install the servo and run the servo cable through the prepared hole.

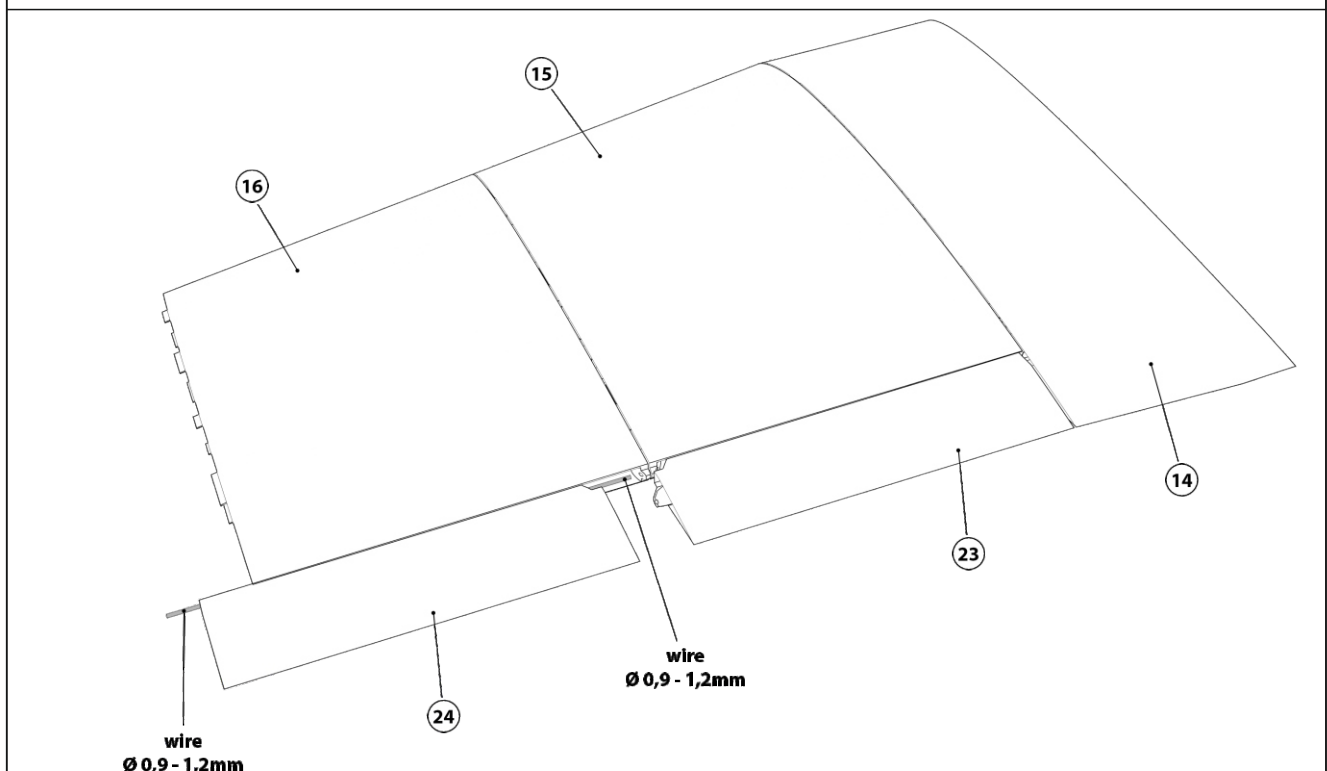


WING ASSEMBLY - AILERON

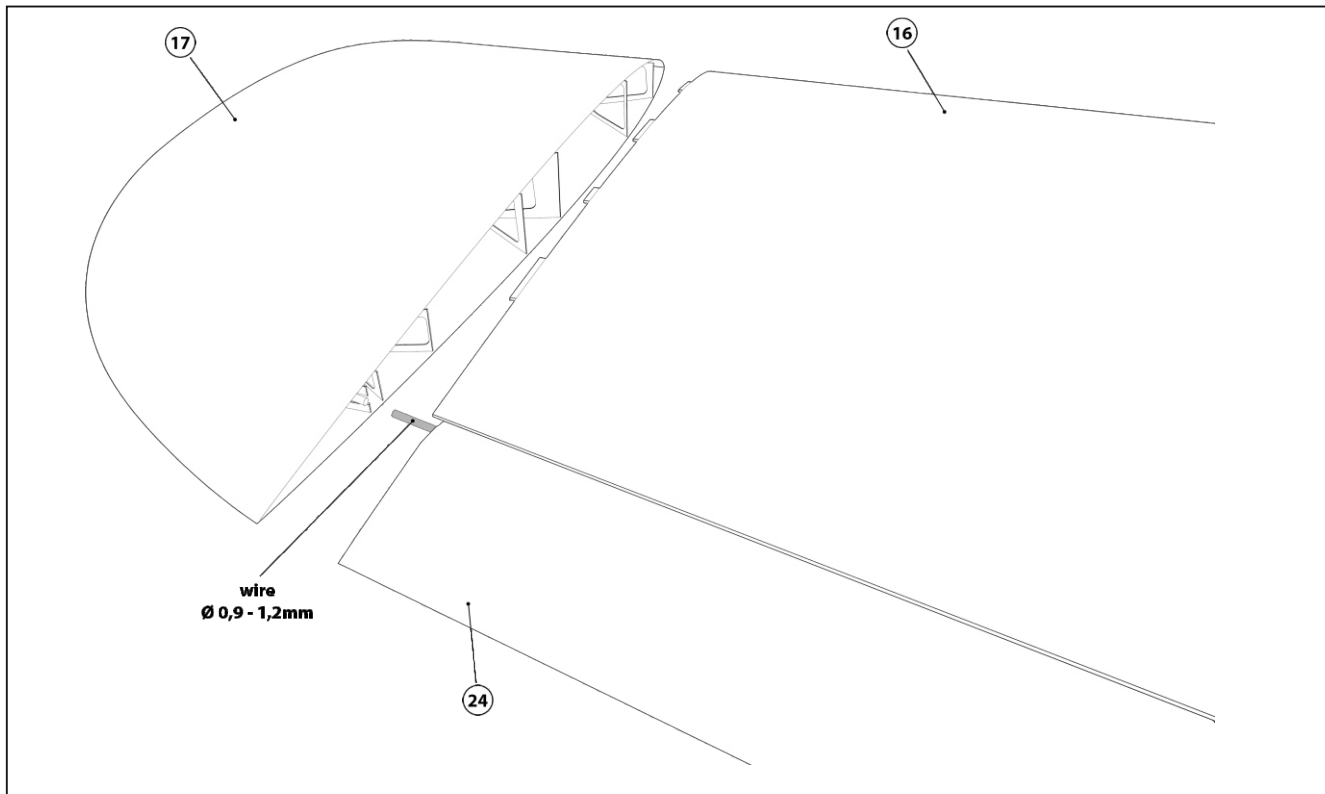


Aileron: Glue together the parts with the installed servo (14-15-16) into which you put the inner part of the aileron (23) fitted with a 0.9mm-1.2mm axle made from a bowden wire or paper clips, then install the outer part of the aileron (24) with the axle from each side and connect both parts of the ailerons so that the axle fits into the wing openings.

Warning: Apply the glue carefully so that the aileron remains movable.

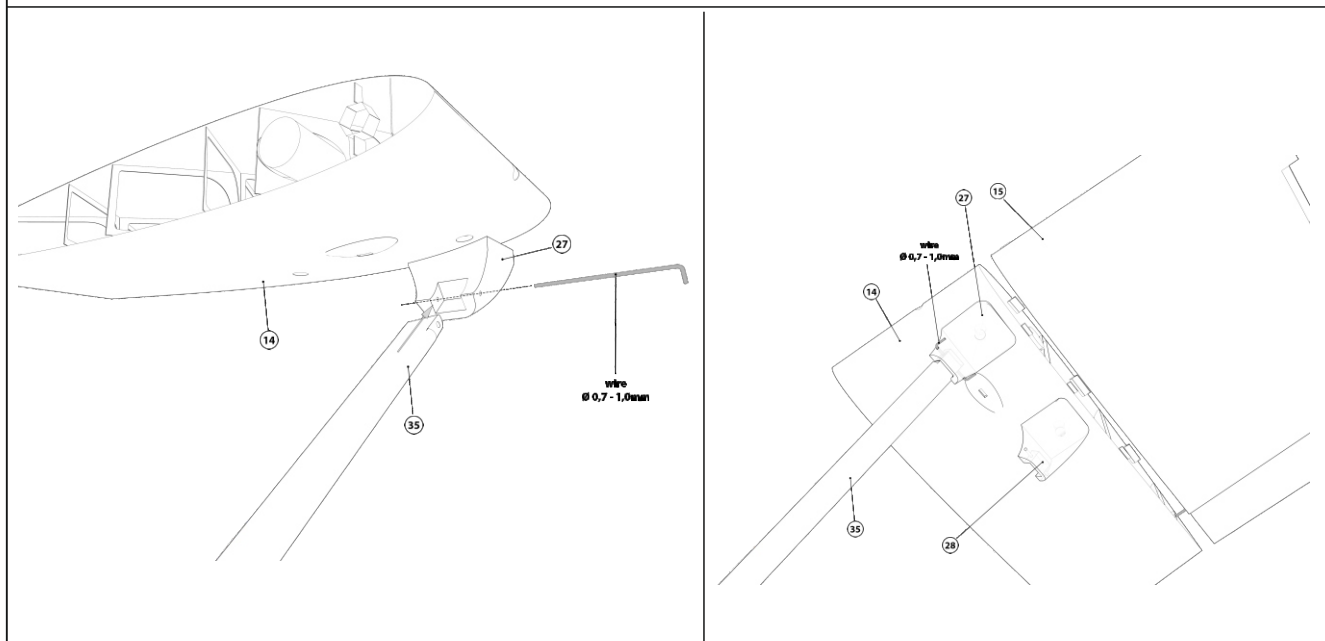


WING ASSEMBLY - COMPLETION

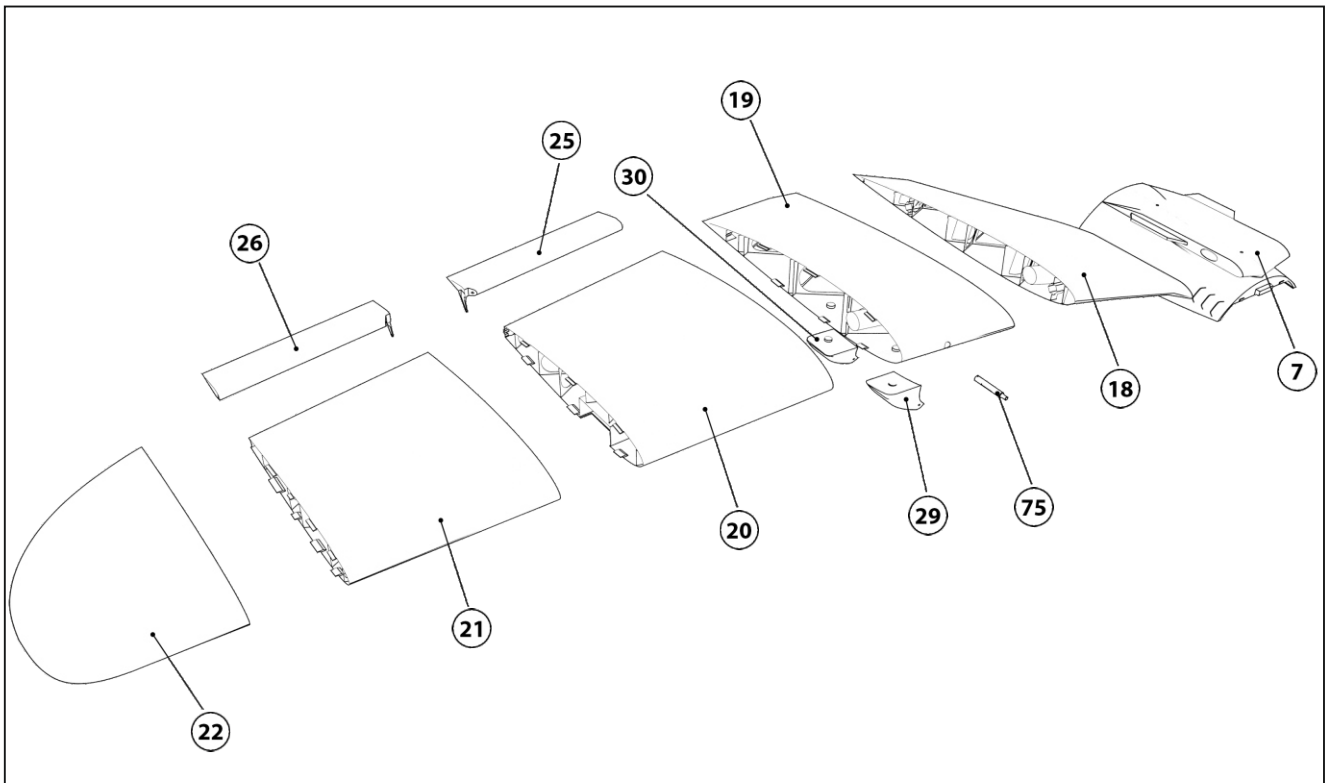


Left Wing Assembly Completion: Put on the part number (17) onto the aileron axle and glue part (17) with the wing part (16). The completed wing assembly cement to part number (13), then to the assembled left wing attach the strut mounts (27-28). Then attach wing struts (35) for fixing the left wing to the fuselage.

Note: Now the same procedure do with the right wing assembly



WING ASSEMBLY



Right Wing Assembly: start by connecting the middle part (7) with the first wing part (18), then prepare the parts 19-20.

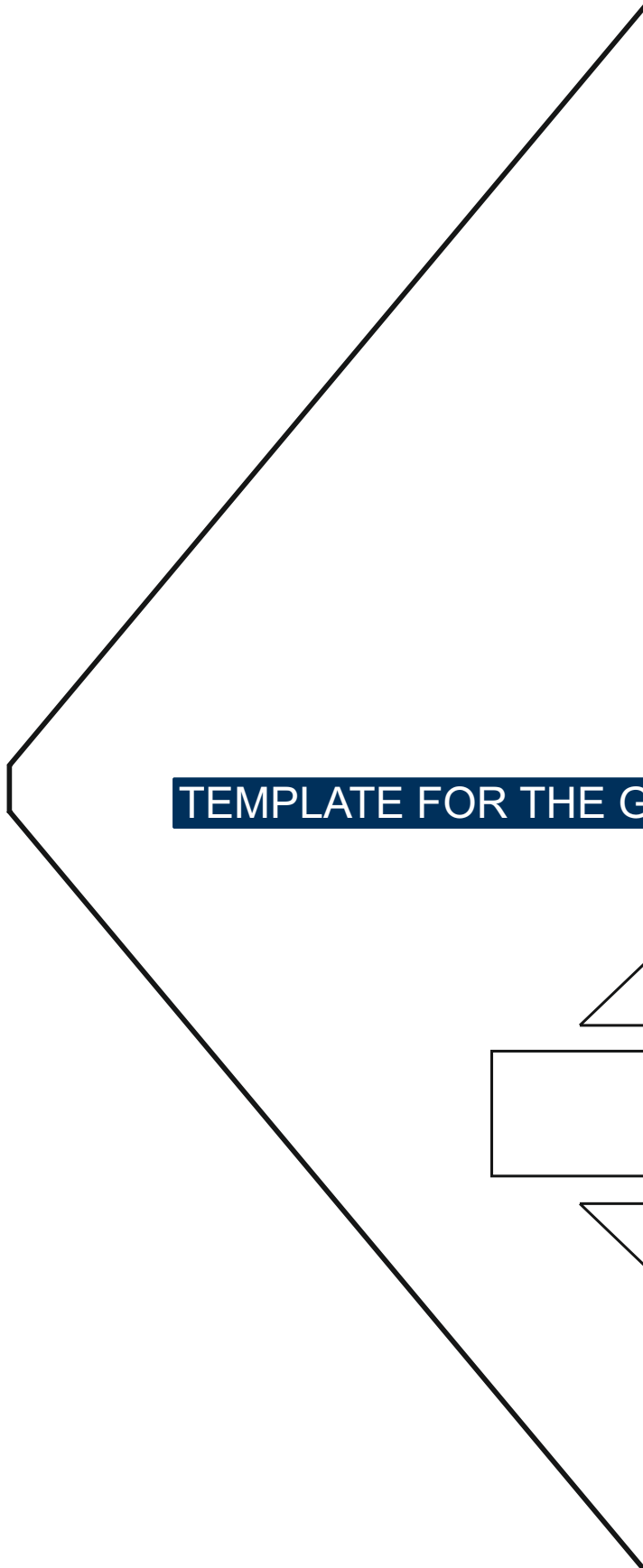
Note: Before connecting the part (20) install the servo and run the servo cable through the prepared hole.

Aileron: Glue together the parts with the installed servo (19-20-21) into which you put the inner part of the aileron (25) fitted with a 0.9mm-1.2mm axle made from a bowden wire or paper clips, then install the outer part of the aileron (26) with the axle from each side and connect both parts of the ailerons so that the axle fits into the wing openings.

Warning: Apply the glue carefully so that the aileron remains movable.

Right Wing Assembly Completion: Put on the part number (22) onto the aileron axle and glue part (22) with the the wing part (21). The completed wing assembly cement to part number (13), then to the assembled wing attach the strut mounts (29-30). Then attach wing struts (35) for fixing the wing to the fuselage.

TEMPLATE FOR THE LANDING GEAR SUSPENSION - SCALE 1/1



TEMPLATE FOR THE GLASS FRAME- SCALE 1/1

