

LCT 7074 1/72nd scale Photoetch sheet

This Photo Etch set is designed for the 1/72nd scale model of LCT 7074 featured in Model Boats magazine May and June 2022 issues and is intended to provide a reasonable level of detail which would survive in a working Radio Controlled model and also save having to individually hand make some parts that are required in large numbers.

General points

Items for specific parts of the vessel are arranged as far as possible together on the PE sheet.

For the smallest and/or most delicate items, a few extra copies are included to allow for any mishaps with the dreaded carpet monster.

There will inevitably be some variation in the sizing of the various hand cut pieces that make up the underlying LCT hull structure so it may well be necessary to trim some of the larger pieces of PE if they are to fit properly. I used a Proxxon PE tool with the finest blades for this and it was also invaluable for snipping the numerous tags. The brass used is 0.3mm thick which offers the best compromise between giving items such as the deck stanchions enough strength while allowing fine detail to be realistically represented. Folding small metal parts of this thickness can be tricky especially for thin items such as the stanchions and I relied on another tool, the Mission Models Etch Mate, to get this done accurately and quickly.

The brass sheet has a natural springiness that can pose a problem when trying to glue some of the larger pieces in place such as the whaleback deck tread. The solution is to anneal the metal so that it becomes more malleable. Annealing is achieved by holding the PE part with some pliers and holding it over a small gas hob ring flame and moving it around so that each part of the PE gets hot enough to start glowing red before moving on to heat another section. Once it has cooled enough to be safe to handle it can be carefully bent by hand to the right profile to fit correctly.

Individual parts and assemblies

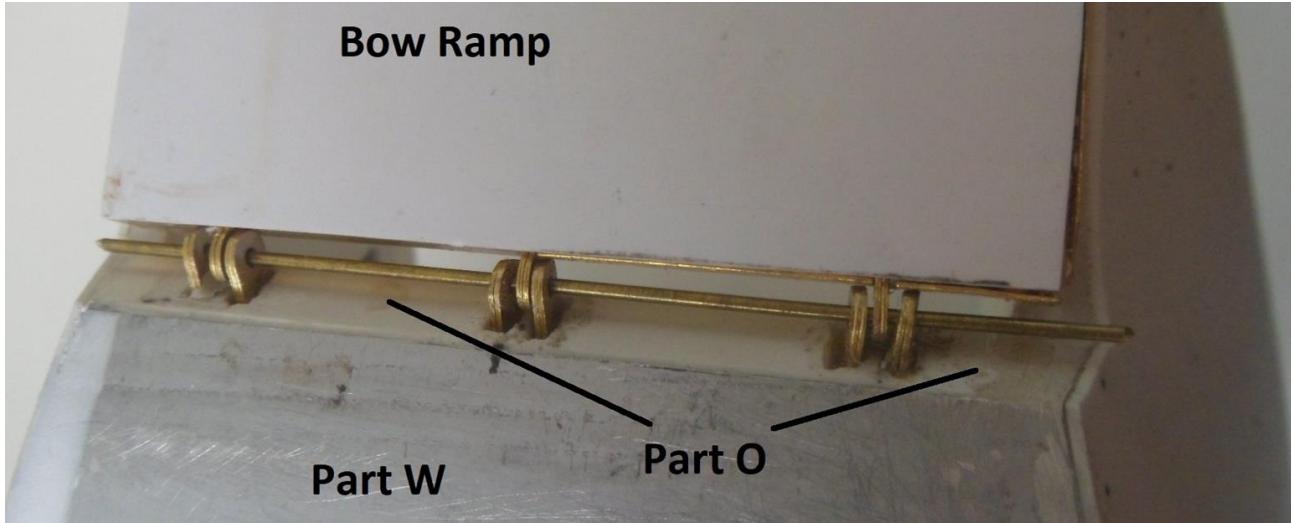
Part 1 Tank deck edging provides the deck securing points used to anchor the ropes and chains that hold the vehicles down while at sea. The oval loops can be gently bent up to take suitable thread or chain. I would suggest painting the deck under each securing point black before glueing each strip in place to provide contrast and make the detail more visible.

Part 2 whaleback deck tread will benefit from annealing as already mentioned.

Part 3 bow ramp when folded has a detailed top and side surfaces. Part 4 ramp formers are then epoxied into place inside making sure that all three hinge holes are correctly aligned. I recommend at the same time also clamping the ramp with some strips of 6 mm balsa wood or similar filling the spaces between the formers to a flat surface such as a piece of plywood to make sure that the ramp does not get warped. Once the glue has fully set the excess balsa can be trimmed and sanded down ready to take the underside of the ramp cut from 0.5 mm plastic cut and glued in place.



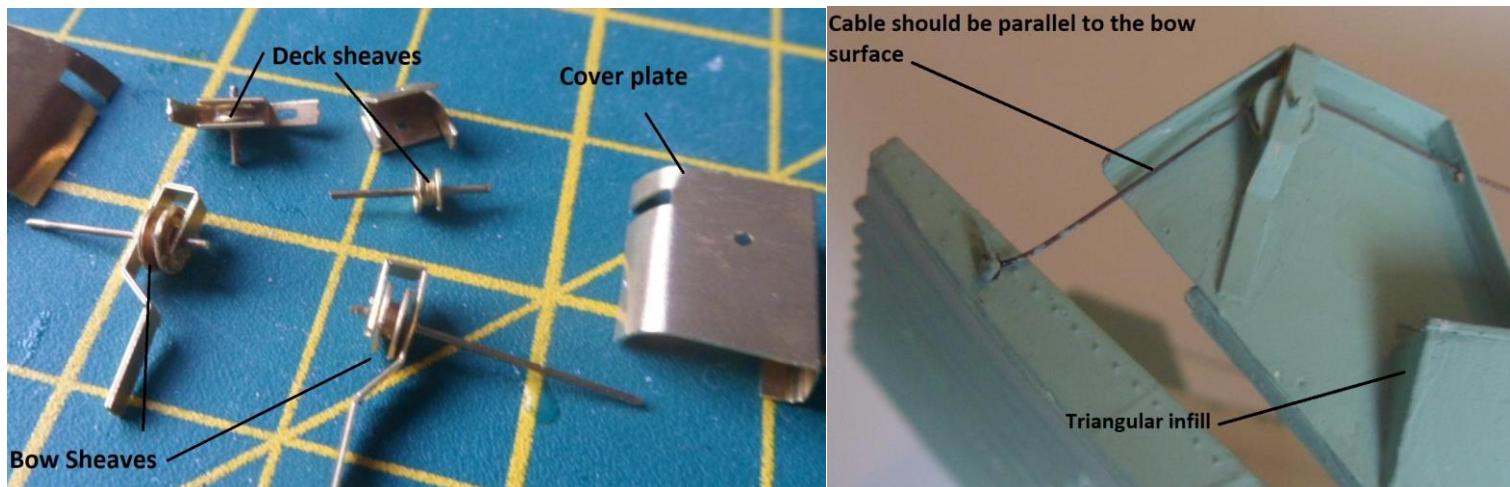
Part 5 hull hinge points for the ramp should be doubled up to make 6 assemblies which are then glued into the appropriate slots in hull Part O. I would suggest glueing one of the outermost of the hinge points first at the correct depth then, when set, assemble the rest in position with a piece of 0.5 mm rod in place through the holes in all 3 hinge sets and the ramp formers as shown in the photo so that the ramp will move smoothly.



Ramp cable assembly

Parts have been included to make the bow ramp cable arrangements as functional as possible with rotating sheaves/pulleys which are in scale. Starting with the main bow lozenge plate, Part 6, this provides the foundation for most of this assembly. Part 6 has three rectangular edge tags which are folded so that the central part with simulated rivets faces inboard. The two Parts 7 for the ramp cable sheave are separated by a small Part 9 spacer and mounted on a short length of 0.5 mm brass rod. The Part 8 bracket is folded around the sheave assembly so that the bracket holds the sheave in place with the brass rod also going through the top hole in Part 6 and the bracket fitting into the top corner of part 6. (The lower hole in part 6 indicates the pivot point for the Part 10 locking arm.) Part 6 can now be glued in place on the hull with the lower part of part 6 secured to part S of the hull so that the vertical edge fits close up to the triangular infill. The Part 12 sheave cover plates should now be prepared by making the two 90 degree folds at the aft end so that they have a tab to provide a good join to part 6 once the ramp cable has been rigged. The forward edge of part 12 should be gently curved inwards so that it will effectively enclose the bow sheave when in place.

The deck sheave outer and spacer Parts 14 and 15 are next assembled as for parts 7 and 9 but this time the 0.5 mm brass rod axle is held by the two holes in the Part 13 deck sheave case (which may need slightly enlarging to make it easier to assemble). The protruding tabs on part 13 are then folded/bent to match the case outline with a short tag protruding downwards to help locate the sheave assembly correctly into a 2mm by 1 mm slot cut on each foredeck as shown on the plan.



A small piece of brass rod is inserted into a hole drilled into each the side of the ramp as shown below to provide anchor points for suitable threads about 25 cm long. The thread should be fed first over the bow sheave then through the square hole on the aft facing side of part 12 then through the small rectangular hole in the part 6 tag and then goes on to the assembled deck sheave where it needs to go in through the rectangular hole and gently pushed so that it curves around the top of that sheave and comes out by the locating tag. The bow sheave cover part 12 can now be glued in place so that the aft end is in line with the triangular infill on the hull and the top edge is parallel with the top of part 6.

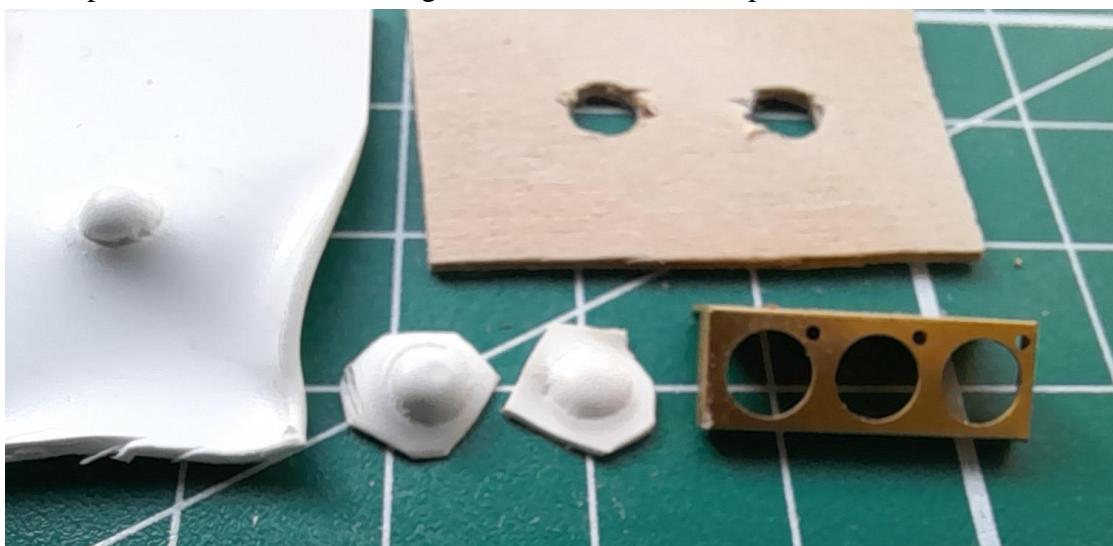
It will be an individual decision on how to secure the end of the thread representing the ramp cables. I have taken them aft under the foredeck and through a small hole in the hull part N and then across and down through a hole in hull part V into the empty space under the side deck. A small wooden spike (such as the end of a cocktail stick) is used to wedge each thread at the correct length depending on whether the ramp is up or down. In the ideal world, some form of winding mechanism could be mounted in the space underneath each foredeck area that could be operated to wind in or pay out the thread as required. I am still pondering the best way to achieve this and also be able to get access to it without compromising watertightness or disrupting or damaging the detailing items in that area. Any worthwhile suggestions will be put on the Model Boats magazine forum.

Fire main

If wanted, Parts 18 are the shut off valve control wheels for the salt water fire main that runs along the inside of the starboard side bulwark and Parts 19 are intended to represent the joining flanges either side of each valve. It would probably be necessary to use short lengths of thin walled brass tube that are a good fit inside part 19 for the valve body as each valve will need a small hole drilled in it to take a mounting rod for the hand wheel and then build up the fire main between each valve cutting suitable lengths of thinner tubing that then fitted inside the valve body.

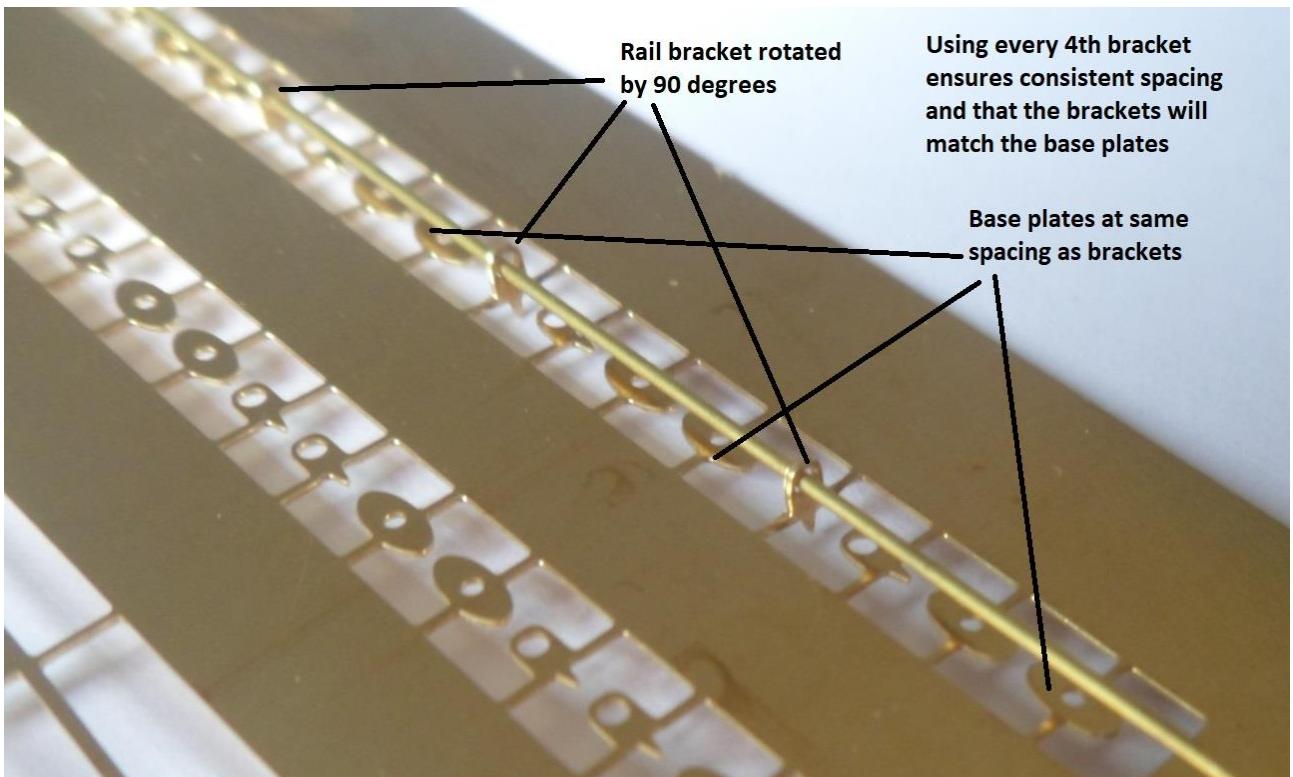
Heads and wash facilities

Parts are included to represent the Forward Heads (i.e. toilets etc.) which were located under the starboard fore deck. Unsurprisingly no photo has been found of this area so some guestimation was involved in designing the parts. Part 24 provides a structural outline when folded along the etched lines which should stand correctly on the sloped part of the whaleback. Part 20 can then be glued to the inward facing side of part 24. Parts 21 and 22 then go on the forward and aft faces of part 24 as shown in the plans. The 3 actual wash bowls that would be on part 24 can be represented by drilling out 4 mm holes in a piece of plywood, clamping a piece of 1 mm plastic card over the holes and then plunge mould a hemisphere by gently heating the plastic over a flame and using the end of a paintbrush or similar to push the plastic through each hole to achieve the desired shape as shown in the photo. These can then be glued to the underside of part 21.



Side rail assembly

There is a rail running the full (450 mm) length of the tank deck sides which was used to secure the canvas covers over the hold area. Parts 86 and 87 can be used to support the rail at the correct spacing from the tank deck side but are quite small and easily lost. They have been positioned on the PE sheet so that if every first part 87 in the groups of two is twisted through 90 degrees as shown in the photo it should then be possible to thread a length of 0.5 mm brass rod through the holes and then apply CA glue so that when it has fully set the fret tags holding each part 87 can then be cut and the section of rail can then repositioned so that the small spike at the end of each part 87 matches the central hole in a part 88 base plate and these can then all glued together in a single session without having to handle individual pieces of tiny PE. I strongly recommend giving the brass rod a good clean up with fine emery paper to ensure the glued joins do not slip.



Stanchions

Parts 27, 28 and 85 provide the different types of stanchions used onboard and these seem to work quite well in 0.3 mm thick photo etch once each is folded along its length by 90 degrees to give good strength. 0.7 mm diameter holes should be drilled in the deck for each stanchion. The overall strength of the railings is further improved by using thin piano wire (0.25 – 0.3 mm) threaded through each stanchion and secured with a drop of glue.

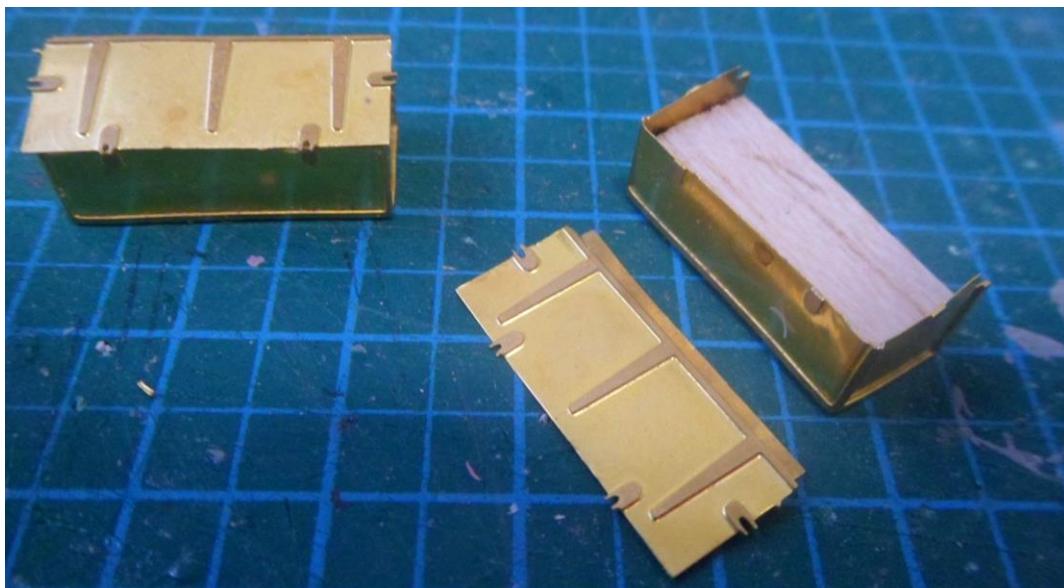
Magazine and Ready use lockers

The two 20 mm ammunition lockers and four 20 mm magazine Ready Use Lockers are each made from a rectangular block built up from plastic strip to the required dimensions then the doors (Part 78) or lids (Part 42) glued in place. The appropriate legs (Parts 30 or 31) are folded in the same way as the guardrail stanchions and glued in place. Photo shows all the parts ready to assemble.



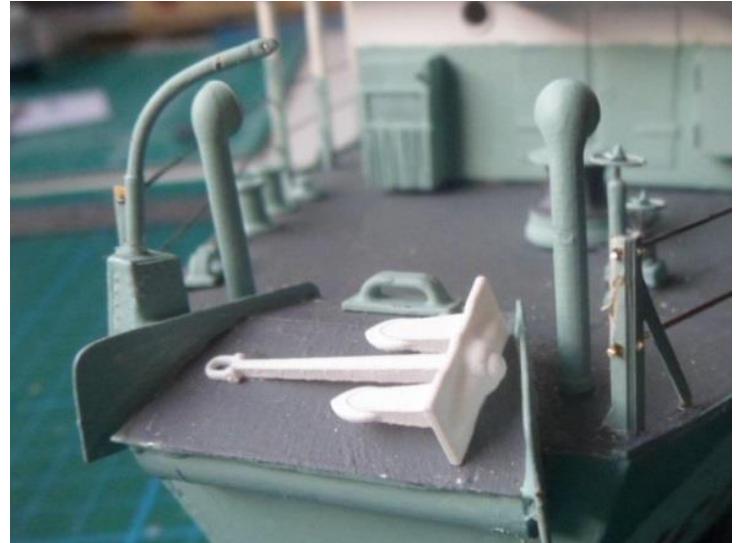
Deckhouse area detailing

There are a number of items to improve the appearance of the deckhouse: Parts 32 and 44 are the corner and inner triangular web plates respectively that reinforce the join to the deck at each end of the 8 vertical supports for the bridge wings. Parts 33 are the riveted strips that run over the external join between the wheelhouse and the bridge. Parts 34 are the vision slits on the front and sides of the wheelhouse area, Parts 35 are the external raised rings around each of the seven portholes and Parts 36 the slightly smaller ones that provide some light to the aft crew area below the deckhouse. Parts 40 and 41 build together as the skylights on each side of the wheelhouse under the ladders and it is easiest to cut a small block of balsa wood to fit inside part 40 which protrudes slightly at the top then glue it in place. Once set, trim the wood down so there is a good surface to glue the lid to. Parts 46 to 48 are the doors into the wheelhouse on the port and aft sides. Parts 65 to 66 are the doors for the two smaller Food Lockers and the whole body of the large Food Locker on the starboard and port sides of the aft end of the deckhouse. The bridge ladder rails, parts 50, are quite delicate and should be glued in place to the sides of the ladder and to the bridge deck after everything else has been completed.



Anchor ramp

The Stern anchor ramp is made up by folding along the etched lines on the main surface part 43 gluing it in place and then the two sides parts 52. The underside of the overhang at the transom is filled with a 28 mm length of 5 mm radius quarter round plastic or wood strip. The anchor davit base part 64 is folded into shape and glued in position to complete this assembly.



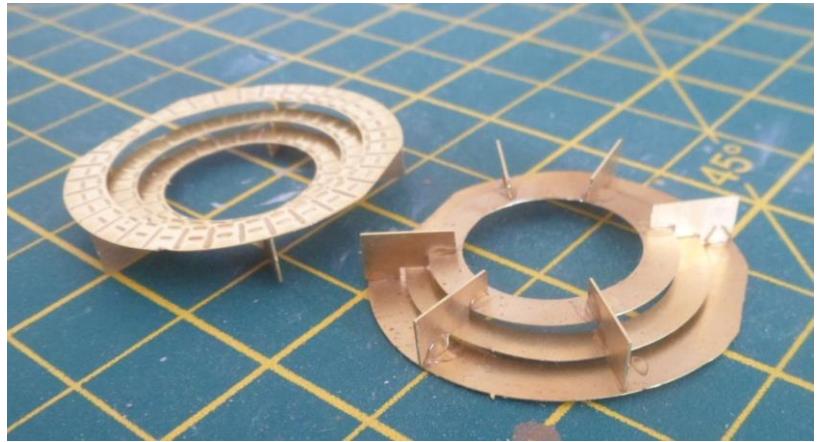
Funnel

The funnel is made by carefully rolling part 59 into a cylinder about mm in diameter and then cutting out a rectangle of 0.25 mm plastic card which is rolled to achieve a cylinder that will fit neatly inside part 59 and use this to provide a good base for holding the edges of part 59 together. A photo etch funnel cap is also provided as an alternative to the 3D printed option. The part 60 cap edge is carefully rolled to get the correct sloped shape, trimming part 60 to get a good joint. I found that the 19 mm diameter circle on a standard drawing template is an excellent former to hold the rolled up part 60 in place while the part 61 funnel cap top is glued in place – an epoxy type glue works best here. Four short sections of 3mm brass tube provide the exhaust pipes.



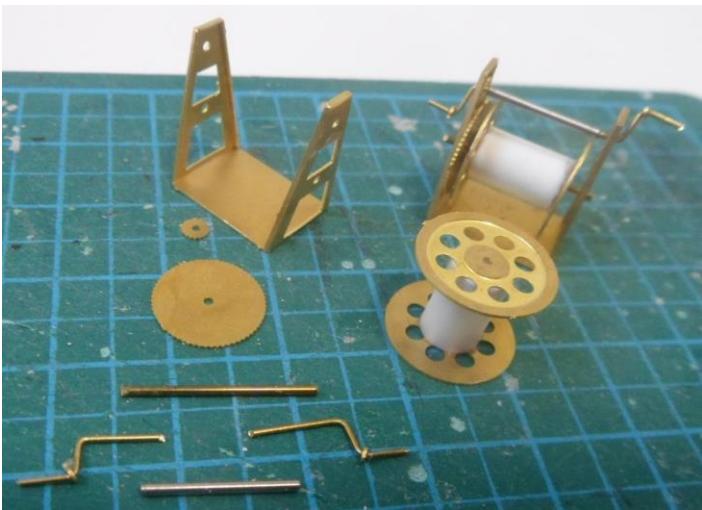
20 mm mounting

At least some LCT 3s had circular treaded steps around the 20 mm mountings and these are included in the PE set. Note that each part 75 outer ring has two flats on it so that they fit within the enclosure walls, with the longer flat on the outboard side and the port and starboard rings are different. Before assembling the steps, check that the outer tread ring will fit the inside of the enclosure, rebending the enclosure wall corners to make more space or trimming a thin sliver off the tread if all else fails. To assemble the full set of steps, start with the inner ring and at least 3 of the Part 39 supports and glue each support to the ring with a fairly quick setting type CA so that it points toward the centre of the ring and the outer edge of the ring touches the riser to the middle ring. The supports should be spaced around the tread ring so that it can placed on a flat surface once the glue has set but also avoiding putting a support along where either of the flat sections will be on the outer ring. The middle ring can then be glued in place and any more supports added before finally glueing the outer tread ring in place taking care to align it with the first two rings.



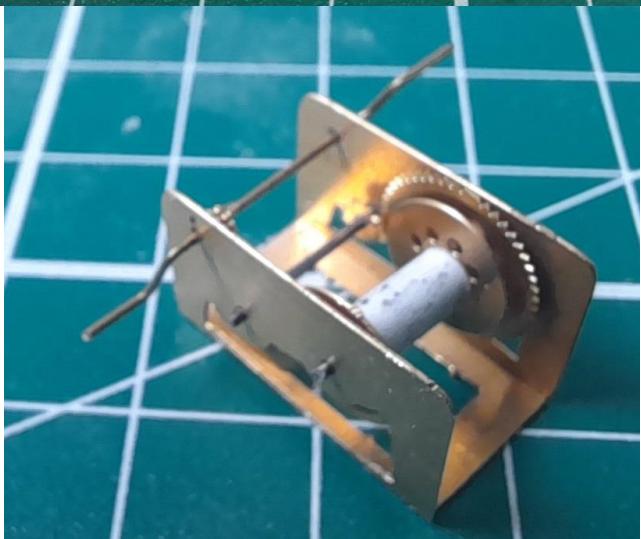
Hand winches

The two types of hand winch are both made up in much the same way. For the aft anchor cable the two cable reel drum ends (part 53) should be glued to each end of a length of plastic tube and a



piece of 0.5 mm brass rod (slightly longer than the length of the winch) inserted through the reel centre holes as an axle. A large gear wheel made from two parts 54 glued together is then added and the drum and gear wheel glued in position on the axle so that this assembly will fit inside the winch frame part 55 once the ends are bent into position. Before doing this, fold the three edge tabs on part 55 at right angles to the end surface. The part 56 small gear wheel should be mounted on a piece of very thin brass tube so that it will match up with the large gear when in place but the

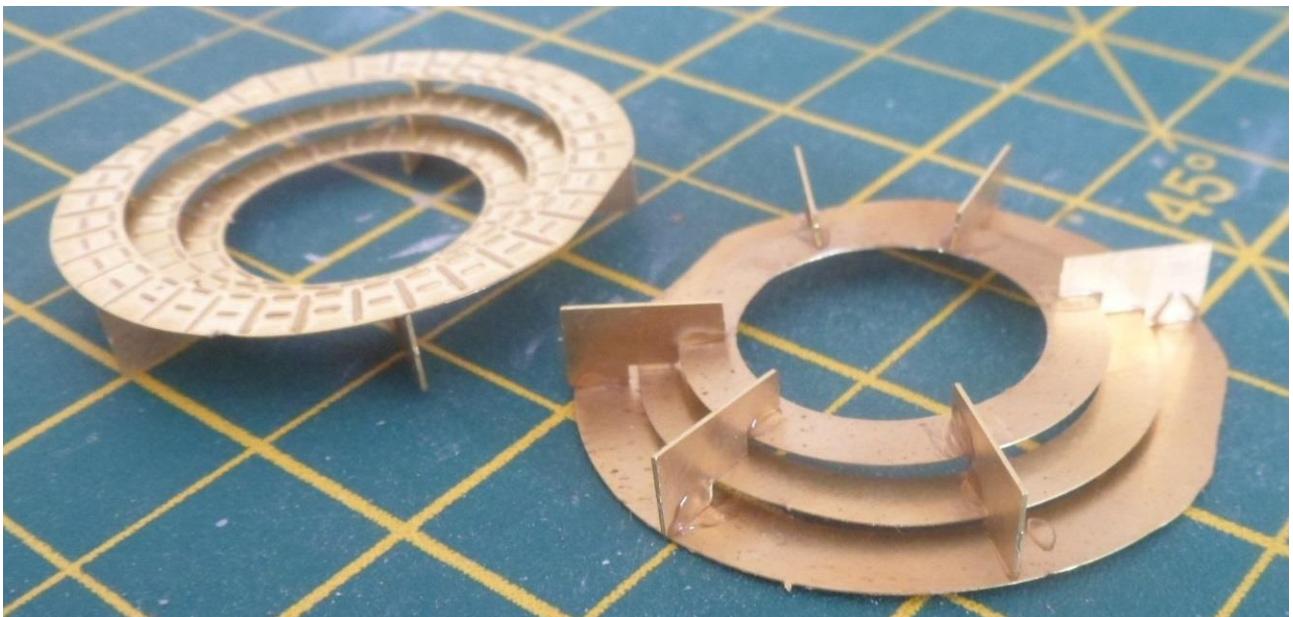
tube is slightly shorter than gap between the two ends of the winch. The two crank handles are then made up from brass rod that fits inside the brass tube and parts 57 hand grip stops can be added before these handles are inserted through the top holes on each end and glued to hold the upper gear axle in place.



The same principles apply for the assembly of the two ramp cable winches under the foredecks with the difference that there are no side tabs on the main frame part 71 and there is an extra gear axle holding the two intermediate sized gears the larger of which, part 70, is intended to match up with the smallest gear part 73 which is by itself on the same axle as the hand cranks. The largest gear part 69, on the cable drum axle should match up with the second smallest gear part 72 on the middle axle. If the hand crank axle is 30 mm long it should be long enough to be able bend a hand crank at each end but care must be taken to hold the axle with fine nosed pliers on the outside of the frame while bending the cranks to avoid distorting the frame.

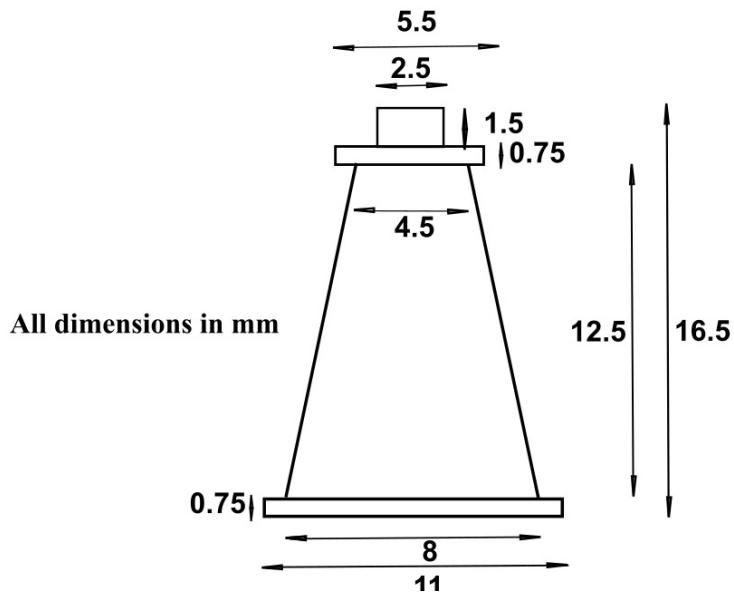
20 mm mounting steps

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20mm mountings

Some parts are included for the two 20mm Oerlikon guns to allow the modeller building a working Radio control version to have a more robust option than the more fragile 3D printed items available from the 3D Boats shop at Shapeways. If the PE parts are used it will be necessary to make a conical base and the gun barrels from metal rod and tube to complete each mounting. Each is made by starting with part 83 gun tray which is folded into shape then the main cradle section part 82 is also folded so it will fit correctly to the gun shield part 79 – see photo. The cradle is then glued to the shield. The gun itself is a 13 mm length of 1.5 mm square section brass with a 30mm length of 0.8 mm rod and an 8 mm length of 1.1 mm thin walled brass tube. The gun is glued to the gun tray and this is mounted between the two arms of the cradle so that the holes in the tray match up with those in the cradle. This assembly is mounted on a conical pedestal with the dimensions as shown on the diagram. It also benefits from an ammunition magazine which can be simulated by using a slice of 5mm diameter plastic rod.



Propellers and shaft supports

Two part 77 propeller outline shapes are included which are the correct size for the real life props. Each blade should be bent to a curved section and glued or soldered as appropriate to a hub turned to a cone from a piece of 2.5mm rod. Both should be right handed – ie they provide forward thrust if turned clockwise when looking at the LCT from astern. In principle they could be used to power the RC model but would probably be a bit too small and the Deans Marine 18mm diameter 3 blade plastic type are advised instead. Four part 37 propeller A frame struts have been included as a basis for making the prop shafts as accurate as possible but I did not have enough information to be sure exactly how they were mounted (LCT 7074 on display at Southsea does not have any underwater fittings) so, as they will probably need some trimming to fit smoothly to the hull surfaces, they are intentionally over length.

FAM launcher stands

The two Fast Aerial Mine (FAM) launchers on the foredecks are mounted on tripod stands and the legs for these are made from 3 pieces of 25 mm long 0.8 mm brass rod. The launcher tripod top and launcher ramp pivot parts 16 and 17 are provided. The pieces of brass rod should be pushed into soft balsa sheet so that about 23 mm of each leg is left exposed with the two outboard facing legs 7 mm apart at the bottom and close to vertical while the inboard leg is about 6.5 mm away from the other two with the top ends of each leg arranged so that they will fit the appropriate holes in the PE

part 16 tripod top. This should be carefully slid into place and then glue applied taking care to only use the minimum necessary to secure the legs. When this has completely set the upper flap can be folded down and the thin side tags bent round to complete an oval perimeter. The lower pivot part is folded and glued to the centre of the tripod top and the remaining two tabs are glued to either side of the launcher ramp which is made from scrap plastic sheet.



Misc remaining items

Part 51 escape hatch should be mounted on a 1 mm slice of plastic tube slightly smaller than the hatch and similarly parts 63 side deck hatch covers should be on a rectangle piece of plastic card. Part 62 FAM locker doors are glued to a block built from plastic strip to represent the rocket lockers located under the port foredeck. The Part 84 tank deck ladders are mounted vertically down from the small triangular plates at the aft corners of the tank deck bulwarks to the tank deck.