

Building Instructions Lisa M.

Order-No. 20320

Congratulations for buying this model kit of the motor yacht "Lisa M.". This model is mainly designed for the beginner, but is also a very interesting kit for more experienced modellers as a basis for own ideas.

For building this model you should have following glues, fillers and paints:

- Superglue Krick ruck-zuck 20g thin (80491)
- Superglue Krick ruck-zuck 20g medium (80495)
- 5min-Epoxy glue 100g (80479)
- wood glue UHU Holz waterresistant 75g (48515)
- 2-component glue UHU-Plus acrylit 30g (48315)
- Filler Micro-Fill white 295 ml (80480)
- Primer (Lord Nelson 80110)
- Clear Varnish for stairs, doors, (80112)
- paint spray blue (320053), light grey (Primer and for deck), and white (320010)
- lacquer red, grey, silver and black for fittings

Following tools are recommended for building "Lisa M.":

- modelling knife (416002)
- hand drill (473841)

- sandpaper files (491016)
- sanding block (490080)
- sand paper of grane 180, 320, 400 and 600 (Set 490190)
- round file ca. Ø 6 mm
- drills Ø 1 mm, 1,5 mm, 2 mm, 3 mm, 4 mm, 6.5 mm
- wet sand paper 400 und 600 for filler, primer and paints

When painting you should have masking tape for areas, which should not be painted. A 3 mm wide tape should be used for the water line. For running and radio control you should have following parts:

- 2 channel radio control including one Servo
- electronic speed control 20 A, forward/back including BEC
- battery pack 7,2V NiCd, NiMH or lead battery 6V/1,1 Ah
- charger 220V AC or 12V DC

Many pictures in the following instruction should make the building of the model as easy as possible.

For identifying the laser cut parts in the wooden sheets, there is a drawing at the end

of this instruction book. Before you start building you should identify all wooden parts and mark the part nos. on the part with a soft pencil. During the building process you should carefully cut out the needed parts only at their bars with a sharp knife.

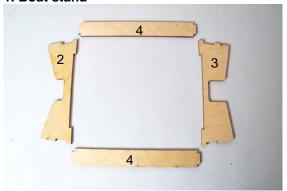
Starting this hobby is much easier, if you have any modeller near you, even we have tried to solve all critical steps in this design. A more or less experienced modeller can help you best with problems and can obtain that your first model "Lisa M." will become a success.

Ask a ship model club in your area or your local hobby shop, where you did buy this kit.

We wish you good fun and success with building this nice model

I. BOAT STAND and HULL

1. Boat stand



First build the boat stand with parts 2, 3 and 4. After the glue is dry carefully sand and varnish the stand several times. As you will later place your wet model on the stand, it is important to have this water resitant. As an apolster you can use some pieces of foam tape on the upper sides which will contact the hull.



2. Hull

Mark the positions of the rudder tube and of the prop shaft on the hull (1). First measure the center line of the hull and mark. Then mark the rudder tube position 35 mm from the stern of the hull. Mark the position of the prop shaft 15 mm down from keel end.

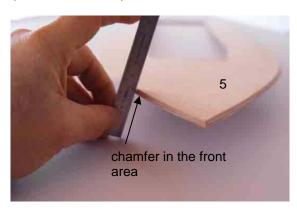


Now drill the holes for prop shaft and rudder tube.

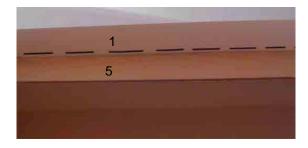
First use a small drill of about 2 – 3 mm and then enlarge to the correct size – rudder tube 4 mm and prop shaft tube 7 mm. You can do this best with a round file, that the hull does not split.

3. Deck

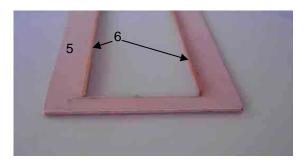
Now prepare the fit of the deck (5) inside the hull. At the areas of the bow it is needed to sand the deck with an angle. The deck should ly down without any force.



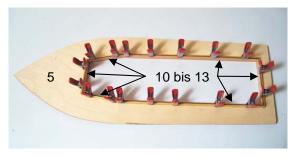
Now place the deck into the hull and mark a line on the sides 2 to 3 mm over deck level. Cut the hull down only until to this line with a sharp knife or strong scissors.



Now place strips (6 to 9) on the underside of the deck around the inner cut out. Place a weight on the deck until the glue is dry, that the deck cannot twist.



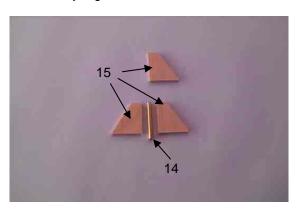
Now the coaming strips (10 to 14) have to be glued vertical onto the strips, that they are flash on the underside and protruding on the upper side. The superstructer will stand over this and so no water can come into the model hull.

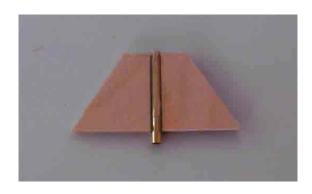




4. Rudder Tube

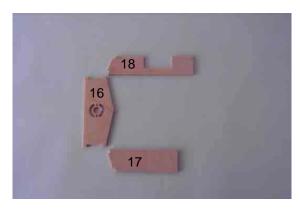
Glue the rudder tube (14)to the 2 supports (15). Use medium or thick super glue or UHU plus acrylit glue for this. Place the parts onto a flat surface. When the glue is dry, place the assembly into the hull, together with the third support. Glue this support to the rudder tube, but do not yet glue all into the hull.





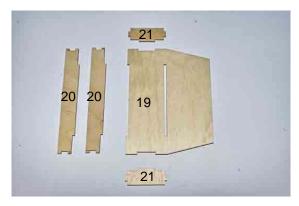
5. Motor Mount

Make the motor mount / Servo tray assembly from parts 16,17 and 18 and glue. You will find on the laser sheets two different motor mounts. First compare with the motor, which motor mount ist he correct one for your motor.





Now make the battery and receiver tray with parts 19, 20 and 21.

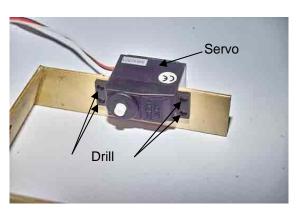


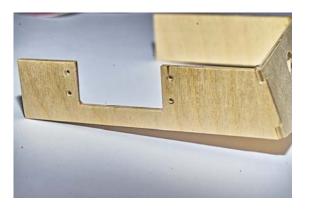


All parts for the inside of the hull should be ready now. Please varnish them 2 to 3 times and sand between, that they are water resistant. Also the deck should be varnished from the underside now.



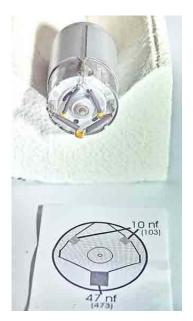
Place the Servo temporarily into the tray and drill the holes with 1.5 mm drill fort he Servo screws.





6. Preparation of the Motor

Solder on the motor the suppression capacitors 103 (10nf) to the connections and to the motor housing as shown. At this place the motor housing should be well sanded to have good connection for the solder. Then solder the third capacitor 473 (47 nf) between the two motor connections. Place insulation tube on the ends before soldering.



Now solder motor wires to the connections.



After that you can assemble the motor to the motor frame.

7. Assembly inside the hull

Brass tubes (29+30) are no longer needed, as the new direct coupling can adjust motor mount and propshaft directly.

Push propshaft and hose through the hole in the hull and fit the motor on the motor mount. Now attach the brass coupling between Motor and prop shaft with grub screws M3. Please check that there is a gap of about 1 mm between motor housing and coupling.

Now align the motor together with motor mount, prop shaft and tube inside the hull. The whole set should be placed well centered and aligned inside the hull, that the tube of the prop shaft is protruding 25 mm out of the hull. Double check that the assembly is placed in the centre of the hull.



Now fix the tube and the motor mount with UHU Plus Acrylit inside the hull and fill the end of the hull around the shaft with glue that it is water tight.



After the glue is set, you can also fix the rudder shaft in the same way.



8. Gluing the Deck

Now all interior is placed correctly inside the hull. So it is time to fix the deck permanently on the hull. Fix the deck with adhesive tape to the hull in a way, that the side walls of the hull are pressed equally to the deck without getting waves.

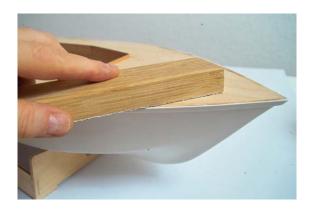


Fix the deck at several points with thin superglue. After that you can fix the deck complete with medium superglue. A good help is also Activator spray to shorten the drying process.



After the glue is dry you should sand the overlaying border of the hull down to deck level. If some gaps have appeared, you can fill them out with filler.



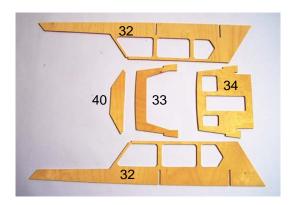


II SUPERSTRUCTURE

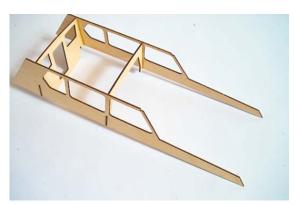
1. Cabin

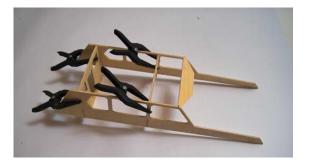
For the first Step of building the superstructure you will need parts 32, 33, 34 und 40.

Now draw the outline of the Windows to the glasing material of PVC (100) and give some more millimetres for gluing behind the Windows.



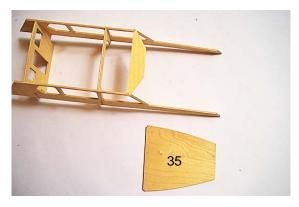
Try fit the parts first without glue. If necessary sand the slots or tenons for a perfect fit. Now first glue the side walls to the frame and back wall. When the gluing points are dry you can glue the bar (40) in place.





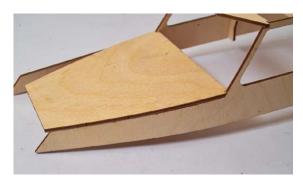
2. Cabin Roof Front

Now place the front roof (35) with ist cut out corners between the two side walls and glue only at the cut outs.





Fix the roof at ist cut outs with superglue



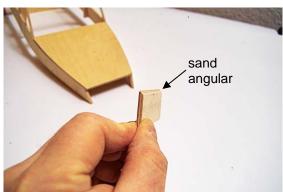
When the glue is dry, bend the side Wenn der Kleber getrocknet ist, das Seitenteil according fo the curve of the roof and fix with superglue.



When the glue is dry, do the same on the other side. After that, glue from inside and fix with clamps.

Now fit the front part (37) to the superstructure. The upper edge needs to be sanded angular to fit correctly.



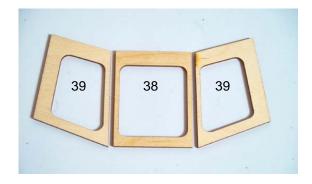




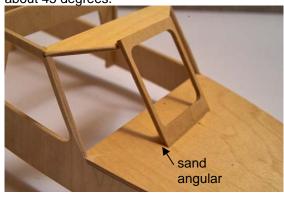
Now sand the flush the overlaying ends.

3. Front Windows

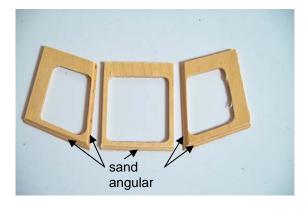
In the next Stepp the front Windows 38 and 39 will be placed.



First bevel the lower edge of the centre part about 45 degrees.



The front Windows at the side have to be bevelled at the lower edge and at the edge to the centre Window.



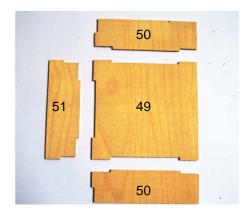
In the next step you have to sand the contour of the main roof on top of the front Windows in the same way as the contours of the frame and back wall..

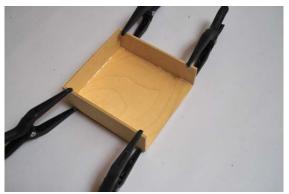
Then sand the side edges flush with the side walls.



4. Cockpit

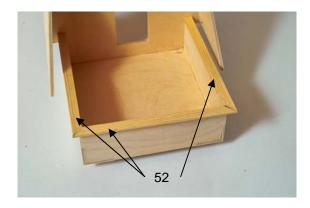
At this stage you will make the cockpit. For this you will need parts 49, 50 and 51.





Now glue the cockpit to the superstructure.





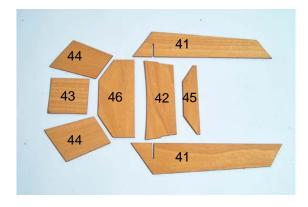
After this fit the hand rail 52.

5. Roof and Flybridge

The last step for the superstructure starts with gluing the main roof (36) on top.



Then the Flybridge will be built with parts 41, 42, 43, 44, 45 and 46.

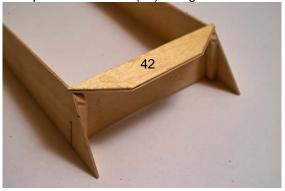


First the parts 41 and 42 will be glued together. Place strips 3 x 5 x 40 mm for strengthening.





Now place dashboard (45) and glue.



Then place the flybridge on the top of the roof, check alignment and fix with superglue.

To match the curve of part 42 to the curve of the roof, you can place sand paper flat onto the roof and sand the wall to have a better fit, if necessary.

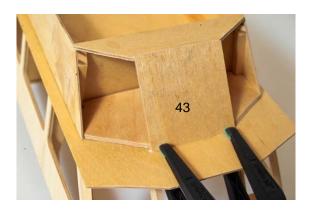


Now place the false edge (46) and glue to the roof.

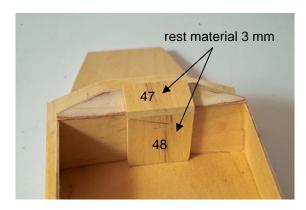


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After the glue has set, you can fit and glue the front walls (43 + 44). The front panels for the side (44) have enough oversize for an easy fit.



Now prepare the false edges 47 und 48 from rest pieces of plywood 3 mm and glue them in place.



Now the body shell of the superstructure is ready.

6. Alignment to Deck

At this stage the superstructure will be placed on the deck and the curve of the lower edge has to be aligned with the curve of the deck. This has to be done mainly in the front area. For this you can mark the deck line to the superstructure with a pencil, layed flat onto the deck. Then sand the curve.



7. Painting

Now the superstructure can be sprayed with filler and sanded several times and afterwards you can use a lacquer for the finish in the wished colour.

III. Details

In the following steps the accessories will be made.

Door, radarbridge, seats, anchor winch, bow reel, stairs, ladder, radar, throttle lever

1. Door

Sand and varnish the door (62) and glue it to the painted back wall. Then bend the door handle from brass wire 1,5x15 mm (108) and slide a brass tube 2x1,5x7 mm (104) over it for a thicker handle.





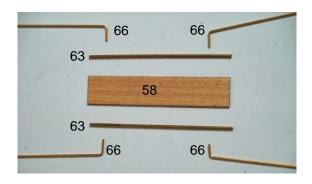
66



2. Radar Bridge

Take part 58 from the laser sheet.

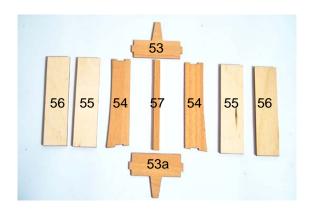
Glue two brass tubes (63) 2x1,5x100 mm on to the board just at the outer edges. Bend from brass wire 1,5 mm four supports (66). Fit the angle according to the angle of the side walls of the flybridge.



3. Seats

drill <

Make the seats from parts 53, 54, 55, 56 and 57.





Glue parts 55 and 56 on.

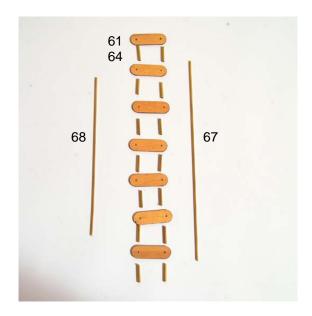


On the side of the flybridge wall sand the protruding parts of the bolsters flat.

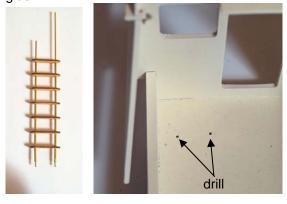


4. Ladder to Flybridge

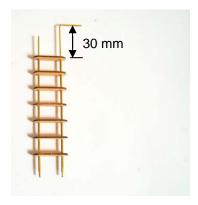
Prepare parts 61, 64, 67 und 68 and build the ladder to the flybridge.



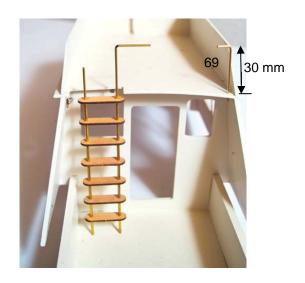
Glue the first two distance tubes 5 mm from the lower end of both vertical rods. Then place alternately one Step and two distance tubes onto the rods and fix the with a drop of superglue.



Drill the holes for the ladder at the correct place into the cockpit floor. Then bend the upper end of the longer rod at a distance of 30 mm from the highest step horizontally to the side.



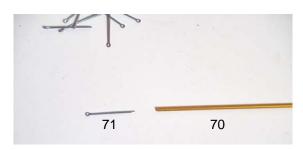
Biegen Sie die Relingstütze aus Brass Wire 1,5 x 45 mm (69).



Place hand rail (70) without glue and check the height of the rail support.



Make the lower rail from two split pins (71) and the tube (70).



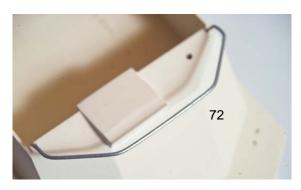


Make the end piece at the left ladder rod from a piece of brass tube 2 x 7 mm (104) and glue.



5. Safety Bar

Bend from brass wire 1,5 x 170 mm the safety bar (72) for the flybridge.

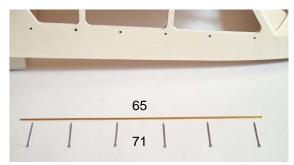


First bend the angles as shown on the top view on the plan and at the end bend the outer ends downwords as shown in the side view.

6. Hand Rail

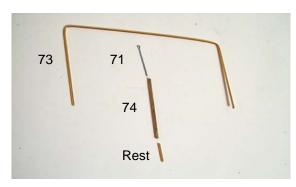
Prepare the hand rail from brass wire $1,5 \times 195$ mm and 6 split pins (71). Mark the holes at the sides of the superstructure and drill with 1,5 mm. Slide the split pins onto the wire and fix the ends into the holes. To achieve an equal distance to the wall, slide some rest pieces of wood 3 mm between wall and rail.





7. Bow Rail

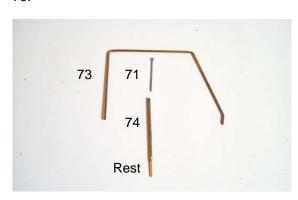
Bend the bow rails from brass wire $1,5 \times 210$ mm (73) place the rail support (74) with split pin and glue into the centre of the rail. Use a small rest of wire as pin into the deck.





8. Aft Rail

Work the same way with the back rail 74 und 75.





9. Anchor Winch

Build up the anchor winch from parts 76, 77, 78, 79, 80 and 81.



Glue the main part (76) to the sides (77).



Then place and glue the base (78).



Glue the motor plate (79) to the right side as shown.



Now the wooden parts should be fillered sanded and painted white or grey. Jetzt sollten die Holzteile mit Porenfüller lackiert und geschliffen werden. Afterwards place the motor (80) and capstan (81) with super glue.





10. Bow Reel

Identify parts 83, 84, 85 and 86.



Glue the sides 83 to the main piece 84.

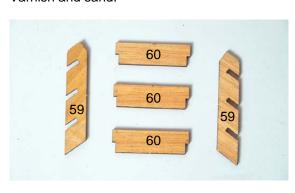


After sanding and painting place reel and pin and fix the pin with a drop of medium super glue. If necessary you have to sand down the reel on both sides to fit between the two sides.



11. Stairs

Glue the parts 59 and 60 to build the stairs. Varnish and sand.





12. Radar

Cut out the two halves (101) of the radar at the vertical end. Then sand the edge on a flat piece of abrasive paper, grade 600 down to measure. Now glue the two halves together and paint if wished. Place the sticker onto the front.

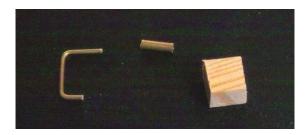






13. Throttle Lever

Make the throttle lever from parts 102, 103 and 104. Bend the lever from brass wire 1,5 x 25 mm. Drill a hole of 1.5 mm into the base (102) and round the upper edges. Glue handle (104) on the lever. After painting the lever can be glued into the base.

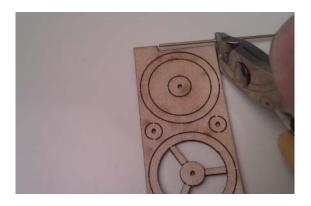




14. Assembly of the steering wheel



For this assembly fo the steering wheel you will need the small laser sheet, 12 cm of brass wire 1 mm, and white glue or Aliphatic glue, a modelling knife, a wire cutter and some sand paper.



Use the cut out on the laser sheet to cut equal lengths for 6 spokes fom the brass wire 1 mm.



Now cut ut the I5 laser parts from the sheet as shown.



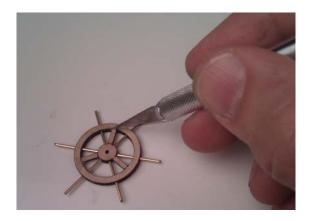
Apply some glue to the outer ring and into the center of the wheel and plase the spokes carefully that they are lying up to the center hole, but leave it free.



Now place the second outer ring, that the grooves are placed on the spokes.

Apply some glue to the upper center piece and place it as well onto the first one.

Now press the complete steering wheel with some weight until the glue has set.



Carefully cut out the laser cut dummy spokes from the lower laser part. Then sand the wooden parts carefully.



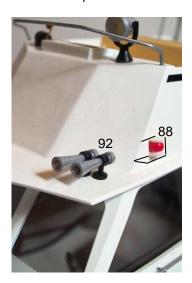
Cut a 10 mm brass piece as a shaft and fix it with glue in the center hole of the steering wheel. Also place the 2 distance rings with wood glue.

Now you can stain and varnish the steering wheel and fix it at the helmstand.



14. Other Fittings

At the end fit all other fittings to the model. For this several pictures are shown as follows.











VI. Radio Control

For running your model on the water, you will need a 2 channel radio control system with one servo.

For the control of the motor you will need an electronic speed control with forward and reverse control. This should have a constant capacity of minimum 20 Ampere and should be equipped with BEC.

The steering servo needs to be fitted to the motor mount. Before assembly you should clear whether this is standing in ist neutral position, as a later screwing is difficult.

For steering the rudder first the rudder lever (97) needs to be fixed to the rudder shaft and combined with the steering rod, made of parts 98, 99 and 107, and aligned. Please check that the rudder really turns to left when the radio command is left. Otherwise the reverse switch or plug has to be changed on your transmitter (see instruction). May be you will need an extension cable for your servo.

The receiver will be fixed in front of the battery with double adhesive tape.

The electronic speed control should also be fixed with double adhesive tape to one side of the motor mount. It should be positioned that way, that switches or potentiometers can easily be adjusted.

Combine the cables from the motor with the cables for the motor fro the speed control in the shortest possible way and soldered together.

Please note the instruction of the speed control for the adjusting and use of it. If a BEC is supplied wit the speed control, you will not need an extra battery for your receiver.

V. Final Work

When all installation is done, please make a final check all over your model. All joints and installations should be checked for their clear and stabile fit and if necessary corrected. Also please make a test of the trim of the model in the bath tub before you go to a lake for the first run. The trim normally needs to be adjusted with some weights of lead.

Before the first run on the water please make a reach check of your radio before. For this place the model onto the stand. Switch on the transmitter and receiver, but leave the antenna of the transmitter short. Now let the motor run full speed and use the rudder lever slowly but constantly left and right. If the rudder also moves without any tremor, your radio works well.

Now the first sail can start. We wish you all the best with your "Lisa M.".

For any questions and help you can contact us.

Klaus Krick Modelltechnik, Postfach 1138, 75434 Knittlingen Tel. 07043/9351-0, Fax 07043/31838

Parts List LISA M.

Position	Description	Material	Measures	Qty.
1	Hull	ABS	Vacuum Formed	1
2	Boat stand front	Plywood	Laser Sheet 5 mm	1
3	Boat stand aft	Plywood	Laser Sheet 5 mm	1
4	Boat stand sides	Plywood	Laser Sheet 5 mm	2
5	Deck	Plywood	Laser Sheet 3 mm	1
6	Reinforcing Strip	Pine	3 x 5 x 310 mm	2
7	Reinforcing Strip	Pine	3 x 5 x 83 mm	2
8	Reinforcing Strip	Pine	3 x 5 x 86 mm	1
9	Reinforcing Strip	Pine	3 x 5 x 116 mm	1
10	Coaming	Plywood	Laser Sheet 1,5 mm	2
11	Coaming	Plywood	Laser Sheet 1,5 mm	2
12	Coaming	Plywood	Laser Sheet 1,5 mm	1
13	Coaming	Plywood	Laser Sheet 1,5 mm	1
14	Rudder Tube	Brass Tube	4 x 3,1 x 35 mm	1
15	Support	Plywood	Rest material 3 mm	3
16	Motor Mount	Plywood	Laser Sheet 3 mm	1
17	Motor Mount Side	Plywood	Laser Sheet 3 mm	1
18	Servo Tray	Plywood	Laser Sheet 3 mm	1
19	Base	Plywood	Laser Sheet 3 mm	1
20	Front & Back	Plywood	Laser Sheet 3 mm	2
21	Sides	Plywood	Laser Sheet 3 mm	2
22	Electric Motor	Finished Part		1
23	Suppression Capacitors Set	Finished Part		1
24	cables	Finished Part		2
25	Screws for Motor	Finished Part	Steel M 2,5 x 6 mm	2
26	Prop shaft & tube	Finished Part		1
27	Set Collar with Screw 3*3 mm	Finished Part		1
28	Propeller 40 mm	Finished Part		1
29	Bushing	Brass Tube	4 x 0,75 x 8 mm	No need
30	Aligning Tube	Brass Tube	5 x 0.45 x 52 mm	No need
31	Coupling complete	Finished Part	brass	1
32	Superstructure Side	Plywood	Laser Sheet 3 mm	2
33	Superstructure Frame	Plywood	Laser Sheet 3 mm	1
34	Superstructure Back	Plywood	Laser Sheet 3 mm	1
35	Superstructure Roof front	Plywood	Laser Sheet 3 mm	1
36	Superstructure Main Roof	Plywood	Laser Sheet 1.5 mm	1
37	Superstructure Front	Plywood	Laser Sheet 3 mm	1
38	Superstructure Window Centre	Plywood	Laser Sheet 3 mm	1
39	Superstructure Window Sides	Plywood	Laser Sheet 3 mm	2
40	Strengthening Piece	Plywood	Laser Sheet 3 mm	1
41	Flybridge Side	Plywood	Laser Sheet 1,5 mm	2
42	Flybridge Frame	Plywood	Laser Sheet 1,5 mm	1
43	Flybridge Front	Plywood	Laser Sheet 1,5 mm	1
44	Flybridge Front Sides	Plywood	Laser Sheet 1,5 mm	2
45	Flybridge Dashboard	Plywood	Laser Sheet 1,5 mm	1
46	False Edge Roof	Plywood	Laser Sheet 1,5 mm	1
47	False Edge	Plywood	3 mm Rest	1
48	False Edge Top	Plywood	3 mm Rest	1
49	Cockpit Floor	Plywood	Laser Sheet 3 mm	1

Parts List LISA M.

Position	Description	Material	Measures	Qty.
50	Cockpit Sides	Plywood	Laser Sheet 3 mm	2
51	Cockpit Back	Plywood	Laser Sheet 3 mm	1
52	Hand Rail	Pine	3 x 7 x 115 mm	3
53	Seat Sides	Plywood	Laser Sheet 1,5 mm	2
54	Seat Fronts	Plywood	Laser Sheet 1,5 mm	2
55	Seat	Plywood	Laser Sheet 1,5 mm	2
56	Seat Back	Plywood	Laser Sheet 1,5 mm	2
57	Seat Centre Part	Pine	3 x 5 x 75 mm	1
58	Radar Tray	Plywood	Laser Sheet 1,5 mm	1
59	Stairs Sides	Plywood	Laser Sheet 1,5 mm	2
60	Stair Steps	Plywood	Laser Sheet 1,5 mm	3
61	Ladder Steps	Plywood	Laser Sheet 1,5 mm	7
62	Door	Plywood	Laser Sheet 1,5 mm	1
63	Radar Tray Tubes	Brass Tube	2 x 1,5 x 100 mm	2
64	Distance Tubes	Brass Tube	2 x 1,5 x 13 mm	14
65	Hand Rail	Brass Wire	1,5 x 195 mm	2
66	Radar Tray Supports	Brass Wire	1,5 x 115 mm	4
67	Hand Rail Ladder right	Brass Wire	1,5 x 160 mm	1
68	Hand Rail Ladder left	Brass Wire	1,5 x 130 mm	1
69	Stanchion	Brass Wire	1,5 x 45 mm	1
70	Railing	Brass Tube	2 x 1,5 x 70 mm	2
71	Split Pin	Finished Part		18
72	Safety Bar	Brass Wire	1,5 x 170 mm	1
73	Bow Rail	Brass Wire	1,5 x 210 mm	2
74	Stanchion	Brass Tube	2 x 1,5 x 42 mm	4
75	Aft Rail	Brass Wire	1,5 x 170 mm	2
76	Anchor Winch Centre	Plywood	Laser Sheet 1,5 mm	1
77	Anchor Winch Housing	Plywood	Laser Sheet 3 mm	2
78	Anchor Winch Base	Plywood	Laser Sheet 1,5 mm	1
79	Anchor Winch Motor Plate	Plywood	Laser Sheet 1,5 mm	1
80	Motor	Finished Part	Casting	1
81	Capstan	Finished Part	Casting	1
82	Anchor	Finished Part	Metal	1
83	Bow reel Sides	Plywood	Laser Sheet 1,5 mm	2
84	Bow reel Centre	Plywood	Laser Sheet 3 mm	1
85	Reel	Finished Part	Brass	1
86	Axle	Brass Wire	2 x 10 mm	1
87	Starboard Lamp	Finished Part	Plastic	1
88	Port Lamp	Finished Part	Plastic	1
89	Back Light	Finished Part	Plastic	1
90 a	Steering Wheel Main Piece	Plywood	Laser sheet 1 mm	1
90 b	Steering Wheel Outer Ring	Plywood	Laser sheet 1 mm	1
90 c	Steering Wheel Center Piece	Plywood	Laser sheet 1 mm	1
90 d	Steering Wheel Distance Piece	Plywood	Laser sheet 1 mm	2
90 e	Steering Wheel Spokes	Brass wire	1 x 18 mm	6
90 f	Steering Wheel Axle	Brass wire	1 x 10 mm	1
91	Life Belt	Finished Part	Plastic	2
92	Horn Soarchlight	Finished Part	Plastic	2
93	Searchlight	Finished Part	Plastic	2 2
94 05	Davit Cleat	Finished Part Finished Part	Plastic	4
95	Cical	riiiisiieu Pait	Metal	4

Parts List LISA M.

Position	Description	Material	Measures	Qty.
96	Rudder	Finished Part	Plastic/Metal	1
97	Rudder Arm	Finished Part	Plastic/Metal	1
98	Push Rod	Finished Part	Metal	2
99	Quick Link	Finished Part	Metal	1
100	Window Material		PVC	
101	Radar, 2 Parts	Vacuum forme	d Styrene	1
102	Base	Pine	8 x 8 x 8 mm	1
103	Lever	Brass Wire	1,5 x 25 mm	1
104	Handle	Brass Tube	2 x 1,5 x 7 mm	3
107	Connecting Clip	Finished Part		1
108	Door Handle	Prass Wire	1,5 * 15 mm	1

Part Numbers of Laser Parts

