

Assembly instruction

MS SAMKA



**Rex-Schiffsmodelle
Christian Rex
Sommerkamp 24
D 24768 Rendsburg
www.rex-schiffsmodelle.de
cr@rex-schiffsmodelle.de**

Historical background:

After WW2 the danish coaster fleet consisted to a large extend of obsolete second-hand tonnage of german and dutch origin and also partly of elder wooden coasters.

The construction program for the so called Caroliner ship type was initiated at that time to rejuvenate this fleet with funds from Marshall Plan.

Design was made by H. C. Christensens Staalskibsvaerft at Marstal. This shipyard build 20 out of 23 coasters during several years. Two ships were build at Svendborg Skibsvaerft in Svendborg and one was build by Skibswaerftet Lilleø in Korsør.

Moreover Christensens build two ships with similar dimensions 1956 (*Hjelm*) und 1958 (*Rosenvold*) and Svendborg Skibsvaerft build four LNG tankers (*Sørine Tholstrup*, *Elsa Tholstrup*, *Inger Tholstrup* und *Betty Nordgas*) between 1954 and 1958. Their construction also based on the Caroliner design.

This series of ships is called Caroliner because the first one to be delivered was *Caroline*.

Today two of these coasters are still in use in Denmark: *Caroline S* (Svendborg) and *Samka* (Marstal).

The GRP hull is already primed and the portholes (6mm brass tube) are fitted to the hull. The primer may be painted either with solvent-based or acrylic paint.

First of all you have to drill holes for the stern tube (6mm) and the rudder coker (4mm) – the position is according to the drawings.

I recommend a standard prop shaft/stern tube (not included) with 4mm axis and 6mm tube – axis length 120mm.

The stern tube support (1,5mm polystyrene) may have to be adapted to the hull form. If properly fitted the tube should be parallel to the bottom of the hull.

The propeller (not included) should be a four-bladed brass propeller with 30mm diameter.



Rudder cocker (4mm brass tube) and rudder (3mm brass tube) are inserted into the hole from below and aligned with the tiller. Then fix with superglue and attach the trapezoidal rudder supports inside so that they open at a 90-120° angle towards the bow. This may absorb forces acting on the rudder, which otherwise may lead to hairline cracks around the coke and thus to leakage.

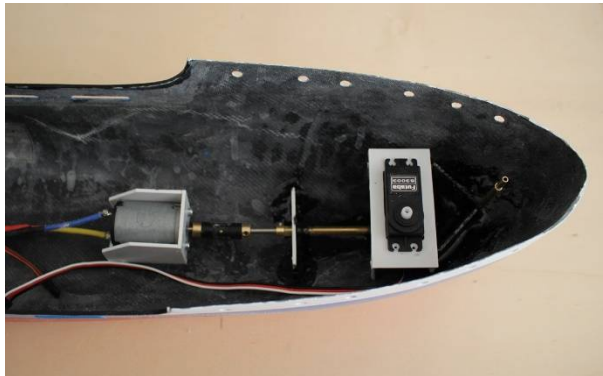
Glue stern tube and rudder cocker waterproof to the hull (epoxi).

The hull now gets two bilge keels made of 2x3mm brass profile (length 215mm each). They are mounted amidships in the area of the largest curvature of the hull and run at the ends slightly pointing upwards. The shorter side of the L-profile is glued to the hull in such a way, that this leg points downwards / to the center of the ship. Under very hard loads, the L-profile could later detach from the fuselage if it is only glued. The most stable solution is to pierce the glued profile with a thin drill (1mm) at the

beginning, in the middle and at the end and insert small brass pins (1mm), which are soldered to the profile and secured inside with epoxy.

On the outside of the hull the thin frames are mounted around the openings (0.5mm polystyrene). If necessary, after curing the adhesive, a slight rework with a file is necessary.

At the bow the small star (you have it twice in the milled parts, because it disappears so easily in the carpet or vacuum cleaner ☺) and the coat of arms are mounted.



The bore for the anchor joint can already be marked according to plan and drilled with 4mm – but when inserting the pipe later a little rework must be done (oval filing).

Since access to the hull is currently still the easiest, you should already mount the rudder servo and the engine. Corresponding mounting frames are attached.



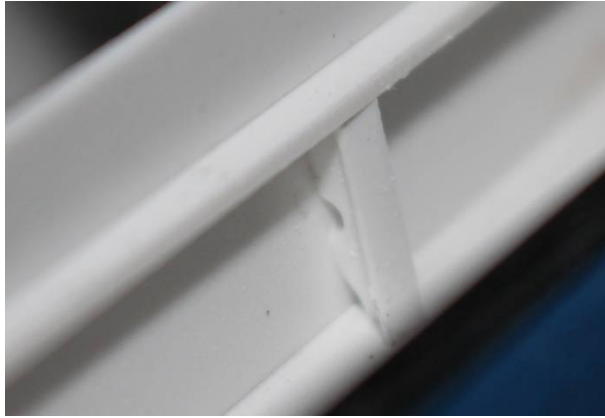
The support strips (2x2mm polystyrene) for the main deck are glued inside. The deck is slightly lower than the side cut-outs. In addition the thickness of the main deck (1.5mm) must be observed. The upper edge of the support strip should be about 3 mm below the lower edge of the cutouts.

It is advisable to glue the frame parts of the loading hatch first with the deck, as these not only give the deck the shape (deck jump / bar bay), but it is the best way that the gluing is waterproof! The main deck is very close to the waterline and in driving mode it can be assumed that water runs through the cutouts on deck again and again (conveniently it disappears again through them).



The side panels are 10mm high and tilt slightly inwards. Therefore the slots in the deck have to be a bit wider.

The side panels to be installed transept are mounted between the elongated ones and give the deck the correct curvature. The part with the slots belongs to the front.



The side panels are supported externally towards the deck – for this purpose, the short sloping supports are provided, 9 of which are evenly distributed over the entire length and glued to the side parts. In order to reproduce the corresponding profile, short strips of 0.5mm polystyrene are then glued on in such a way that they protrude towards the rear (this results in an L-shaped cross-section). Subsequently, the front transverse wall and the short side panels as well as the

steps are mounted in the slots provided for this purpose.

Mount the horizontal frame part to get it waterproof. As soon as the main deck is glued into the hull, it is difficult to get there.

The 5mm high side parts are then inserted into the slots of the frame part at the top and glued.



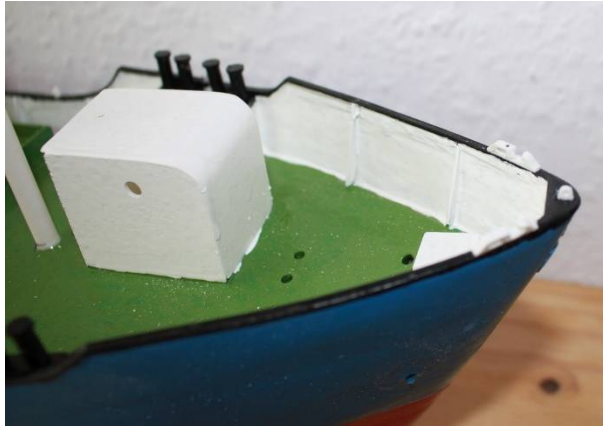
The transverse bulkhead with the two door openings and the three windows is mounted. The doors shall be arranged in such a way that the hinges point outwards. Door handles / closures can be easily made from thin solder (retains the metallic character without painting) – insert only after painting the wall. Likewise, the window glasses should only be used after painting.

Now the main deck can be glued in. Make sure that the upper edge of the wall of the transverse bulkhead closes with the laminated fuselage in height.

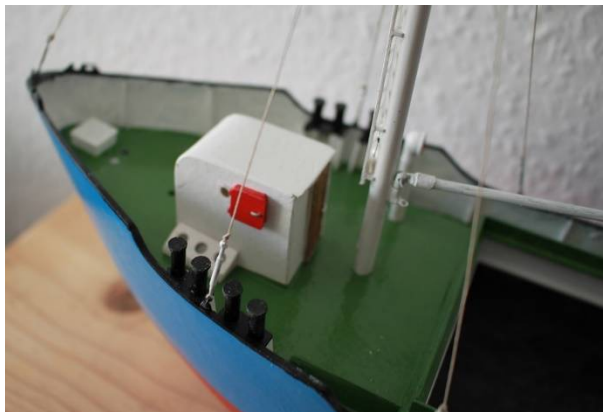


The foredeck may have to be adjusted slightly in the contour, as the wall thickness of the laminated hull is never quite the same. The deck support strips are glued to the hull. Care must be taken to ensure that the deck rises continuously to the bow.

It should fit the loading hatch frame without gaps. The transitions to the bulwark are to be filled.



The anchor hawse consists of 4mm polystyrene tube which is glued with a little protrusion first in the hull and on deck. The assembly site is then cleaned. In front of the anchor hawse there is a small hatch on the foredeck. The floor is the smaller square part around which the side panels are mounted. On top of the frame comes the lid with the rounded corners. Hinge replicas (0.5mm polystyrene) and a handle (0.5mm brass rod) complete the hatch.



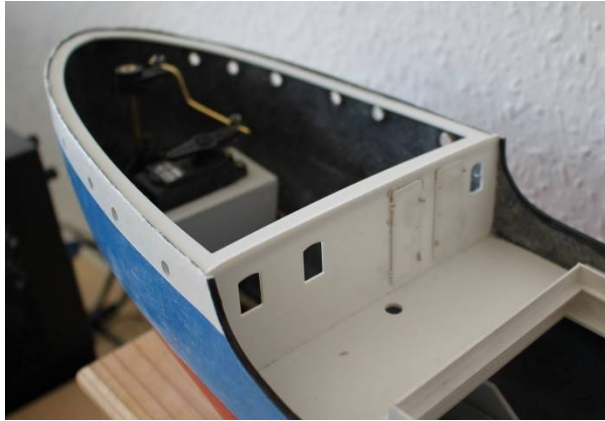
Sidewalls of the little deckhouse as well as the side facing the stern with the door opening are glued to the deck and to each other. The front / roof is a combined part that must be bent according to the rounding of the sides. However it should only be glued when the porthole windows are mounted. The roof has some excess, which is convenient for gluing. After curing the adhesive, it can be cut according the drawing.

Next to the deckhouse there are skylights on both sides. These are glued together, the gaps are filled, sanded and painted. Then glue in the windows from the inside and attach them to the deck. It is 1 mm behind the front edge of the deckhouse. The door of the deckhouse is clad with teak.

The bulwark supports shall be placed on the main deck opposite the supports of the loading hatch.

For the foredeck, the long bulwark supports are provided, which may have to be adapted to the shape of the bulwark and height. They are placed 35 and 70mm from the bow. The slightly lower bulwark receives the support structure for the bollards on both sides. Here, the supports must first be glued to the bollard base. Then 4mm polystyrene tube is used for the bollards (about 10mm should remain above the base plate). The supports and the pipes must be adapted to the shape of the bulwark. The distance to the step is 3mm, between both support structures 5mm. The bollard base should be at the level of the bulwark. The bollards are closed after they have been adjusted in height to the higher bulwark with a 5mm polystyrene plate at the top.

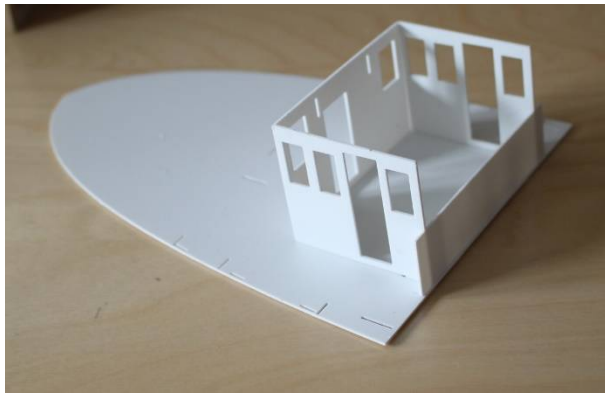
After the installation of the bulwark supports, a 1x2mm polystyrene profile is glued to the bulwark as the upper end (unless this has not already been done).



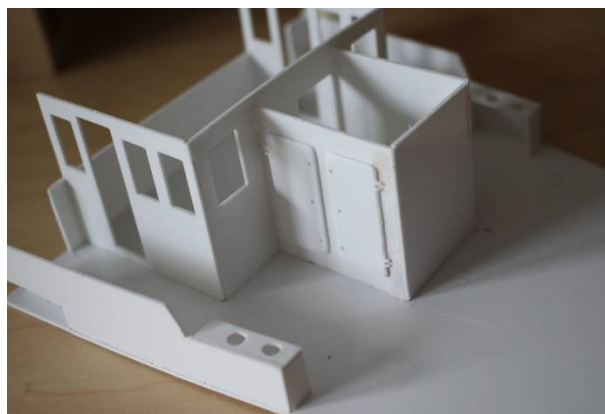
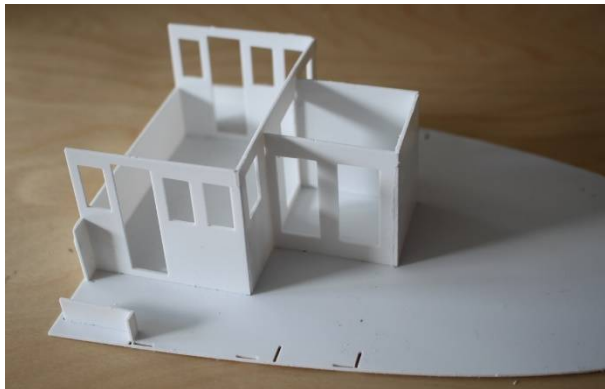
With the aft deck you start with the gluing of the frame (1.5mm polystyrene). This must be flush with the side wall and the transverse wall at the top. On the outside, a profile of 0.5x2.6mm polystyrene is then glued on in such a way that it protrudes 1.5mm upwards. This hides the joint between the fuselage and the removable structure.

(in the photo the frame is still too deep!)
Tip: to fix the aft deck you can use neodymium magnets. These are either

placed under the frame or better inserted into the frame. The counter magnets then come on top of the 1mm thick PS plate of the aft deck: one exactly amidships at the stern and one each on the outside where the bollards are.



You start assembling the aft deck with the lower part of the bridge front. This is slightly broader than the deck house – you should mark the middle of the deck and the front part and align it exactly. Then the side walls are mounted and then the rear transverse wall. The front is completed by the window element after it has been provided with the narrow triangles. Attention! The lower edge of the window part is slightly curved and the triangles are glued with the pointed side down from the inside against the window front. This results in an overlap of 1mm for the side walls for the installation. Subsequently the walls of the small annex are attached. This is slightly lower than the bridge house. The wall with the two door openings is located on the left in the direction of travel. The doors are glued to the openings. Door handle and closing mechanism is again made of solder.



Before the sides with the position lanterns are mounted, you should first attach a skirting board to the bridge house from 1x2mm polystyrene and then glue teak sticks to the bridge house. It is easier to sand and paint now.

When assembling the sides, you start with the long part and align it so that the rear end gives a clean corner with the rear bollard support. At the front, a section of the 2mm quarter profile is glued



on and then the wall part pointing to the bow. The rear end of the recess for the position lamp is plugged into the deck, as well as the longer part and glued. The end lid (trapezoidal part) is finally mounted – the small recess should fit the quarter round profile.

With the bollards, the front support is used and the bollard base is mounted on top. This should match the height of the side wall. The bollards are made of 4mm PS tube (20mm length) and glued in the holes. As a lid they receive a plate

with a diameter of 5mm. (In front of the front bollard would be the place for the counter magnet for deck fixation)

The side panels are given a handrail made of 1x2mm teak.



For the railing, holes with a diameter of 1mm are drilled into the deck. From the rear end of the right side panel, the railing supports are at 30, 60, 85, 110mm, exactly in the middle at the rear, 15, 35 and 60mm from the rear to the left. On the left side, the railing is interrupted for the dinghy.

The railing supports are made of 1mm brass wire (21mm length) and get a handrail made of 1.5mm wire. The pulls

are soldered from 0.7mm wire in between.



At the very end of the deck there is a hatch that is built analogously to the small hatch at the bow (if the proposed solution is implemented with the neodymium magnets, first the magnet should be placed and then the hatch without the bottom part).

The dinghy crane gets a base plate with 6mm diameter. A polystyrene pipe with a diameter of 5mm and a length of 20mm is mounted on it. As a collar

comes at the upper end the 6.5mm plate. The rotatable part is made of 4mm polystyrene profile (length 40mm) to which the crane arm is glued.

The dinghy receives the designated dinghy bearings. In the original it is orange and has a blue cover (this can be made from a fabric remnant and is not included in the kit).

The dinghy bearings have small holes through which eyelets (0.5mm brass wire) can be led to secure the dinghy with yarn.



Behind the small bridge house extension on the left side of the ship are the round head fan with 4mm pipe, on the right the other fan with the cylindrical head.

The remaining round head fans have a pipe with a diameter of 5mm and belong on the main deck (right side next to the stairs), or on the foredeck laterally from the front mast.



The chimney is made of two slabs (the smaller one belongs upwards) and 3 pipe sections. The pipe length corresponds almost to the height of the chimney side.

The thicker pipe is bevelled at the top after assembly and receives a short pipe section that points to aft.

The recess on the chimney sheathing points forward, as the chimney compensates for the height difference between the roof of the bridge house and the extension. However, this overlap is also very practical, as the bridge house roof is secured in this way.



The mounting joint of the jacket points to the aft. Conveniently, mark the center of the jacket and the plate and start there with the bonding of the upper smaller plate. After the jacket is mounted, the joint must be filled and sanded. The largest oval part is then glued around the upper edge of the jacket. This is followed by the smaller ones. The steps are balanced by filler and grinding so that a uniform inclination is created. The completed chimney is glued to the roof of the small extension.



In the deck are holes for the radar / antenna carriers immediately behind the bridge house. For the radar mast 3mm polystyrene tube (length 74mm) is used, for the thinner left mast 2mm polystyrene pipe of the same length. Both are con-

nected about 2mm below the upper edge with a 2mm polystyrene tube as a crossbar.

It is advisable to support the masts against the bridge house wall with a short 2x2mm profile.

The radar consists of 3 discs – the one with the largest bore is pulled straight over the end of the 3mm tube. Then follows the larger disc with the small bore and on top of it the smallest disc. A 2mm brass wire is glued to the radar bar, which is plugged into the 3mm tube as an axis (you can also drive the radar if by motor if you like). In the left 2mm tube a thicker rod antenna (1mm brass wire) is mounted and in the cross beam smaller ones made of 0.5mm brass wire.

The masts are made of various polystyrene pipes, which are inserted into each other. The lower part is made of 6mm tube (front mast 200mm above deck level, rear mast 210mm above deck level). Conveniently, some protrusion should also remain downwards in order to be able to glue the mast neatly in the bore in the deck.

Initially, however, the following pipes with a smaller diameter are used for both masts (the same for both masts): 5mm pipe, length 25mm of which 5 mm is sunk in the 6-pipe – 4mm pipe, length 25mm of which 5mm recessed – 3mm pipe, length 15mm of which 5mm sunk. The upper end is a 2mm MS pipe in which a hole is inserted for the cross tag (1mm brass). On the cross tag the flag lines are struck.



The plate for the top light is mounted at the upper end of the 5mm tube. As long as the front mast is not yet glued in, you should already pull in cables for the lighting of the top light (for example thin enamelled copper wire).

The eyes for the tensioning of the shrouds are fixed as follows: at the upper end of the 6mm tube in the form of a large X (seen from above) pointing outwards



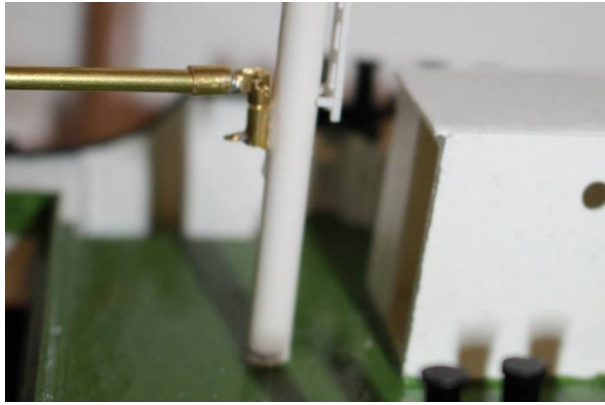
(the angle between the left and right eye is greater than between those on one side). Further eyes are located at the lower end of the 5-pipe at the front of the front mast (bracing to the bow) and at the back of the front and at the front of the rear mast (stop block for the loading trees). In addition, one eye belongs to the upper end of the 3mm pipe on the front and back (tensioning to the bow, between the masts).

The other eyes are attached to the handrail on the bulwark: at the bow, between the two double bollards, immediately above the front end of the first sidecut, above the end of the last sidecut and at the rear end of the position lamp box.

The shroud tensioners are attached to the lower eyes by means of a brass ring (0.5mm wire). With the rear shroud tensioners, which are attached to the position lamp box, it is advantageous to connect them only

with a hook, otherwise the aft deck can no longer be completely removed!

For the bracing I recommend 0.5mm yarn (not included).



The bearing for the load beams are glued to the masts according to plan (please note that these parts are now resin printed!) Then the bearings for the loading trees are glued in the small holes of the loading hatch frame and with the deck. They must be slightly turned inwards, as the beams are placed diagonally above the loading hatch.

The loading beams are already prefabricated and only have to be used in the corresponding pipe ends of the bearing on the masts (fixation with superglue).

The blocks for the loading trees are included as a kit. Putting it together is quite a fiddle. You can also simplify this a bit if you take thin brass wire as an axis and also bend a double ring in the form of an 8 for the attachment of the block.



For the loading hatch, a larger plate, 5 shear sticks (2mm polystyrene) and a number of pine wood strips are included. In the original, spruce wood was used for the hatch cover. The plate forms the substructure and – together with a foam rubber edge – ensures a relatively water-proof seal (my model has not taken any water since 2 years). The shear sticks are inserted into the slots of the plate. Then you start with the laying of the jaw strips, which always run from one shear stick to the next (the enclosed strips must be shortened accordingly).



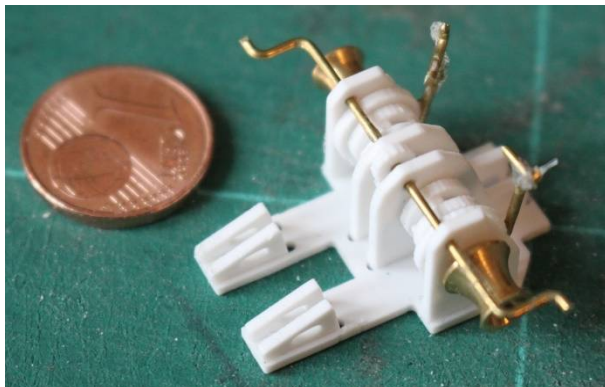
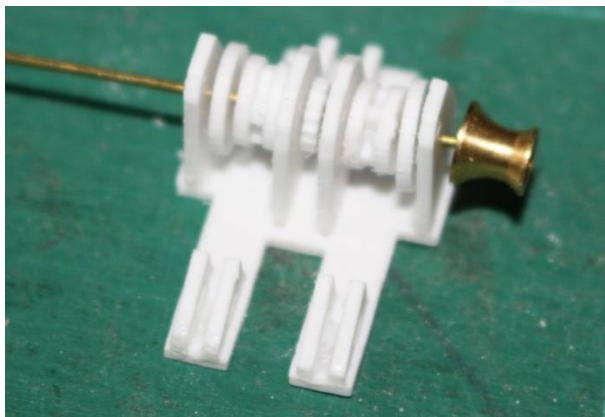
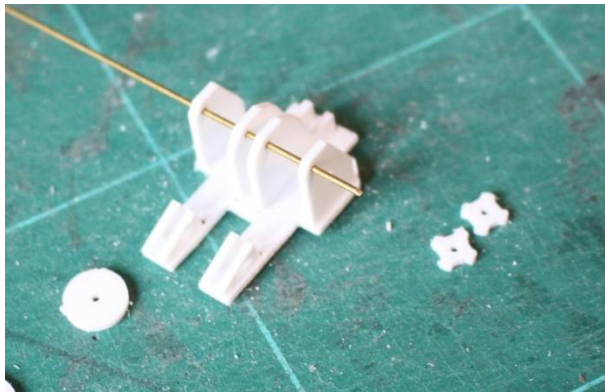
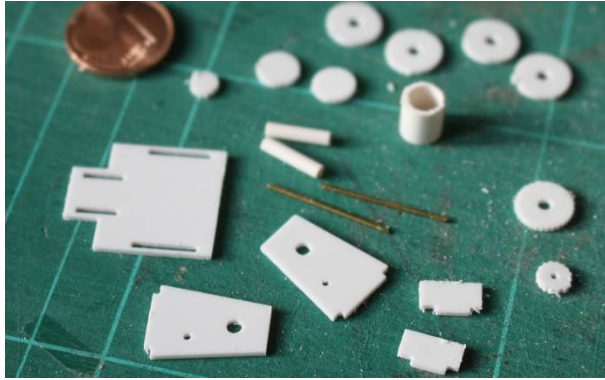
Tip: it will be even more precise with brass holds on the wooden strips, which

were used to lift the beams. If necessary, you can also age the wood a little.

Visually this solution is nicer to look at - but in bad weather / swell a tarpaulin was of course mandatory.

The fire boxes are composed of three parts. The frame without hinge attachment belongs to the wall, on it the frame of the same size with hinge attachment / bore is glued and on top of it the slightly larger lid. A handle made of solder is placed in the borehole.

Now we come to the winches. But before you start, a tip: if you value the mobility of the drums, spools, etc., the parts should be painted before assembly!

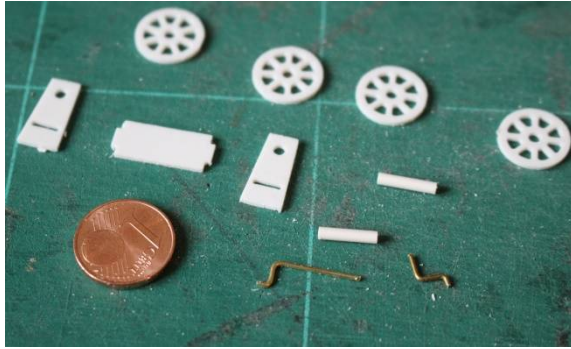


The anchor windlass consist of a large number of the smallest parts, the assembly of which must be carried out as follows: The inclined parts (chain stoppers) are first inserted into the base plate in such a way that they close flush with the base plate. Then follow the side and middle cheeks. Make sure that the holes are inline. The steep, vertical edges point to the chain stoppers. From the four flat discs of the same size and the two star-shaped parts, the chain nuts are built (again, pay attention that holes are in line). 1mm brass wire is provided with a spill and then guided through the deeper bore. Inside follows a disc (brake disc), which has a slightly larger diameter than the chain nuts, then a chain nut – followed by the first middle cheek – then the larger of the two gears – followed by the second middle cheek – chain nut – brake disc – side bolster – spill.

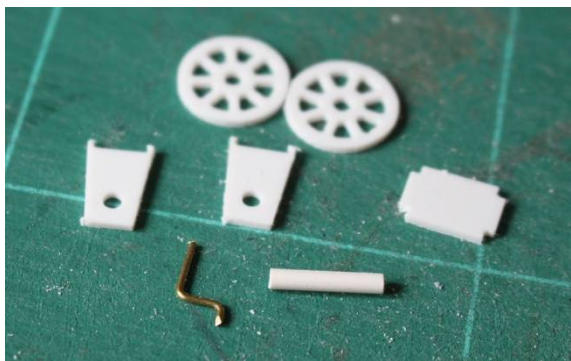
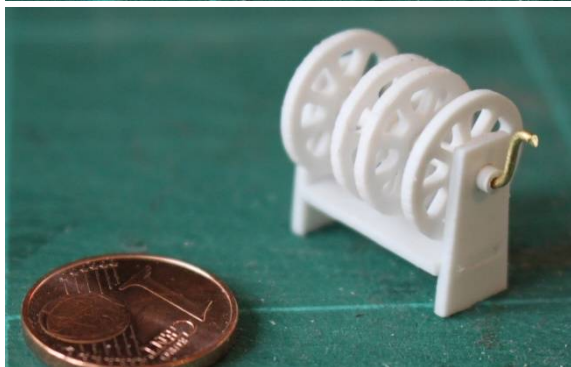
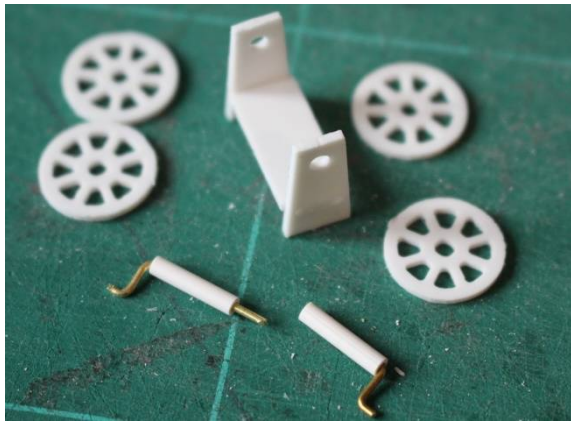
From 1mm wire, a hand crank is now bent, then the wire first guided through the upper holes of the side and middle cheek, then the smaller gear is attached, bent through the two cheeks and then again a hand crank.

Attention the handles of the hand crank must be further apart than the width of the spill heads.

In addition, the anchor winch receives brake cranks (1mm brass wire), which are simply firmly glued to the brake disc and the side bolster.

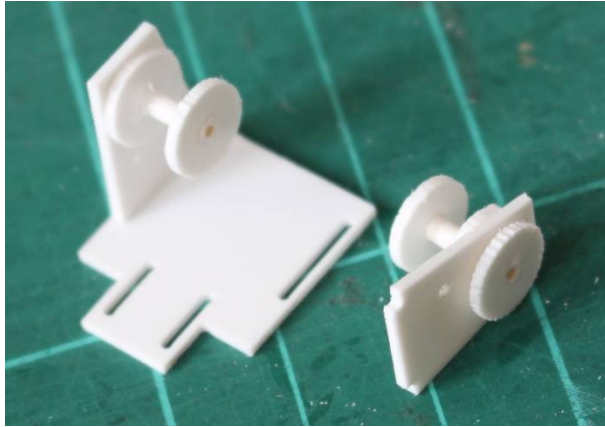


At the bow directly above the anchor haws is a hand-operated reel on which the mooring rope can be rolled up. First, the three frame parts are connected to each other. Two cranks are bent from 1mm wire – one of them a little longer. They are inserted into the 2mm polystyrene tubes (length 12mm). The longer one is immediately glued with a tube, inserted through the side wall and receives two of the drum sides (glued so that there is still some place on the side of the cheek and align the spokes!). From the opposite side, the second hand crank with the 2mm polystyrene tube is now passed through the side bolster, the two drum sides are attached and then the tube is pushed over the protruding brass axis core of the other drum. Glue drum sides and make sure that there is no glue between the two drums – then they remain rotatable separately.

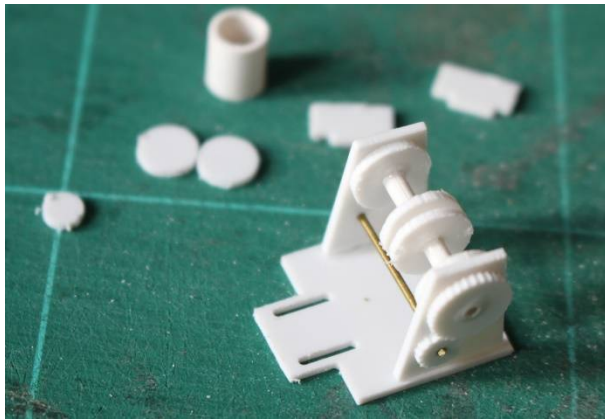


Aft there is a similar variant, beside the bollards, which has only one drum. First, the assembly of the frame takes place, then the hand crank is glued to the 2mm polystyrene tube axis, guided through the hole in the side bolster, the two drum sides are attached, axis is pushed into the hole of the opposite cheek and the drum sides are pushed outwards so that there is still some place left to the cheeks and stick inside.

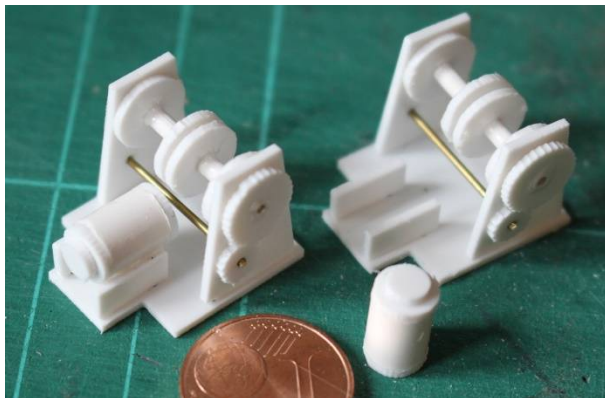




What remains are the winches for the loading beams: align the base plate (the recesses point to the viewer). The side cheek is now inserted into the base plate on the left and glued. Then slide one of the 2mm polystyrene pipe sections (9mm each) through the large bore and insert two drum sides inside. Glue with the polystyrene tube – flush on the inside and to the side bolster with some distance.

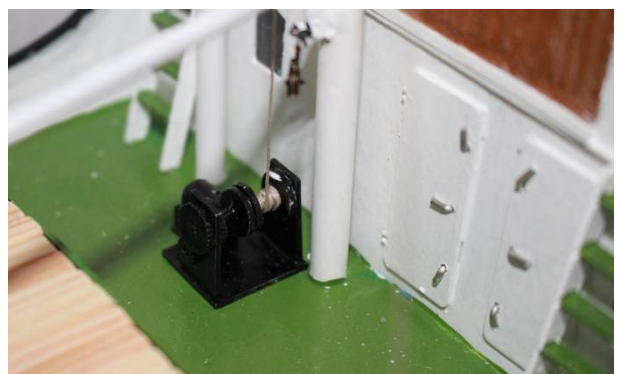


On the right side bolster, the polystyrene tube is not pushed in completely. On the outside the large gear is glued, then follow the side bolster and inside again the two drum sides which are glued as on the other side. For guidance, a 1mm brass rod is then inserted into the bore of the 2mm polystyrene tube.



A 1mm brass wire is inserted into the lower, smaller hole, which receives the small gear wheel on the right side. Inside, a gear connection actually belongs to the engine.

For the motor dummy, the two small rectangular parts are now inserted into the base plate. The motor dummy itself is built from a 7mm long 6mm polystyrene tube, two matching 6mm discs and a 4mm disc and then placed on the carrier parts in such a way that the end ends flush above the base plate. Assembly takes place next to the mast, gears point to the loading hatch.





The kit comes with decals for the ship's name and the coat of arms on the bow. These should be cut out as closely as possible to the font (cutter and cutting mat recommended). Immerse in warm water for about 3-4 seconds, leave on for a short time and carefully test whether the water slide image moves. Then place on the hull, align and press/dry with kitchen crepe. After complete drying, seal with clear lacquer.



Colours:

underwater ship / fan inside / chimney: fiery red RAL 3000

hull: sky blue RAL 5015

bulwark / superstructure: pure white RAL 9010

deck: green RAL 6002

lifeboat: orange RAL 2010

blocks, bollards, winches, bulwark handrail: black RAL 9005